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REPORT ON

2023 GROUNDWATER AND SURFACE WATER MONITORING
PACCAR RENTON SITE
RENTON, WASHINGTON

by
Haley & Aldrich, Inc.
Seattle, Washington

for
PACCAR
Bellevue, Washington

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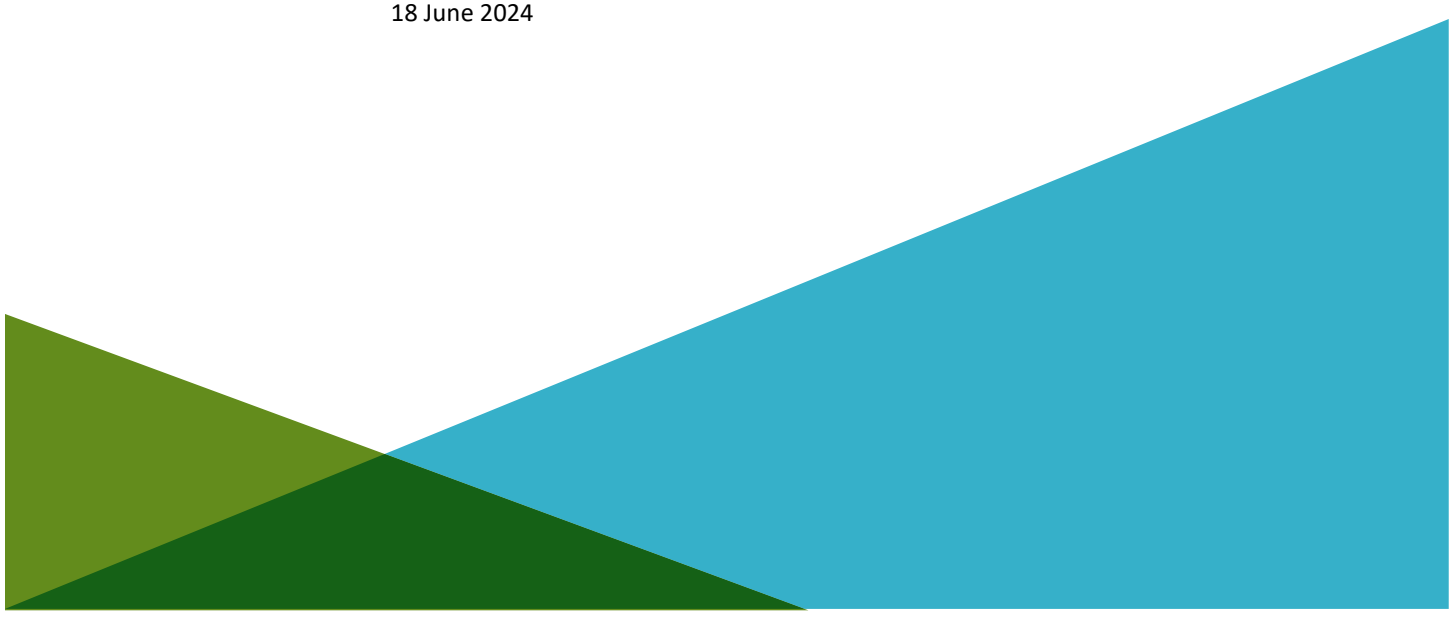

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REPORT ON

2023 GROUNDWATER AND SURFACE WATER MONITORING
PACCAR RENTON SITE
RENTON, WASHINGTON

PREPARED FOR

PACCAR
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1. Introduction

This report presents the 2023 groundwater and surface water monitoring results and structural fill cover observations for the PACCAR Renton National Priorities List Site (Site). The report contains the elements described in the Confirmational Monitoring and Inspection Plan (CMIP; Dalton, Olmstead, and Fuglevand, 1997) and the Periodic Review prepared by the Washington State Department of Ecology (Ecology; 2021). Sampling and the cover inspection were conducted at the Site in October and November 2023.

This report is divided into four sections:

1. Introduction
2. Groundwater Monitoring
3. Surface Water Monitoring
4. PACCAR Structural Fill Cover Monitoring Field Inspection and Observation Form

The information in these sections is supplemented by tables and figures presented at the end of the respective sections. In addition, Appendix A presents the chemical data quality review for groundwater and surface water. Appendix B provides the laboratory reports, and Appendices C and D present the water quality summary charts and Mann-Kendall trend analysis for groundwater and surface water, respectively.

2. Groundwater Monitoring

This section presents the results of the groundwater monitoring event conducted on 1 November 2023 and a review of historical groundwater data. Specifically, it includes a tabulation of water level and groundwater quality data, groundwater flow maps, time series concentration plots, and an assessment of results relative to cleanup levels (CULs) for developing sampling and analysis recommendations consistent with the CMIP and Periodic Review (Ecology, 2021) for 2024 monitoring. Groundwater elevation and chemical test results obtained from this event are compiled in this section.

The CMIP provides compound-specific CULs and hot spot action levels (HSALs) for comparison with the Site data. The CULs represent the groundwater remediation goals at the Site, while HSALs for groundwater are based on drinking water standards. Proposed actions described in this report are based on an interpretation of the updated data relative to the decision-making processes outlined in the CMIP.

Data presented in this report are organized as follows:

- **Monitoring Summary.** An overview of the data collected from each monitoring well is presented in Table 1. This table lists the wells sampled and identifies the chemicals analyzed in each well.
- **Groundwater Elevation.** Groundwater elevation measurements are compiled in Table 2 and contoured on Figures 1-1 and 1-2 for the Upper Sand and Lower Sand units, respectively.
- **Groundwater Chemical Result Summary.** A summary of groundwater analytical results is provided in Table 3. Groundwater samples were analyzed for total and dissolved arsenic and/or vinyl chloride. Field parameter measurements including turbidity, temperature, pH, dissolved oxygen, redox potential, and conductivity are also included in Table 3.
- **Purge Water Sampling.** Groundwater collected during well purging (before sampling) was analyzed for arsenic, chromium, lead, diesel- and heavy-oil-range total petroleum hydrocarbons, and volatile organic compounds. These data are necessary for future disposal documentation and are presented in Table 4.
- **Surface Water Chemical Results Summary.** A summary of surface water analytical results is provided in Table 5. Surface water samples were analyzed for total copper, hexavalent chromium, lead, and zinc.
- **Chemical Data Compilation.** Appendix A includes a data validation summary for the 2023 groundwater, surface water, and purge water data. The laboratory reports are provided in Appendix B.
- **Groundwater and Surface Water Quality Summary Charts.** Groundwater and surface water quality summary charts are provided at the end of the report (Figures 3-1 through 3-10 and 4-1 through 4-15, respectively). These charts summarize the historical analytical results for these monitoring locations. Appendices C and D include the Mann-Kendall trend analysis for each groundwater and surface monitoring location, respectively, as part of the 2023 monitoring program.

2.1 NOVEMBER 2023 ANALYTICAL RESULTS

2.1.1 Arsenic

The CUL for arsenic is 5 micrograms per liter (µg/L) and the HSAL is 50 µg/L as established in the CMIP. More recently, Ecology recognized that background arsenic concentrations were more variable across the state and the updated background arsenic concentration for the Puget Sound Basin was estimated to be 8 µg/L (Ecology, 2022). Additionally, during the 2021 Periodic Review, Ecology proposed lowering the HSAL to 10 µg/L, the current drinking water standard, for total arsenic.

Detected total arsenic concentrations in the six confirmation wells sampled in 2023 ranged from 0.71 to 16.9 µg/L. Concentrations of total arsenic were below the CUL in wells CW-1D (0.71 µg/L) and CW-1S (2.02 µg/L). Concentrations of total arsenic exceeded the CUL in wells LW-9S (5.52 µg/L), LW-06D (9.73 µg/L), LW-09D (9.22 µg/L), and MW-03I (16.9 µg/L). The natural background arsenic concentration was exceeded in three locations (LW-06D, LW-09D, MW-03I). The proposed HSAL of 10 µg/L was only exceeded in a sample from MW-03I. However, total arsenic concentrations in these wells appear to be positively biased due to the presence of suspended particulates in the samples.

During the 2023 monitoring event, dissolved arsenic was also analyzed and the results are summarized in Table 3. Detected dissolved arsenic concentrations in the six confirmation wells sampled in 2023 ranged from 0.677 to 6.54 µg/L, which are all below the Puget Sound Basin updated background concentration of 8 µg/L. Dissolved arsenic concentrations only exceeded the CUL of 5 µg/L in one well LW-06D (6.54 µg/L). Also, dissolved arsenic was detected in MW-03I, at a concentration (0.747 µg/L) over an order of magnitude below the total arsenic concentration (16.9 µg/L) and below the HSAL and CUL.

2.1.2 Vinyl Chloride

The CUL for vinyl chloride is 0.4 µg/L. Vinyl chloride in 2023 was detected at a concentration of 0.0389 µg/L and 0.218 µg/L, below the CUL, in wells CW-1S and LW-09D, respectively.

2.2 2024 MONITORING

The Periodic Review establishes the groundwater monitoring program (Table 6) for the Site in 2024. The program consists of:

- Sampling groundwater and analyzing for total and dissolved arsenic in wells CW-1D, LW-6D, LW-9D, CW-1S, LW-9S, and MW-03I. Field parameters will also be measured in these wells;
- Analyzing groundwater samples for vinyl chloride in wells CW-1S and LW-9D; and
- Measuring groundwater elevations in the PACCAR monitoring well network.

Given that arsenic concentrations detected in Site monitoring wells are generally within the range of Puget Sound Basin background concentrations (as discussed below), we recommend eliminating arsenic testing from the groundwater monitoring program.

Additionally, vinyl chloride has been below the CUL in well CW-01S since 2016 (for the past seven years), and we recommend eliminating vinyl chloride testing in this well from the groundwater monitoring program.

2.3 SUMMARY OF HISTORICAL GROUNDWATER MONITORING RESULTS

Groundwater monitoring has been conducted at the Site since the 1980s. Confirmation groundwater monitoring began in 1998 after approval of the CMIP in 1997. The confirmational groundwater monitoring network began with 28 wells. Historically, the monitoring well network was sampled for arsenic, chromium, lead, benzene, vinyl chloride, carcinogenic polycyclic aromatic hydrocarbons, pentachlorophenol, diesel, and heavy oil. Except for arsenic and vinyl chloride, these chemicals have either not been detected or detected at concentrations below CULs, and were dropped from the monitoring program using the protocols established in the CMIP. In addition, using the CMIP protocols, wells with arsenic and vinyl chloride concentrations below CULs were also dropped from the program. Currently the groundwater network consists of eight monitoring wells. Arsenic is analyzed in all of the monitoring wells (wells SC-01S and SC-02S are currently sampled every five years with the next monitoring event in 2025) and vinyl chloride is analyzed in two monitoring wells.

Arsenic and vinyl chloride concentration charts for the existing groundwater monitoring network are shown on Figures 3-1 through 3-10. Although not sampled during this monitoring event or discussed in this report, arsenic concentration charts for wells SC-01S and SC-02S are provided in Figures 3-9 and 3-10, respectively. Arsenic concentrations detected in Site monitoring wells are generally within the range of Puget Sound Basin arsenic background concentrations as discussed in the PACCAR Site Background Arsenic memorandum (Haley & Aldrich, 2024). Total arsenic concentrations in wells exceeding the Puget Sound Basin background concentration (including LW-6D, LW-9D, and MW-3I) appear to be positively biased due to the presence of suspended particulates in the samples. Dissolved arsenic concentrations measured in these wells are all below the background concentration of 8 µg/L.

Historical groundwater analytical results for the current monitoring network are summarized below. Appendix C includes groundwater quality summary statistical and trend analysis for each well sampled as part of the November 2023 monitoring program. The Mann-Kendall statistical trend analysis is based on analytical data collected since 2010 and therefore only includes total arsenic rather than dissolved arsenic (which has only been analyzed in 2022 and 2023). A summary of the trend analysis results are provided in Table 7.

2.3.1 CW-01S

CW-01S is located along Garden Avenue and is currently analyzed for arsenic and vinyl chloride. In 2023, total arsenic was detected at 2.02 µg/L, which is less than the CUL of 5 µg/L (Figure 3-1). Since April 2014 (the last 10 samples), the mean concentration of total arsenic in CW-01S was 2.7 µg/L and ranged from 0.4 to 7.3 µg/L. The CUL of 5 µg/L was exceeded in only one of last ten samples. Concentrations were below the updated Puget Sound Basin background of 8 µg/L and Ecology's proposed HSAL of 10 µg/L. There appears to be a statistically decreasing trend in total arsenic concentrations in CW-01S based on the Mann-Kendall analysis.

During the 2022 and 2023 monitoring events, dissolved arsenic was also analyzed and detected at concentrations of 0.34 and 1.56 µg/L, respectively, below the CUL. The dissolved concentrations were lower than the total arsenic concentrations (Figure 3-1).

Vinyl chloride was detected in 2023 at a concentration of 0.0389 µg/L, which is less than then CUL of 0.4 µg/L (Figure 3-2). The mean concentration of vinyl chloride in CW-01S since 2016 (the last 8 samples) was 0.12 µg/L and the detected concentrations ranged from 0.0208 to 0.259 µg/L. Concentrations of vinyl chloride in CW-01S have been less than the CUL since 2016. There appears to be a statistically decreasing trend in vinyl chloride concentrations in CW-01S based on the Mann-Kendall analysis.

2.3.2 CW-01D

CW-01D is located adjacent to CW-01S and is currently only analyzed for arsenic. In 2023, total arsenic was detected at a concentration of 0.71 µg/L, which is less than the CUL of 5 µg/L (Figure 3-3). Since 2014 (the last 10 samples), the mean concentration of total arsenic in CW-01D was 3.8 µg/L and ranged from 0.061 to 6.94 µg/L. The concentration of total arsenic exceeded the CUL in 6 of the last 10 samples. None of the samples collected over the past ten years were above the Puget Sound Basin updated background concentration. All the samples since 1998 were below Ecology's proposed HSAL of 10 µg/L. Statistically, there appears to be a probably decreasing trend in total arsenic concentrations in CW-01D based on the Mann-Kendall analysis.

During the 2022 and 2023 monitoring events, dissolved arsenic was detected at concentrations of 0.068 and 0.677 µg/L, respectively, below the CUL. Concentrations of total and dissolved arsenic were similar (Figure 3-3).

2.3.3 LW-06D

LW-06D is located along Garden Avenue and is currently only analyzed for arsenic. In 2023, total arsenic was detected at a concentration of 9.73 µg/L, which is greater than the CUL of 5 µg/L (Figure 3-4). Since 2014, the mean concentration of total arsenic in LW-06D was 8.6 µg/L, ranging between 4.57 µg/L and 10.0 µg/L. The concentration of total arsenic exceeded the CUL in 9 of the 10 samples. None of the 10 samples exceeded Ecology's proposed HSAL. There appears to be statistically no trend in total arsenic concentrations in LW-09D based on the Mann-Kendall analysis.

During the 2022 monitoring event, dissolved arsenic was detected at a concentration of 3.58 µg/L, below the CUL and Ecology's proposed HSAL of 10 µg/L. During the 2023 monitoring event, dissolved arsenic was detected at a concentration of 6.54 µg/L, above the CUL and below Ecology's proposed HSAL and Puget Sound Basin updated natural background concentration. The dissolved concentrations were significantly lower than the total concentrations (more than 30 to 60 percent lower; Figure 3-4).

2.3.4 LW-09S

LW-09S is located along Garden Avenue and is currently only analyzed for arsenic. In 2023, total arsenic was detected at 5.52 µg/L, which is greater than the CUL of 5 µg/L. Since 2017, arsenic concentrations have declined as illustrated on Figure 3-5. The mean concentration of total arsenic in LW-09S since 2014 (the last 10 samples) is 9.66 µg/L, ranging between 0.956 and 19.2 µg/L. The mean concentration of total arsenic in LW-09S since 2018 (the last six samples) is 5.4 µg/L, ranging between 0.956 and 7.31 µg/L. Total arsenic concentrations exceeded the CUL in 9 of last 10 samples. However, since 2018, total arsenic concentrations were below both the Puget Sound Basin updated background concentration and Ecology's proposed HSAL. There appears to be a statistically decreasing trend in total arsenic concentrations in LW-09S based on the Mann-Kendall analysis.

During the 2022 and 2023 monitoring events, dissolved arsenic was detected at concentrations of 0.414 and 3.15 µg/L, respectively, below the CUL and HSAL. The dissolved concentrations were lower than the total concentrations (more than 40 percent lower; Figure 3-5).

2.3.5 LW-09D

LW-09D is located adjacent to LW 09S and is currently analyzed for arsenic and vinyl chloride. Total arsenic was detected at 9.22 µg/L in 2023, which is greater than the CUL of 5 µg/L (Figure 3-6). Since 2014 (the last 10 samples), the mean concentration of total arsenic in LW-09D was 8.8 µg/L, ranging between 7.7 and 9.51 µg/L. Total arsenic concentrations exceeded the CUL in all the samples since 2014, but were below Ecology's proposed HSAL. Total arsenic concentrations in LW-09D have increased from 7.7 to 9.2 µg/L since 2015. There appears to be a statistically increasing trend in total arsenic concentrations in LW-09D based on the Mann-Kendall analysis.

During the 2022 and 2023 monitoring events, dissolved arsenic was detected at concentrations of 2.93 and 4.5 µg/L, respectively, below the CUL and Puget Sound Basin background concentration. Dissolved concentrations were substantially lower than the total concentrations (greater than 50 percent lower; Figure 3-6).

Vinyl chloride was detected in 2023 at a concentration of 0.218 µg/L, which is below the CUL of 0.4 µg/L (Figure 3-7). The mean concentration of vinyl chloride since 2014 is 0.41 µg/L, ranging between 0.22 and 0.70 µg/L. There appears to be a statistically stable trend in vinyl chloride concentrations in LW-09D based on the Mann-Kendall analysis.

2.3.6 MW-03I

MW-03I is located on the south side of Site along 4th Avenue and is currently only analyzed for arsenic. In 2023, total arsenic was detected at 16.9 µg/L, which is greater than the CUL of 5 µg/L and Ecology's proposed HSAL of 10 µg/L (Figure 3-8). Since 2014 (the most recent 10 samples), the mean concentration of total arsenic in MW-03I was 15.5 µg/L, ranging between 13.2 and 18.1 µg/L. Since 2014, total arsenic concentrations exceeded the CUL and proposed HSAL in all 10 samples. There appears to be a statistically increasing trend in total arsenic concentrations in MW-03I based on the Mann-Kendall analysis.

During the 2022 and 2023 monitoring events, dissolved arsenic was detected at concentrations of 1.01 and 0.747 µg/L, respectively, below the CUL and HSAL. There is a significant difference between the total and dissolved arsenic concentrations. Dissolved concentrations are more than 90 percent lower than the total concentrations (Figure 3-8).

Table 7. Summary of Groundwater Trend Analysis - 2023

Monitoring Well	Arsenic	Vinyl Chloride
CW-01S	Decreasing	Decreasing
CW-01D	Probably Decreasing	--
LW-06D	No Trend	--
LW-09S	Decreasing	--
LW-09D	Increasing	Stable
MW-03I	Increasing	--

3. Surface Water Monitoring

This section presents the results of the surface water monitoring event conducted in accordance with the CMIP and Periodic Review. Samples were collected from five storm sewer manholes on 25 October 2023. Chemical test results are compiled in Table 5, and the sampling locations are shown with the generalized storm sewer configuration on Figure 2-1. The data quality review and laboratory report (ARI #23J0665) are provided in Appendices A and B, respectively. Figure 4-1 through 4-15 includes surface water quality summary charts for each sampling location as part of the October 2023 monitoring program. The charts summarize the historical surface water sampling results.

3.1 OCTOBER 2023 AND HISTORICAL SAMPLING RESULTS

Surface water monitoring was conducted on 25 October 2023 for metals (total copper, lead, and zinc; and hexavalent chromium) at five locations (Figure 2-1) identified in the CMIP to assess whether any long-term changes are occurring. Monitoring began in 1998 after completion of cleanup activities at the site in 1997. The October 2023 surface water monitoring results are presented below and are compared to CMIP CULs and current Ecology stormwater benchmarks (Table 8). A discussion of historical monitoring results and Mann-Kendall trend analysis (Table 9) are based on sampling since 2005 when post-construction conditions stabilized. Hexavalent chromium is not discussed since it has not been detected in any samples.

Table 8. Surface Water Cleanup Levels and Benchmarks – 2023

	CUL (µg/L)	Benchmark (µg/L)
Copper	7	14
Lead	1	86.1
Zinc	47	117
Hexavalent chromium	11	--

3.1.1 SW-MH

SW-MH represents municipal stormwater coming onto the Site from off-site and upstream sources. SW-MH is sampled from a concrete vault at the southeast corner of the Site, which provides access to the municipal storm drain. The municipal storm drain traverses the Site from south to north, leaving the Site at the north discharge point (SW-3). Per the CMIP, the surface water from the Site does not flow into the municipal storm drain as it traverses the Site. SW-MH was included for informational purposes.

- **October 2023.** Copper (70.7 µg/L), lead (1.3 µg/L), and zinc (93.8 µg/L) concentrations detected in stormwater collected from SW-MH in October 2023 exceeded surface water CULs. Copper also exceeded its stormwater benchmark.
- **Historical.** Copper, lead, and zinc have generally been detected at concentrations above the CULs during most of the stormwater sampling events at SW-MH (Figures 4-1 through 4-3, respectively). Copper and zinc concentrations are also generally above stormwater benchmarks. Copper, lead, and zinc concentrations appear to be statistically decreasing in SW-MH based on the Mann-Kendall analysis.

3.1.2 SW-3

SW-3 is located at the north discharge point. SW-3 represents treated and untreated surface water generated from the Site and the municipal storm drain, which carries untreated stormwater northward across the Site from untreated off-site sources. This location is not identified in the CMIP and is sampled for informational purposes.

- **October 2023.** Zinc (52.5 µg/L) was detected in stormwater collected from SW-3 in October 2023 at a concentration exceeding the surface water CUL but was below the stormwater benchmark. Detected copper (2.2 µg/L) and lead (0.15 µg/L) concentrations were below surface water CULs and stormwater benchmarks.
- **Historical.** Since 2005, only two water samples collected from SW-3 have detected copper concentration exceeding the CUL of 7 µg/L (8.9 µg/L in 2015 and 12.6 µg/L in 2020). Lead concentrations generally have been detected below the CUL at concentrations ranging between 0.072 and 1 µg/L. However, in 2011, 2015, and 2019, lead concentrations were detected at concentrations of 2.2, 1.7, and 1.21 µg/L, respectively, just above the CUL of 1 µg/L. Since 2005, zinc concentrations have ranged from 5 to 131 µg/L with roughly half of the samples exceeding the CUL of 47 µg/L. All lead and copper concentrations and most zinc concentrations were below stormwater benchmarks (Figures 4-4 through 4-6, respectively). Copper and zinc concentrations appear statistically stable and lead appears to be statistically decreasing in SW-3 based on the Mann-Kendall analysis.

3.1.3 SW-DP

SW-DP is sampled at the outlet of the north treatment facility. Stormwater from this location is derived from the Truck Plant and associated parking lot and was included in the CMIP for "informational purposes" only. This was because stormwater is derived from paved surfaces associated with the truck plant and discharge is regulated under a stormwater discharge permit.

- **October 2023.** Zinc (49.6 µg/L) was detected in stormwater collected from SW-DP in October 2023 at a concentration exceeding the surface water CUL but was below the stormwater benchmark. Detected copper (2.4 µg/L) and lead (0.17 µg/L) concentrations were below surface water CULs and stormwater benchmarks.
- **Historical.** Since 2005, copper and lead concentrations have generally been detected below their respective CULs and been below stormwater benchmarks (Figures 4-7 and 4-8, respectively). Zinc concentrations have been variable and generally above the CULs and a few instances above the stormwater benchmark (Figure 4-9). Copper and lead concentrations appear statistically stable and decreasing, respectively, and there is no statistical trend for zinc concentrations in SW-DP based on the Mann-Kendall analysis.

3.1.4 SW-6

SW-6 is sampled from a manhole which represents stormwater from the area where Building 17 was formerly located. Building 17 was demolished and removed from the Site in 2013.

- **October 2023.** When SW-6 was sampled, the water within the manhole was visibly turbid and had a turbidity reading of 630 nephelometric turbidity units. The source of the turbidity is unknown; however, the area has been used as excess parking for completed trucks from the facility, which could be the source of the turbid water at SW-6. Copper (17 µg/L) was detected

above the surface water CULs and above the stormwater benchmark. Lead (5.5 µg/L) was detected at a concentration above the CUL and below the stormwater benchmark. Zinc (20.8 µg/L) was detected at a concentration below the CUL and stormwater benchmark.

- **Historical.** Since 2005, copper, lead, and zinc concentrations have generally been detected below CULs except between 2014 to 2017 during construction of the PACCAR Part Distribution Warehouse (PDW) completed in 2017 (Figures 4-10 through 4-12, respectively). Copper concentrations trends appear statistically stable, lead concentrations appear to be statistically decreasing, and there is statistically no apparent trend in zinc concentrations in SW-6 based on the Mann-Kendall analysis.

3.1.5 SW-5

Stormwater from the south half of the Site is sampled at a manhole designated SW-5. The CMIP specifies that water quality from SW-5 will be compared to CULs for compliance purposes and represented (in 1991) runoff from the structural fill cover that covered contaminated soil. Currently, surface water at SW-5 is generated from the Kenworth Research and Development, PACCAR PDW, and Active facilities, as well as a portion of the undeveloped area at the southwest corner of site.

- **October 2023.** Copper (2.7 µg/L), lead (0.18 µg/L), and zinc (34.2 µg/L) concentrations in the sample collected from SW-5 did not exceed the CULs and stormwater benchmarks.
- **Historical.** Since 2005, copper, lead and zinc concentrations have not exceeded the CULs with a few exceptions (Figures 4-13 through 4-15, respectively). Sample concentrations were all below stormwater benchmarks. Between 2015 and 2017, some exceedances of copper, lead, and zinc concentrations occurred. This time period coincided with construction of the PACCAR PDW, which was completed in 2017. The zinc concentration exceeded the CUL in 2022. Other than during this period of construction disturbance, the surface cover has been effective at minimizing stormwater impacts based on surface water sampling at the point of compliance. Copper and zinc concentrations appear statistically stable and lead concentrations appear to be decreasing in SW-5 based on the Mann-Kendall analysis.

Table 9. Summary of Surface Water Trend Analysis - 2023

Monitoring Well	Copper	Lead	Zinc
SW-MH	Decreasing	Decreasing	Decreasing
SW-3	Stable	Decreasing	Stable
SW-DP	Stable	Decreasing	No trend
SW-6	Stable	Decreasing	No trend
SW-5	Stable	Decreasing	Stable

Surface water quality CULs have generally been met at SW-5, the established point of compliance. Exceedances of CULs were noted in selected metals during the period of construction of the PACCAR PDW between 2015 and 2017. Except for some instances following construction completion, stormwater metals concentrations have dropped below respective CULs.

4. Structural Fill Cover Monitoring Field Inspection and Observation Form

The structural fill and pavement covers are monitored annually to document their condition and note areas where repair or maintenance is necessary. An engineer conducted a site walk to observe and document the following:

- Conditions of paved area (settlement, ruts, cracks, other); and
- Disturbance in areas of planted cover (erosion, excavation, vegetation, other).

4.1 FIELD INSPECTION OBSERVATIONS

Date of Field Inspection: 1 November 2023

Weather Conditions: Cloudy

Inspection Personnel: Andrew Nakahara, Environmental Engineer

The stockpile area has a planted cover with good development of grass and shows no signs of settlement or erosion. The cap area is used for vehicle parking, and the presence of tire tracks disturbing vegetation and surface soil were observed. The tire tracks do not appear to be affecting the integrity of the cover as they were observed to be surficial in nature.

4.2 RECOMMENDED ACTIONS AND FOLLOW-UP

4.2.1 Areas Needing Repair

Review site conditions in 2024.

4.2.2 Documentation of Repair Completion

No repairs required.

References

1. Dalton, Olmstead, and Fuglevand, 1997. Confirmational Monitoring and Inspections Plans, Former PACCAR Defense Systems Site, Renton, Washington. November.

2. Haley & Aldrich, 2024. Pacific Car & Foundry Co. Site Background Arsenic. February 23.

3. Washington State Department of Ecology (Ecology), 2021. Periodic review, Pacific Car & Foundry Co, Renton, Washington. November 29.

4. Ecology, 2022. Natural Background Groundwater Arsenic Concentrations in Washington State: Study Results. Revised January.

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TABLES

TABLE 1

GROUNDWATER MONITORING PROGRAM FOR 2023

PACCAR

RENTON, WASHINGTON

	2023	
Well	**VC[a]**	**Arsenic[b]**
Confirmation Lower Sand/Delta Deposits		
CW-1D		X
LW-6D		X
LW-9D	X	X
Confirmation Upper Sand/Aquitard Wells		
CW-1S	X	X
LW-9S		X
MW-3I		X
Stabilized Cell Wells		
SC-1S		
SC-2S		
Quality Control Samples		
	X	X
Purge Water Samples		
	X	X

Notes:

[a] *Vinyl chloride.*

[b] *Arsenic was analyzed for total (unfiltered) and dissolved (filtered).*

Water elevations were measured in approximately 27 wells.

All wells with samples submitted for laboratory analysis had the following field parameters measured: temperature, pH, conductivity, turbidity, dissolved oxygen, and redox potential.

Purge water samples analyzed for VOCs, arsenic, lead, total chromium, diesel, and oil.

TABLE 2

GROUNDWATER ELEVATION DATA, NOVEMBER 2023

PACCAR

RENTON, WASHINGTON

Well	Depth to Water in Feet	Reference Elevation in Feet	Water Elevation in Feet
CW-1D	4.75	26.18	21.43
CW-1S	4.61	26.14	21.53
CW-3D	10.31	31.39	21.08
CW-3S	9.33	32.04	22.71
DM-2D	6.38	28.40	22.02
DM-5D	7.58	40.13	32.55
LW-14S	23.43	45.37	21.94
LW-1D	4.20	25.98	21.78
LW-1S	3.23	25.84	22.61
LW-2D	NM	28.78	NM
LW-2S	5.50	28.98	23.48
LW-4S	7.33	39.87	NM
LW-6D	8.42	30.58	22.16
LW-6S	NM	29.70	NM
LW-7S	NL	33.74	NL
LW-9D	10.76	31.95	21.19
LW-9S	10.34	32.12	21.78
MW-1S(N)	4.74	26.56	21.82
MW-2D(R)	6.76	29.43	22.67
MW-2S(W)	DRY	28.85	DRY
MW-3I(N)	11.56	34.39	22.83
MW-3S(S)	DRY	34.39	DRY
OSP-10D	14.12	40.74	26.62
OSP-1D	12.54	41.51	28.97
OSP-1S	9.80	41.44	31.64
OW-4D	21.89	43.48	21.59
OW-4S	21.35	43.49	22.14
R-10D	9.08	35.15	26.07
R-10S	10.58	36.24	25.66
SC-1S	5.50	37.78	32.28
SC-2S	14.40	40.52	26.12
U-1D	10.40	30.29	19.89
U-1S	NL	29.86	NL

Notes:

NL = Not located.

NM = Not measured.

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL DATA
PACCAR
RENTON, WASHINGTON

Well	Date	Total Arsenic in µg/L	Diss. Arsenic in µg/L	Total Lead in µg/L	Total Chromium in µg/L	Benzene in µg/L	Vinyl Chloride in µg/L	Total cPAHs[a] in µg/L	PCP * in µg/L	Diesel in mg/L	Heavy Oil in mg/L	Ferrous Iron [b] in mg/L	Temp. in °C	pH	Diss. Oxygen in mg/L	Cond. in µmhos /cm	Redox Potential in Eh	Turbidity in NTU	TSS in mg/L
CUL:		5	5	5	80	5	0.4	0.1		1	1	NE	NE	NE	NE	NE	NE	NE	NE
HSAL:		50	50	50	100	5	2	NE		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Confirmation Lower Sand/Delta Deposits																			
CW-01D																			
	3/24/98	4.1	-	-	-	0.5 U	0.13 U	-	-	0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/20/98	2 U	-	-	-	0.5 U	0.12 J	-	-	0.24 U	0.48 U	-	-	-	-	-	-	-	-
	3/4/99	3.2 +	-	-	-	0.5 U	0.039 U	-	-	0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/19/99	6.3	-	1 U	10 U	0.5 U	0.2	-	-	0.24 U	0.71 U	-	14	6.8	-	580	-	-	-
	5/18/00	6	-	-	-	0.2 U	0.4	-	-	0.25 U	0.5 U	-	14	6.8	-	560	-	-	-
	3/19/01	5.8	-	-	-	0.2 U	0.2	-	-	0.25 U	0.5 U	-	-	-	-	-	-	-	-
	3/25/02	7.9	-	-	-	0.2 U	0.6	-	-	0.25 U	0.5 U	-	12	7.1	-	780	-	0.08	-
	10/16/02	-	-	-	-	-	-	-	-	-	-	-	15.8	6.7	-	760	-	0.18	-
	4/2/03	6.7	-	1 U	1 U	0.2 U	0.2	0.15 U	-	0.25 U	0.5 U	4	13.2	6.8	1.18	442	-	28	-
	3/31/04	8.2	-	-	-	0.2 U	0.3	-	-	-	-	55.5	13.4	6.2	0.01	496	-34	12	74.5
	4/13/05	6.1	-	-	-	-	-	-	-	-	-	46.4	14.4	6.5	0.1	283	18	0	31.5
	3/28/06	5.1	-	-	-	-	-	-	-	-	-	52.5	13.9	6.2	0.26	448	25	0	51.9
	3/27/07	6.2	-	-	-	-	-	-	-	-	-	45.2	13.3	5.2	0.11	417	62	0	31.6
	4/1/10	5.6	-	-	-	-	-	-	-	-	-	52	13.1	7.1	0.26	-	-100	293	54.4
	3/29/11	5.7	-	-	-	-	-	-	-	-	-	43.8	12.8	6.4	<0.01	270	-	10	48.2
	3/22/12	5.5	-	-	-	-	-	-	-	-	-	46.4	12.9	6.1	<0.01	727	-165	16.3	40
	11/15/12	-	-	-	-	-	0.14	-	-	-	-	48.4	13.9	6.3	1.15	332	-132	21	85.4
	3/12/13	5.4	-	0.3	1 U	0.02 U	0.1	0.2 U	0.25 U	0.1 U	0.2 U	55	13.1	9.9	<0.01	423	-13	24.9	80
	4/2/14	5.8	-	-	-	-	0.1	-	-	-	-	49.8	12.91	6.3	<0.01	410	-80	76.2	76.2
	4/15/15	5.4	-	-	-	-	-	-	-	-	-	-	13.99	6.2	<0.01	433	-88	13.9	-
	3/10/16	0.4	-	-	-	-	0.02 U	-	-	-	-	-	13.61	6.6	0.01	797	-8	1.4	-
	4/11/17	6.29	-	-	-	-	-	-	-	-	-	-	13.55	6.2	<0.01	[c]	-79	21	-
	4/17/18	5.16	-	-	-	-	-	-	-	-	-	-	13.6	6.0	0.09	477.1	0	220	-
	6/21/19	1.47	-	-	-	-	-	-	-	-	-	-	15.6	6.4	0.48	165.5	-25	42.4	-
	8/17/20	5.39	-	-	-	-	-	-	-	-	-	-	17.4	6.2	0.4	506	24	37	-
	10/19/21	6.94	-	-	-	-	-	-	-	-	-	-	16.3	6.29	0.32	517	-93	216	-
	12/14/22	0.061 J	0.068 J	-	-	-	-	-	-	-	-	-	12	5.69	1.63	23	156.1	2.91	
	11/1/2023	0.71	0.677	-	-	-	-	-	-	-	-	-	15.3	6.1	0.07	68.3	-77.2	4.27	-
LW-06D																			
	3/26/98	11	-	-	-	0.5 U	0.13 U	-		0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/22/98	12	-	-	-	0.5 U	0.08 J	-	-	0.24 U	0.47 U	-	-	-	-	-	-	-	-
	3/5/99	3.1	-	-	-	0.5 U	0.039 U	-	-	0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/19/99	10	-	1 U	10 ``	0.5 U	0.099 J	-	-	0.24 U	0.71 U	-	14.1	6.4	-	530	-	-	-
	5/23/00	9	-	-	-	0.2 U	0.2 U	-	-	0.25 U	0.5 U	-	13	7.2	-	690	-	-	-
	3/16/01	10.8	-	-	-	0.2 U	0.2 U	-	-	0.25 U	0.5 U	-	14	7.1	-	900	-	0.14	-
	3/21/02	8.8	-	-	-	0.2 U	0.2 U	-	-	0.25 U	0.5 U	-	13	7.1	-	860	-	0.08	-
	4/3/03	3.3	-	1 U	1	0.2 U	0.2 U	0.15 U	-	0.25 U	0.5 U	4	11.4	6.9	1.25	454	-	18	-
	3/31/04	14.2	-	-	-	-	-	-	-	-	-	56.0	13.0	6.1	0.02	524	-2	27	93.0
	4/12/05	10.2	-	-	-	-	-	-	-	-	-	59.5	13.2	6.3	0.08	548	-15	0	38.9
	3/31/06	11.2	-	-	-	-	-	-	-	-	-	62.5	13.7	6.2	0.16	459	-10	0	20.3
	3/29/07	11.1	-	-	-	-	-	-	-	-	-	58.0	14.0	5.8	0.11	554	107	0	40.8
	3/26/08	9.8	-	-	-	-	-	-	-	-	-	49.6	11.1	6.7	0.52	436	-35	0	-
	3/26/09	10.4	-	-	-	-	-	-	-	-	-	63	13.36	5.6	2.64	764	-118	32	55
	4/2/10	10.4	-	-	-	-	-	-	-	-	-	62	12.5	7.1	<0.01	445	-83	160	58.4
	3/31/11	9.7	-	-	-	-	-	-	-	-	-	63	13	6.1	0.05	382	-61	10	70
	3/23/12	9.1	-	-	-	-	-	-	-	-	-	61.5	13.3	6.0	<0.01	724	-160	6.2	54.2
	3/13/13	9.1	-	0.1 U	1 U	0.025	0.14	0.2 U	-	0.1 U	0.2 U	65	13.18	8.6	<0.01	508	57	9.9	67.8
	4/2/14	7.8	-	-	-	-	-	-	-	-	-	56.5	14.01	6.3	0.01	527	-102	115.5	34.6
	4/15/15	7.8	-	-	-	-	-	-	-	-	-	-	14.05	6.2	<0.01	529	-189	25.4	-
	3/10/16	8.0	-	-	-	-	0.24	-	-	-	-	-	13.72	6.2	<0.01	533.9	-11	10.9	-
	4/11/17	10.0	-	-	-	-	-	-	-	-	-	-	13.71	6.1	<0.01	[c]	-101	4.0	-
	4/17/18	9.2	-	-	-	-	-	-	-	-	-	-	13.7	6.21	0.14	682	0	378	-
	6/21/19	4.57	-	-	-	-	-	-	-	-	-	-	14.6	6.25	0.7	542	-62.6	32.2	-
	8/17/20	9.26	-	-	-	-	-	-	-	-	-	-	15.7	6.4	0.4	723	-6.3	3.9	-
	10/19/21	9.94	-	-	-	-	-	-	-	-	-	-	16	6.21	0.37	730	-92	11.6	-
	12/14/22	9.84	3.58	-	-	-	-	-	-	-	-	-	12.3	6.22	0.56	774	-26.5	4.5	-
	11/1/2023	9.73	6.54	-	-	-	-	-	-	-	-	-	14.6	6.09	0.13	724	-101.1	0.57	-
LW-09D																			
	3/26/98	9.5	-	-	-	0.5 U	0.97 J	-	0.82 U	0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/21/98	7.6	-	-	-	0.5 U	0.7 J	-	0.8 U	0.24 U	0.47 U	-	-	-	-	-	-	-	-
	3/7/99	7.9	-	-	-	0.5 U	0.86	-	0.9 U	0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/19/99	3.3	-	1 U	10 U	0.5 U	0.4 J	-	-	0.32	0.71 U	-	14.6	7.4	-	450	-	-	-
	5/24/00	9	-	-	-	0.2 U	0.3	-	-	0.25 U	0.5 U	-	14	6.7	-	740	-	-	-
	10/12/00	-	-	-	-	0.2 U	0.9	-	-	-	-	-	14	7.2	-	640	-	-	-
	3/15/01	9.4	-	-	-	0.2 U	0.9	-	-	0.25 U	0.5 U	-	14	6.8	-	590	-	0.14	-
	10/31/01	-	-	-	-	0.2 U	0.5	-	-	-	-	-	14	6.8	-	560	-	0.14	-
	3/20/02	11.4	-	-	-	0.2 U	1.6	-	-	0.25 U	0.5 U	-	13	8.0	-	910	-	0.11	-
	10/16/02	-	-	-	-	0.2 U	0.9	-	-	-	-	5.8	14.1	6.9	1.1	510	-	0.14	-
	4/4/03	0.9	-	1 U	1 U	0.2 U	0.2 U	0.15 U	0.25 U	0.25 U	0.5 U	3.4	12.6	7.3	0.71	389	-	12	-
	10/7/03	-	-	-	-	0.2 U	0.7	-	-	-	-	-	13	7.3	-	680	-	0.18	-
	3/31/04	12.2	-	-	-	0.2 U	1.1	-	-	-	-	54.5	12.2	6.2	0.22	523	-22	13	77.5
	10/20/04	-	-	-	-	0.2 U	1.0	-	-	-	-	52	12.6	6.2	0	528	-28	0	41.5
	4/12/05	8	-	-	-	0.2 U	1.3 J	-	-	-	-	54	12.5	6.4	0.05	540	-24	1	37.5
	11/3/05	-	-	-	-	0.2 U	0.8	-	-	-	-	52	12	6.7	0.32	517	-42	7	33.4
	3/31/06	7.7	-	-	-	0.2 U	0.8	-	-	-	-	53.5	12.6	6.3	0.12	433	-20	0	18.2
	3/27/07	8.5	-	-	-	0.2 U	0.9	-	-	-	-	-	12.2	6.0	0.19	541	54	0	-
	3/26/08	8.3	-	-	-	-	1.2	-	-	-	-	46.7	11.7	6.8	0.48	427	-15	0	-
	3/26/09	8.4	-	-	-	-	1.2	-	-	-	-	55.5	12.24	5.7	2.56	729	-129	48	36.4
	10/27/09	8	-	-	-	-	0.71	-	-	-	-	52.7	12.44	9.3	3.33	617	-146	20	51.1
	4/2/10	8.4	-	-	-	-	0.5	-	-	-	-	55	11.5	7.2	0	428	-90	242	41.2
	3/29/11	8.5	-	-	-	-	0.5	-	-	-	-	51.5	12	6.4	0.11	441	-	10	54.8
	3/23/12	7.5	-	-	-	-	0.32	-	-	-	-	51	11.9	6.0	0	666	-155	2.9	40
	3/15/13	8	-	0.1 U	0.7	0.02 U	0.41	0.2 U	0.25 U	0.1 U	0.2 U	54	12.31	7.2	0.02	491	235	59.8	62.2
	4/2/14	8.2	-	-	-	-	0.41	-	-	-	-	63	12.16	6.3	0.01	499.8	-65	27.6	27.7
	4/15/15	7.7	-	-	-	-	0.7	-	-	-	-	-	12.41	6.2	0.07	481	-192	164.8	-
	3/10/16	9.0	-	-	-	-	0.44	-	-	-	-	-	12.42	6.2	<0.01	478	-50	6	-
	4/11/17	8.5	-	-	-	-	0.35	-	-	-	-	-	12.45	6.2	<0.01	[c]	-73	17.4	-
	4/17/18	9.16	-	-	-	-	0.35	-	-	-	-	-	12.5	6.3	0.14	639	0	-	-
	6/20/19	9.12	-	-	-	-	0.52	-	-	-	-	-	12.9	6.3	0.29	574	-71	116.6	-
	8/17/20	8.95	-	-	-	-	0.311	-	-	-	-	-	14.9	6.5	0.43	674	-0.1	11.9	-
	10/19/21	9.51	-	-	-	-	0.375	-	-	-	-	-	13.4	6.22	0.32	675	-93	44.4	-
	12/14/22	9.02	2.93	-	-	-	0.47	-	-	-	-	-	11.1	6.3	0.53	694	-45.3	8.4	-
	11/1/2023	9.22	4.5	-	-	-	0.218	-	-	-	-	-	12.8	8.72	0.74	604	- [c]	9	-

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL DATA
PACCAR
RENTON, WASHINGTON

Well	Date	Total Arsenic in µg/L	Diss. Arsenic in µg/L	Total Lead in µg/L	Total Chromium in µg/L	Benzene in µg/L	Vinyl Chloride in µg/L	Total cPAHs[a] in µg/L	PCP * in µg/L	Diesel in mg/L	Heavy Oil in mg/L	Ferrous Iron [D] in mg/L	Temp. in °C	pH	Diss. Oxygen in mg/L	Cond. in µmhos /cm	Redox Potential in Eh	Turbidity in NTU	TSS in mg/L
CUL:		5	5	5	80	5	0.4	0.1		1	1	NE	NE	NE	NE	NE	NE	NE	NE
HSAL:		50	50	50	100	5	2	NE		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Confirmation Upper Sand/Aquitard Wells																			
CW-01S																			
	3/24/98	8.7	-	-	-	0.5 U	0.38 J	-	-	0.3	0.71 U	-	-	-	-	-	-	-	-
	10/20/98	6.6	-	-	-	0.62	0.86 J	-	-	0.24 U	0.47 U	-	-	-	-	-	-	-	-
	3/4/99	4.9	-	-	-	0.5 U	0.53	-	-	0.24 U	0.72 U	-	-	-	-	-	-	-	-
	10/19/99	7.1	-	1 U	10 U	0.53	0.63 J	-	-	0.24 U	0.71 U	-	14.9	6.6	-	550	-	-	-
	5/18/00	9	-	-	-	0.6	0.9	-	-	0.25 U	0.5 U	-	15	7.0	-	810	-	-	-
	3/19/01	8.7	-	-	-	0.7	1.3	-	-	0.25 U	0.5 U	-	-	-	-	-	-	-	-
	3/25/02	11.5	-	-	-	0.7	2.4	-	-	0.27	0.5 U	-	12	7.1	-	820	-	0.06	-
	10/16/02	-	-	-	-	-	-	-	-	-	-	-	16.1	6.6	-	580	-	0.14	-
	4/2/03	8.7	-	1 U	1	0.4	0.9	0.26 U	-	0.25 U	0.5 U	4	13.9	6.8	1.51	408	-	29	-
	10/7/03	-	-	-	-	0.2 U	0.6	-	-	-	-	-	14	6.9	-	770	-	0.09	-
	3/31/04	12.0	-	-	-	0.2	0.9	-	-	-	-	48.2	13.5	6.2	0.06	484	-7	30	72.5
	4/13/05	8.7	-	-	-	0.2 U	0.9	-	-	-	-	48.4	14.8	6.4	0.1	480	5	2	34.4
	3/28/06	8.1	-	-	-	0.2 U	0.9	-	-	-	-	46.6	14.2	6.5	0.2	524	9	0	33.5
	3/27/07	8.2	-	-	-	0.2 U	0.7	-	-	-	-	46.2	13.1	5.8	0.02	398	72	0	32.8
	3/27/08	8.1	-	-	-	-	0.63	-	-	-	-	37.6	12.3	6.6	0.67	379	-7	0	-
	3/24/09	8	-	-	-	-	0.54	-	-	-	-	0.999	12.83	5.8	2.2	665	-135	10	40.7
	4/1/10	8.1	-	-	-	0.2 U	0.4	-	-	-	-	49.7	13.1	7.0	<0.01	-	-94	333	69.6
	3/29/11	8.1	-	-	-		0.64	-	-	-	-	50.5	13.2	6.4	<0.01	440	-	10	48.7
	3/22/12	4.7	-	-	-	-	0.3	-	-	-	-	22.6	13.3	6.0	<0.01	441	-113	4.6	13.7
	3/12/13	7	-	0.2	1 U	0.023	0.62	0.2 U	-	0.16	0.2 U	52.5	13.01	9.9	0.01	464.3	3	1.2	48.3
	4/2/14	1.8	-	-	-	-	0.11	-	-	-	-	5.95	12.99	6.1	0.08	95.65	36	18	7
	4/15/15	3.6	-	-	-	-	0.46	-	-	-	-	-	14.4	5.9	0.08	237.5	-117	42.4	-
	3/10/16	0.4	-	-	-	-	0.02 U	-	-	-	-	-	13.13	6.6	6.4	163	71	18.1	-
	4/11/17	4.39	-	-	-	-	0.244	-	-	-	-	-	13.96	5.9	<0.01	374.9	7	3.6	-
	4/17/18	0.884	-	-	-	-	0.0243 J	-	-	-	-	-	13.8	5.7	1.83	37.3	321	10	-
	6/21/19	1.67	-	-	-	-	0.2 U	-	-	-	-	-	18.2	6.5	6.24	59.7	82.6	29.4	-
	8/13/20	7.3	-	-	-	-	0.259	-	-	-	-	-	17	6.2	0.3	544	28	49	-
	10/19/21	4.44	-	-	-	-	0.122	-	-	-	-	-	15.9	6.1	0.46	315	-57	16.7	-
	12/14/22	0.599	0.34	-	-	-	0.0208	-	-	-	-	-	12.3	5.7	1.15	43.9	209.8	5.16	-
	11/1/2023	2.02	1.56	-	-	-	0.0389	-	-	-	-	-	15.5	8.21	0.64	132	-[c]	9	-
LW-09S																			
	3/26/98	21	-	-	-	0.5 U	0.13 U	-	-	0.32	0.71 U	-	-	-	-	-	-	-	-
	10/21/98	17	-	-	-	0.5 U	0.31 J	-	-	0.36	0.47 U	-	-	-	-	-	-	-	-
	3/7/99	10 S	-	-	-	0.5 U	0.039 U	-	-	0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/19/99	18	-	1 U	10 U	0.5 U	0.22 J	-	-	0.56	0.71 U	-	13.6	6.7	-	810	-	-	-
	5/24/00	14	-	-	-	0.2 U	0.2 U	-	-	0.25 U	0.5 U	-	13	7.2	-	860	-	-	-
	3/15/01	19.2	-	-	-	0.2 U	0.2 U	-	-	0.25	0.5 U	-	14	6.3	-	720	-	0.11	-
	3/20/02	19.9	-	-	-	0.2 U	0.2 U	-	-	0.38	0.5 U	-	13	7.4	-	660	-	0.08	-
	10/16/02	-	-	-	-	-	-	-	-	-	-	-	14.1	7.0	-	600	-	0.1	-
	4/4/03	13.4	-	1 U	2	0.2 U	0.2 U	0.15 U	-	0.4	0.5 U	3.8	11.5	7.5	1.12	268	-	16	-
	3/30/04	17.7	-	-	-	-	-	-	-	-	-	61.5	11.1	5.9	0.39	420	-12	49	89.0
	4/12/05	11.6	-	-	-	-	-	-	-	-	-	48.8	11.4	6.6	0.07	418	-37	10	48.4
	3/30/06	8.5	-	-	-	-	-	-	-	-	-	36.2	11.9	6.5	0.3	299	-15	0	43.6
	3/28/07	14.8	-	-	-	-	-	-	-	-	-	61	10.7	6.6	0.03	367	92	46	68.2
	3/25/08	12.8	-	-	-	-	-	-	-	-	-	39	10	6.4	1.08	343	-140	62	-
	3/26/09	13.3	-	-	-	-	-	-	-	-	-	57.5	11.86	6.0	2.4	612	-127	81	46.7
	4/2/10	18.3	-	-	-	-	-	-	-	-	-	65	10.4	7.6	<0.01	361	-124	77	56.4
	3/31/11	17.3	-	-	-	-	-	-	-	-	-	61	10.6	6.4	<0.01	322	-152	10	76 J
	3/23/12	14.1	-	-	-	-	-	-	-	-	-	54	10.5	6.2	<0.01	570	-190	9.2	68.1
	3/15/13	13.6	-	0.1 U	1.8	0.02 U	0.039	0.2 U	-	0.2	0.25	50	11.46	7.5	0.03	360.1	201	42	79.3
	4/2/14	14.6	-	-	-	-	-	-	-	-	-	61	11.03	6.7	0.07	417	-118	33.1	76.5
	4/15/15	19.2	-	-	-	-	-	-	-	-	-	-	11.72	6.5	0.01	410.5	-95	47.3	-
	3/10/16	14.8	-	-	-	-	0.027	-	-	-	-	-	11.59	6.4	<0.01	421.6	-74	27.6	-
	4/11/17	15.3	-	-	-	-	-	-	-	-	-	-	11.45	6.5	<0.01	--	-111	26.8	-
	4/17/18	7.31	-	-	-	-	-	-	-	-	-	-	11.3	6.49	0.16	523	0	57.2	-
	6/20/19	6.1	-	-	-	-	-	-	-	-	-	-	12.4	6.73	0.62	428.7	-81.2	36.5	-
	8/17/20	6.98	-	-	-	-	-	-	-	-	-	-	14.7	6.5	0.47	595	-53.4	4.5	-
	10/19/21	5.83	-	-	-	-	-	-	-	-	-	-	14.2	6.48	0.36	704	-113	1.8	-
	12/14/22	0.956	0.414	-	-	-	-	-	-	-	-	-	11	5.93	1.25	438	161.3	8.3	-
	11/1/2023	5.52	3.15	-	-	-	-	-	-	-	-	-	13	6.14	0.12	543	-55.5	4.81	-
MW-03I																			
	3/27/98	17	-	-	-	0.5 U	0.13 U	-		0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/22/98	15	-	-	-	0.5 U	0.15 J	-	-	0.24 U	0.47 U	-	-	-	-	-	-	-	-
	3/5/99	10	-	-	-	0.5 U	0.039 U	-	-	0.24 U	0.71 U	-	-	-	-	-	-	-	-
	10/20/99	19	-	1 U	10 U	0.5 U	0.14 J	-	-	0.34	0.71 U	-	15.7	7.3	-	430	-	-	-
	5/23/00	14	-	-	-	0.2 U	0.2	-	-	0.25 U	0.5 U	-	13	7.1	-	620	-	-	-
	3/16/01	18	-	-	-	0.2 U	0.3	-	-	0.25 U	0.5 U	-	14	7.1	-	810	-	0.19	-
	3/25/02	19.4	-	-	-	0.2 U	0.5	-	-	0.28	0.5 U	-	13	7.4	-	940	-	0.13	-
	10/16/02	-	-	-	-	-	-	-	-	-	-	-	15.4	6.9	-	410	-	0.08	-
	4/1/03	37.4	-	1 U	1	0.2 U	0.2 U	0.15 U	-	0.29	0.5 U	5.5	13.2	6.9	0.86	268	-	35	-
	3/30/04	18.2	-	-	-	0.2 U	0.2 J	-	-	-	-	49.9	13	6.0	0.35	382	-33	19	79.5
	10/20/04	19.4	-	-	-	-	-	-	-	-	-	50.5	15.4	6.4	0.01	404	-26	1	43.5
	4/12/05	14.9	-	-	-	-	-	-	-	-	-	50.5	12.8	6.5	0.16	386	-41	0	35.2
	11/2/05	17.5	-	-	-	-	-	-	-	-	-	49.3	15	6.9	0.36	449	-40	7	30
	3/30/06	12.8	-	-	-	-	-	-	-	-	-	51.5	13.8	6.3	0.14	316	-11	0	51.4
	3/28/07	12.9	-	1 U	1 U	0.2 U	0.2 U	0.1 U	0.25 U	0.25 U	0.5 U	46	12.6	5.7	0.1	339	103	0	47.7
	3/25/08	18.6	-	-	-	-	-	-	-	-	-	37	11.1	6.9	0.8	320	-31	0	-
	3/26/09	13	-	-	-	-	-	-	-	-	-	48	11.94	5.8	2.11	504	-119	12	27.2
	4/2/10	13.8	-	-	-	-	-	-	-	-	-	50	11.5	7.4	0.15	320	-92	33	60.5
	3/31/11	14.9	-	-	-	-	-	-	-	-	-	51	12.2	6.2	0.08	265	-	10	98.8
	3/23/12	14.7	-	-	-	-	-	-	-	-	-	54.5	12	6.0	<0.01	547	-148	3	45.1
	11/15/12	-	-	-	-	-	0.029	-	-	-	-	46.2 J	12.9	6.3	2.29	284	-105	2.6	54
	3/14/13	10.9	-	0.1 U	0.5	0.02 U	0.066	0.2 U	-	0.1 U	0.2 U	52.0	12.35	8.4	<0.01	343	77	7.1	58
	4/2/14	13.2	-	-	-	-	-	-	-	-	-	56.0	12.53	6.5	0.02	407.5	-100	3.9	33.4
	4/15/15	13.5	-	-	-	-	-	-	-	-	-	-	12.6	6.4	0.1	388.6	-85	5.6	-
	3/10/16	16.9	-	-	-	-	0.077	-	-	-	-	-	11.72	6.4	<0.01	385.3	-36	9.2	-
	4/11/17	14.7	-	-	-	-	-	-	-	-	-	-	12.59	6.3	<0.01	[c]	-67	8.1	-
	4/17/18	13.9	-	-	-	-	-	-	-	-	-	-	12.2	6.4	0.14	501	0	30	-
	6/20/19	13.7	-	-	-	-	-	-	-	-	-	-	13.1	6.5	0.26	504	-68.5	23.8	-
	8/13/20	16.3	-	-	-	-	-	-	-	-	-	-	13.9	6.5	0.4	490	32.2	8.7	-
	10/19/21	18.1	-	-	-	-	-	-	-	-	-	-	15.9	6.5	0.27	583	-88	65	-
	12/14/22	18.1	1.01	-	-	-	-	-	-	-	-	-	10.9	6.4	0.55	579	-38.2	11.67	-
	11/1/2023	16.9	0.747	-	-	-	-	-	-	-	-	-	14.7	8.68	0.76	531	-[c]	14	-

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL DATA
PACCAR
RENTON, WASHINGTON

Well	Date	Total Arsenic in µg/L	Diss. Arsenic in µg/L	Total Lead in µg/L	Total Chromium in µg/L	Benzene in µg/L	Vinyl Chloride in µg/L	Total cPAHs[a] in µg/L	PCP * in µg/L	Diesel in mg/L	Heavy Oil in mg/L	Ferrous Iron [b] in mg/L	Temp. in °C	pH	Diss. Oxygen in mg/L	Cond. in µmhos /cm	Redox Potential in Eh	Turbidity in NTU	TSS in mg/L
CUL:		5	5	5	80	5	0.4	0.1		1	1	NE	NE	NE	NE	NE	NE	NE	NE
HSAL:		50	50	50	100	5	2	NE		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Stabilized Cell Wells																			
SC-01S																			
	3/25/98	4.4	-	2.2	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/21/98	3.4	-	1.4	5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/7/99	4.7	-	1 U	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/19/99	5.8	-	1 U	10 U	-	-	-	-	-	-	-	17.2	8.2	-	190	-	-	-
	5/24/00	5	-	1 U	0.5 U	-	-	-	-	-	-	-	13	7.0	-	740	-	-	-
	3/15/01	5.2	-	1 U	0.5 U	-	-	-	-	-	-	-	13	6.8	-	620	-	0.13	-
	3/20/02	5.8	-	1 U	0.5 U	-	-	-	-	-	-	-	12	7.2	-	860	-	0.15	-
	10/16/02	-	-	-	-	-	-	-	-	-	-	-	15.1	7.1	-	610	-	0.11	-
	4/4/03	4.9	-	1 U	0.5 U	-	-	-	-	-	-	0.6	13.8	8.1	2.6	107	-	26	-
	4/1/04	5.4	-	-	-	-	-	-	-	-	-	0.043	12.4	8.2	0.19	119	162	13	4.9
	4/12/05	5.1	-	-	-	-	-	-	-	-	-	0.04 U	12.7	8.0	0.15	123	-42	1	1.9
	3/29/06	4.7	-	-	-	-	-	-	-	-	-	0.04 U	12.8	7.7	0.32	97	-49	0	1.8
	3/29/07	4.6	-	-	-	-	-	-	-	-	-	0.04 U	12.9	7.1	0.2	118	93	0	2.9
	3/13/13	4.6	-	0.1 U	1 U	-	-	-	-	-	-	0.046	11.72	8.7	0.09	105.7	70	9.3	3.3
	6/20/19	-	-	-	-	-	0.2 U	-	-	-	-	-	16.2	7.9	9.64	131.6	166.3	3	-
	8/13/20	5.15	-	-	-	-	-	-	-	-	-	-	16.2	7.86	9.64	131.6	166	3	-
SC-02S																			
	3/26/98	4.5	-	1 U	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/21/98	4	-	1 U	5 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/7/99	2.6	-	1 U	10 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/19/99	4.7	-	1 U	10 U	-	-	-	-	-	-	-	16.5	-	-	-	-	-	-
	5/24/00	4	-	1 U	2 U	-	-	-	-	-	-	-	14	7.1	-	610	-	-	-
	3/15/01	4.1	-	1 U	2	-	-	-	-	-	-	-	13	6.3	-	810	-	0.17	-
	3/20/02	5.7	-	1 U	3.9	-	-	-	-	-	-	-	12	6.7	-	790	-	0.13	-
	10/16/02	-	-	-	-	-	-	-	-	-	-	-	13.4	6.5	-	560	-	0.09	-
	4/4/03	3.2	-	1 U	2	-	-	-	-	-	-	4.2	13	7.3	1.04	340	-	21	-
	4/1/04	4.9	-	-	-	-	-	-	-	-	-	36.5	12.7	6.2	0.03	386	66	18	23.2
	3/13/13	3.3	-	0.1 U	2	-	-	-	-	-	-	34.8	12.85	8.6	0.05	361	115	22.5	1.4
	6/21/19	-	-	-	-	-	0.2 U	-	-	-	-	-	13.5	6.2	0.67	476.7	-103	9.4	-
	8/13/20	3.65	-	-	-	-	-	-	-	-	-	-	13.5	6.15	0.67	476.7	-103	9.4	-

Notes:

[a] cPAHs are benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene (WAC 173-340-200). Total cPAH values presented are based on toxicity equivalency quotient (TEQ) calculation.

[b] Ferrous iron collected in October 2002 and April 2003 were field measurements using HACH kit. Other samples were analyzed in the laboratory using EPA Method SM 3500.

[c] Instrument error - no data.

< Not detected at indicated value.

- = Sample not analyzed for specific analyte.

** PCP = Pentachlorophenol.*

µg/L = micrograms per liter

µmhos/cm = micromhos per centimeter

°C = degrees Celcius

CUL = Cleanup level.

Eh = redox potential

HSAL: Hot spot action level.

mg/L = milligrams per liter

NE = Not established.

NTU = nephelometric turbidity unit

U = Not detected at the detection limit noted.

J = Estimated value.

TSS = total suspended solids

TABLE 4

ANALYTICAL RESULTS FOR PURGE WATER

PACCAR

RENTON, WASHINGTON

Sample ID	KW Tank	
Sampling Date	**11/1/2023**	
Total Metals in µg/L		
Arsenic	**6.8**	
Chromium	1.3	U
Lead	**1.18**	
Dissolved Metals in µg/L		
Arsenic	**1.11**	
Chromium	2.5	U
Lead	0.1	U
TPH in mg/L		
Diesel Range Organics	0.1	U
Motor Oil	0.2	U
Volatiles in µg/L		
1,1,1,2-Tetrachloroethane	0.09	U
1,1,1-Trichloroethane	0.08	U
1,1,2,2-Tetrachloroethane	0.03	U
1,1,2-Trichloroethane	0.1	U
1,1-Dichloroethane	0.04	U
1,1-Dichloroethene	0.08	U
1,1-Dichloropropene	0.09	U
1,2,3-Trichlorobenzene	0.25	U
1,2,3-Trichloropropane	0.16	U
1,2,4-Trichlorobenzene	0.21	U
1,2,4-Trimethylbenzene	0.05	U
1,2-Dibromo-3-Chloropropane	0.39	U
1,2-Dichlorobenzene	0.08	U
1,2-Dichloroethane	0.08	U
1,2-Dichloropropane	0.07	U
1,3,5-Trimethylbenzene	0.07	U
1,3-Dichlorobenzene	0.08	U
1,3-Dichloropropane	0.07	U
1,4-Dichlorobenzene	0.1	U
2,2-Dichloropropane	0.11	U
2-Chloroethyl vinyl ether	0.55	U
2-Chlorotoluene	0.06	U
2-Hexanone	2.06	U
2-Pentanone	0.06	U
4-Chlorotoluene	0.06	U
4-Isopropyl Toluene	1.9	U
Acetone	4.94	J
Acrolein	2.7	U
Acrylonitrile	0.4	U
Benzene	0.05	U
Bromobenzene	0.07	U
Bromochloromethane	0.09	U
Bromoform	0.15	U

Sample ID	KW Tank	
Sampling Date	**11/1/2023**	
Volatiles in µg/L		
Bromomethane	0.23	U
Carbon Disulfide	0.06	U
Carbon Tetrachloride	0.09	U
Trichlorofluoromethane (CFC-11)	0.13	U
Trifluorotrichloroethane (Freon 113)	0.11	U
Chlorobenzene	0.06	U
Chlorobromomethane	0.09	U
Chloroethane	0.05	U
Chloroform (Trichloromethane)	0.05	U
Chloromethane (Methyl Chloride)	0.27	U
cis-1,2-Dichloroethene	0.08	U
cis-1,3-Dichloropropene	0.09	U
Dibromomethane	0.06	U
Cymene (p-Isopropyltoluene)	0.08	U
Dichlorodifluoromethane (CFC-12)	0.13	U
Ethylbenzene	0.05	U
1,2-Dibromoethane (Ethylene Dibromide)	0.09	U
Hexachlorobutadiene	1	U
Iodomethane	0.15	U
Isopropylbenzene (Cumene)	0.07	U
m,p-Xylenes	0.14	U
2-Butanone (Methyl Ethyl Ketone)	1.77	U
Methyl propyl ketone	2.34	U
Methyl Tert Butyl Ether (MTBE)	0.14	U
Methylene chloride (Dichloromethane)	0.53	U
Naphthalene	0.27	U
n-Butylbenzene	0.18	U
n-Propylbenzene	0.07	U
o-Xylene	0.08	U
Dibromochloromethane	0.09	U
Styrene	0.09	U
tert-Butylbenzene	0.07	U
Tetrachloroethene	0.09	U
Toluene	0.05	U
Xylene (Total)	0.22	U
trans-1,2-Dichloroethene	0.07	U
trans-1,3-Dichloropropene	0.09	U
trans-1,4-Dichloro-2-butene	0.6	U
Trichloroethene	0.07	U
Vinyl acetate	0.12	U
Vinyl chloride	0.08	U

Notes:

µg/L = micrograms per liter

mg/L = milligrams per liter

U = Not detected.

J = Estimated value.

TABLE 5
SURFACE WATER ANALYTICAL SUMMARY
PACCAR
RENTON, WASHINGTON

Analyte in µg/L	Date	SW-3	SW-3D	SW-5	SW-6	SW-6D	SW-DP	SW-MH	SW-MHD
Copper	3/1/1990	5							
Copper	11/1/1990	13							
Copper	4/1/1991	10							
Copper	10/1/1991	24							
Copper	3/1/1992	16							
Copper	10/1/1992	40							
Copper	3/1/1993	12							
Copper	10/1/1993	12							
Copper	2/1/1994	12							
Copper	10/21/1994	26		24			24	39	
Copper	3/8/1995	10		10	11		10	18	
Copper	10/20/1995	12		46			7	15	
Copper	10/18/1996	7		11	37		7	32	
Copper	10/28/1997	7.8		20	7.8		8.4	34	
Copper	3/23/1998	6.5		4.7	9.8	7.5	18	31	
Copper	10/28/1998	5.2		84	86		8.2	12	11
Copper	3/3/1999	6.2		2.7	12		7.6	11	11
Copper	10/29/1999	2.4		3.7	5.7		19	7.4	
Copper	5/26/2000	4.4		3	2.9		4.6	27.4	26.4
Copper	10/16/2000	44.6	43	9.9	5.8		52.1	14.2	
Copper	3/13/2001	9		7.1	6.6		10.6	25.2	24.5
Copper	10/30/2001	11.7	11.5	6.2	11.6		14.1	111	
Copper	3/28/2002	12.2		5.8	10		22.1	108	118
Copper	11/6/2002	33.7		5.2	16.5		46.5	135	140
Copper	4/7/2003	30.7		5.7	10.6		16.6	85	77.2
Copper	10/8/2003	25.9		9.5	53.9		6.3	205	201
Copper	3/30/2004	11.4		5.4	3.5		4.4	137	135
Copper	11/2/2004	2.4		3.6	5.4		4.2	64.3	64.5
Copper	4/7/2005	4.3		3.3	5.6		5.1	71.7	72.5
Copper	11/1/2005	2.6		3.9	5.8		3.2	73.9	76.2
Copper	3/28/2006	3.5		4.4	4.5		4.6	89.8	95.1
Copper	10/19/2006	4.2		5.7	3.6		4	146	138
Copper	3/22/2007	4.1		3.9	4		2.6	163	170
Copper	10/25/2007	2.4		3.1	5.4		1.9	109	170
Copper	3/26/2008	2.3		3.2	4.8		1.2	67.3	65
Copper	3/25/2009	2.4		4.7	3.5		1.5	61	61.9
Copper	10/15/2009	2.6 J		3.2	3.6		3	72	61.9
Copper	3/31/2010	3		6.6	4.8		1.4	33.4	33.8
Copper	10/22/2010	0.9		1.5	3.6		0.9	20.3	19.9
Copper	3/28/2011	4.4		2.8	3.3		1.5	20	19.9
Copper	10/28/2011	5.3		2.9	2.8		1.8	43	45.8
Copper	3/21/2012	2.3		3.6	3.3		2.3	32	32
Copper	11/13/2012	3.4		5.3	4.4		2.4	59.4	59.1
Copper	3/11/2013	1.4		2.1	4.2		2.3	42.4	42.2
Copper	3/28/2014	2		2.4	10.1		2.7	34.1	34.4
Copper	4/13/2015	8.9	8.9	9.1	3.5		1.7	22.2	
Copper	3/10/2016	1		11.4	7.7		1.1	40.1	39.5
Copper	4/11/2017	2.98		2.52	6.87		1.37	28	
Copper	4/18/2018	1.84		2.79	4.31		1.71	3.14	
Copper	6/20/2019	2.47		5.28	3.75		2.73	44.7	
Copper	9/24/2020	12.6		3.74	5.25		12.3	36.9	
Copper	10/21/2021	1.82		2.15	2.5		5.4	51.7	53
Copper	12/13/2022	2.66		3.09	3.7		2.39	78	82.4
Copper	10/25/2023	2.16		2.69	17		2.36	70.7	70.8

TABLE 5
SURFACE WATER ANALYTICAL SUMMARY
PACCAR
RENTON, WASHINGTON

Analyte in µg/L	Date	SW-3	SW-3D	SW-5	SW-6	SW-6D	SW-DP	SW-MH	SW-MHD
Statistics from 1998 to current:									
Mean		7.346		6.547	9.305		7.694	62.181	72.645
Median		3.450		3.820	5.025		3.100	48.200	61.900
Std Dev		9.691		12.765	14.971		11.127	46.887	50.575
GeoMean		4.384		4.412	6.076		4.169	45.187	56.329
Count		40		40	40		40	40	31
Min		0.9		1.5	2.5		0.9	3.14	11
Max		44.6		84	86		52.1	205	201
# Greater Benchmark (14 µg/L)		4		1	4		7	36	29
# Greater CUL (7 µg/L)		10		6	11		11	39	31
Hexavalent Chromium	3/1/1990	1 U							
Hexavalent Chromium	11/1/1990	5							
Hexavalent Chromium	4/1/1991	5 U							
Hexavalent Chromium	10/1/1991	10							
Hexavalent Chromium	3/1/1992	12							
Hexavalent Chromium	10/1/1992	20							
Hexavalent Chromium	3/1/1993	10 U							
Hexavalent Chromium	10/1/1993	10 U							
Hexavalent Chromium	2/1/1994	10 U							
Hexavalent Chromium	10/21/1994	10 U		10 U			10 U	10 U	
Hexavalent Chromium	3/8/1995	10 U		10 U			10 U	13	
Hexavalent Chromium	10/20/1995	5 U		18	10 U		5 U	7.4	
Hexavalent Chromium	10/18/1996	5 U		6.4	16		5 U	11	
Hexavalent Chromium	10/28/1997	9.4		8.5	13		9.8	8	
Hexavalent Chromium	3/23/1998	10 U		10 U	10 U	0.01 U	10 U	10 U	
Hexavalent Chromium	10/28/1998	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	3/3/1999	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	10/29/1999	10 U		10 U	10 U		10 U	10 U	
Hexavalent Chromium	5/26/2000	20 U		20 U	10 U		20 U	60 U	60 U
Hexavalent Chromium	10/16/2000	110 U	110 U	10 U	10 U		230 U	10 U	
Hexavalent Chromium	3/13/2001	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	10/30/2001	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	
Hexavalent Chromium	3/28/2002	5 U		5 U	5 U		14	5 U	5 U
Hexavalent Chromium	11/6/2002	60 U		10 U	10 U		60 U	10 U	10 U
Hexavalent Chromium	4/7/2003	11 U		11 U	11 U		11 U	11 U	11 U
Hexavalent Chromium	10/8/2003	11 U		11 U	11 U		11 U	11 U	11 U
Hexavalent Chromium	3/30/2004	11 U		11 U	11 U		11 U	11 U	11 U
Hexavalent Chromium	11/2/2004	11 U		11 U	11 U		11 U	11 U	11 U
Hexavalent Chromium	4/7/2005	0.6		0.6	0.5		0.8	4.9	3.7 U
Hexavalent Chromium	11/1/2005	11 U		11 U	11 U		11 U	11 U	11 U
Hexavalent Chromium	3/28/2006	11 U		11 U	11 U		11 U	19	11 U
Hexavalent Chromium	10/19/2006	11 U		11 U	11 U		11 U	26	17
Hexavalent Chromium	3/22/2007	11 U		11 U	11 U		11 U	11 U	12
Hexavalent Chromium	10/25/2007	11 U		11 U	11 U		11 U	11 U	11 U
Hexavalent Chromium	3/26/2008	12 U		12 U	12 U		12 U	12 U	12 U
Hexavalent Chromium	3/25/2009	10 UJ		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	10/15/2009	10 UJ		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	3/31/2010	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	10/22/2010	10 UJ		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	3/28/2011	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	10/28/2011	10 UJ		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	3/21/2012	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	11/13/2012	10 UJ		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	3/11/2013	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	3/28/2014	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	4/13/2015	10 U	10 U	10 U	10 U		10 U	10 U	
Hexavalent Chromium	3/10/2016	10 U		10 U	10 U		10 U	10 U	10 U
Hexavalent Chromium	10/21/2021	13 U		13 U	13 U		13 U	13 U	13 U
Hexavalent Chromium	12/13/2022	13 U		13 U	13 U		13 U	13 U	13 U
Hexavalent Chromium	10/25/2023	13 UJ		13 UJ	13 UJ		13 UJ	13 UJ	13 UJ

TABLE 5
SURFACE WATER ANALYTICAL SUMMARY
PACCAR
RENTON, WASHINGTON

Analyte in µg/L	Date	SW-3	SW-3D	SW-5	SW-6	SW-6D	SW-DP	SW-MH	SW-MHD
Statistics from 1998 to current:									
Mean		14.323		10.156	9.875		17.911	12.025	12.119
Std Dev		18.655		3.173	2.697		37.412	9.068	9.159
GeoMean		9.022		8.031	7.838		9.552	9.127	10.824
Count		36		36	36		36	36	31
Min		0.01		0.01	0.01		0.01	0.01	3.7
Max		110		20	13		230	60	60
# Greater CUL (11 µg/L)		7		5	4		8	7	7
Lead	3/1/1990	5 U							
Lead	11/1/1990	13							
Lead	4/1/1991	1.6							
Lead	10/1/1991	35							
Lead	3/1/1992	1 U							
Lead	10/1/1992	50							
Lead	3/1/1993	6.7							
Lead	10/1/1993	3 U							
Lead	2/1/1994	13							
Lead	10/21/1994	3 U		3 U				10	
Lead	3/8/1995	4.1		8.1	8.6		3 U	20	
Lead	10/20/1995	10		51			3 U	9.3	
Lead	10/18/1996	5.7		6.1	54		1.1	70	
Lead	10/28/1997	3.8		15	5.2		2.9	11	
Lead	3/23/1998	5.2		2	3.3	3.3	2.7	33	
Lead	10/28/1998	1.5		1.6	1.9		1.9	5.9	5.5
Lead	3/3/1999	3.8		1 U	16		2.7	6.7	6.1
Lead	10/29/1999	1.5		1 U	1.1		4	1 U	
Lead	5/26/2000	3		2	1 U		7	12	11
Lead	10/16/2000	10	9	14	7		17	10	
Lead	3/13/2001	3		1	1 U		2	24	26
Lead	10/30/2001	4	3	5	3		7	10	
Lead	3/28/2002	4		4	7		3	12	11
Lead	11/6/2002	4		2	4		6	10	10
Lead	4/7/2003	6		2	2		3	16	15
Lead	10/8/2003	5		5	22		2	7	7
Lead	3/30/2004	1		1 U	1 U		1	9	10
Lead	11/2/2004	1 U		1 U	1 U		1 U	7	7
Lead	4/7/2005	1 U		1 U	1 U		1 U	7	7
Lead	11/1/2005	1		1	1 U		1	7	7
Lead	3/28/2006	1 U		1 U	1 U		1 U	6	6
Lead	10/19/2006	1 U		1 U	1 U		1 U	3	3
Lead	3/22/2007	1 U		1 U	1 U		1 U	8	8
Lead	10/25/2007	1 U		1 U	1		1 U	6	8
Lead	3/26/2008	1 U		1 U	1 U		1 U	4	4
Lead	3/25/2009	1 U		1	1 U		1 U	12	12
Lead	10/15/2009	1 U		1 U	1 U		1 U	2	2
Lead	3/31/2010	1 U		1	1 U		1 U	3	3
Lead	10/22/2010	1 U		1 U	1 U		1 U	1	1
Lead	3/28/2011	1		1 U	1 U		1 U	2	2
Lead	10/28/2011	2.2		4	0.2		0.4	8.2	8.4
Lead	3/21/2012	0.1		0.6	0.1 U		0.7	1.3	1.3
Lead	11/13/2012	0.2		0.5	0.1 U		0.4	1.3	1.2
Lead	3/11/2013	0.1 U		0.3	0.1 U		0.7	0.7	0.7
Lead	3/28/2014	0.5		0.5	3.9		0.5	3.2	3.1
Lead	4/13/2015	1.7	1.8	2.3	0.1 U		0.3	1	
Lead	3/10/2016	0.3		5.2	1.2		0.1 U	4	4.1
Lead	4/11/2017	0.605		0.372	0.917		0.102	2.78	
Lead	4/18/2018	0.075		0.265	0.181		0.085	0.295	
Lead	6/20/2019	1.21		1.52	0.356		0.255	1.05	
Lead	9/24/2020	0.614		0.13	0.284		0.581	3.38	
Lead	10/21/2021	0.072 J		0.551	0.105		0.387	2.08	2.28
Lead	12/13/2022	0.074 J		0.153	0.6 U		0.058	3.36	2.67
Lead	10/25/2023	0.151		0.177	5.49 J		0.166	1.34	1.24

TABLE 5
SURFACE WATER ANALYTICAL SUMMARY
PACCAR
RENTON, WASHINGTON

Analyte in µg/L	Date	SW-3	SW-3D	SW-5	SW-6	SW-6D	SW-DP	SW-MH	SW-MHD
Statistics from 1998 to current:									
Mean		1.823		3.430	2.423		1.926	6.465	6.342
Std Dev		2.054		2.392	4.273		3.000	6.513	5.245
GeoMean		0.964		1.081	1.011		0.931	4.078	4.532
Count		40		40	40		40	40	31
Min		0.072		0.13	0.1		0.058	0.295	0.7
Max		10		14	22		17	33	26
# Greater Benchmark (86.1 µg/L)		0		0	0		0	0	0
# Greater CUL (1 µg/L)		15		13	13		12	35	29
Zinc	3/1/1990	11							
Zinc	11/1/1990	76							
Zinc	4/1/1991	33 J							
Zinc	10/1/1991	89							
Zinc	3/1/1992	170							
Zinc	10/1/1992	29							
Zinc	3/1/1993	81							
Zinc	10/1/1993	140							
Zinc	2/1/1994	66							
Zinc	10/21/1994	34		17			74	95	
Zinc	3/8/1995	80		25			100	140	
Zinc	10/20/1995	50		80	110		59	88	
Zinc	10/18/1996	28		25	61		53	270	
Zinc	10/28/1997	130		87	14		130	270	
Zinc	3/23/1998	59		53	45	57	110	230	
Zinc	10/28/1998	23		23	31		56	230	210
Zinc	3/3/1999	62		20	34		69	150	140
Zinc	10/29/1999	25		81	23		160	140	
Zinc	5/26/2000	64		60	5		75	170	160
Zinc	10/16/2000	115	112	143	23		129	80	
Zinc	3/13/2001	55		71	11		60	142	139
Zinc	10/30/2001	215	198	57	57		102	129	
Zinc	3/28/2002	78		60	40		70	340	380
Zinc	11/6/2002	119		71	37		151	145	145
Zinc	4/7/2003	80		54	41		100	160	130
Zinc	10/8/2003	73		215	122		70	203	202
Zinc	3/30/2004	50		19	4		48	196	201
Zinc	11/2/2004	56		29	5		56	88	86
Zinc	4/7/2005	91		36	10		100	110	120
Zinc	11/1/2005	64		47	11		74	101	103
Zinc	3/28/2006	73		51	6		73	126	141
Zinc	10/19/2006	65		40	11		70	139	129
Zinc	3/22/2007	20		14	10		33	340	380
Zinc	10/25/2007	49		28	8		47	181	380
Zinc	3/26/2008	30		26	6		54	92	90
Zinc	3/25/2009	48		32	20		79	215	250
Zinc	10/15/2009	17		33	4 U		84	192	192
Zinc	3/31/2010	10		15	5		60	169	169
Zinc	10/22/2010	18		8	4 U		20	95	92
Zinc	3/28/2011	111		9	4 U		53	99	98
Zinc	10/28/2011	57		20	4 U		36	134	137
Zinc	3/21/2012	7		18	4 U		142	116	118
Zinc	11/13/2012	21		31	4		113	136	132
Zinc	3/11/2013	5		10	4 U		69	217	214
Zinc	3/28/2014	18		22	17		109	108	106
Zinc	4/13/2015	8	9	50	4 U		40	100	
Zinc	3/10/2016	125		24	10		81	169	164
Zinc	4/11/2017	41		14.4	54.6		73.9	72.5	
Zinc	4/18/2018	12.3		9.72	2.17		65.7	15.1	
Zinc	6/20/2019	72.2		40.1	8.72		34.9	68.5	
Zinc	9/24/2020	131		43	8.68		140	118	
Zinc	10/21/2021	22		16.4	6.72		69.4	99.8	99.6
Zinc	12/13/2022	110		57.9	6 U		120	154	153
Zinc	10/25/2023	52.5		34.2	20.8		49.6	93.8	89.4

TABLE 5
SURFACE WATER ANALYTICAL SUMMARY
PACCAR
RENTON, WASHINGTON

Analyte in µg/L	Date	SW-3	SW-3D	SW-5	SW-6	SW-6D	SW-DP	SW-MH	SW-MHD
Statistics from 1998 to current:									
Mean		58.800		42.143	18.292		78.663	146.593	166.129
Std Dev		43.752		38.002	22.621		34.241	65.754	82.416
GeoMean		42.721		32.060	10.922		71.488	131.605	151.327
Count		40		40	40		40	40	31
Min		5		8	2.17		20	15.1	86
Max		215		215	122		160	340	380
# Greater Benchmark (117 µg/L)		4		2	1		6	25	23
# Greater CUL (47 µg/L)		25		13	3		34	39	31

Notes:

No benchmark value established for hexavalent chromium.

Statistics were calculated starting in 1998, after the remediation was completed in 1997.

= exceeds Benchmark Level.

= exceeds Cleanup Level (CUL).

SW-3D = duplicate sample of SW-3

SW-6D = duplicate sample of SW-6

SW-MHD = duplicate sample of SW-MH.

µg/L = micrograms per liter

U = Not detected.

J = Estimated value.

TABLE 6

GROUNDWATER MONITORING PROGRAM FOR 2024

PACCAR

RENTON, WASHINGTON

	2024	
Well	**VC[a]**	**Arsenic[b]**
Confirmation Lower Sand/Delta Deposits		
CW-1D		X
LW-6D		X
LW-9D	X	X
Confirmation Upper Sand/Aquitard Wells		
CW-1S	X	X
LW-9S		X
MW-3I		X
Stabilized Cell Wells		
SC-1S		
SC-2S		
Quality Control Samples		
	X	X
Purge Water Samples		
	X	X

Notes:

[a] *Vinyl chloride.*

[b] *Arsenic will be analyzed for total (unfiltered) and dissolved (filtered).*

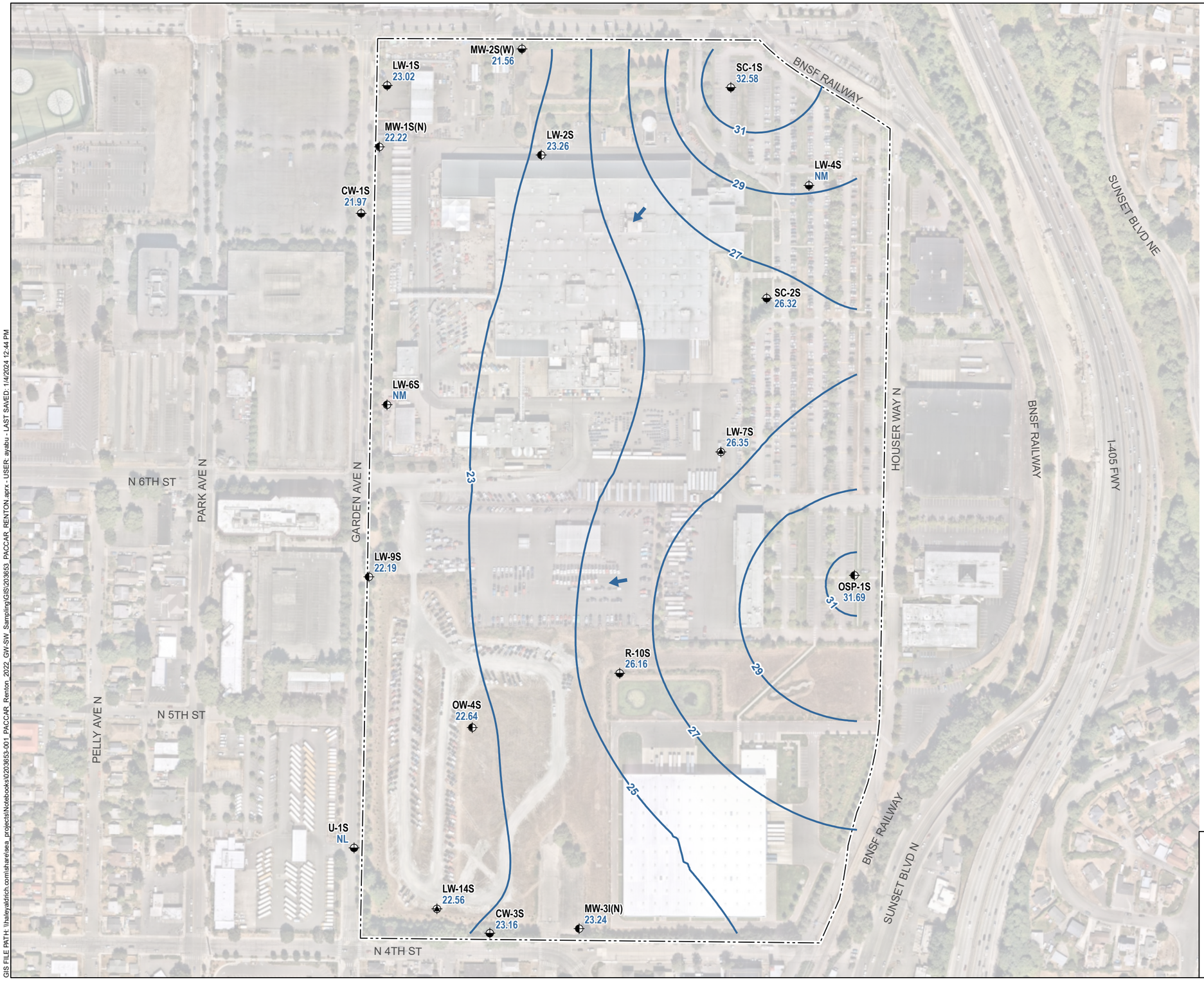
Water elevations will be measured in up to 33 wells.

All wells with samples submitted for laboratory analysis will have the following parameters measured: temperature, pH, conductivity, turbidity, dissolved oxygen, and redox potential.

Purge water samples will be analyzed for VOCs, arsenic, lead, total chromium, diesel, and oil.

SC-1S and SC-2S will be monitoired in 2025.

FIGURES



LEGEND

- GROUNDWATER FLOW DIRECTION
- MONITORING WELL
- PAIRED MONITORING WELL
- PIEZOMETER
- GROUNDWATER ELEVATION CONTOUR, IN FEET
- SITE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS TAKEN NOVEMBER 2023
3. AERIAL IMAGERY SOURCE: NEARMAP, 12 AUGUST 2023

N

0 350 700

SCALE IN FEET

HALEY ALDRICH

PACCAR
RENTON, WASHINGTON

GROUNDWATER ELEVATION CONTOUR MAP SHALLOW WELLS - 2023

JANUARY 2024

FIGURE 1-1

GIS FILE PATH: \\haleyaldrich.com\share\sea_projects\Notebooks\0203653-001_PACCAR_Renton_2022_GW-SW_Sampling\GIS\203653_PACCAR_RENTON.aprx - USER: ayabu - LAST SAVED: 1/4/2024 12:44 PM

LEGEND

- GROUNDWATER FLOW DIRECTION
- MONITORING WELL
- PAIRED MONITORING WELL
- PIEZOMETER
- GROUNDWATER ELEVATION CONTOUR, IN FEET
- SITE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS TAKEN NOVEMBER 2023
3. AERIAL IMAGERY SOURCE: NEARMAP, 12 AUGUST 2023

N

0 350 700

SCALE IN FEET

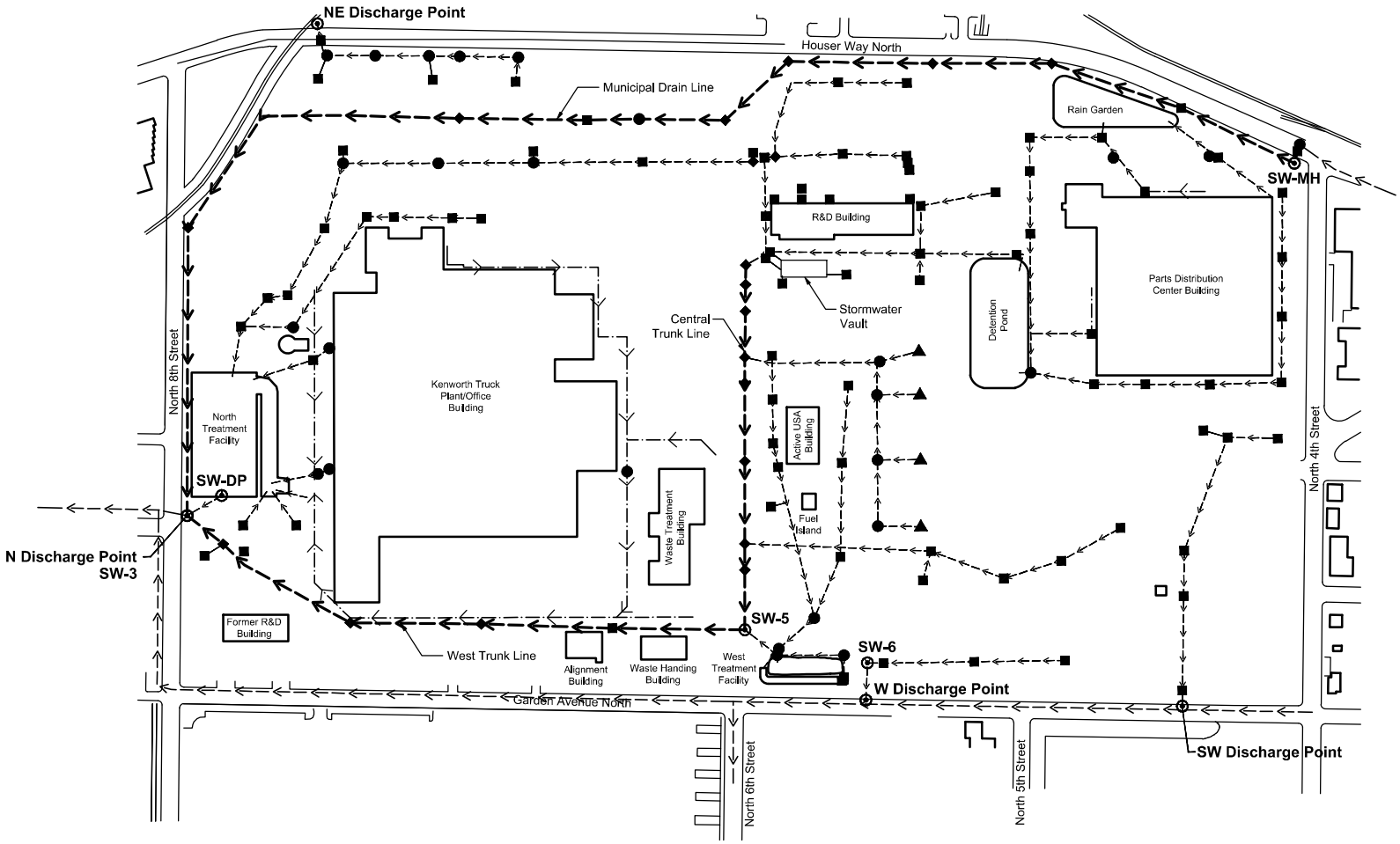
HALEY ALDRICH

PACCAR
RENTON, WASHINGTON

GROUNDWATER ELEVATION CONTOUR MAP LOWER SAND UNIT - 2023

JANUARY 2024

FIGURE 1-2



Legend

- Catch Basin
- Grated Drain
- Manhole and Cleanout
- Square Cover
- SW-MH — Surface Water Sample Location and Number
- On-Site Storm Drain
- On-Site Storm Drain
- Off-Site Storm Drain Flow and Direction
- Perimeter Trench Drainage

Note:
Surface drainage system was modified in 2016 due to construction of the Parts Distribution Center building.

N

0 250 500

Scale in Feet

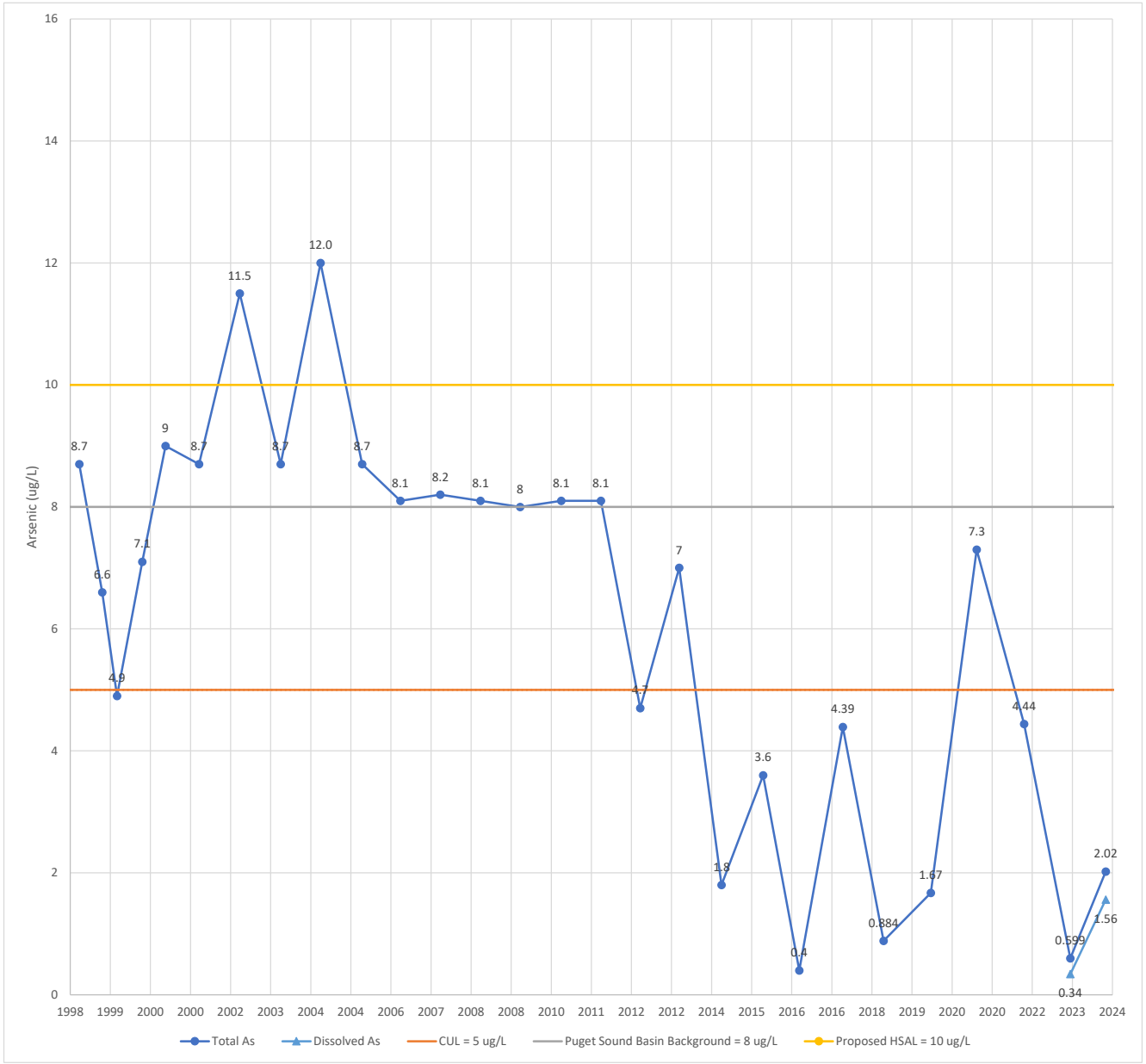
PACCAR
Renton, Washington

Surface Water Sampling Location Plan

1639-76 January 2022

HALEY ALDRICH

Figure **2-1**



PACCAR INC.
RENTON, WASHINGTON

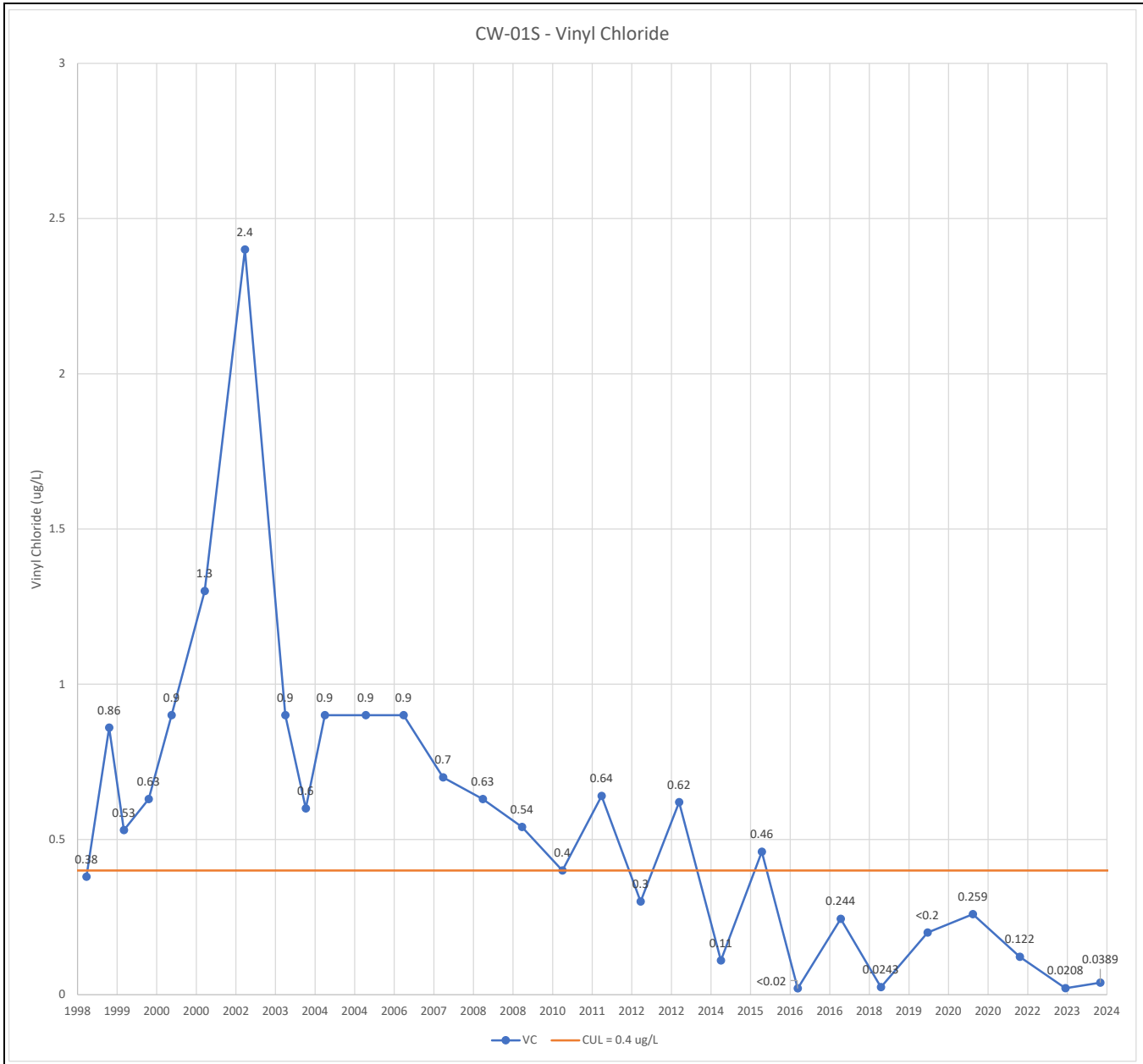
CW-01S - Arsenic

JUNE 2024

HALEY ALDRICH

Figure

3-1



PACCAR INC.
RENTON, WASHINGTON

CW-01S - Vinyl Chloride

JUNE 2024

HALEY ALDRICH

Figure
3-2

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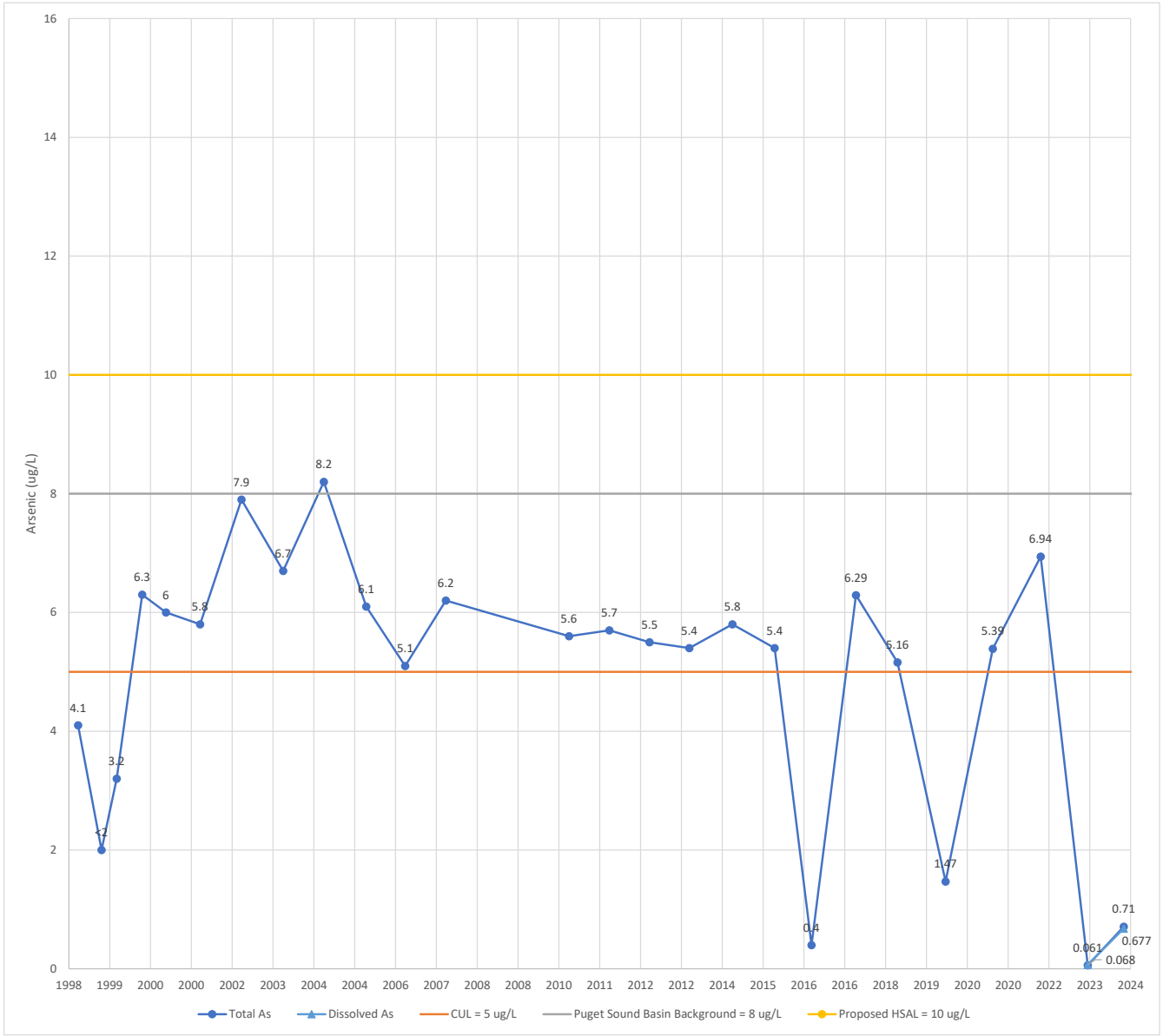

PACCAR INC.
RENTON, WASHINGTON

CW-01D - Arsenic

JUNE 2024

HALEY ALDRICH

Figure

3-3

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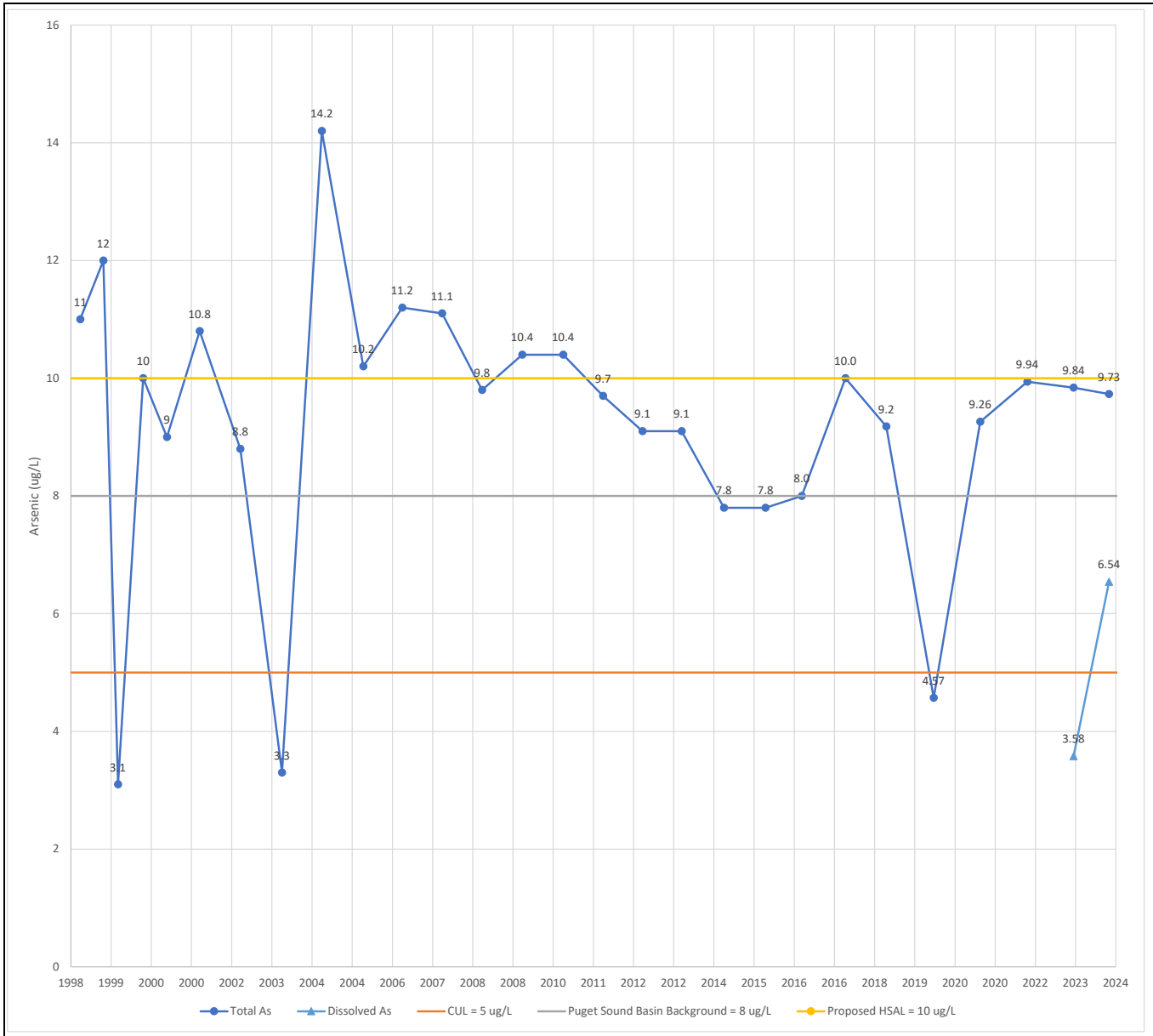

PACCAR INC.
RENTON, WASHINGTON

LW-06D - Arsenic

JUNE 2024

HALEY ALDRICH

Figure

3-4

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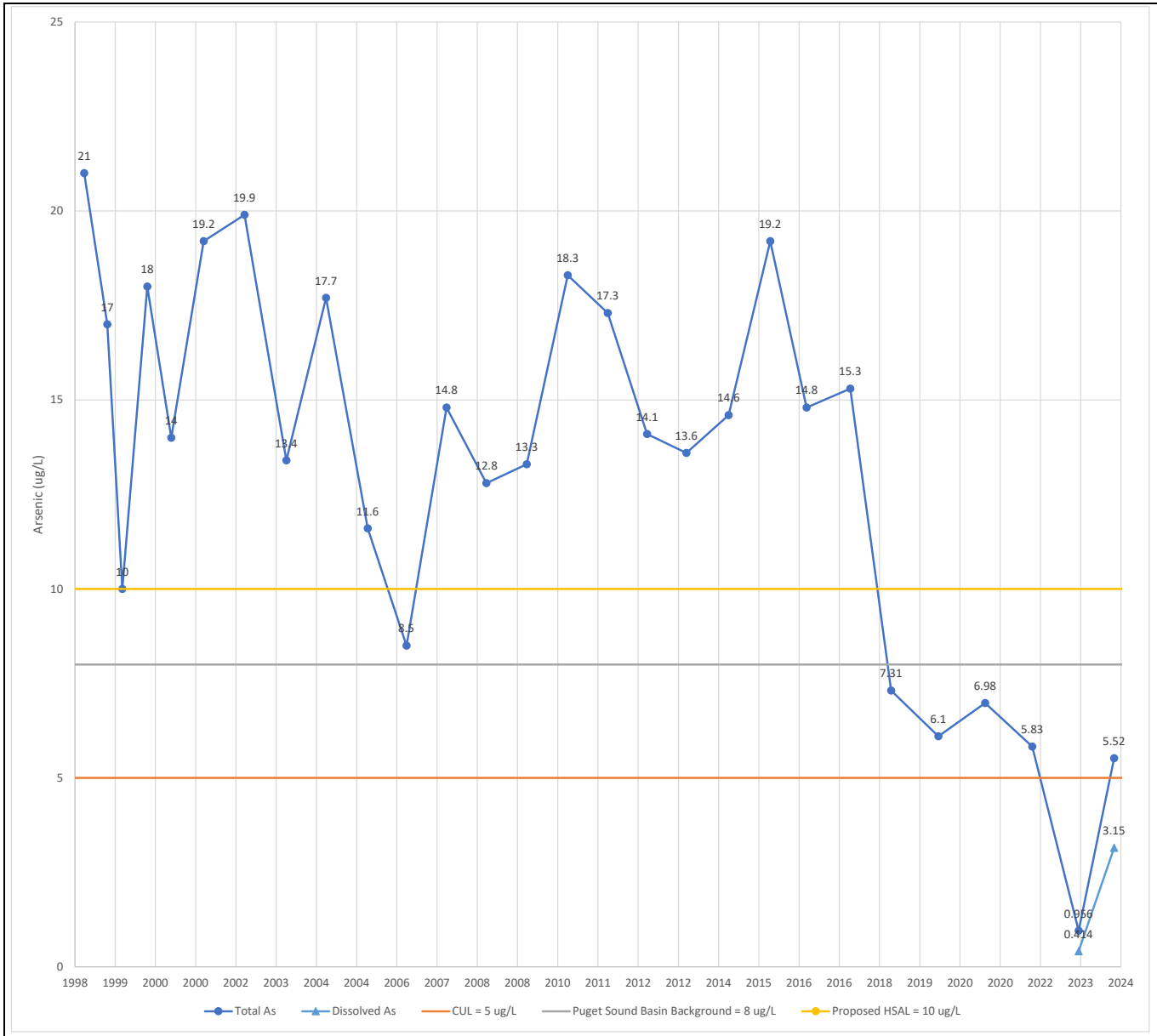


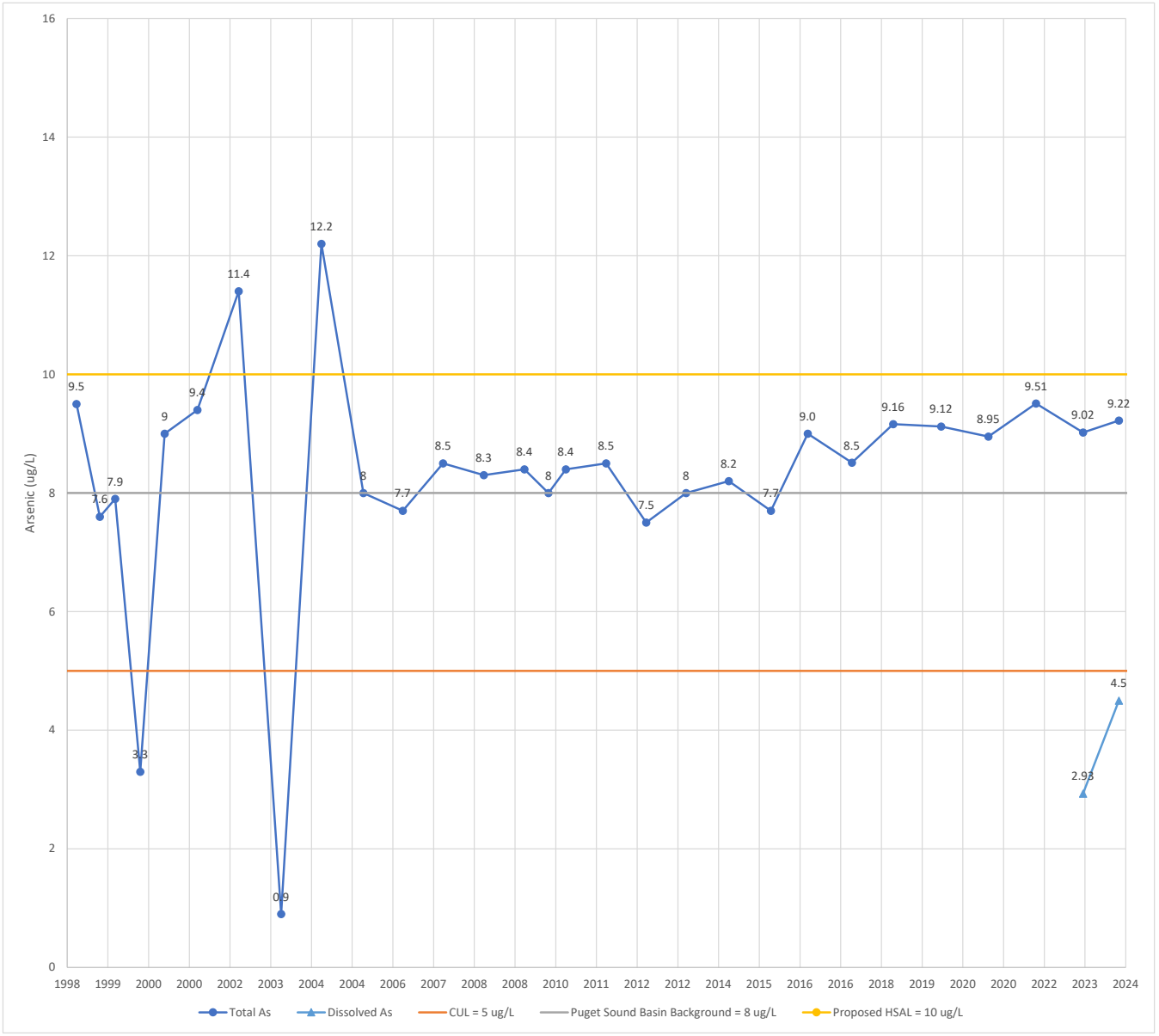
PACCAR INC.
RENTON, WASHINGTON

LW-09S - Arsenic

JUNE 2024

HALEY ALDRICH

Figure
3-5



PACCAR INC.
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LW-09D - Arsenic

JUNE 2024

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Figure

3-6

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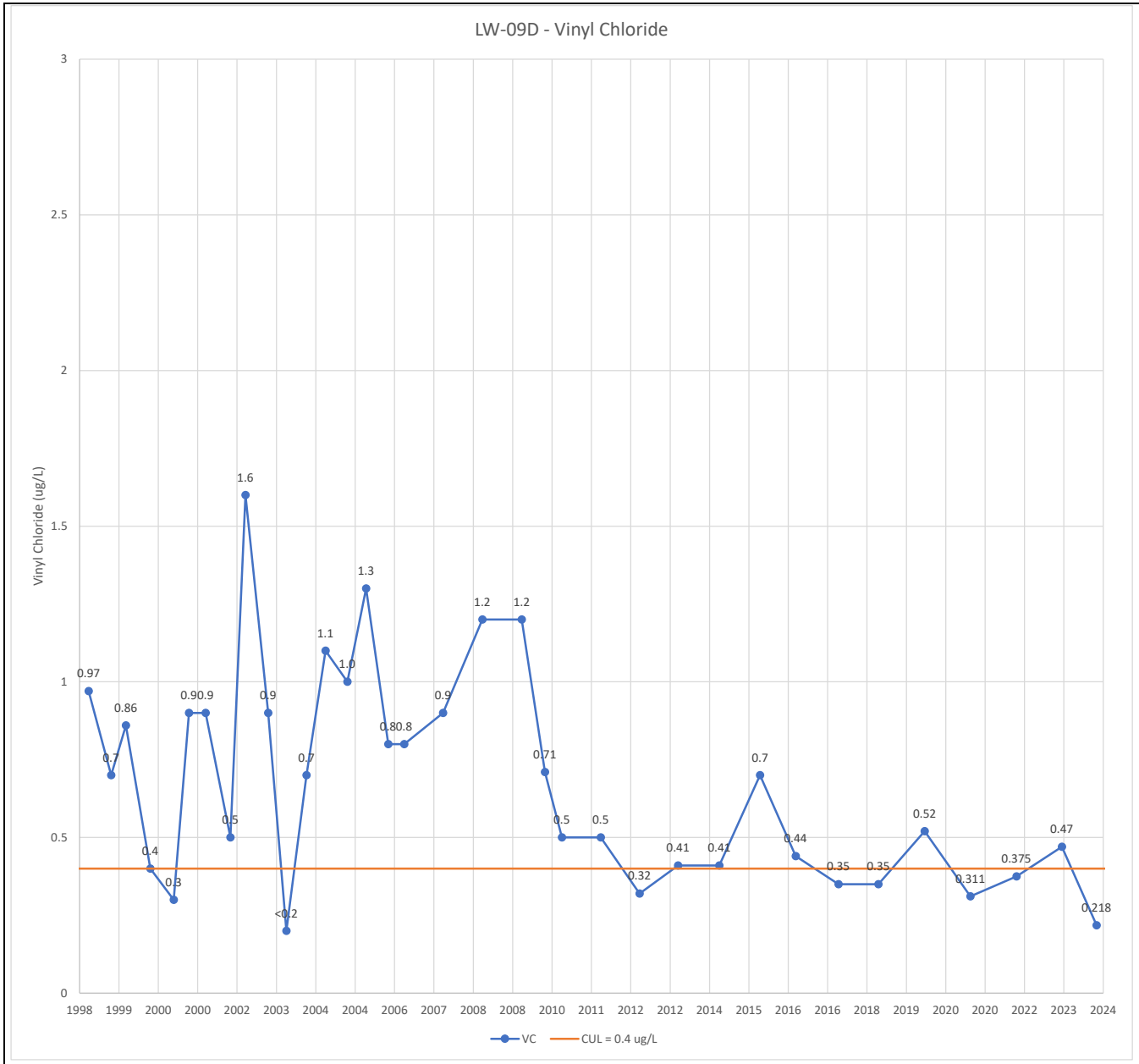

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LW-09D - Vinyl Chloride

JUNE 2024

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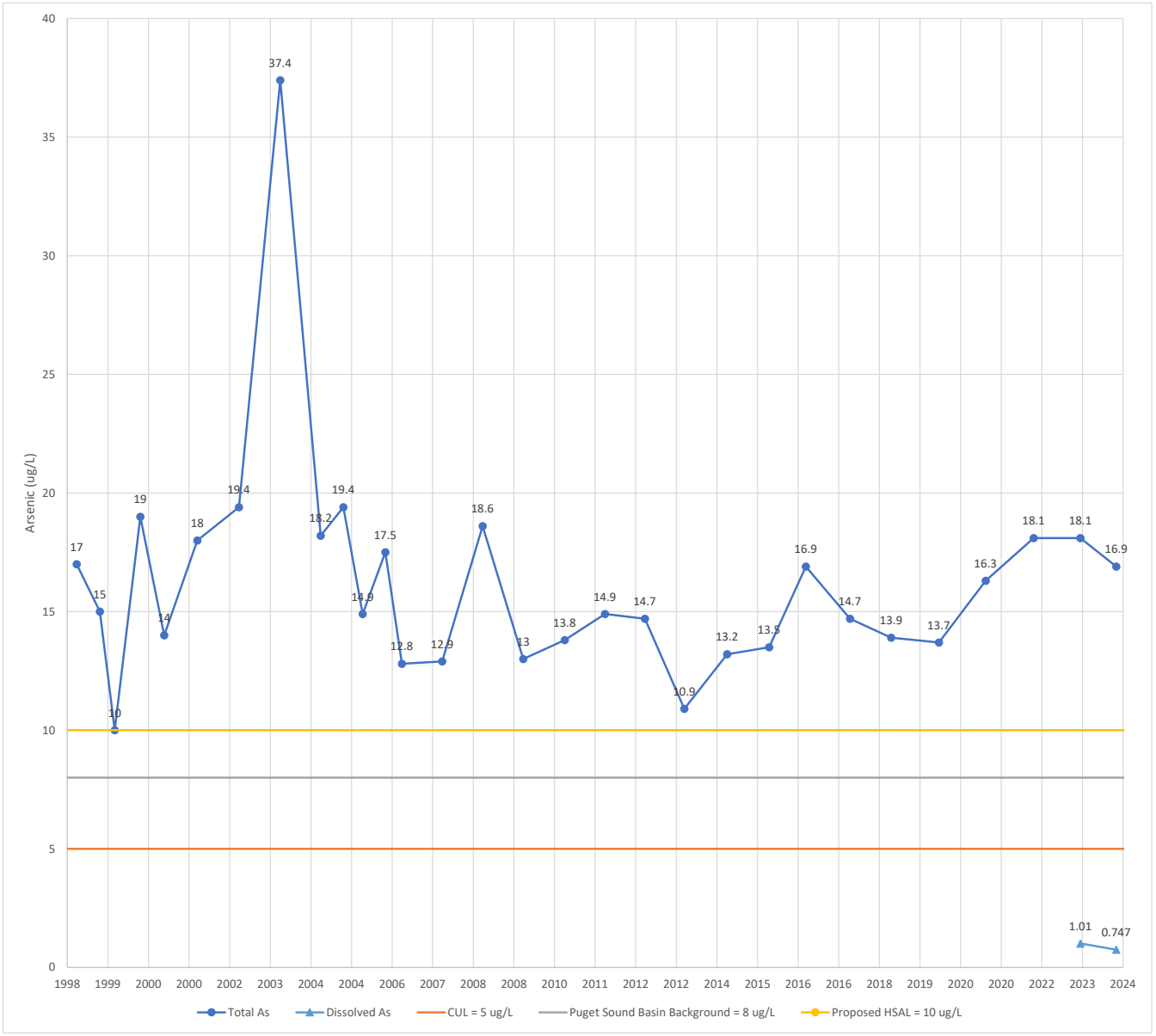
Figure
3-7



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MW-03I - Arsenic

JUNE 2024

HALEY ALDRICH

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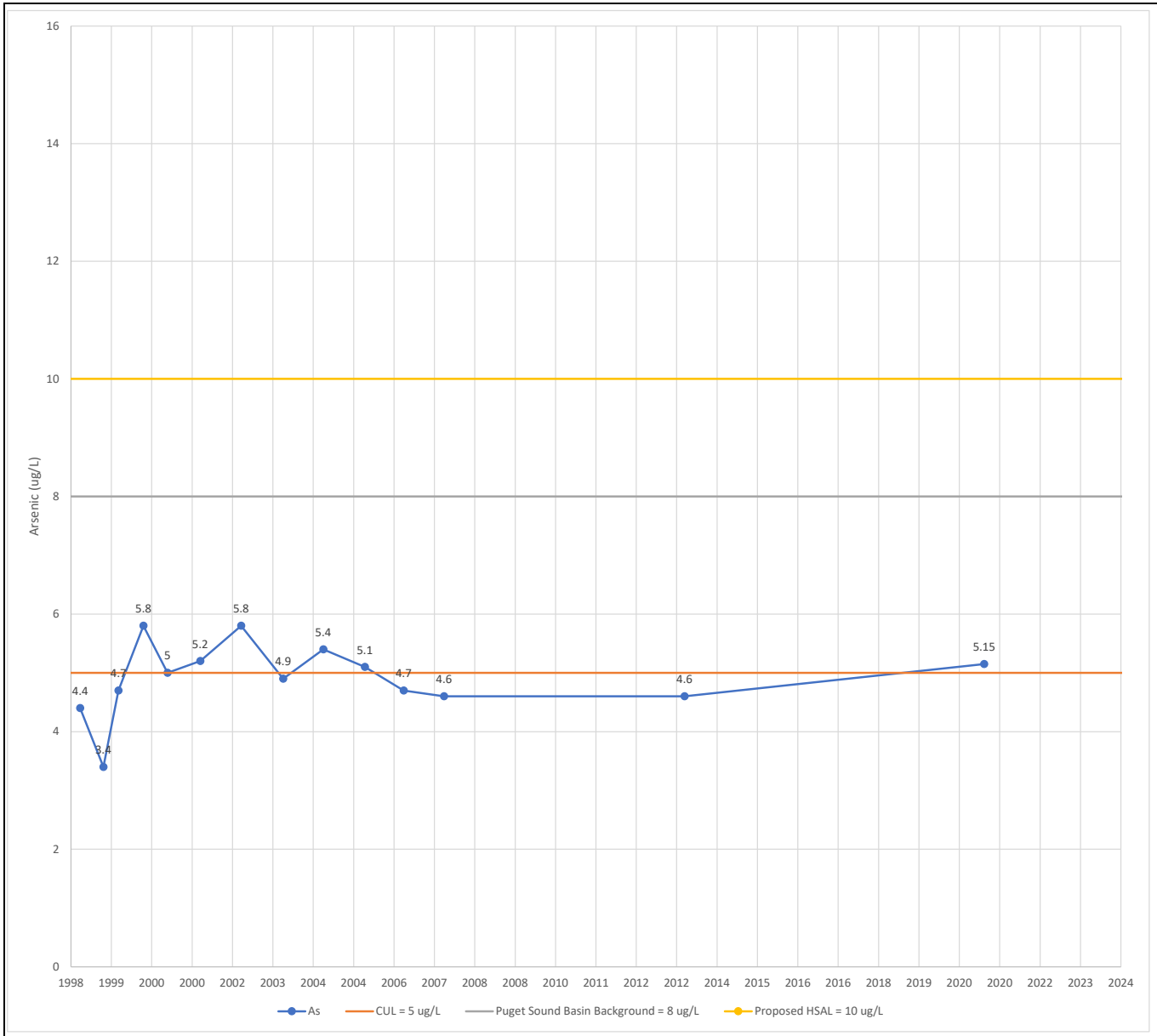

PACCAR INC.
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SC-01S - Arsenic

JUNE 2024

HALEY ALDRICH

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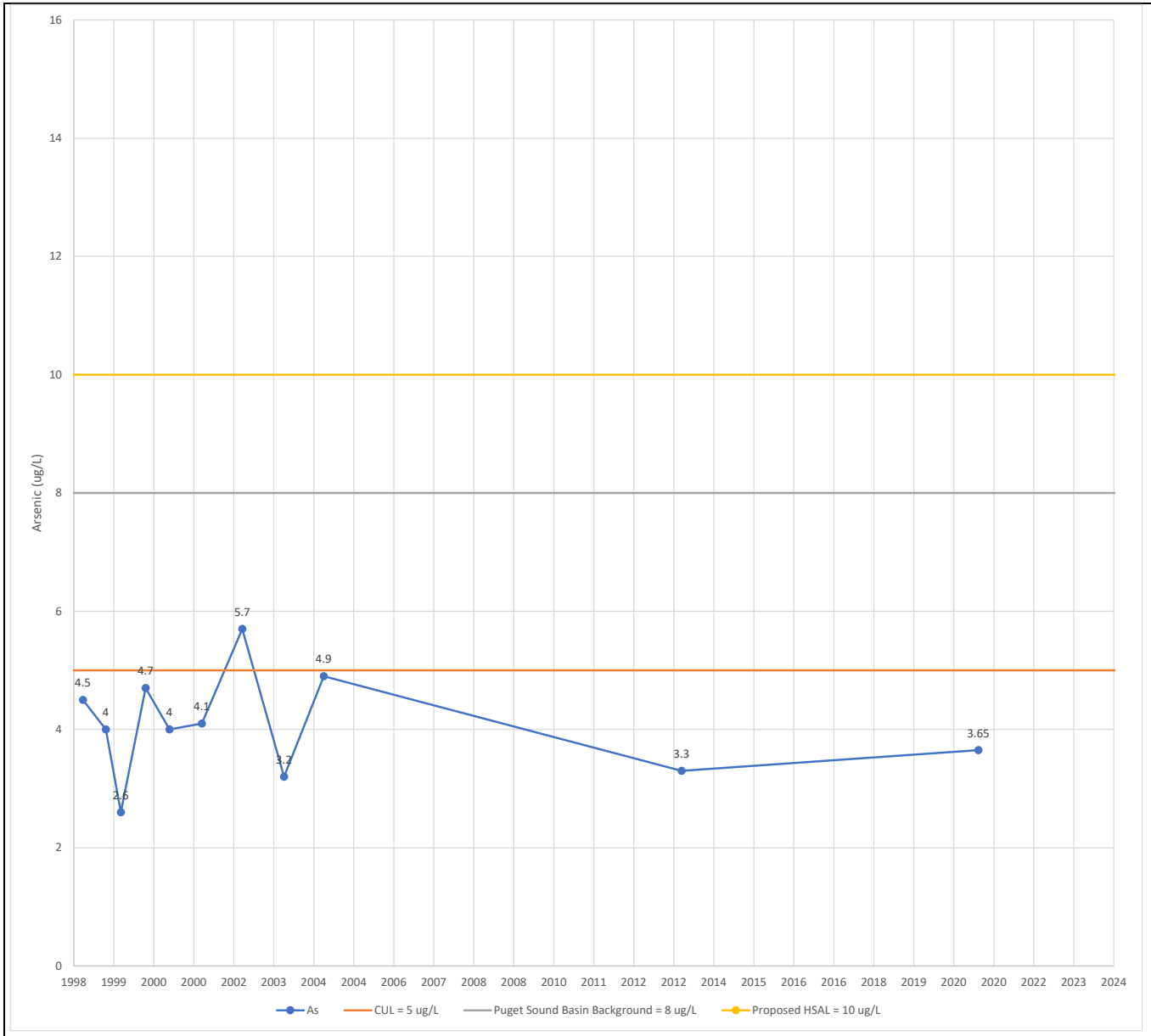

PACCAR INC.
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SC-02S - Arsenic

JUNE 2024

HALEY ALDRICH

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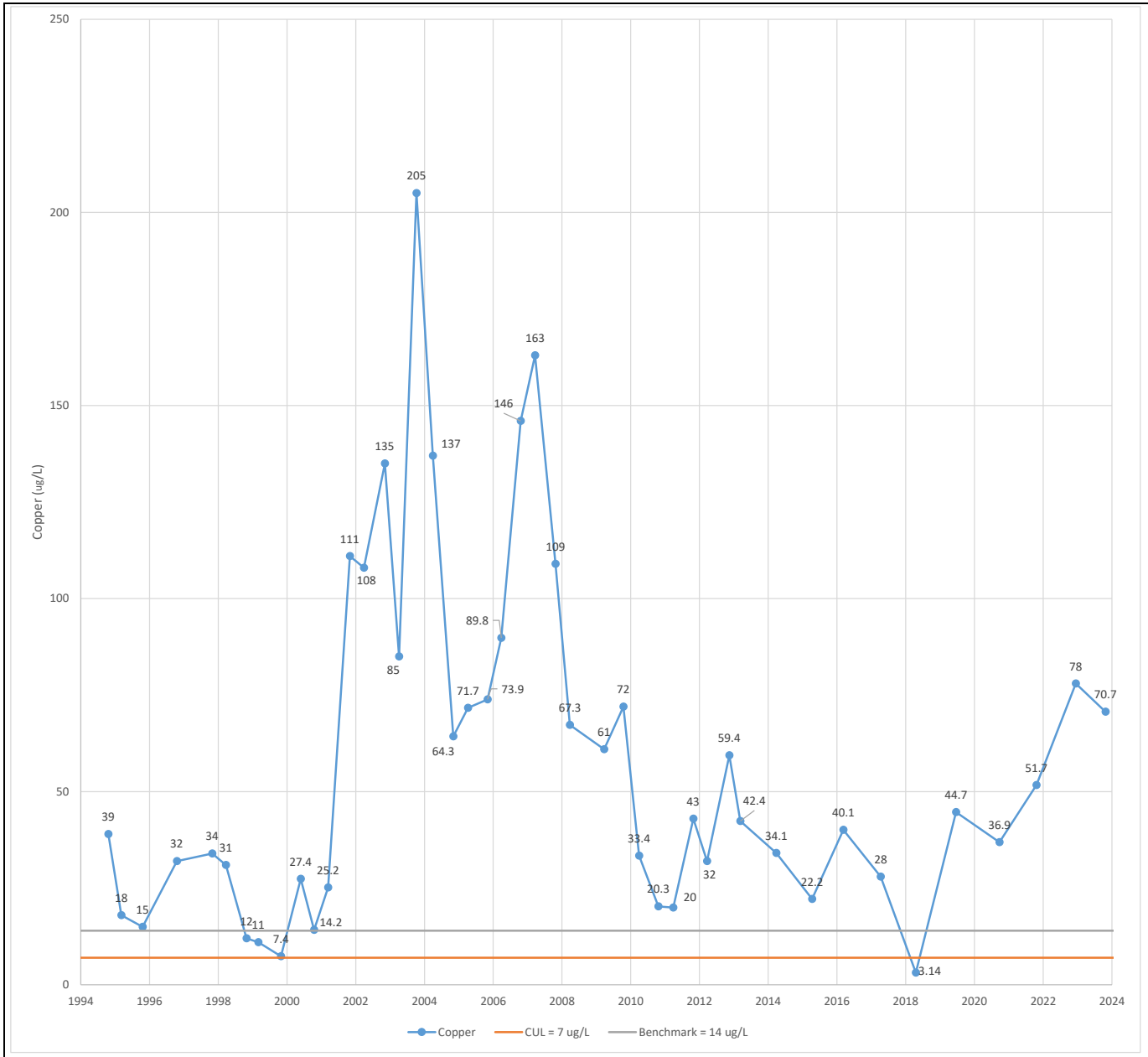

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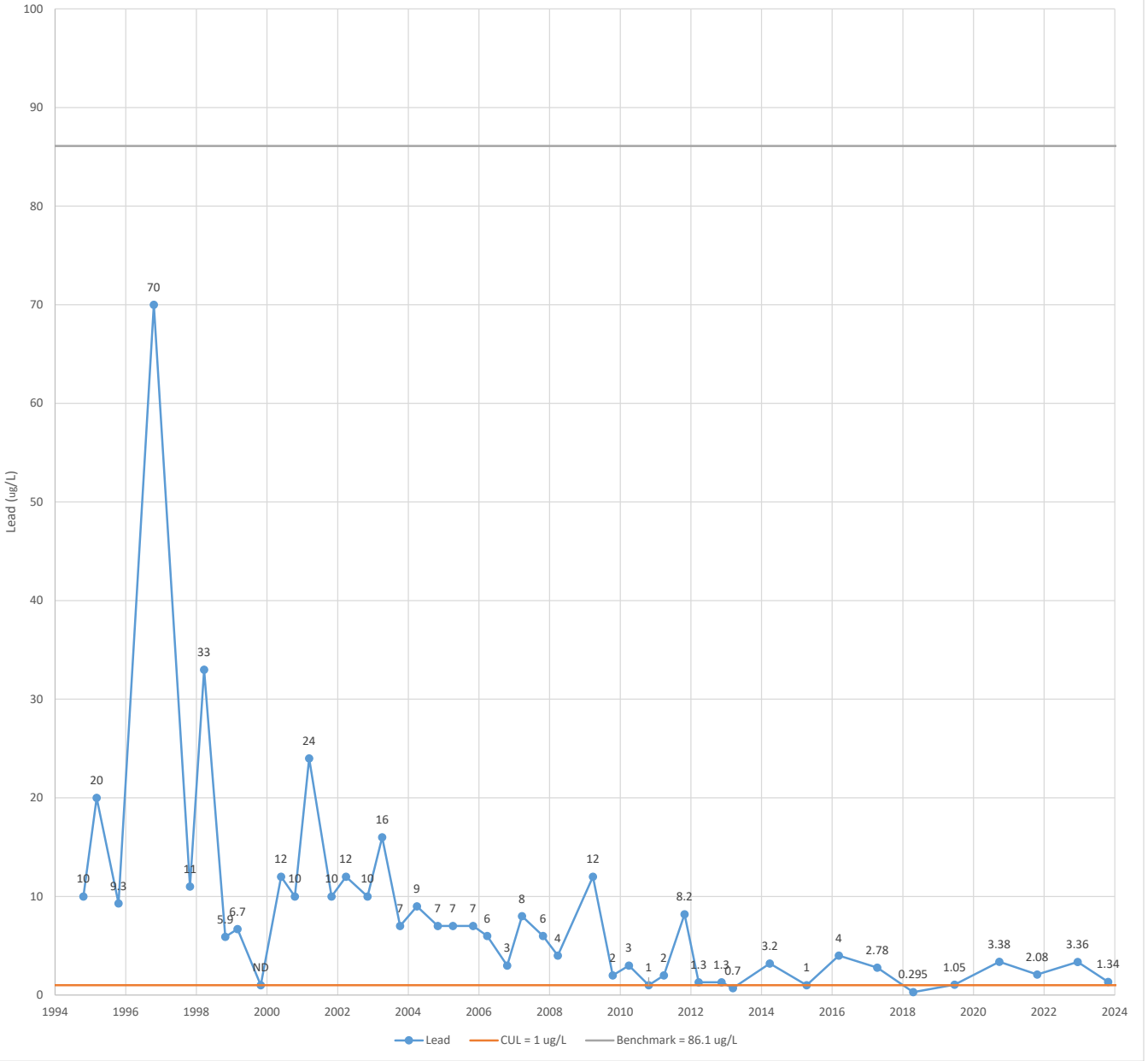
SW-MH - Copper

JUNE 2024

HALEY ALDRICH

Figure
4-1



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SW-MH - Lead

JUNE 2024

HALEY ALDRICH

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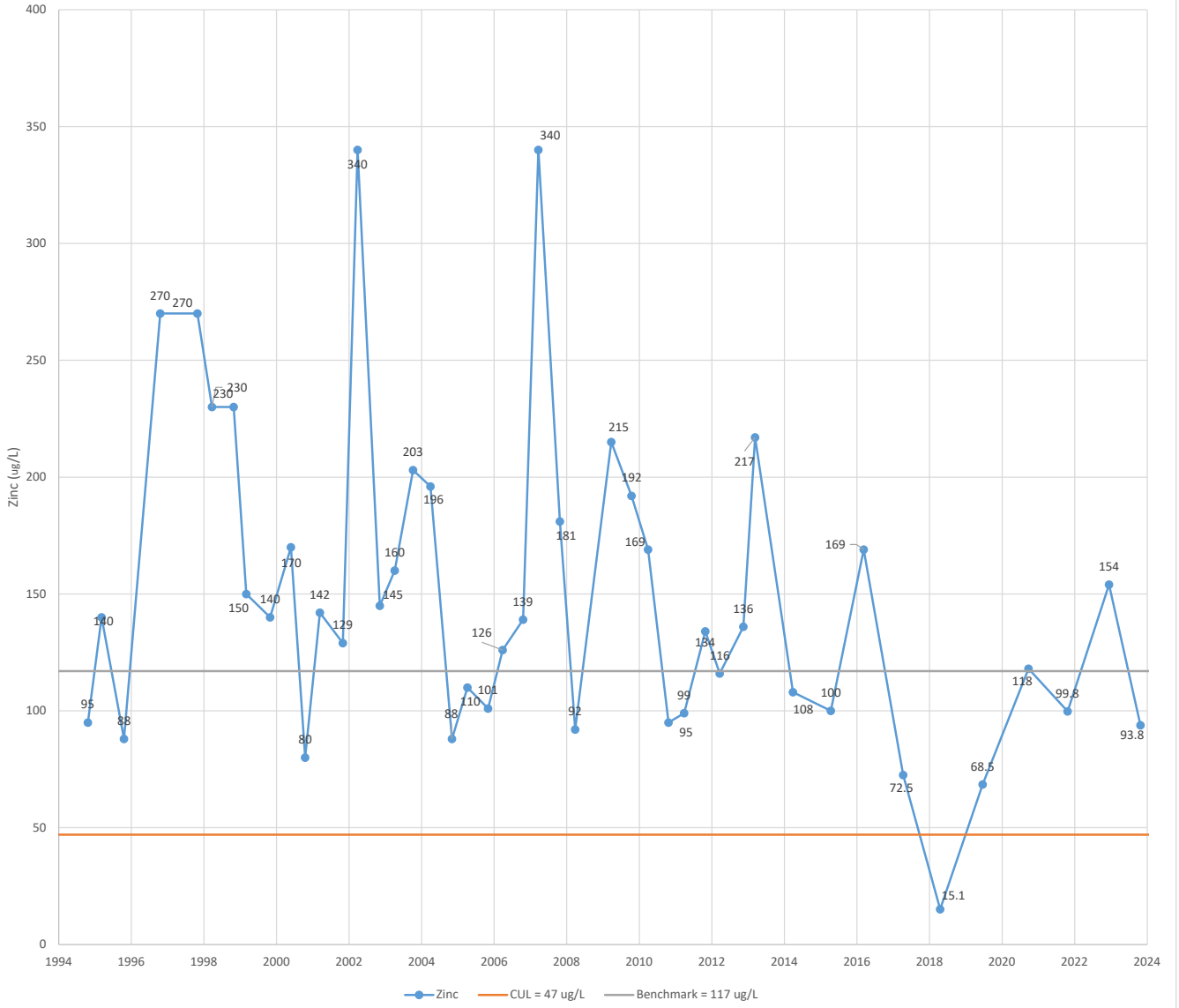
4-2



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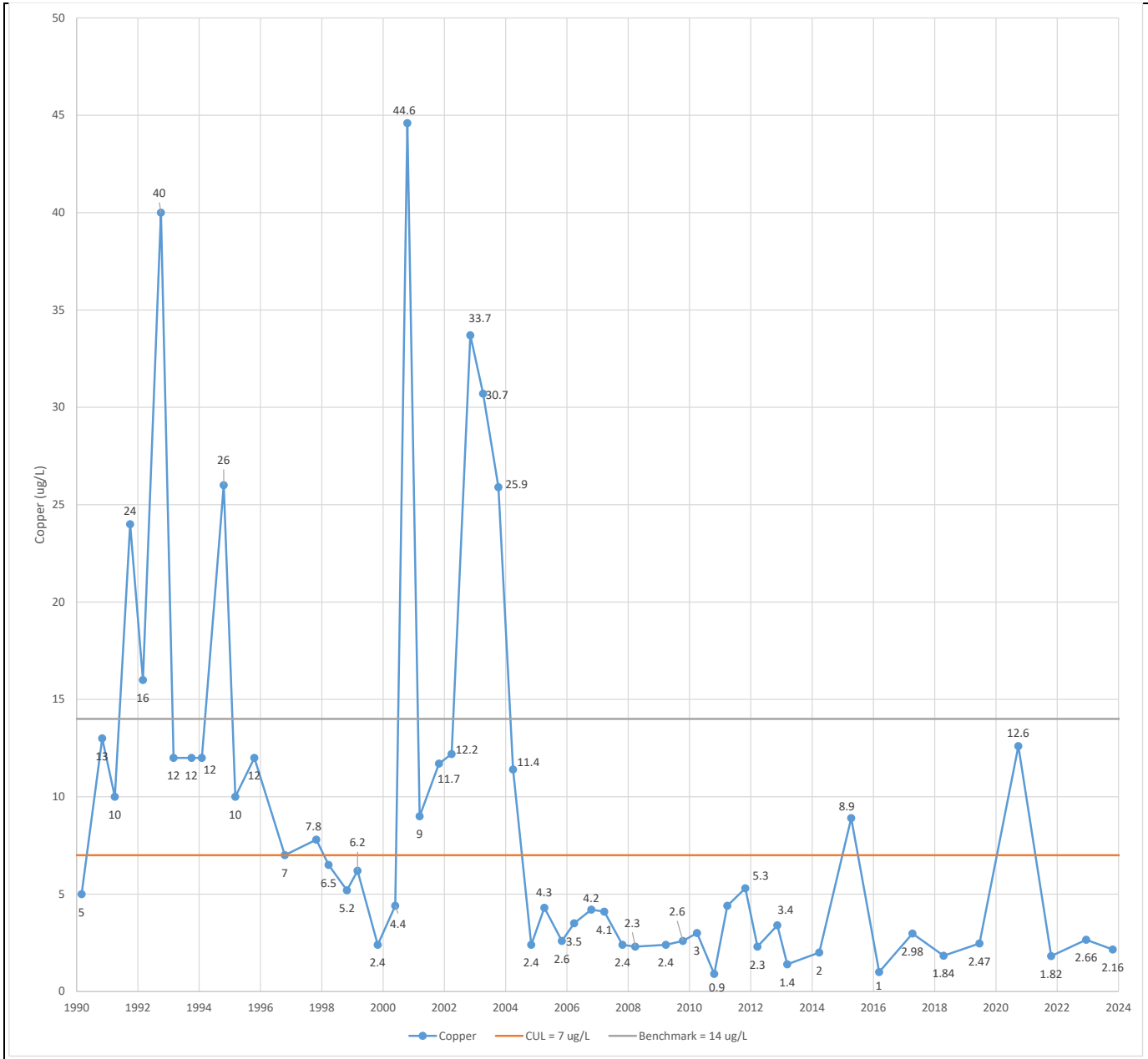
SW-MH - Zinc

JUNE 2024

HALEY ALDRICH

Figure
4-3



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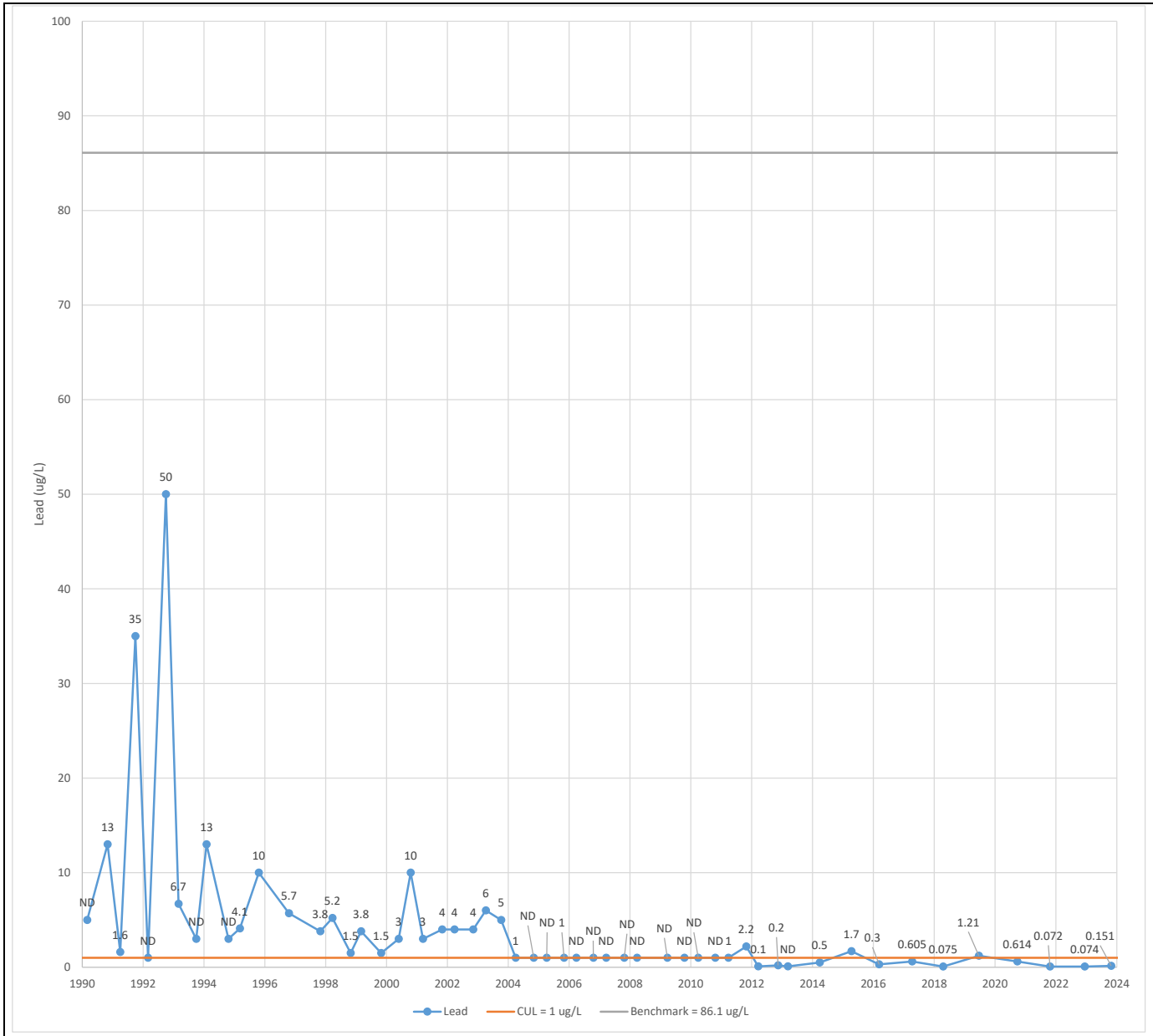
SW-3 - Copper

JUNE 2024

HALEY ALDRICH

Figure
4-4



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SW-3 - Lead

JUNE 2024

HALEY ALDRICH

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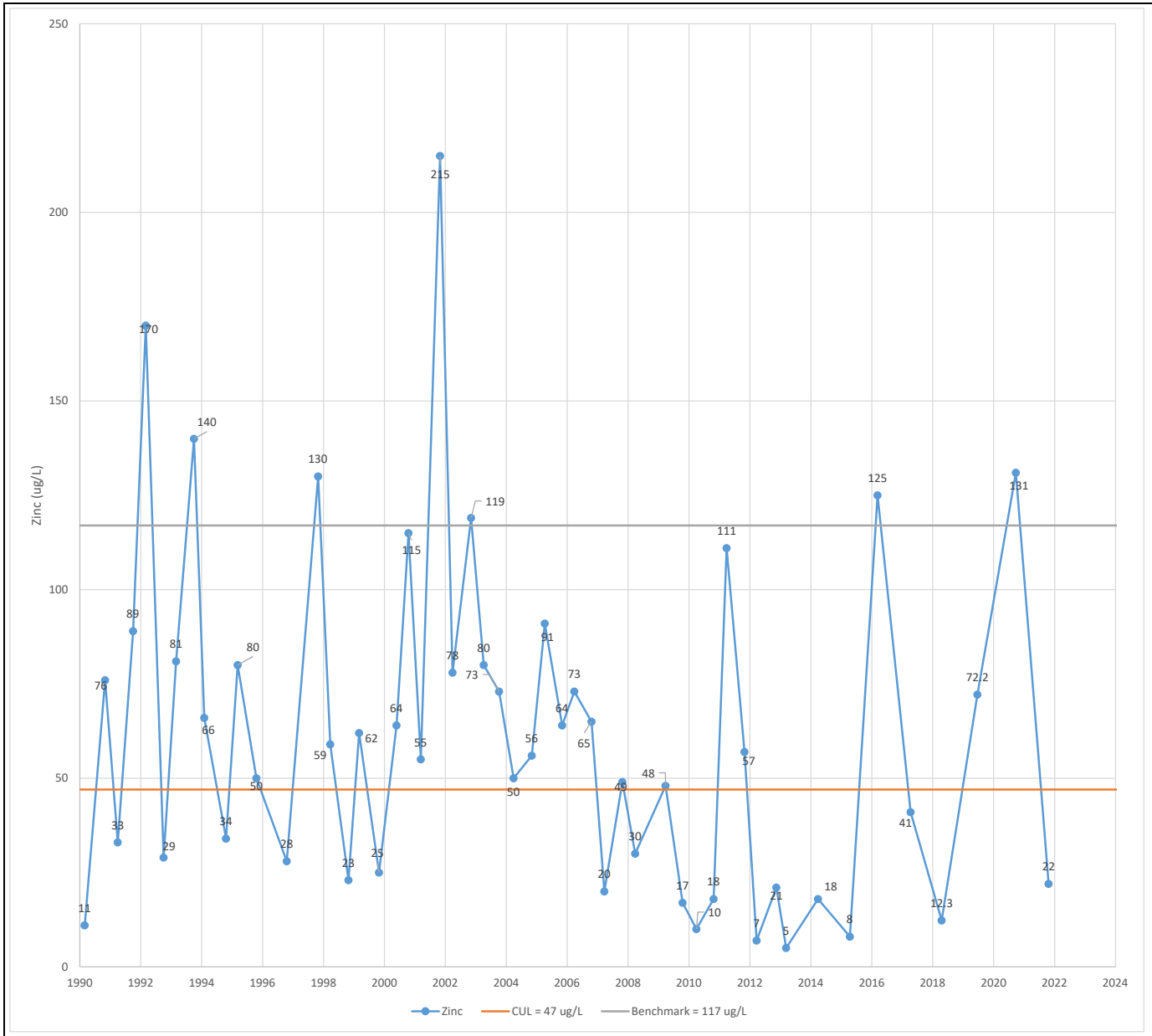
4-5



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SW-3 - Zinc

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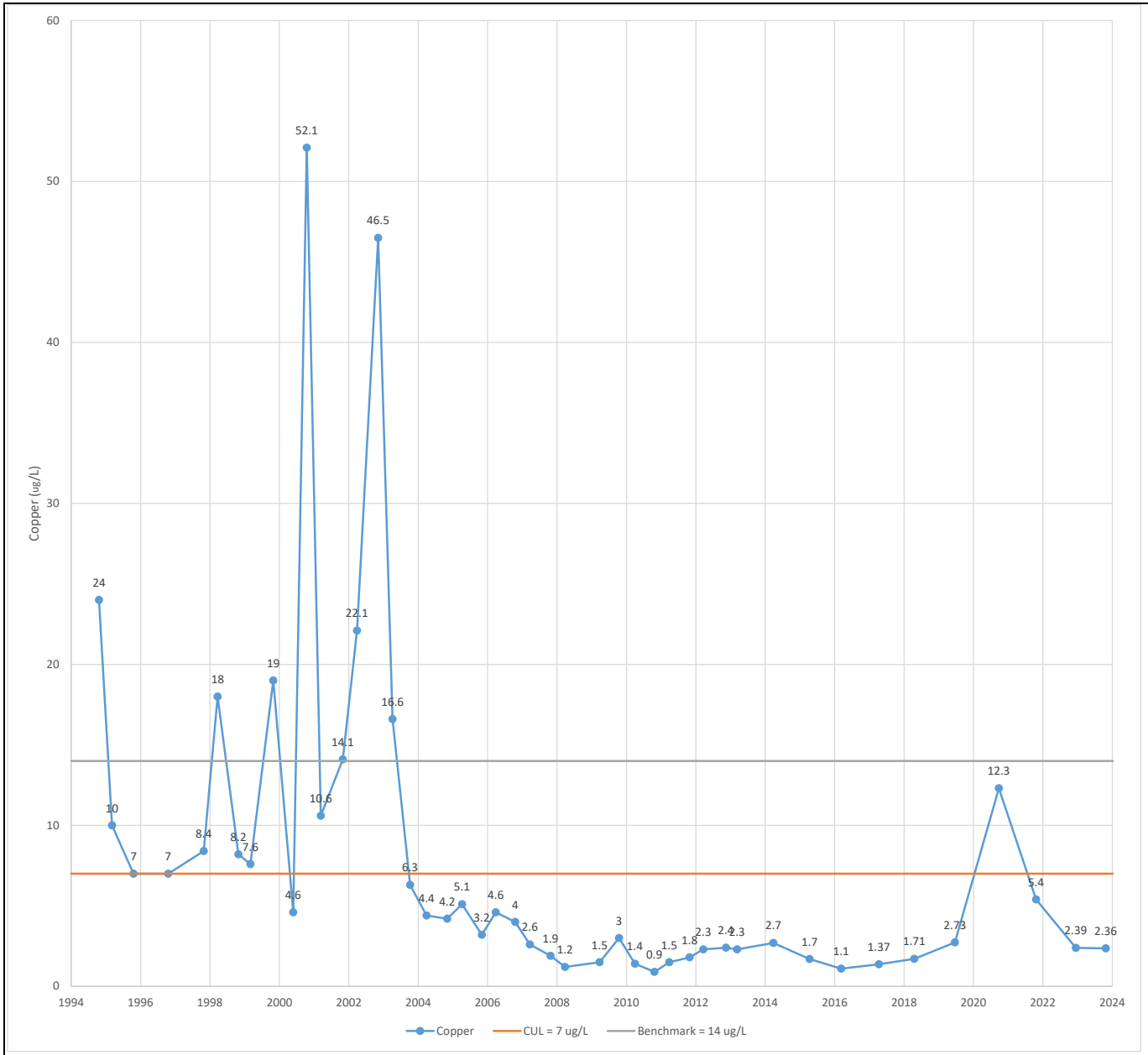
Figure

4-6



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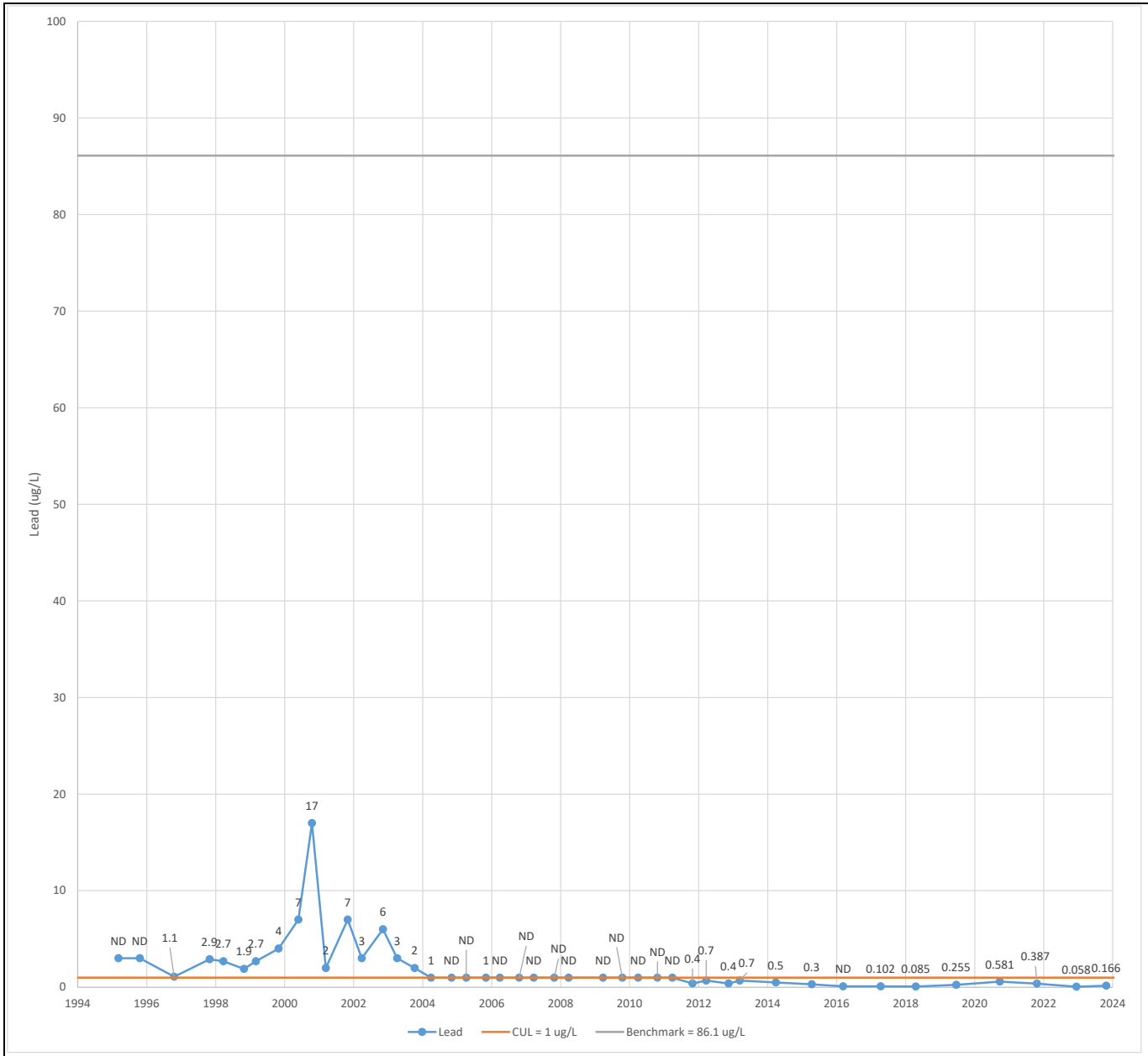
SW-DP - Copper

JUNE 2024

HALEY ALDRICH

Figure
4-7



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SW-DP - Lead

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Figure
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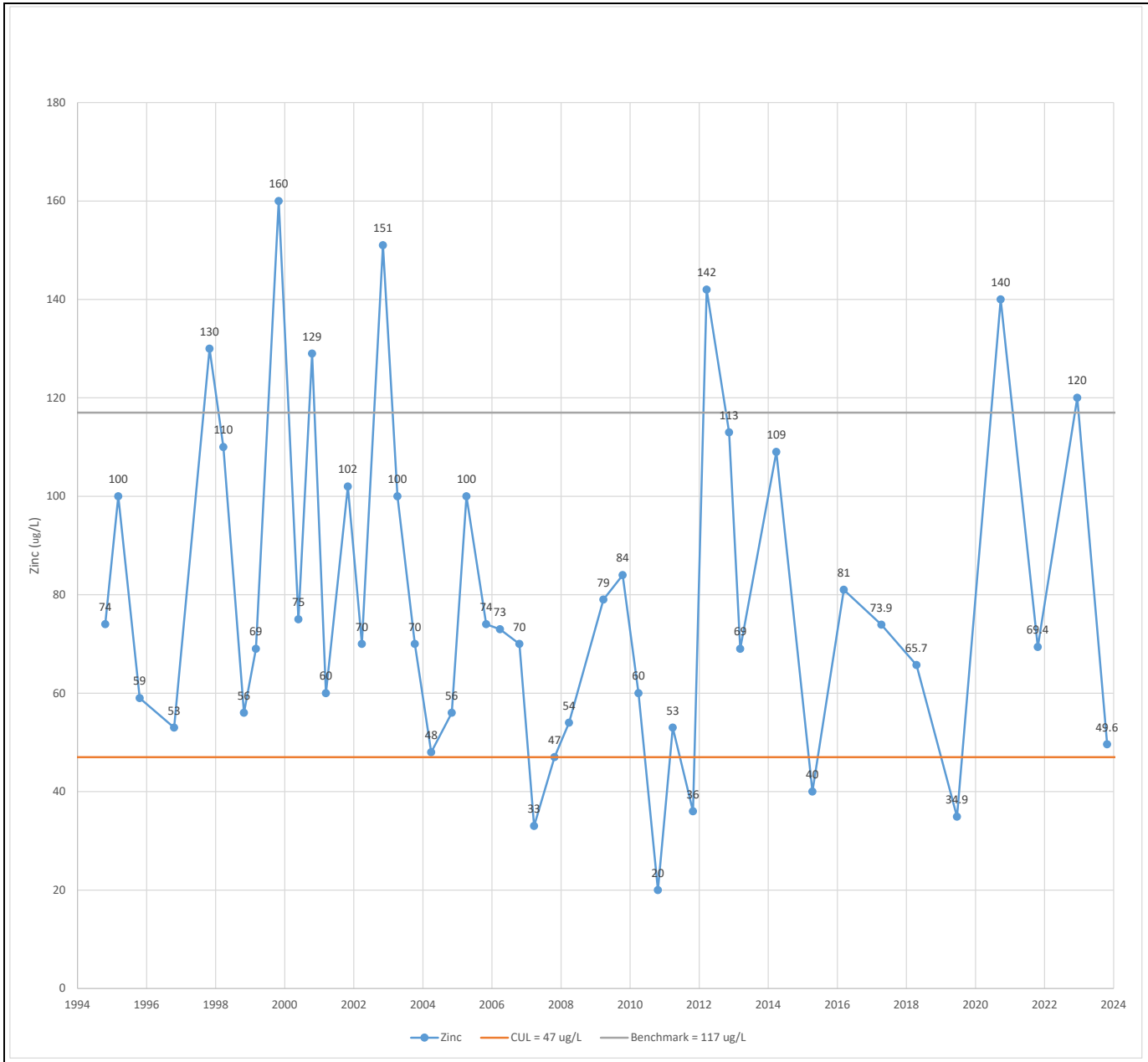

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SW-DP - Zinc

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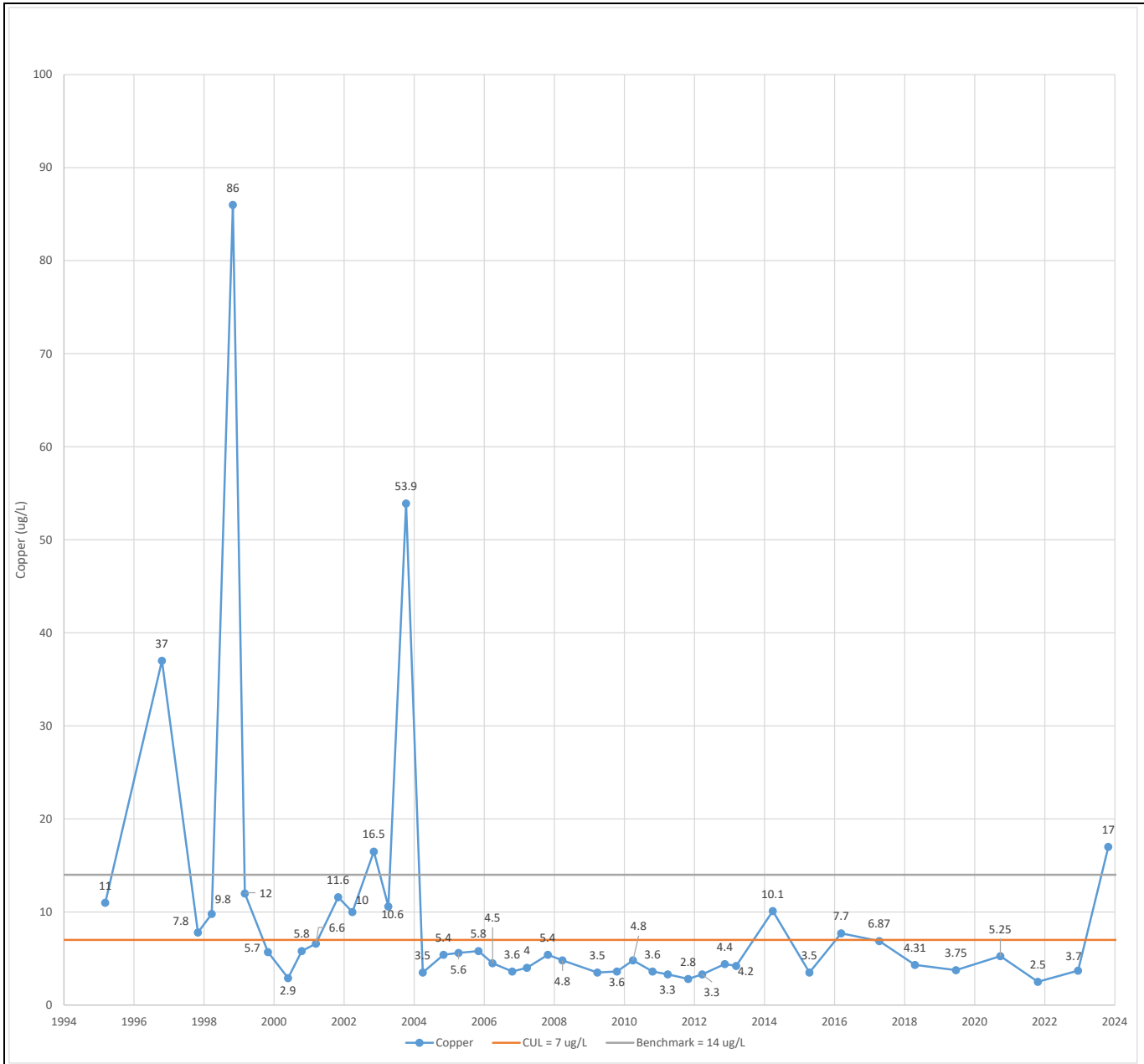
Figure
4-9



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SW-6 - Copper

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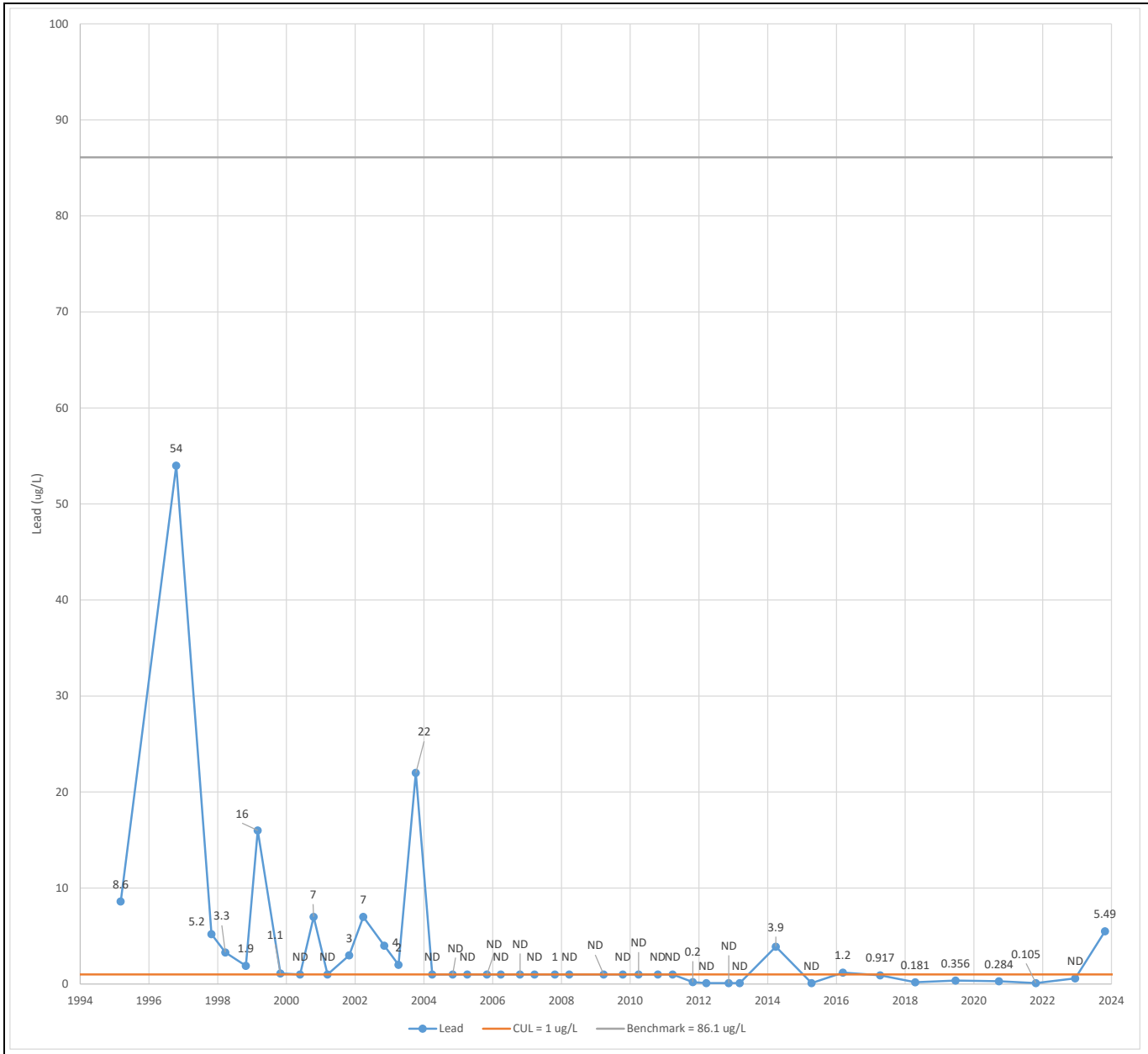
Figure
4-10



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SW-6 - Lead

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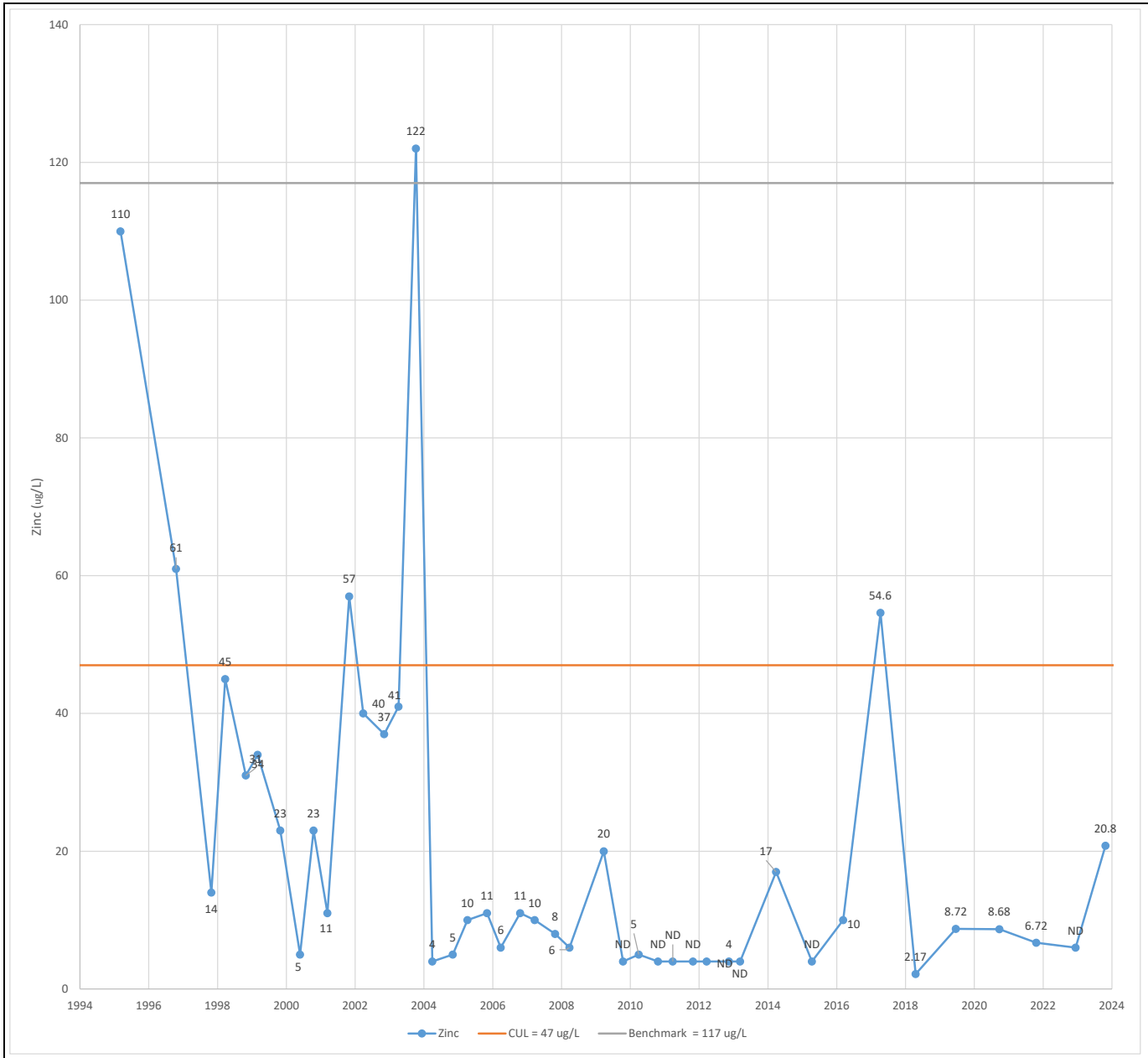
Figure
4-11



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SW-6 - Zinc

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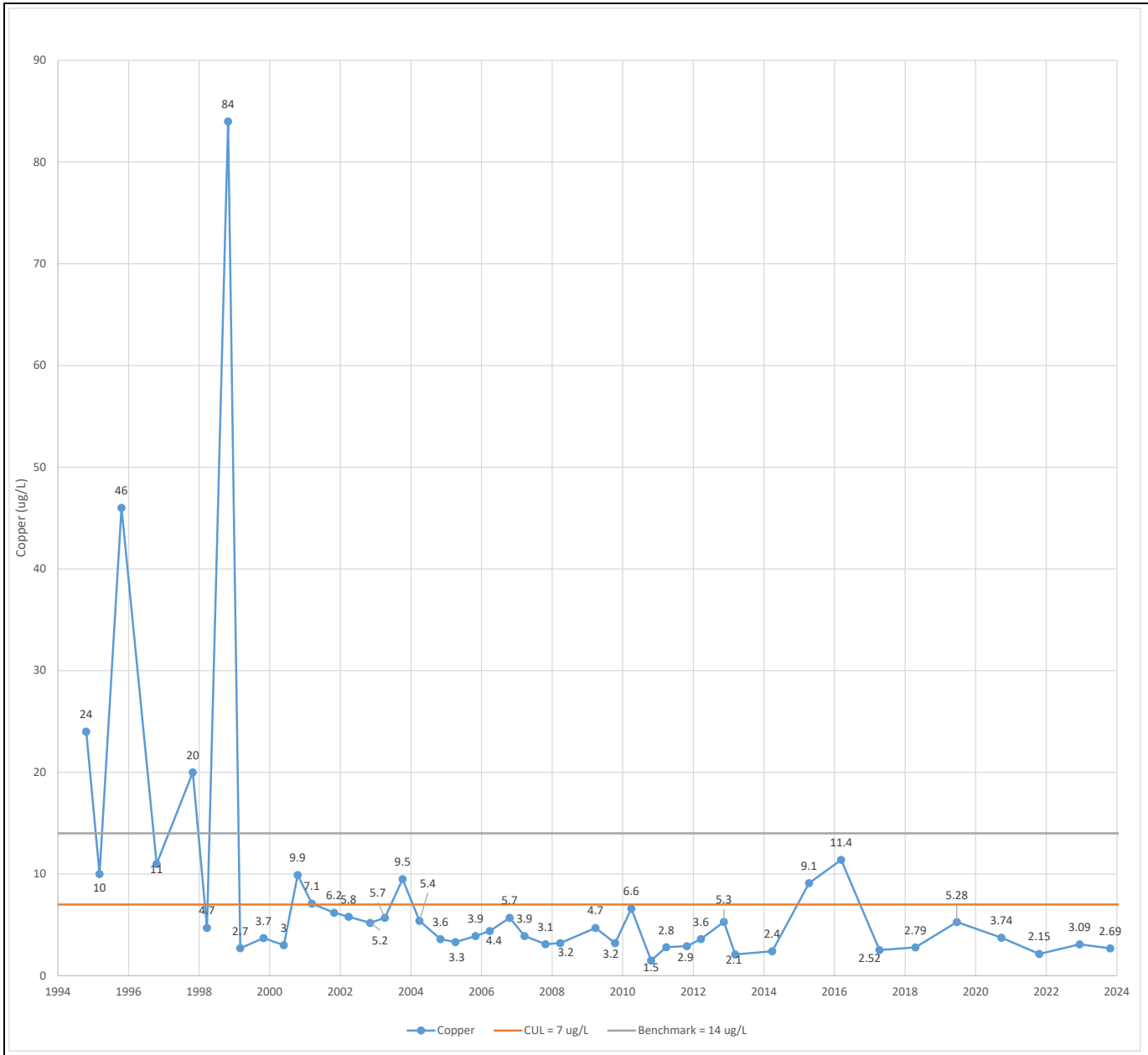
4-12



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SW-5 - Copper

JUNE 2024

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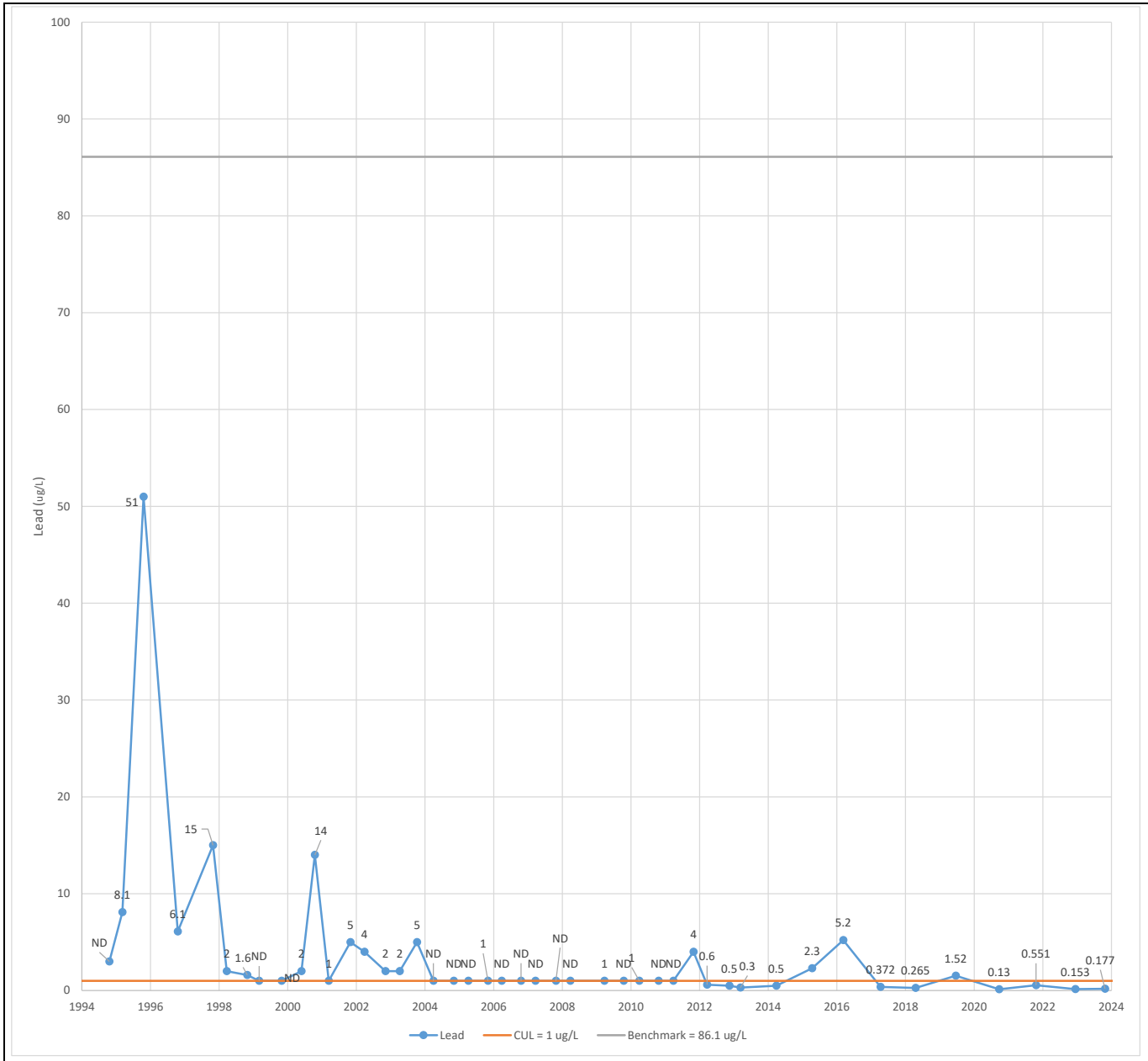
Figure
4-13



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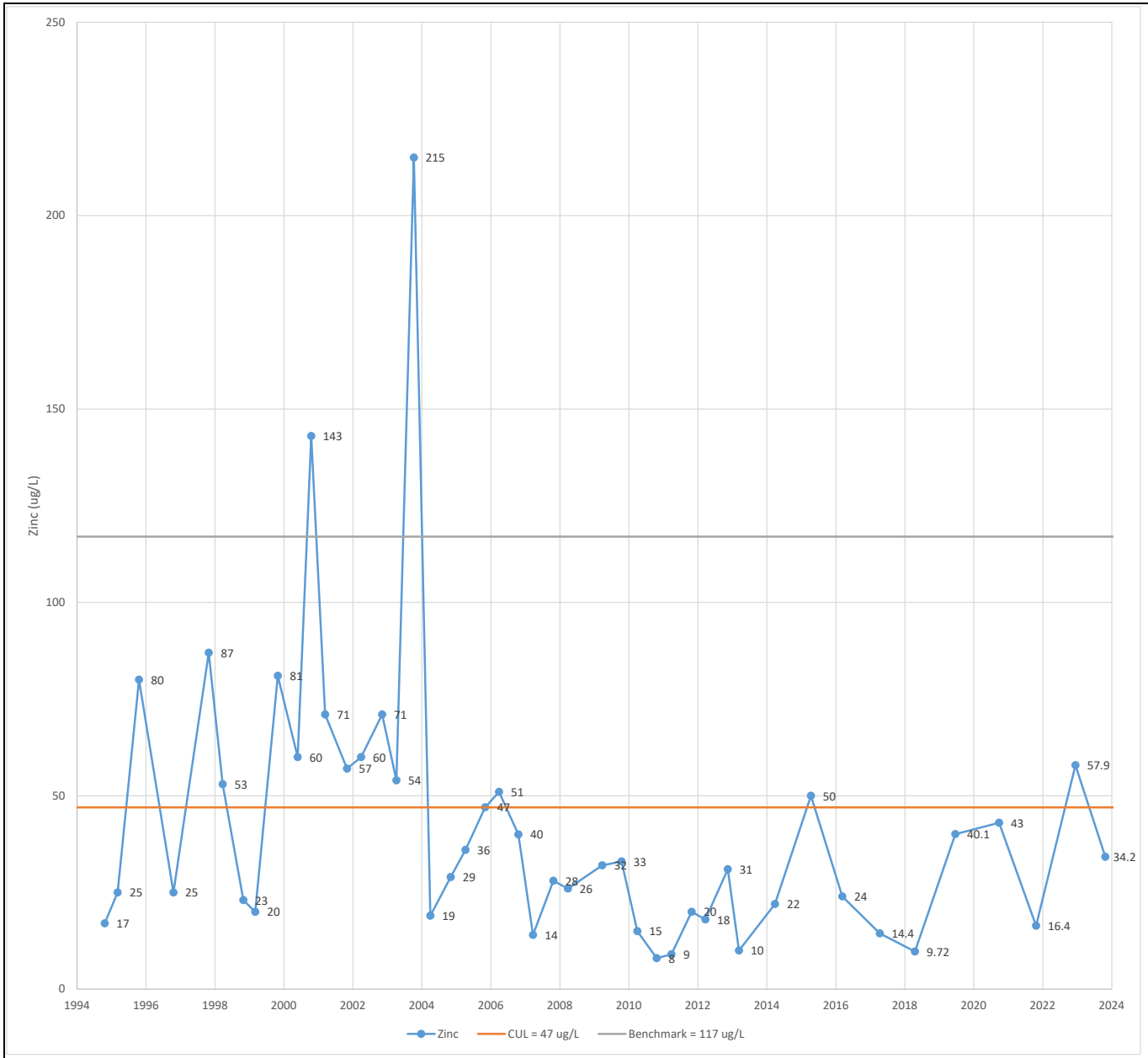
SW-5 - Lead

JUNE 2024

HALEY ALDRICH

Figure
4-14



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SW-5 - Zinc

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Figure
4-15

APPENDIX A
Data Validation Summary for Water Samples

Haley & Aldrich, Inc.
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Suite 100
Tucson, AZ 85701
520.289.8621

Data Usability Summary Report

Project Name: Paccar

Project Description: Groundwater Samples

Sample Date(s): 25 October and 1 November 2023

Analytical Laboratory: Analytical Resources, LLC – Tukwila, WA

Validation Performed by: Kristina Ilina

Validation Reviewed by: Katherine Miller

Validation Date: 5 December 2023

Haley & Aldrich, Inc. prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the analytical results for Sample Delivery Groups (SDGs) listed. This DUSR is organized into the following sections:

1. Sample Delivery Group Numbers 23J0665 and 23K0040
2. Explanations
3. Glossary
4. Abbreviations
5. Qualifiers

References

This data validation and usability assessment was performed per the guidance and requirements established by the United States Environmental Protection Agency (USEPA) using the following reference materials:

- National Functional Guidelines (NFG) for Inorganic Data Review.
- NFG for Organic Data Review.

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). Results found between the MDL and reporting limit (RL) are flagged J as estimated.

Sample data were qualified in accordance with the laboratory's standard operating procedures. The results presented in each laboratory report were found to be compliant with the data quality objectives (DQOs) for the project and are therefore usable; any exceptions are noted in the following pages.

1. Sample Delivery Group Numbers 23J0665 and 23K0040

1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG numbers:

- 23J0665, dated 24 November 2023; and
- 23K0040, dated 28 November 2023.

Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC. Issues noted with sample management are listed below:

- Custody seals were not used on the sample cooler(s).
- The name of the sample SW-MHD on the container label doesn't match with COC (MW-MHD).

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Date	Matrix	Methods
SW-3-20231025	N	23J0665-04	10/25/2023	WG	A, B
SW-5-20231025	N	23J0665-05	10/25/2023	WG	A, B
SW-6-20231025	N	23J0665-06	10/25/2023	WG	A, B
SW-DP-20231025	N	23J0665-03	10/25/2023	WG	A, B
SW-MH-20231025	N	23J0665-01	10/25/2023	WG	A
SW-MH-20231025	N	23J0665-01RE1	10/25/2023	WG	B
SW-MHD-20231025	FD	23J0665-02	10/25/2023	WG	A, B
CW-1S-20231101	N	23K0040-01	11/01/2023	WG	A, C
CW-1S-20231101	N	23K0040-02	11/01/2023	WG	A
CW-1D-20231101	N	23K0040-03	11/01/2023	WG	A
CW-1D-20231101	N	23K0040-04	11/01/2023	WG	A
LW-9S-20231101	N	23K0040-05	11/01/2023	WG	A
LW-9S-20231101	N	23K0040-06	11/01/2023	WG	A
LW-9D-20231101	N	23K0040-07	11/01/2023	WG	A, C
LW-9D-20231101	N	23K0040-08	11/01/2023	WG	A
LW-6D-20231101	N	23K0040-09	11/01/2023	WG	A
LW-6D-20231101	N	23K0040-10	11/01/2023	WG	A
MW-3I-20231101	N	23K0040-11	11/01/2023	WG	A
MW-3I-20231101	N	23K0040-12	11/01/2023	WG	A
FD-1-20231101	FD	23K0040-13	11/01/2023	WG	A, C
FD-1-20231101	FD	23K0040-14	11/01/2023	WG	A
Purge-20231101	N	23K0040-15	11/01/2023	WG	A, D, E
Purge-20231101	N	23K0040-16	11/01/2023	WG	A

Method Holding Times			
A.	E200.8	Metals (by Mass Spectrometer)	180 days for liquid, preserved
B.	SM3500-CR D	Chromium Hexavalent	24 hours, unpreserved
C.	SW8260DSIM	Selected Ion Monitoring - Volatile Organics	14 days for liquid, preserved 7 days for liquid unpreserved
D.	NWTPH-DX	Total Petroleum Hydrocarbons (TPH) Total Diesel	14 days for liquid, preserved 7 days for liquid unpreserved
E.	SW8260D	Volatile Organic Compounds (VOCs)	14 days for liquid, preserved 7 days for liquid unpreserved

1.2 CASE NARRATIVE

The laboratory report case narrative lists various additional quality control issues, such as internal standard exceedances and initial calibration verification and/or continuing calibration verification (CCV) exceedances. Since these additional quality control issues were not required for the project's DQOs, these quality control issues were not reviewed.

1.3 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.4 REPORTING LIMITS AND SAMPLE DILUTIONS

All sample dilutions were reviewed and found to be justified. Dilution of the project samples was required to bring calibration of target analytes within calibration range, matrix interference, foaming at the time of purging, or abundance of non-target analytes.

1.5 SURROGATE RECOVERY COMPLIANCE

Refer to Section E 1.2. The percent recovery (%R) for each surrogate compound added to each project sample were determined to be within the laboratory specified quality control limits.

1.6 LABORATORY CONTROL SAMPLES

Refer to Section E 1.3. Compounds associated with the laboratory control sample (LCS) analyses associated with client samples exhibited recoveries within the specified limits.

1.7 MATRIX SPIKE SAMPLES

Refer to Section E 1.4. The sample(s) below were used for matrix spike/matrix spike duplicate (MS/MSD) analyses:

Lab Sample Number	Matrix Spike/Matrix Spike Duplicate Sample Client ID	Method(s)
23J0665-01RE1	SW-MH-20231025	SM3500-CR D
23K0040-02	CW-1S-20231101	E200.8

The MS/MSD recoveries and the relative percent difference (RPD) between the MS and MSD results were within the specified limits, with the following exceptions:

Sample Type	Method	Parent Sample	Analyte	%R	Qualifier	Affected Samples
MS	SM3500-CR D	SW-MH-20231025	Hexavalent Chromium	58%	J-/UJ	SW-MH-20231025 SW-MHD-20231025 SW-DP-20231025 SW-3-20231025 SW-5-20231025 SW-6-20231025

1.8 BLANK SAMPLE ANALYSIS

Refer to Section E 1.5. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

1.9 DUPLICATE SAMPLE ANALYSIS

Refer to Section E 1.6. The following sample(s) were used for laboratory duplicate analysis and the RPDs were all below 20 percent (or the absolute difference rule was satisfied if detects were less than five times the RL):

Lab Sample Number	Laboratory Duplicate Sample Client ID	Method(s)
23J0665-01RE1	SW-MH-20231025	SM3500-CR D
23K0040-02	CW-1S-20231101	E200.8

The following sample(s) were used for field duplicate analysis. RPDs were all below 35 percent for water (or the absolute difference rule was satisfied if detects were less than five times the RL).

Primary Sample ID	Duplicate Sample ID	Method(s)
LW-9D-20231101	FD-1-20231101	E200.8, EPA 8260DSIM
SW-MH-20231025	SW-MHD-20231025	E200.8, SM 3500-CR D

1.10 PRECISION AND ACCURACY

Refer to Section E 1.7. Where required by the method, some measurement of analytical accuracy and precision was reported for each method with the site samples.

1.11 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the DQOs for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable, as no data was rejected. The qualifiers applied to this dataset are summarized in the table below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
SW-MH-20231025	Chromium VI (Hexavalent)	ND	UJ	MS %R low
SW-MHD-20231025		ND	UJ	
SW-DP-20231025		ND	UJ	
SW-3-20231025		ND	UJ	
SW-5-20231025		ND	UJ	
SW-6-20231025		ND	UJ	

2. Explanations

The following explanations include more detailed information regarding each of the sections in the DUSR above. Not all sections in the Explanations are represented:

- E 1.2 Surrogate Recovery Compliance
  - Surrogates, also known as system monitoring compounds, are compounds added to each sample prior to sample preparation to determining the efficiency of the extraction procedure by evaluating the %R of the compounds.
- E 1.3 Laboratory Control Samples
  - The LCS/LCSD analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.4 Matrix Spike Samples
  - MS/MSD data are used to assess the precision and accuracy of the analytical method and evaluate the effects of the sample matrix on the sample preparation procedures and measurement methodologies.
  - For inorganic methods, when a matrix spike recovery falls outside of the control limits and the sample result is less than four times the spike added, a post-digestion spike (PDS) is performed.
- E 1.5 Blank Sample Analysis
  - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
  - Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport.
- E 1.6 Laboratory and Field Duplicate Sample Analysis
  - The laboratory duplicate sample analysis is used by the laboratory at the time of the analysis to demonstrate acceptable method precision. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
  - The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
- E 1.7 Precision and Accuracy
  - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the RPD found between a primary and a duplicate sample. This can be an LCS/LCSD pair, a MS/MSD pair, a laboratory duplicate performed on a site sample, or a field duplicate collected and analyzed concurrently with a site sample.
  - Accuracy is a statistical measurement of the correctness of a measured value and includes components of random error (variability caused by imprecision) and systematic error. In a laboratory environment, this will be measured by determining the %R of

certain spiked compounds. This can be assessed using LCS, blank spike (BS), MS, and/or surrogate recoveries.

3. Glossary

Not all of the following symbols, acronyms, or qualifiers occur in this document.

- Sample Types:
  - EB Equipment Blank Sample
  - FB Field Blank Sample
  - FD Field Duplicate Sample
  - N Primary Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg micrograms per kilogram
  - µg/L micrograms per liter
  - µg/m^3 micrograms per cubic meter
  - mg/kg milligrams per kilogram
  - mg/L milligrams per liter
  - ppb v/v parts per billion volume/volume
  - pCi/L picocuries per liter
  - pg/g picograms per gram
- Matrices:
  - AA Ambient Air
  - GS Soil Gas
  - GW/WG Groundwater
  - QW Water Quality
  - IA Indoor Air
  - SE Sediment
  - SO Soil
  - SSV Sub-slab Vapor
  - WQ Water Quality control matrix
  - WS Surface Water
- Table Footnotes:
  - NA Not applicable
  - ND Non-detect
  - NR Not reported
- Common Symbols:
  - % percent
  - < less than
  - ≤ less than or equal to
  - > greater than
  - ≥ greater than or equal to
  - = equal
  - °C degrees Celsius
  - ± plus or minus
  - ~ approximately
  - x times (multiplier)

4. Abbreviations

%D	Percent Difference
%R	Percent Recovery
%RSD	Percent Relative Standard Deviation
%v/v	Percent volume by volume
2s	2 sigma
4,4-DDT	4 4-dichlorodiphenyltrichloroethane
Abs Diff	Absolute Difference
amu	atomic mass unit
BPJ	Best Professional Judgement
BS	Blank Spike
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CCVL	Continuing Calibration Verification Low
COC	Chain of Custody
COM	Combined Isotope Calculation
Cr (VI)	Hexavalent Chromium
CRI	Collision Reaction Interface
DoD	Department of Defense
DQO	data quality objective
DUSR	Data Usability Summary Report
EMPC	Estimated Maximum Possible Concentration
FBK	Field Blank Contamination
FDP	Field Duplicate
GC	Gas Chromatograph
GC/MS	Gas Chromatography/Mass Spectrometry
GPC	Gel Permeation Chromatography
H_2	Hydrogen gas
HCl	Hydrochloric Acid
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP/MS	Inductively Coupled Plasma/ Mass Spectrometry
ICV	Initial Calibration Verification
ICVL	Initial Calibration Verification Low
IPA	Isopropyl Alcohol
LC	Laboratory Control
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
MBK	Method Blank Contamination
MDC	Minimum Detectable Concentration
MDL	Laboratory Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	not applicable
ND	Non-Detect
NFG	National Functional Guidelines
NH_3	Ammonia
NYSDEC	New York State Department of Environmental Conservation
PAH	polycyclic aromatic hydrocarbon
PCB	Polychlorinated Biphenyl
PDS	Post Digestion Spike
PEM	Performance Evaluation Mixture
PFAS	Per- and Polyfluoroalkyl Substances
PFBA	Perfluorbutanoic Acid
PFD	Perfluorodecalin
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane sulfonate
PFPeA	Perfluoropentanoic Acid
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
R^2	R-squared value
Ra-226	Radium-226
Ra-228	Radium-228
RESC	Resolution Check Measure
RL	Laboratory Reporting Limit
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SAP	sampling analysis plan
SDG	Sample Delivery Group
SIM	Selected ion monitoring
SOP	Standard Operating Procedure
SPE	Solid-Phase Extraction
SVOC	Semi-Volatile Organic Compound
TCLP	Toxicity Characteristic Leaching Procedure
TIC	Tentatively Identified Compound
TKN	Total Kjeldahl Nitrogen
TPH	Total Petroleum Hydrocarbon
TPU	Total Propagated Uncertainty
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compound
WP	Work Plan

5. Qualifiers

The qualifiers below are from the USEPA NFG and the data in the DUSR may contain these qualifiers:

- Concentration (C) Qualifiers:

  U — The compound was analyzed for but not detected. The associated value is either the compound quantitation limit if not detected by the analytical instrument or could be the reported or blank concentration if qualified by blank contamination. This can also be displayed as less than the associated compound quantitation limit (<RL or <MDL), or "ND".

  B — The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers:

  E — The compound was quantitated above the calibration range.

  D — The concentration is based on a diluted sample analysis.

- Validation Qualifiers:

  J — The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  J+ — The result is an estimated quantity, but the result may be biased high.

  J- — The result is an estimated quantity, but the result may be biased low.

  J/UJ — as listed in exception tables J applies to detected data and UJ applies to non-detected data as reported by the laboratory.

  UJ — The compound was not detected above the reported sample quantitation limit; however, the reported limit is estimated and may or may not represent the actual limit of quantitation.

  NJ — The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is an estimated concentration only.

  R — The sample results were rejected as unusable; the compound may or may not be present in the sample.

  S — Result is suspect. See DUSR for details.

References

1. United States Environmental Protection Agency, 2020a. National Functional Guidelines for Inorganic Superfund Methods Data Review. EPA-542-R-20-006. November.

2. United States Environmental Protection Agency, 2020b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-20-005. November.

APPENDIX B
Laboratory Reports

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

28 November 2023

Angie Goodwin
Haley & Aldrich
3131 Elliott Avenue, Suite 600
Seattle, WA 98121

RE: Paccar (0203653-002)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
23K0040	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 23K0040	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Haley&Aldrich	Phone:	Date: 11/2/23	Ice Present? Y
Client Contact: A. Goodwin, V. Pehlivan		No. of Coolers: 1	Cooler Temps: 2.1°C
Client Project Name: PACCAR			
Client Project #: 0203653-002	Samplers: AN, ZS		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Tot/Dis. As	Vinyl Chloride	TPH-Dx	Tot/Dis As,Pb,Cr	VOCs			Notes/Comments
CW-1S	11/1/23	1405	H2O	5	X	X						
CW-1D		1345		2	X							
MW-9S		1535		2	X							
MW-9D		1530		5	X	X						
MW-6D		1730		2	X							
MW-3I		1720		2	X							
FD-1		1200		5	X	X	(					
Purge		1800		7			X	X	X			

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Lab Filter	Printed Name: Andrew Galagher	Printed Name: Matthew Reaves	Printed Name:	Printed Name:
	Company: HA	Company: ARI	Company:	Company:
	Date & Time: 11/2/23 1008	Date & Time: 11/02/23 1008	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CW-1S	23K0040-01	Water	01-Nov-2023 14:05	02-Nov-2023 10:08
CW-1S	23K0040-02	Water	01-Nov-2023 14:05	02-Nov-2023 10:08
CW-1D	23K0040-03	Water	01-Nov-2023 13:45	02-Nov-2023 10:08
CW-1D	23K0040-04	Water	01-Nov-2023 13:45	02-Nov-2023 10:08
LW-9S	23K0040-05	Water	01-Nov-2023 15:35	02-Nov-2023 10:08
LW-9S	23K0040-06	Water	01-Nov-2023 15:35	02-Nov-2023 10:08
LW-9D	23K0040-07	Water	01-Nov-2023 15:30	02-Nov-2023 10:08
LW-9D	23K0040-08	Water	01-Nov-2023 15:30	02-Nov-2023 10:08
LW-6D	23K0040-09	Water	01-Nov-2023 17:30	02-Nov-2023 10:08
LW-6D	23K0040-10	Water	01-Nov-2023 17:30	02-Nov-2023 10:08
MW-3I	23K0040-11	Water	01-Nov-2023 17:20	02-Nov-2023 10:08
MW-3I	23K0040-12	Water	01-Nov-2023 17:20	02-Nov-2023 10:08
FD-1	23K0040-13	Water	01-Nov-2023 12:00	02-Nov-2023 10:08
FD-1	23K0040-14	Water	01-Nov-2023 12:00	02-Nov-2023 10:08
Purge	23K0040-15	Water	01-Nov-2023 18:00	02-Nov-2023 10:08
Purge	23K0040-16	Water	01-Nov-2023 18:00	02-Nov-2023 10:08

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Work Order Case Narrative

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control high in the CCAL. All associated samples that contain analyte have been flagged with a "Q" qualifer.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Volatiles - EPA Method 8260D-SIM (Selected Ion Monitoring)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Total and Dissolved Metals - EPA Method 200.8

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 11/2/2023 11:08:32AM

WORK ORDER

23K0040

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Haley & Aldrich | **Project Manager:** Kelly Bottem

Project: Paccar | **Project Number:** 0203653-002

Preservation Confirmation

Container ID	Container Type	pH	
23K0040-01 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-01 B	VOA Vial, Clear, 40 mL, HCL		
23K0040-01 C	VOA Vial, Clear, 40 mL, HCL		
23K0040-01 D	VOA Vial, Clear, 40 mL, HCL		
23K0040-02 A	HDPE NM, 500 mL	>2	fail
23K0040-03 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-04 A	HDPE NM, 500 mL	>2	fail
23K0040-05 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-06 A	HDPE NM, 500 mL	>2	fail
23K0040-07 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-07 B	VOA Vial, Clear, 40 mL, HCL		
23K0040-07 C	VOA Vial, Clear, 40 mL, HCL		
23K0040-07 D	VOA Vial, Clear, 40 mL, HCL		
23K0040-08 A	HDPE NM, 500 mL	>2	fail
23K0040-09 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-10 A	HDPE NM, 500 mL	>2	fail
23K0040-11 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-12 A	HDPE NM, 500 mL	>2	fail
23K0040-13 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-13 B	VOA Vial, Clear, 40 mL, HCL		
23K0040-13 C	VOA Vial, Clear, 40 mL, HCL		
23K0040-13 D	VOA Vial, Clear, 40 mL, HCL		
23K0040-14 A	HDPE NM, 500 mL	>2	fail
23K0040-15 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-15 B	Glass NM, Amber, 500 mL		
23K0040-15 C	Glass NM, Amber, 500 mL		
23K0040-15 D	VOA Vial, Clear, 40 mL, HCL		
23K0040-15 E	VOA Vial, Clear, 40 mL, HCL		
23K0040-15 F	VOA Vial, Clear, 40 mL, HCL		
23K0040-16 A	HDPE NM, 500 mL	>2	fail

Preservation Confirmed By

11/02/23
Date

Reviewed By

Date

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Haley + Aldrich Project Name: Paccar

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 23K0040 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1008 2.1°C

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90970S

Cooler Accepted by: MO Date: 11/02/23 Time: 1008

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
How were bottles sealed in plastic bags?	Individually	Grouped	(Not)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Were the sample(s) split by ARI? (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: [signature] Date: 11/02/23 Time: 1024 Labels checked by: LB

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

~~trip blanks unlabelled and not on COC~~ LB 11/2/23

~~have particulates, not trip blanks?~~

purge VOAs have no labels

By: LB Date: 11/02/23

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 11/2/2023 11:08:32AM

WORK ORDER

23K0040

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Haley & Aldrich | **Project Manager:** Kelly Bottem

Project: Paccar | **Project Number:** 0203653-002

Preservation Confirmation

Container ID	Container Type	pH	
23K0040-01 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-01 B	VOA Vial, Clear, 40 mL, HCL		
23K0040-01 C	VOA Vial, Clear, 40 mL, HCL		
23K0040-01 D	VOA Vial, Clear, 40 mL, HCL		
23K0040-02 A	HDPE NM, 500 mL	>2	fail (1)
23K0040-03 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-04 A	HDPE NM, 500 mL	>2	fail (1)
23K0040-05 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-06 A	HDPE NM, 500 mL	>2	fail (1)
23K0040-07 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-07 B	VOA Vial, Clear, 40 mL, HCL		
23K0040-07 C	VOA Vial, Clear, 40 mL, HCL		
23K0040-07 D	VOA Vial, Clear, 40 mL, HCL		
23K0040-08 A	HDPE NM, 500 mL	>2	fail (1)
23K0040-09 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-10 A	HDPE NM, 500 mL	>2	fail (1)
23K0040-11 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-12 A	HDPE NM, 500 mL	>2	fail (1)
23K0040-13 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-13 B	VOA Vial, Clear, 40 mL, HCL		
23K0040-13 C	VOA Vial, Clear, 40 mL, HCL		
23K0040-13 D	VOA Vial, Clear, 40 mL, HCL		
23K0040-14 A	HDPE NM, 500 mL	>2	fail (1)
23K0040-15 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pass
23K0040-15 B	Glass NM, Amber, 500 mL		
23K0040-15 C	Glass NM, Amber, 500 mL		
23K0040-15 D	VOA Vial, Clear, 40 mL, HCL		
23K0040-15 E	VOA Vial, Clear, 40 mL, HCL		
23K0040-15 F	VOA Vial, Clear, 40 mL, HCL		
23K0040-16 A	HDPE NM, 500 mL	>2	fail (1)

Preservation Confirmed By

11/02/23
Date

(1) Filtered out 0.45um and preserved to pH <2.0 with 0.75ml conc. HNO_3 (L90531. ML 11102123

Reviewed By

Date

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

CW-1S

23K0040-01 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM — Sampled: 11/01/2023 14:05
Instrument: NT16 Analyst: TWC — Analyzed: 11/02/2023 16:19

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23K0040-01 B
Preparation Batch: BLK0062 — Sample Size: 10 mL
Prepared: 11/02/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	5.01	20.0	38.9	ng/L	
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*102*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*92.4*	*%*	
Surrogate: 4-Bromofluorobenzene				*75-125 %*	*93.8*	*%*	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

CW-1S

23K0040-01 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 14:05
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:39

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-01 A 01
Preparation Batch: BLK0432 — Sample Size: 25 mL
Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0373	0.200	2.02	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

CW-1S

23K0040-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 14:05
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/21/2023 22:21

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-02 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	1.56	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

CW-1D

23K0040-03 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 13:45
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:42

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-03 A 01
Preparation Batch: BLK0432 — Sample Size: 25 mL
Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	2	0.0746	0.400	0.710	ug/L	D

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

CW-1D

23K0040-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 13:45
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 22:51

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-04 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	0.677	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

LW-9S

23K0040-05 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 15:35
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:45

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-05 A 01
Preparation Batch: BLK0432 — Sample Size: 25 mL
Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0373	0.200	5.52	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

LW-9S

23K0040-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 15:35
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 22:54

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-06 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	3.15	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

LW-9D

23K0040-07 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM — Sampled: 11/01/2023 15:30
Instrument: NT16 Analyst: TWC — Analyzed: 11/02/2023 16:39

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23K0040-07 B
Preparation Batch: BLK0062 — Sample Size: 10 mL
Prepared: 11/02/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	5.01	20.0	218	ng/L	
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*104*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*90.5*	*%*	
Surrogate: 4-Bromofluorobenzene				*75-125 %*	*93.5*	*%*	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

LW-9D

23K0040-07 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 15:30
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:49

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-07 A 01
Preparation Batch: BLK0432 — Sample Size: 25 mL
Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	2	0.0746	0.400	9.22	ug/L	D

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

LW-9D

23K0040-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 15:30
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 22:58

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-08 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	4.50	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

LW-6D

23K0040-09 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 17:30
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:52

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-09 A 01
Preparation Batch: BLK0432 — Sample Size: 25 mL
Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	2	0.0746	0.400	9.73	ug/L	D

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Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

LW-6D

23K0040-10 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 17:30
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:01

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-10 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	6.54	ug/L	

Analytical Resources, LLC
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Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

MW-3I

23K0040-11 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 17:20

Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:55

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-11 A 01

Preparation Batch: BLK0432 — Sample Size: 25 mL

Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	5	0.187	1.00	16.9	ug/L	D

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

MW-3I

23K0040-12 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 17:20
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:05

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-12 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	0.747	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

FD-1

23K0040-13 (Water)

Volatile Organic Compounds - SIM

Method: EPA 8260D-SIM — Sampled: 11/01/2023 12:00

Instrument: NT16 Analyst: TWC — Analyzed: 11/02/2023 17:00

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23K0040-13 B

Preparation Batch: BLK0062 — Sample Size: 10 mL

Prepared: 11/02/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Vinyl chloride	75-01-4	1	5.01	20.0	223	ng/L	
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*103*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*89.7*	*%*	
Surrogate: 4-Bromofluorobenzene				*75-125 %*	*94.4*	*%*	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

FD-1

23K0040-13 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 12:00

Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:59

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-13 A 01

Preparation Batch: BLK0432 — Sample Size: 25 mL

Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0373	0.200	8.47	ug/L	

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Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

FD-1

23K0040-14 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 12:00
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/20/2023 23:10

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-14 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	5.12	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Purge

23K0040-15 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/01/2023 18:00

Instrument: NT20 Analyst: PKC — Analyzed: 11/03/2023 18:10

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 23K0040-15 E

Preparation Batch: BLK0118 — Sample Size: 10 mL

Prepared: 11/03/2023 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.27	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.08	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	0.23	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.05	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.13	0.20	ND	ug/L	U
Acrolein	107-02-8	1	2.70	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.11	0.20	ND	ug/L	U
Acetone	67-64-1	1	1.91	5.00	4.94	ug/L	J
1,1-Dichloroethene	75-35-4	1	0.08	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.15	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	0.53	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.40	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.06	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.07	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.12	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.04	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	1.77	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.11	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.08	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.05	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.09	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.08	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.09	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.09	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.08	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.05	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.07	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.07	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.09	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.06	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	0.55	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	1.90	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.09	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.05	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.09	0.20	ND	ug/L	U

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Purge

23K0040-15 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/01/2023 18:00

Instrument: NT20 Analyst: PKC — Analyzed: 11/03/2023 18:10

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.06	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.10	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.07	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.09	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.09	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.09	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.06	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.05	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.09	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.14	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.08	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.22	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.09	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.15	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.03	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.16	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	0.60	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.07	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.07	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.07	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.06	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.06	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.07	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.07	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.05	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.06	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.08	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.08	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.10	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.18	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.08	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.39	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.21	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	1.00	2.00	ND	ug/L	U
Naphthalene	91-20-3	1	0.27	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.25	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.13	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.14	0.50	ND	ug/L	U

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Purge

23K0040-15 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/01/2023 18:00

Instrument: NT20 Analyst: PKC — Analyzed: 11/03/2023 18:10

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.34	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*108*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*96.7*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*94.5*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*100*	*%*	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Purge

23K0040-15 (Water)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 11/01/2023 18:00
Instrument: FID4 Analyst: NRB — Analyzed: 11/13/2023 18:38

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23K0040-15 B 01
Preparation Batch: BLK0159 — Sample Size: 500 mL
Prepared: 11/08/2023 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*74.0*	*%*	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Purge

23K0040-15 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 18:00
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/21/2023 22:12

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-15 A 01
Preparation Batch: BLK0432 — Sample Size: 25 mL
Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.0373	0.200	6.80	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Purge

23K0040-15 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 — Sampled: 11/01/2023 18:00
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/24/2023 18:23

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-15 A 01
Preparation Batch: BLK0432 — Sample Size: 25 mL
Prepared: 11/15/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	5	1.30	2.50	ND	ug/L	U
Lead	7439-92-1	1	0.0513	0.100	1.18	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Purge

23K0040-16 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 11/01/2023 18:00
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/21/2023 22:16

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-16 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	1.11	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Purge

23K0040-16 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 — Sampled: 11/01/2023 18:00
Instrument: ICPMS2 Analyst: MCB — Analyzed: 11/24/2023 18:24

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23K0040-16 A 02
Preparation Batch: BLK0407 — Sample Size: 25 mL — Filtration Batch: BLK0094
Prepared: 11/14/2023 — Final Volume: 25 mL — Filtration Date: 11/02/2023 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	5	1.30	2.50	ND	ug/L	U
Lead, Dissolved	7439-92-1	1	0.0513	0.100	ND	ug/L	U

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLK0118-BLK2)				Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 13:08							
Chloromethane	ND	0.27	0.50	ug/L							U
Vinyl Chloride	ND	0.08	0.20	ug/L							U
Bromomethane	ND	0.23	1.00	ug/L							U
Chloroethane	ND	0.05	0.20	ug/L							U
Trichlorofluoromethane	ND	0.13	0.20	ug/L							U
Acrolein	ND	2.70	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.11	0.20	ug/L							U
Acetone	ND	1.91	5.00	ug/L							U
1,1-Dichloroethene	ND	0.08	0.20	ug/L							U
Iodomethane	ND	0.15	1.00	ug/L							U
Methylene Chloride	ND	0.53	1.00	ug/L							U
Acrylonitrile	ND	0.40	1.00	ug/L							U
Carbon Disulfide	ND	0.06	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.07	0.20	ug/L							U
Vinyl Acetate	ND	0.12	0.20	ug/L							U
1,1-Dichloroethane	ND	0.04	0.20	ug/L							U
2-Butanone	ND	1.77	5.00	ug/L							U
2,2-Dichloropropane	ND	0.11	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.08	0.20	ug/L							U
Chloroform	ND	0.05	0.20	ug/L							U
Bromochloromethane	ND	0.09	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.08	0.20	ug/L							U
1,1-Dichloropropene	ND	0.09	0.20	ug/L							U
Carbon tetrachloride	ND	0.09	0.20	ug/L							U
1,2-Dichloroethane	ND	0.08	0.20	ug/L							U
Benzene	ND	0.05	0.20	ug/L							U
Trichloroethene	ND	0.07	0.20	ug/L							U
1,2-Dichloropropane	ND	0.07	0.20	ug/L							U
Bromodichloromethane	ND	0.09	0.20	ug/L							U
Dibromomethane	ND	0.06	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	0.55	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	1.90	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.09	0.20	ug/L							U
Toluene	ND	0.05	0.20	ug/L							U
trans-1,3-Dichloropropene	ND	0.09	0.20	ug/L							U

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLK0118-BLK2)				Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 13:08							
2-Hexanone	ND	2.06	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.10	0.20	ug/L							U
1,3-Dichloropropane	ND	0.07	0.20	ug/L							U
Tetrachloroethene	ND	0.09	0.20	ug/L							U
Dibromochloromethane	ND	0.09	0.20	ug/L							U
1,2-Dibromoethane	ND	0.09	0.20	ug/L							U
Chlorobenzene	ND	0.06	0.20	ug/L							U
Ethylbenzene	ND	0.05	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.09	0.20	ug/L							U
m,p-Xylene	ND	0.14	0.40	ug/L							U
o-Xylene	ND	0.08	0.20	ug/L							U
Xylenes, total	ND	0.22	0.60	ug/L							U
Styrene	ND	0.09	0.20	ug/L							U
Bromoform	ND	0.15	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.03	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.16	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	0.60	1.00	ug/L							U
n-Propylbenzene	ND	0.07	0.20	ug/L							U
Bromobenzene	ND	0.07	0.20	ug/L							U
Isopropyl Benzene	ND	0.07	0.20	ug/L							U
2-Chlorotoluene	ND	0.06	0.20	ug/L							U
4-Chlorotoluene	ND	0.06	0.20	ug/L							U
t-Butylbenzene	ND	0.07	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.07	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.05	0.20	ug/L							U
s-Butylbenzene	ND	0.06	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.08	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.08	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.10	0.20	ug/L							U
n-Butylbenzene	ND	0.18	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.08	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.39	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.21	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	1.00	2.00	ug/L							U
Naphthalene	ND	0.27	0.50	ug/L							U

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLK0118-BLK2)				Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 13:08							
1,2,3-Trichlorobenzene	ND	0.25	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.13	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.14	0.50	ug/L							U
2-Pentanone	ND	2.34	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.14			ug/L	*5.00*		*103*	*80-129*			
Surrogate: Toluene-d8	4.76			ug/L	*5.00*		*95.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.92			ug/L	*5.00*		*98.5*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.99			ug/L	*5.00*		*99.7*	*80-120*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLK0118-BS2)					Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 11:36						
Chloromethane	10.2	0.27	0.50	ug/L	10.0		102	60-138			
Vinyl Chloride	10.4	0.08	0.20	ug/L	10.0		104	66-133			
Bromomethane	9.87	0.23	1.00	ug/L	10.0		98.7	72-131			
Chloroethane	9.81	0.05	0.20	ug/L	10.0		98.1	60-155			
Trichlorofluoromethane	9.42	0.13	0.20	ug/L	10.0		94.2	62-141			
Acrolein	65.4	2.70	5.00	ug/L	50.0		131	52-190			Q
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.64	0.11	0.20	ug/L	10.0		96.4	76-129			
Acetone	47.3	1.91	5.00	ug/L	50.0		94.5	58-142			
1,1-Dichloroethene	10.2	0.08	0.20	ug/L	10.0		102	69-135			
Iodomethane	9.57	0.15	1.00	ug/L	10.0		95.7	56-147			
Methylene Chloride	10.4	0.53	1.00	ug/L	10.0		104	65-135			
Acrylonitrile	9.70	0.40	1.00	ug/L	10.0		97.0	64-134			
Carbon Disulfide	9.55	0.06	0.20	ug/L	10.0		95.5	78-125			
trans-1,2-Dichloroethene	9.73	0.07	0.20	ug/L	10.0		97.3	78-128			
Vinyl Acetate	9.29	0.12	0.20	ug/L	10.0		92.9	55-138			
1,1-Dichloroethane	9.57	0.04	0.20	ug/L	10.0		95.7	76-124			
2-Butanone	47.7	1.77	5.00	ug/L	50.0		95.5	61-140			
2,2-Dichloropropane	10.2	0.11	0.20	ug/L	10.0		102	66-147			
cis-1,2-Dichloroethene	9.14	0.08	0.20	ug/L	10.0		91.4	80-121			
Chloroform	9.44	0.05	0.20	ug/L	10.0		94.4	80-122			
Bromochloromethane	9.82	0.09	0.20	ug/L	10.0		98.2	80-121			
1,1,1-Trichloroethane	9.78	0.08	0.20	ug/L	10.0		97.8	79-123			
1,1-Dichloropropene	9.75	0.09	0.20	ug/L	10.0		97.5	80-127			
Carbon tetrachloride	9.53	0.09	0.20	ug/L	10.0		95.3	53-137			
1,2-Dichloroethane	9.00	0.08	0.20	ug/L	10.0		90.0	75-123			
Benzene	9.52	0.05	0.20	ug/L	10.0		95.2	80-120			
Trichloroethene	9.36	0.07	0.20	ug/L	10.0		93.6	80-120			
1,2-Dichloropropane	9.68	0.07	0.20	ug/L	10.0		96.8	80-120			
Bromodichloromethane	9.60	0.09	0.20	ug/L	10.0		96.0	80-121			
Dibromomethane	8.61	0.06	0.20	ug/L	10.0		86.1	80-120			
2-Chloroethyl vinyl ether	9.01	0.55	1.00	ug/L	10.0		90.1	64-120			
4-Methyl-2-Pentanone	47.9	1.90	5.00	ug/L	50.0		95.7	67-133			
cis-1,3-Dichloropropene	9.86	0.09	0.20	ug/L	10.0		98.6	80-124			
Toluene	9.34	0.05	0.20	ug/L	10.0		93.4	80-120			
trans-1,3-Dichloropropene	10.0	0.09	0.20	ug/L	10.0		100	71-127			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLK0118-BS2)					Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 11:36						
2-Hexanone	49.4	2.06	5.00	ug/L	50.0		98.8	69-133			
1,1,2-Trichloroethane	8.39	0.10	0.20	ug/L	10.0		83.9	80-121			
1,3-Dichloropropane	9.87	0.07	0.20	ug/L	10.0		98.7	80-120			
Tetrachloroethene	9.95	0.09	0.20	ug/L	10.0		99.5	80-120			
Dibromochloromethane	9.28	0.09	0.20	ug/L	10.0		92.8	65-135			
1,2-Dibromoethane	9.70	0.09	0.20	ug/L	10.0		97.0	80-121			
Chlorobenzene	9.76	0.06	0.20	ug/L	10.0		97.6	80-120			
Ethylbenzene	9.65	0.05	0.20	ug/L	10.0		96.5	80-120			
1,1,1,2-Tetrachloroethane	10.2	0.09	0.20	ug/L	10.0		102	80-120			
m,p-Xylene	19.9	0.14	0.40	ug/L	20.0		99.6	80-121			
o-Xylene	9.93	0.08	0.20	ug/L	10.0		99.3	80-121			
Xylenes, total	29.9	0.22	0.60	ug/L	30.0		99.5	76-127			
Styrene	10.2	0.09	0.20	ug/L	10.0		102	80-124			
Bromoform	10.2	0.15	0.20	ug/L	10.0		102	51-134			
1,1,2,2-Tetrachloroethane	9.98	0.03	0.20	ug/L	10.0		99.8	77-123			
1,2,3-Trichloropropane	9.64	0.16	0.50	ug/L	10.0		96.4	76-125			
trans-1,4-Dichloro 2-Butene	10.2	0.60	1.00	ug/L	10.0		102	55-129			
n-Propylbenzene	10.2	0.07	0.20	ug/L	10.0		102	78-130			
Bromobenzene	9.84	0.07	0.20	ug/L	10.0		98.4	80-120			
Isopropyl Benzene	10.6	0.07	0.20	ug/L	10.0		106	80-128			
2-Chlorotoluene	10.2	0.06	0.20	ug/L	10.0		102	78-122			
4-Chlorotoluene	10.2	0.06	0.20	ug/L	10.0		102	80-121			
t-Butylbenzene	10.2	0.07	0.20	ug/L	10.0		102	78-125			
1,3,5-Trimethylbenzene	10.4	0.07	0.20	ug/L	10.0		104	80-129			
1,2,4-Trimethylbenzene	10.3	0.05	0.20	ug/L	10.0		103	80-127			
s-Butylbenzene	10.4	0.06	0.20	ug/L	10.0		104	78-129			
4-Isopropyl Toluene	10.5	0.08	0.20	ug/L	10.0		105	79-130			
1,3-Dichlorobenzene	9.99	0.08	0.20	ug/L	10.0		99.9	80-120			
1,4-Dichlorobenzene	9.87	0.10	0.20	ug/L	10.0		98.7	80-120			
n-Butylbenzene	10.5	0.18	0.20	ug/L	10.0		105	74-129			
1,2-Dichlorobenzene	9.79	0.08	0.20	ug/L	10.0		97.9	80-120			
1,2-Dibromo-3-chloropropane	10.5	0.39	0.50	ug/L	10.0		105	62-123			
1,2,4-Trichlorobenzene	10.5	0.21	0.50	ug/L	10.0		105	64-124			
Hexachloro-1,3-Butadiene	10.2	1.00	2.00	ug/L	10.0		102	65-145			
Naphthalene	10.5	0.27	0.50	ug/L	10.0		105	50-134			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLK0118-BS2)					Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 11:36						
1,2,3-Trichlorobenzene	10.4	0.25	0.50	ug/L	10.0		104	49-133			
Dichlorodifluoromethane	12.7	0.13	0.20	ug/L	10.0		127	48-147			Q
Methyl tert-butyl Ether	9.39	0.14	0.50	ug/L	10.0		93.9	71-132			
2-Pentanone	46.4	2.34	5.00	ug/L	50.0		92.8	69-134			
Surrogate: 1,2-Dichloroethane-d4	5.16			ug/L	*5.00*		*103*	*80-129*			
Surrogate: Toluene-d8	4.86			ug/L	*5.00*		*97.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.96			ug/L	*5.00*		*99.2*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.01			ug/L	*5.00*		*100*	*80-120*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLK0118-BSD2)					Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 12:22						
Chloromethane	10.5	0.27	0.50	ug/L	10.0		105	60-138	2.41	30	
Vinyl Chloride	10.5	0.08	0.20	ug/L	10.0		105	66-133	0.73	30	
Bromomethane	10.2	0.23	1.00	ug/L	10.0		102	72-131	3.02	30	
Chloroethane	9.69	0.05	0.20	ug/L	10.0		96.9	60-155	1.29	30	
Trichlorofluoromethane	9.87	0.13	0.20	ug/L	10.0		98.7	62-141	4.65	30	
Acrolein	67.0	2.70	5.00	ug/L	50.0		134	52-190	2.36	30	Q
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.64	0.11	0.20	ug/L	10.0		96.4	76-129	0.00		
Acetone	47.0	1.91	5.00	ug/L	50.0		94.1	58-142	0.46	30	
1,1-Dichloroethene	10.2	0.08	0.20	ug/L	10.0		102	69-135	0.42	30	
Iodomethane	9.78	0.15	1.00	ug/L	10.0		97.8	56-147	2.22	30	
Methylene Chloride	10.6	0.53	1.00	ug/L	10.0		106	65-135	2.05	30	
Acrylonitrile	9.71	0.40	1.00	ug/L	10.0		97.1	64-134	0.09	30	
Carbon Disulfide	9.70	0.06	0.20	ug/L	10.0		97.0	78-125	1.57	30	
trans-1,2-Dichloroethene	10.0	0.07	0.20	ug/L	10.0		100	78-128	3.19	30	
Vinyl Acetate	9.37	0.12	0.20	ug/L	10.0		93.7	55-138	0.85	30	
1,1-Dichloroethane	9.71	0.04	0.20	ug/L	10.0		97.1	76-124	1.51	30	
2-Butanone	48.7	1.77	5.00	ug/L	50.0		97.4	61-140	1.99	30	
2,2-Dichloropropane	10.5	0.11	0.20	ug/L	10.0		105	66-147	2.56	30	
cis-1,2-Dichloroethene	11.4	0.08	0.20	ug/L	10.0		114	80-121	21.90	30	
Chloroform	9.65	0.05	0.20	ug/L	10.0		96.5	80-122	2.20	30	
Bromochloromethane	10.1	0.09	0.20	ug/L	10.0		101	80-121	2.58	30	
1,1,1-Trichloroethane	9.93	0.08	0.20	ug/L	10.0		99.3	79-123	1.51	30	
1,1-Dichloropropene	10.1	0.09	0.20	ug/L	10.0		101	80-127	3.77	30	
Carbon tetrachloride	9.74	0.09	0.20	ug/L	10.0		97.4	53-137	2.13	30	
1,2-Dichloroethane	9.43	0.08	0.20	ug/L	10.0		94.3	75-123	4.66	30	
Benzene	9.76	0.05	0.20	ug/L	10.0		97.6	80-120	2.52	30	
Trichloroethene	9.56	0.07	0.20	ug/L	10.0		95.6	80-120	2.10	30	
1,2-Dichloropropane	9.89	0.07	0.20	ug/L	10.0		98.9	80-120	2.18	30	
Bromodichloromethane	9.87	0.09	0.20	ug/L	10.0		98.7	80-121	2.79	30	
Dibromomethane	8.92	0.06	0.20	ug/L	10.0		89.2	80-120	3.55	30	
2-Chloroethyl vinyl ether	9.43	0.55	1.00	ug/L	10.0		94.3	64-120	4.57	30	
4-Methyl-2-Pentanone	50.4	1.90	5.00	ug/L	50.0		101	67-133	5.18	30	
cis-1,3-Dichloropropene	10.2	0.09	0.20	ug/L	10.0		102	80-124	3.35	30	
Toluene	9.51	0.05	0.20	ug/L	10.0		95.1	80-120	1.85	30	
trans-1,3-Dichloropropene	10.2	0.09	0.20	ug/L	10.0		102	71-127	1.92	30	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLK0118-BSD2)					Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 12:22						
2-Hexanone	50.6	2.06	5.00	ug/L	50.0		101	69-133	2.29	30	
1,1,2-Trichloroethane	11.3	0.10	0.20	ug/L	10.0		113	80-121	29.40	30	
1,3-Dichloropropane	10.1	0.07	0.20	ug/L	10.0		101	80-120	2.61	30	
Tetrachloroethene	10.1	0.09	0.20	ug/L	10.0		101	80-120	1.87	30	
Dibromochloromethane	9.48	0.09	0.20	ug/L	10.0		94.8	65-135	2.11	30	
1,2-Dibromoethane	10.0	0.09	0.20	ug/L	10.0		100	80-121	3.41	30	
Chlorobenzene	9.96	0.06	0.20	ug/L	10.0		99.6	80-120	1.99	30	
Ethylbenzene	9.84	0.05	0.20	ug/L	10.0		98.4	80-120	1.98	30	
1,1,1,2-Tetrachloroethane	10.4	0.09	0.20	ug/L	10.0		104	80-120	2.25	30	
m,p-Xylene	20.3	0.14	0.40	ug/L	20.0		101	80-121	1.75	30	
o-Xylene	10.1	0.08	0.20	ug/L	10.0		101	80-121	1.95	30	
Xylenes, total	30.4	0.22	0.60	ug/L	30.0		101	76-127	1.81	30	
Styrene	10.4	0.09	0.20	ug/L	10.0		104	80-124	1.88	30	
Bromoform	10.6	0.15	0.20	ug/L	10.0		106	51-134	4.17	30	
1,1,2,2-Tetrachloroethane	10.0	0.03	0.20	ug/L	10.0		100	77-123	0.44	30	
1,2,3-Trichloropropane	9.89	0.16	0.50	ug/L	10.0		98.9	76-125	2.58	30	
trans-1,4-Dichloro 2-Butene	10.2	0.60	1.00	ug/L	10.0		102	55-129	0.10	30	
n-Propylbenzene	10.1	0.07	0.20	ug/L	10.0		101	78-130	0.30	30	
Bromobenzene	10.1	0.07	0.20	ug/L	10.0		101	80-120	2.12	30	
Isopropyl Benzene	10.4	0.07	0.20	ug/L	10.0		104	80-128	2.33	30	
2-Chlorotoluene	10.2	0.06	0.20	ug/L	10.0		102	78-122	0.07	30	
4-Chlorotoluene	10.2	0.06	0.20	ug/L	10.0		102	80-121	0.37	30	
t-Butylbenzene	10.1	0.07	0.20	ug/L	10.0		101	78-125	1.39	30	
1,3,5-Trimethylbenzene	10.3	0.07	0.20	ug/L	10.0		103	80-129	0.48	30	
1,2,4-Trimethylbenzene	10.1	0.05	0.20	ug/L	10.0		101	80-127	1.41	30	
s-Butylbenzene	10.0	0.06	0.20	ug/L	10.0		100	78-129	3.68	30	
4-Isopropyl Toluene	10.3	0.08	0.20	ug/L	10.0		103	79-130	2.17	30	
1,3-Dichlorobenzene	9.99	0.08	0.20	ug/L	10.0		99.9	80-120	0.00		
1,4-Dichlorobenzene	9.99	0.10	0.20	ug/L	10.0		99.9	80-120	1.28	30	
n-Butylbenzene	10.1	0.18	0.20	ug/L	10.0		101	74-129	4.46	30	
1,2-Dichlorobenzene	9.77	0.08	0.20	ug/L	10.0		97.7	80-120	0.27	30	
1,2-Dibromo-3-chloropropane	10.5	0.39	0.50	ug/L	10.0		105	62-123	0.33	30	
1,2,4-Trichlorobenzene	10.3	0.21	0.50	ug/L	10.0		103	64-124	2.29	30	
Hexachloro-1,3-Butadiene	8.85	1.00	2.00	ug/L	10.0		88.5	65-145	14.60	30	
Naphthalene	10.8	0.27	0.50	ug/L	10.0		108	50-134	2.45	30	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Instrument: NT20 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLK0118-BSD2)					Prepared: 03-Nov-2023 Analyzed: 03-Nov-2023 12:22						
1,2,3-Trichlorobenzene	10.3	0.25	0.50	ug/L	10.0		103	49-133	0.58	30	
Dichlorodifluoromethane	13.1	0.13	0.20	ug/L	10.0		131	48-147	2.96	30	Q
Methyl tert-butyl Ether	9.81	0.14	0.50	ug/L	10.0		98.1	71-132	4.35	30	
2-Pentanone	50.0	2.34	5.00	ug/L	50.0		100	69-134	7.47	30	
Surrogate: 1,2-Dichloroethane-d4	5.16			ug/L	*5.00*		*103*	*80-129*			
Surrogate: Toluene-d8	4.92			ug/L	*5.00*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.98			ug/L	*5.00*		*99.7*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.90			ug/L	*5.00*		*97.9*	*80-120*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLK0118 - EPA 8260D

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - SIM - Quality Control

Batch BLK0062 - EPA 8260D-SIM

Instrument: NT16 Analyst: TWC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLK0062-BLK1)				Prepared: 02-Nov-2023 Analyzed: 02-Nov-2023 11:31							
Vinyl chloride	ND	5.01	20.0	ng/L							U
Surrogate: 1,2-Dichloroethane-d4	5080			ng/L	*5000*		*102*	*80-129*			
Surrogate: Toluene-d8	4510			ng/L	*5000*		*90.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4690			ng/L	*5000*		*93.9*	*75-125*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - SIM - Quality Control

Batch BLK0062 - EPA 8260D-SIM

Instrument: NT16 Analyst: TWC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLK0062-BS1)					Prepared: 02-Nov-2023 Analyzed: 02-Nov-2023 10:29						
Vinyl chloride	2150	5.01	20.0	ng/L	2000		108	62-141			
Surrogate: 1,2-Dichloroethane-d4	5100			ng/L	*5000*		*102*	*80-129*			
Surrogate: Toluene-d8	4770			ng/L	*5000*		*95.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5010			ng/L	*5000*		*100*	*75-125*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - SIM - Quality Control

Batch BLK0062 - EPA 8260D-SIM

Instrument: NT16 Analyst: TWC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLK0062-BSD1)					Prepared: 02-Nov-2023 Analyzed: 02-Nov-2023 10:49						
Vinyl chloride	2070	5.01	20.0	ng/L	2000		104	62-141	3.79	30	
Surrogate: 1,2-Dichloroethane-d4	5200			ng/L	*5000*		*104*	*80-129*			
Surrogate: Toluene-d8	4740			ng/L	*5000*		*94.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5060			ng/L	*5000*		*101*	*75-125*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - SIM - Quality Control

Batch BLK0062 - EPA 8260D-SIM

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BLK0159 - NWTPH-Dx

Instrument: FID4 Analyst: NRB/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLK0159-BLK1)				Prepared: 08-Nov-2023 Analyzed: 13-Nov-2023 15:57						
Diesel Range Organics (C12-C24)	ND	0.100	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.154		mg/L	*0.270*		*57.1*	*50-150*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BLK0159 - NWTPH-Dx

Instrument: FID4 Analyst: NRB/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLK0159-BS1)				Prepared: 08-Nov-2023 Analyzed: 13-Nov-2023 16:18						
Diesel Range Organics (C12-C24)	2.37	0.100	mg/L	3.00		79.1	56-120			
Surrogate: o-Terphenyl	0.189		mg/L	*0.270*		*70.1*	*50-150*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BLK0159 - NWTPH-Dx

Instrument: FID4 Analyst: NRB/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLK0159-BSD1)				Prepared: 08-Nov-2023 Analyzed: 13-Nov-2023 16:38						
Diesel Range Organics (C12-C24)	2.54	0.100	mg/L	3.00		84.6	56-120	6.68	30	
Surrogate: o-Terphenyl	0.196		mg/L	*0.270*		*72.7*	*50-150*			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BLK0159 - NWTPH-Dx

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BLK0432 - EPA 200.8

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLK0432-BLK1)						Prepared: 15-Nov-2023 Analyzed: 15-Nov-2023 18:13						
Chromium	52	ND	0.260	0.500	ug/L							U
Lead	208	ND	0.0513	0.100	ug/L							U
Arsenic	75a	ND	0.0373	0.200	ug/L							U
LCS (BLK0432-BS1)						Prepared: 15-Nov-2023 Analyzed: 15-Nov-2023 18:18						
Chromium	52	26.1	0.260	0.500	ug/L	25.0		104	80-120			
Lead	208	28.0	0.0513	0.100	ug/L	25.0		112	80-120			
Arsenic	75a	25.9	0.0373	0.200	ug/L	25.0		104	80-120			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BLK0407 - EPA 200.8

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLK0407-BLK1)						Prepared: 14-Nov-2023 Analyzed: 15-Nov-2023 19:33						
Chromium, Dissolved	52	ND	0.260	0.500	ug/L							U
Lead, Dissolved	208	ND	0.0513	0.100	ug/L							U
Arsenic, Dissolved	75a	ND	0.0373	0.200	ug/L							U
LCS (BLK0407-BS1)						Prepared: 14-Nov-2023 Analyzed: 15-Nov-2023 19:38						
Chromium, Dissolved	52	24.6	0.260	0.500	ug/L	25.0		98.3	80-120			
Lead, Dissolved	208	26.3	0.0513	0.100	ug/L	25.0		105	80-120			
Arsenic, Dissolved	75a	22.6	0.0373	0.200	ug/L	25.0		90.3	80-120			
Duplicate (BLK0407-DUP1)			**Source: 23K0040-02**			Prepared: 14-Nov-2023 Analyzed: 21-Nov-2023 22:25						
Chromium, Dissolved	52	ND	0.260	0.500	ug/L		ND					U
Lead, Dissolved	208	0.213	0.0513	0.100	ug/L		0.203			4.81	20	
Arsenic, Dissolved	75a	1.63	0.0373	0.200	ug/L		1.56			4.27	20	
Matrix Spike (BLK0407-MS1)			**Source: 23K0040-02**			Prepared: 14-Nov-2023 Analyzed: 21-Nov-2023 22:30						
Chromium, Dissolved	52	21.7	0.260	0.500	ug/L	25.0	ND	86.6	75-125			
Lead, Dissolved	208	24.5	0.0513	0.100	ug/L	25.0	0.203	97.3	75-125			
Arsenic, Dissolved	75a	25.1	0.0373	0.200	ug/L	25.0	1.56	94.1	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 in Water	
Chromium-52	NELAP,WADOE,WA-DW,DoD-ELAP
Lead-208	NELAP,WADOE,WA-DW,DoD-ELAP
Chromium-52	NELAP,WADOE,WA-DW,DoD-ELAP
Lead-208	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 200.8 UCT-KED in Water	
Arsenic-75a	NELAP,WADOE,WA-DW,DoD-ELAP
Arsenic-75a	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 8260D in Water	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroeth	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
2-Pentanone	WADOE
EPA 8260D-SIM in Water	
Vinyl chloride	NELAP,WADOE
NWTPH-Dx in Water	
Diesel Range Organics (C12-C2	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-	DoD-ELAP,NELAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2024

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	28-Nov-2023 10:41

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
HC	The natural concentration of the spiked analyte is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
J	Estimated concentration value detected below the reporting limit.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

24 November 2023

Angie Goodwin
Haley & Aldrich
3131 Elliott Avenue, Suite 600
Seattle, WA 98121

RE: Paccar (0203653-002)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
23J0665	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 23J0665	Turn-around Requested: Standard	Page: 1	of 1
ARI Client Company: Haley & Aldrich	Phone:	Date: 10/25	Ice Present? Yes
Client Contact: Angie Goodwin, Victoria Pehlivan		No. of Coolers: 1	Cooler Temps: 9.5°
Client Project Name: PACCAR			
Client Project #: 0203653-002	Samplers: A. Dalcahara		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Total Metals	Analysis Requested: Cr VI	Notes/Comments
SW-MH	10/25/23	1100	H2O	2	X	X	
MW-MHD		1130			X	X	
SW-DP		1125			X	X	
SW-3		1000			X	X	
SW-5		1015			X	X	
SW-6		1050			X	X	

Comments/Special Instructions: Cu, Pb, Zn

	Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature)				
Printed Name:	Andrew Dalcahara	Roman A.		
Company:	HA	ARI		
Date & Time:	10/25/23 1253	10/25/23 1253		

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW - MH	23J0665-01	Water	25-Oct-2023 12:00	25-Oct-2023 12:53
MW - MHD	23J0665-02	Water	25-Oct-2023 11:30	25-Oct-2023 12:53
SW - DP	23J0665-03	Water	25-Oct-2023 11:25	25-Oct-2023 12:53
SW - 3	23J0665-04	Water	25-Oct-2023 10:00	25-Oct-2023 12:53
SW - 5	23J0665-05	Water	25-Oct-2023 10:15	25-Oct-2023 12:53
SW - 6	23J0665-06	Water	25-Oct-2023 10:50	25-Oct-2023 12:53

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

Work Order Case Narrative

Total Metals - EPA Method 200.8

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Wet Chemistry

The sample(s) were prepared and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 10/25/2023 1:24:21PM

WORK ORDER

23J0665

Samples will be discarded 90 days after submission of a final report unless other instructions are received

Client: Haley & Aldrich | **Project Manager:** Kelly Bottem

Project: Paccar | **Project Number:** 0203653-002

Preservation Confirmation

Container ID	Container Type	pH	
23J0665-01 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pam
23J0665-01 B	HDPE NM, 500 mL		
23J0665-02 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pam
23J0665-02 B	HDPE NM, 500 mL		
23J0665-03 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pam
23J0665-03 B	HDPE NM, 500 mL		
23J0665-04 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pam
23J0665-04 B	HDPE NM, 500 mL		
23J0665-05 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pam
23J0665-05 B	HDPE NM, 500 mL		
23J0665-06 A	HDPE NM, 500 mL, 1:1 HNO3	<2	pam
23J0665-06 B	HDPE NM, 500 mL		

Preservation Confirmed By

10/25/23
Date

Reviewed By

Date

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Haley and Aldrich Project Name: Paccar

COC No(s): NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 23J0665 Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1253 9.5°

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 9708

Cooler Accepted by: Date: 10/25/23 Time: 1253

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ...	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?	LB 10/25	YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: Date: 10/25/23 Time: 1316 Labels checked by: LB

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
SW-MHD	MW-MHD		

Additional Notes, Discrepancies, & Resolutions:

By: Date: 10/25/23

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Temperature Compliance Form

ARI Work Order: 23J0665

Cooler#: _____ **Temperature(°C):** 9.5°

Sample ID	Bottle Count	Bottle Type
samples above 6°		

Cooler#: _____ **Temperature(°C):** _____

Sample ID	Bottle Count	Bottle Type

Cooler#: _____ **Temperature(°C):** _____

Sample ID	Bottle Count	Bottle Type

Cooler#: _____ **Temperature(°C):** _____

Sample ID	Bottle Count	Bottle Type

Completed by: _____ Date: 10/25/23 Time: 1213

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - MH

23J0665-01 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 10/25/2023 12:00
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 19:46

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-01 A
Preparation Batch: BLK0210 — Sample Size: 25 mL
Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	70.7	ug/L	
Zinc	7440-66-6	1	2.92	6.00	93.8	ug/L	

Analytical Resources, LLC
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Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - MH

23J0665-01 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 — Sampled: 10/25/2023 12:00

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 19:46

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-01 A

Preparation Batch: BLK0210 — Sample Size: 25 mL

Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	1	0.0513	0.100	1.34	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - MH

23J0665-01RE1 (Water)

Wet Chemistry

Method: SM 3500-Cr B-09 — Sampled: 10/25/2023 12:00
Instrument: UV1800-1 Analyst: SRB — Analyzed: 10/25/2023 18:19

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23J0665-01RE1 B 01
Preparation Batch: BLJ0803 — Sample Size: 40 mL
Prepared: 10/25/2023 — Final Volume: 50 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Hexavalent Chromium	1854-02-99	1.25	0.013	0.013	ND	mg/L	U

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Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

MW - MHD

23J0665-02 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 10/25/2023 11:30
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 19:50

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-02 A
Preparation Batch: BLK0210 — Sample Size: 25 mL
Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	70.8	ug/L	
Zinc	7440-66-6	1	2.92	6.00	89.4	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

MW - MHD

23J0665-02 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 — Sampled: 10/25/2023 11:30

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 19:50

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-02 A

Preparation Batch: BLK0210 — Sample Size: 25 mL

Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	1	0.0513	0.100	1.24	ug/L	

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Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

MW - MHD

23J0665-02 (Water)

Wet Chemistry

Method: SM 3500-Cr B-09 — Sampled: 10/25/2023 11:30
Instrument: UV1800-1 Analyst: SRB — Analyzed: 10/25/2023 18:10

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23J0665-02 B
Preparation Batch: BLJ0803 — Sample Size: 40 mL
Prepared: 10/25/2023 — Final Volume: 50 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Hexavalent Chromium	1854-02-99	1.25	0.013	0.013	ND	mg/L	U

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Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - DP

23J0665-03 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 10/25/2023 11:25
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 19:53

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-03 A
Preparation Batch: BLK0210 — Sample Size: 25 mL
Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	2.36	ug/L	
Zinc	7440-66-6	1	2.92	6.00	49.6	ug/L	

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Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - DP

23J0665-03 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 — Sampled: 10/25/2023 11:25
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 19:53

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-03 A
Preparation Batch: BLK0210 — Sample Size: 25 mL
Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	1	0.0513	0.100	0.166	ug/L	

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Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - DP

23J0665-03 (Water)

Wet Chemistry

Method: SM 3500-Cr B-09 — Sampled: 10/25/2023 11:25
Instrument: UV1800-1 Analyst: SRB — Analyzed: 10/25/2023 18:13

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23J0665-03 B 01
Preparation Batch: BLJ0803 — Sample Size: 40 mL
Prepared: 10/25/2023 — Final Volume: 50 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Hexavalent Chromium	1854-02-99	1.25	0.013	0.013	ND	mg/L	U

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 3

23J0665-04 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 10/25/2023 10:00

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 20:16

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-04 A

Preparation Batch: BLK0210 — Sample Size: 25 mL

Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	2.16	ug/L	
Zinc	7440-66-6	1	2.92	6.00	52.5	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 3

23J0665-04 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 — Sampled: 10/25/2023 10:00

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 20:16

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-04 A

Preparation Batch: BLK0210 — Sample Size: 25 mL

Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	1	0.0513	0.100	0.151	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 3

23J0665-04 (Water)

Wet Chemistry

Method: SM 3500-Cr B-09 — Sampled: 10/25/2023 10:00
Instrument: UV1800-1 Analyst: SRB — Analyzed: 10/25/2023 18:14

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23J0665-04 B 01
Preparation Batch: BLJ0803 — Sample Size: 40 mL
Prepared: 10/25/2023 — Final Volume: 50 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Hexavalent Chromium	1854-02-99	1.25	0.013	0.013	ND	mg/L	U

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 5

23J0665-05 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 10/25/2023 10:15
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 20:20

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-05 A
Preparation Batch: BLK0210 — Sample Size: 25 mL
Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	2.69	ug/L	
Zinc	7440-66-6	1	2.92	6.00	34.2	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 5

23J0665-05 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 — Sampled: 10/25/2023 10:15
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 20:20

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-05 A
Preparation Batch: BLK0210 — Sample Size: 25 mL
Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	1	0.0513	0.100	0.177	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 5

23J0665-05 (Water)

Wet Chemistry

Method: SM 3500-Cr B-09 — Sampled: 10/25/2023 10:15
Instrument: UV1800-1 Analyst: SRB — Analyzed: 10/25/2023 18:14

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23J0665-05 B 01
Preparation Batch: BLJ0803 — Sample Size: 40 mL
Prepared: 10/25/2023 — Final Volume: 50 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Hexavalent Chromium	1854-02-99	1.25	0.013	0.013	ND	mg/L	U

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Report

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 6

23J0665-06 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED — Sampled: 10/25/2023 10:50

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 20:24

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-06 A

Preparation Batch: BLK0210 — Sample Size: 25 mL

Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Copper	7440-50-8	1	0.173	0.500	17.0	ug/L	
Zinc	7440-66-6	1	2.92	6.00	20.8	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 6

23J0665-06 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 — Sampled: 10/25/2023 10:50
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/21/2023 20:24

Sample Preparation: Preparation Method: REN - EPA 3010A M — Extract ID: 23J0665-06 A
Preparation Batch: BLK0210 — Sample Size: 25 mL
Prepared: 11/07/2023 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Lead	7439-92-1	1	0.0513	0.100	5.49	ug/L	

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

SW - 6

23J0665-06 (Water)

Wet Chemistry

Method: SM 3500-Cr B-09 — Sampled: 10/25/2023 10:50
Instrument: UV1800-1 Analyst: SRB — Analyzed: 10/25/2023 18:16

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23J0665-06 B 01
Preparation Batch: BLJ0803 — Sample Size: 40 mL
Prepared: 10/25/2023 — Final Volume: 50 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Hexavalent Chromium	1854-02-99	1.25	0.013	0.013	ND	mg/L	U

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BLK0210 - EPA 200.8

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLK0210-BLK1)					Prepared: 07-Nov-2023 Analyzed: 07-Nov-2023 22:09							
Lead	208	ND	0.0513	0.100	ug/L							U
Copper	63	ND	0.173	0.500	ug/L							U
Zinc	66	ND	2.92	6.00	ug/L							U
LCS (BLK0210-BS1)					Prepared: 07-Nov-2023 Analyzed: 07-Nov-2023 22:14							
Lead	208	27.2	0.0513	0.100	ug/L	25.0		109	80-120			
Copper	63	26.1	0.173	0.500	ug/L	25.0		105	80-120			
Zinc	66	83.1	2.92	6.00	ug/L	80.0		104	80-120			

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BLJ0803 - SM 3500-Cr B-09

Instrument: UV1800-1 Analyst: SRB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLJ0803-BLK1)				Prepared: 25-Oct-2023 Analyzed: 25-Oct-2023 18:02							
Hexavalent Chromium	ND	0.013	0.013	mg/L							U
LCS (BLJ0803-BS1)				Prepared: 25-Oct-2023 Analyzed: 25-Oct-2023 18:04							
Hexavalent Chromium	0.617	0.013	0.013	mg/L	0.630		98.0	85-115			
Duplicate (BLJ0803-DUP1)		**Source: 23J0665-01RE1**		Prepared: 25-Oct-2023 Analyzed: 25-Oct-2023 18:06							
Hexavalent Chromium	ND	0.013	0.013	mg/L		ND					U
Matrix Spike (BLJ0803-MS1)		**Source: 23J0665-01RE1**		Prepared: 25-Oct-2023 Analyzed: 25-Oct-2023 18:09							
Hexavalent Chromium	0.037	0.013	0.013	mg/L	0.0630	ND	58.0	85-115			K
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Post Spike (BLJ0803-PS1)		**Source: 23J0665-01RE1**		Prepared: 25-Oct-2023 Analyzed: 25-Oct-2023 18:28							
Hexavalent Chromium	0.034			mg/L	0.0301	ND	96.5	85-115			D

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 in Water	
Lead-208	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 200.8 UCT-KED in Water	
Copper-63	NELAP,WADOE,WA-DW,DoD-ELAP
Zinc-66	NELAP,WADOE,WA-DW,DoD-ELAP
SM 3500-Cr B-09 in Water	
Hexavalent Chromium	WADOE,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2024

Haley & Aldrich	Project: Paccar	
3131 Elliott Avenue, Suite 600	Project Number: 0203653-002	**Reported:**
Seattle WA, 98121	Project Manager: Angie Goodwin	24-Nov-2023 16:47

Notes and Definitions

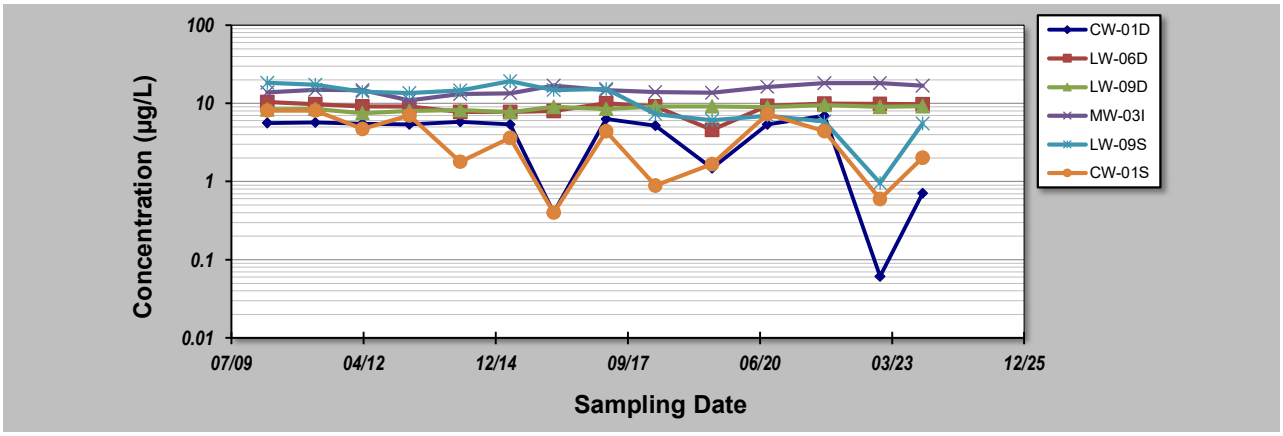
*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
HC	The natural concentration of the spiked analyte is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
J	Estimated concentration value detected below the reporting limit.
K	Hexavalent Chromium post spike performed on a pH adjusted sample to verify matrix interference.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

APPENDIX C
Groundwater Quality Mann-Kendall Analysis

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	26-Dec-23	Job ID:	0203653-002
Facility Name:	PACCAR Renton	Constituent:	Arsenic
Conducted By:	Andrew Nakahara/REJ	Concentration Units:	µg/L

Sampling Point ID:	CW-01D	LW-06D	LW-09D	MW-03I	LW-09S	CW-01S
Sampling Event	Sampling Date	ARSENIC CONCENTRATION (µg/L)					
1	4/2/10	5.6	10.4	8.4	13.8	18.3	8.1
2	3/31/11	5.7	9.7	8.5	14.9	17.3	8.1
3	3/23/12	5.5	9.1	7.5	14.7	14.1	4.7
4	3/14/13	5.4	9.1	8	10.9	13.6	7
5	4/2/14	5.8	7.8	8.2	13.2	14.6	1.8
6	4/15/15	5.4	7.8	7.7	13.5	19.2	3.6
7	3/10/16	0.4	8.0	9.0	16.9	14.8	0.4
8	4/11/17	6.29	10.0	8.5	14.7	15.3	4.39
9	4/17/18	5.16	9.2	9.16	13.9	7.31	0.884
10	6/20/19	1.47	4.57	9.12	13.7	6.1	1.67
11	8/13/20	5.39	9.26	8.95	16.3	6.98	7.3
12	10/19/21	6.94	9.94	9.51	18.1	5.83	4.44
13	12/14/22	0.061	9.84	9.02	18.1	0.956	0.599
14	11/1/23	0.71	9.73	9.22	16.9	5.52	2.02
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.57	0.17	0.07	0.14	0.50	0.72
Mann-Kendall Statistic (S):		-30	5	53	38	-59	-34
Confidence Factor:		94.4%	58.5%	99.8%	97.9%	100.0%	96.5%
Concentration Trend:		Prob. Decreasing	No Trend	Increasing	Increasing	Decreasing	Decreasing



Notes:

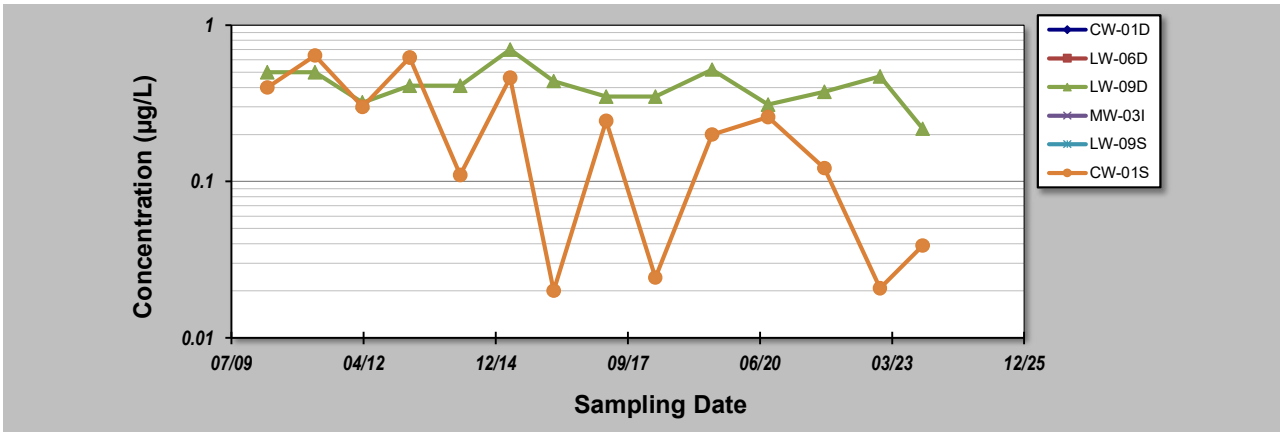
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	26-Dec-23	Job ID:	0203653-002
Facility Name:	PACCAR Renton	Constituent:	Vinyl Chloride
Conducted By:	Andrew Nakahara/REJ	Concentration Units:	µg/L

Sampling Point ID:	CW-01D	LW-06D	LW-09D	MW-03I	LW-09S	CW-01S

Sampling Event	Sampling Date	VINYL CHLORIDE CONCENTRATION (µg/L)					
1	4/2/10			0.5			0.4
2	3/29/11			0.5			0.64
3	3/23/12			0.32			0.3
4	3/15/13			0.41			0.62
5	4/2/14			0.41			0.11
6	4/15/15			0.7			0.46
7	3/10/16			0.44			0.02
8	4/11/17			0.35			0.244
9	4/17/18			0.35			0.0243
10	6/20/19			0.52			0.2
11	8/17/20			0.311			0.259
12	10/19/21			0.375			0.122
13	12/14/22			0.47			0.0208
14	11/1/23			0.218			0.0389
15							
16							
17							
18							
19							
20							
Coefficient of Variation:				0.28			0.87
Mann-Kendall Statistic (S):				-24			-43
Confidence Factor:				89.4%			99.0%
Concentration Trend:				Stable			Decreasing



Notes:

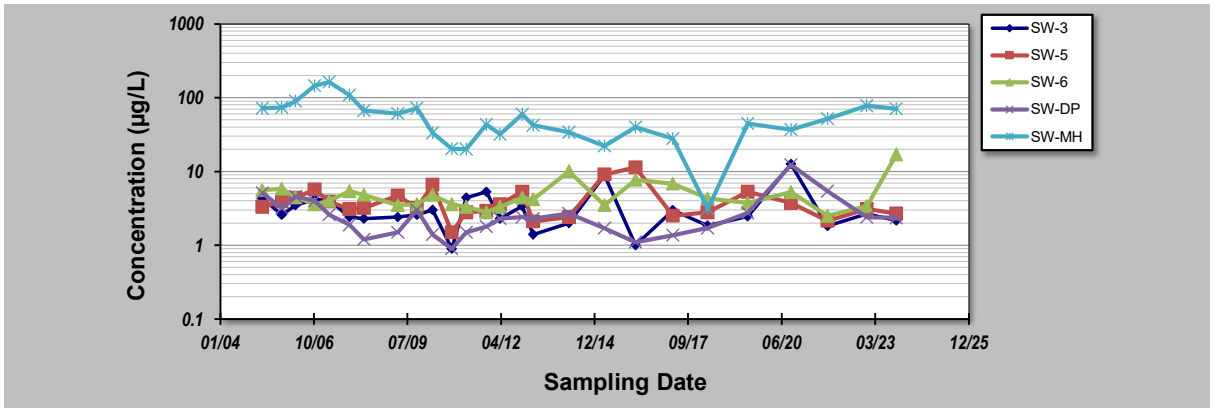
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

APPENDIX D
Surface Water Quality Mann-Kendall Analysis

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	26-Dec-23	Job ID:	0203653-002
Facility Name:	PACCAR Renton	Constituent:	Copper
Conducted By:	Andrew Nakahara/REJ	Concentration Units:	µg/L

Sampling Point ID:	SW-3	SW-5	SW-6	SW-DP	SW-MH		
Sampling Event	Sampling Date	COPPER CONCENTRATION (µg/L)						
1	4/7/2005	4.3	3.3	5.6	5.1	71.7		
2	11/1/2005	2.6	3.9	5.8	3.2	73.9		
3	3/28/2006	3.5	4.4	4.5	4.6	89.8		
4	10/19/2006	4.2	5.7	3.6	4	146		
5	3/22/2007	4.1	3.9	4	2.6	163		
6	10/25/2007	2.4	3.1	5.4	1.9	109		
7	3/26/2008	2.3	3.2	4.8	1.2	67.3		
8	3/25/2009	2.4	4.7	3.5	1.5	61		
9	10/15/2009	2.6	3.2	3.6	3	72		
10	3/31/2010	3	6.6	4.8	1.4	33.4		
11	10/22/2010	0.9	1.5	3.6	0.9	20.3		
12	3/28/2011	4.4	2.8	3.3	1.5	20		
13	10/28/2011	5.3	2.9	2.8	1.8	43		
14	3/21/2012	2.3	3.6	3.3	2.3	32		
15	11/13/2012	3.4	5.3	4.4	2.4	59.4		
16	3/11/2013	1.4	2.1	4.2	2.3	42.4		
17	3/28/2014	2	2.4	10.1	2.7	34.1		
18	4/13/2015	8.9	9.1	3.5	1.7	22.2		
19	3/10/2016	1	11.4	7.7	1.1	40.1		
20	4/11/2017	2.98	2.52	6.87	1.37	28		
21	4/18/2018	1.84	2.79	4.31	1.71	3.14		
22	6/20/2019	2.47	5.28	3.75	2.73	44.7		
23	9/24/2020	12.6	3.74	5.25	12.3	36.9		
24	10/21/2021	1.82	2.15	2.5	5.4	51.7		
25	12/13/2022	2.66	3.09	3.37	2.39	78		
26	10/25/2023	2.16	2.69	17	2.36	70.7		
27								
28								
29								
30								
Coefficient of Variation:		0.74	0.54	0.58	0.80	0.64		
Mann-Kendall Statistic (S):		-56	-55	-23	-19	-97		
Confidence Factor:		88.6%	88.2%	68.4%	65.3%	98.3%		
Concentration Trend:		Stable	Stable	Stable	Stable	Decreasing		



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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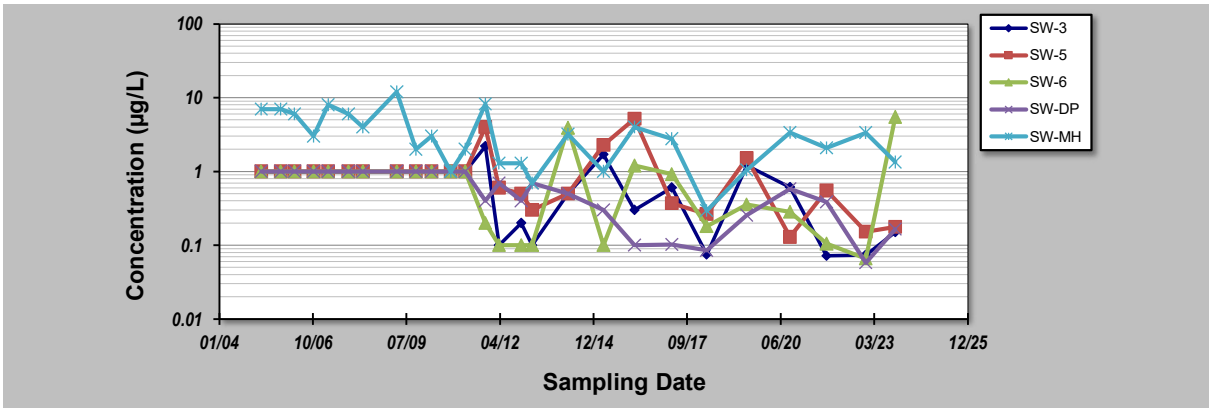
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	26-Dec-23	Job ID:	0203653-002
Facility Name:	PACCAR Renton	Constituent:	Lead
Conducted By:	Andrew Nakahara/REJ	Concentration Units:	µg/L

Sampling Point ID:	SW-3	SW-5	SW-6	SW-DP	SW-MH
Sampling Event	Sampling Date	LEAD CONCENTRATION (µg/L)				
1	4/7/2005	1	1	1	1	7
2	11/1/2005	1	1	1	1	7
3	3/28/2006	1	1	1	1	6
4	10/19/2006	1	1	1	1	3
5	3/22/2007	1	1	1	1	8
6	10/25/2007	1	1	1	1	6
7	3/26/2008	1	1	1	1	4
8	3/25/2009	1	1	1	1	12
9	10/15/2009	1	1	1	1	2
10	3/31/2010	1	1	1	1	3
11	10/22/2010	1	1	1	1	1
12	3/28/2011	1	1	1	1	2
13	10/28/2011	2.2	4	0.2	0.4	8.2
14	3/21/2012	0.1	0.6	0.1	0.7	1.3
15	11/13/2012	0.2	0.5	0.1	0.4	1.3
16	3/11/2013	0.1	0.3	0.1	0.7	0.7
17	3/28/2014	0.5	0.5	3.9	0.5	3.2
18	4/13/2015	1.7	2.3	0.1	0.3	1
19	3/10/2016	0.3	5.2	1.2	0.1	4
20	4/11/2017	0.605	0.372	0.917	0.102	2.78
21	4/18/2018	0.075	0.265	0.181	0.085	0.295
22	6/20/2019	1.21	1.52	0.356	0.255	1.05
23	9/24/2020	0.614	0.13	0.284	0.581	3.38
24	10/21/2021	0.072	0.551	0.105	0.387	2.08
25	12/13/2022	0.074	0.153	0.066	0.058	3.36
26	10/25/2023	0.151	0.177	5.49	0.166	1.34
27						
28						
29						
30						
Coefficient of Variation:		0.70	1.04	1.24	0.58	0.79
Mann-Kendall Statistic (S):		-114	-108	-87	-205	-116
Confidence Factor:		99.5%	99.2%	97.1%	>99.9%	99.5%
Concentration Trend:		Decreasing	Decreasing	Decreasing	Decreasing	Decreasing



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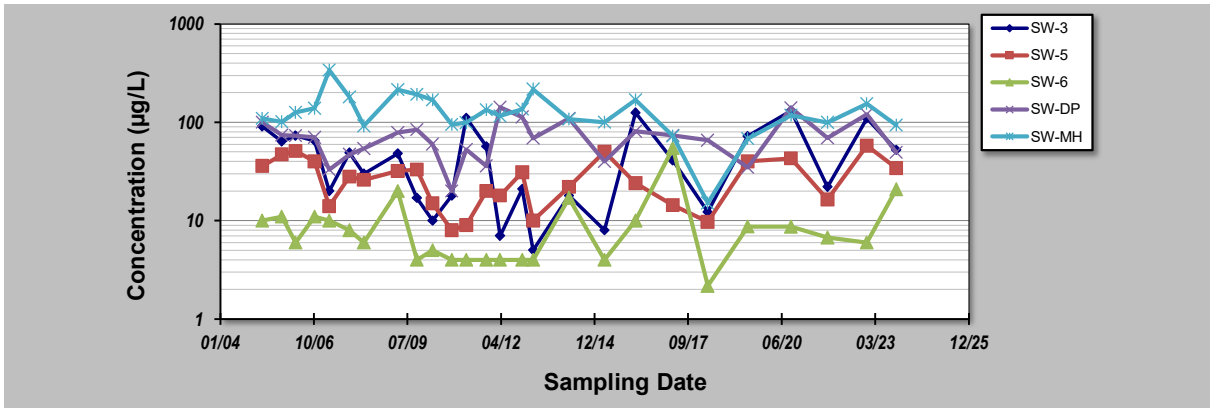
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	26-Dec-23	Job ID:	0203653-002
Facility Name:	PACCAR Renton	Constituent:	Zinc
Conducted By:	Andrew Nakahara/REJ	Concentration Units:	µg/L

Sampling Point ID:	SW-3	SW-5	SW-6	SW-DP	SW-MH
Sampling Event	Sampling Date	ZINC CONCENTRATION (µg/L)				
1	4/7/2005	91	36	10	100	110
2	11/1/2005	64	47	11	74	101
3	3/28/2006	73	51	6	73	126
4	10/19/2006	65	40	11	70	139
5	3/22/2007	20	14	10	33	340
6	10/25/2007	49	28	8	47	181
7	3/26/2008	30	26	6	54	92
8	3/25/2009	48	32	20	79	215
9	10/15/2009	17	33	4	84	192
10	3/31/2010	10	15	5	60	169
11	10/22/2010	18	8	4	20	95
12	3/28/2011	111	9	4	53	99
13	10/28/2011	57	20	4	36	134
14	3/21/2012	7	18	4	142	116
15	11/13/2012	21	31	4	113	136
16	3/11/2013	5	10	4	69	217
17	3/28/2014	18	22	17	109	108
18	4/13/2015	8	50	4	40	100
19	3/10/2016	125	24	10	81	169
20	4/11/2017	41	14.4	55	73.9	73
21	4/18/2018	12	9.72	2	65.7	15
22	6/20/2019	72	40.1	9	34.9	69
23	9/24/2020	131	43	9	140	118
24	10/21/2021	22	16.4	6.72	69.4	99.8
25	12/13/2022	110	57.9	6	120	154
26	10/25/2023	52.5	34.2	20.8	49.6	93.8
27						
28						
29						
30						
Coefficient of Variation:		0.79	0.52	1.06	0.44	0.47
Mann-Kendall Statistic (S):		-16	-15	-28	11	-76
Confidence Factor:		62.9%	62.0%	72.3%	58.6%	95.1%
Concentration Trend:		Stable	Stable	No Trend	No Trend	Decreasing



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