Port of Seattle
Lora Lake Apartments Site

2023 Annual Compliance Monitoring Report

Prepared for

Port of Seattle
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2023 Annual Compliance Monitoring Report

This document was prepared for
The Port of Seattle
under the supervision of:

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Date: December 21, 2023

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List of Abbreviations

Abbreviation	Definition
ARL	Analytical Resources, LLC
CAP	Cleanup Action Plan
CD	Consent Decree
CMP	Compliance Monitoring Plan
DMCA	1982 Dredged Material Containment Area
Ecology	Washington State Department of Ecology
µg/L	Micrograms per liter
pg/g	Picograms per gram
pg/L	Picograms per liter
Port	Port of Seattle
Site	Lora Lake Apartments Site
TEQ	Toxic equivalent
USEPA	U.S. Environmental Protection Agency
WSDOT	Washington State Department of Transportation

1.0 Introduction

This Annual Compliance Monitoring Report was prepared by Floyd|Snider on behalf of the Port of Seattle (Port) to document the compliance monitoring events conducted in 2023 at the Lora Lake Apartments Site (Site) in Burien, Washington. Compliance monitoring activities were conducted in accordance with the 2015 Compliance Monitoring Plan (CMP), as revised and finalized in 2022 (Floyd|Snider 2022).

The objective of this report is to describe the compliance monitoring program activities performed from January through December 2023. This report includes the results from compliance monitoring activities including groundwater compliance monitoring, sediment remedy compliance monitoring, and wildlife barrier and cap performance inspections at the Site. The cumulative data from these events will be used in the first 5-year periodic review, to be conducted following the 2024 monitoring event, to confirm the effectiveness of the remedial action and identify when site-wide compliance with groundwater cleanup standards for the Site have been achieved.

1.1 BACKGROUND

1.1.1 Site Description

The Site is located at 15001 Des Moines Memorial Drive South in Burien, Washington, and straddles the boundary between the Cities of Burien and SeaTac, Washington (refer to Figure 1.1). The Site, as defined by Washington Administrative Code 173-340-200, consists of three areas: the Lora Lake Apartments Parcel, and areas within the Lora Lake Parcel and 1982 Dredged Material Containment Area (DMCA), where contamination has come to be located. Historical operations at the Lora Lake Apartments Parcel included barrel-washing and auto-wrecking operations, which along with site regrading led to soil and groundwater contamination throughout the Site. The Site is owned by the Port and located within the security fencing for the Seattle-Tacoma International Airport with the exception of the portion of the Lora Lake Apartments Parcel owned by the Washington State Department of Transportation (WSDOT), described below. Descriptions of the Site areas are as follows:

- The Lora Lake Apartments Parcel is located on the west side of Des Moines Memorial Drive in the City of Burien and consists of approximately 8.3 acres of previously vacant land. A portion of the Lora Lake Apartments Parcel in the northeast corner was sold to WSDOT in May 2017 for the construction of State Road-518 off-ramp. This area is retained within the Site boundary although no longer owned by the Port. To the south of the Lora Lake Apartments Parcel is the former Seattle City Light Sunnydale Substation Parcel, which was purchased by the Port in 2011. Contamination has come to be located on a portion of the former Sunnydale Substation Parcel and this area therefore falls within the Site boundary.
- The Lora Lake Parcel is located on the east side of Des Moines Memorial Drive in the City of SeaTac and consists of approximately 7.1 acres of land, including the former

approximately 3-acre Lora Lake and a Port-constructed wetland habitat mitigation area.

- The DMCA is an approximately 2.75-acre area located adjacent to the Lora Lake Parcel, to the northeast. The DMCA was constructed in 1982, when King County dredged approximately 4 feet of Lora Lake sediments and placed the dredged material in a specifically constructed facility, now referred to as the DMCA.

The Port and the Washington State Department of Ecology (Ecology) entered a Consent Decree (CD) in September 2015 under the mutual objective of providing remedial action at the Site. The CD required the Port to perform a final cleanup action and associated compliance monitoring at the Site as described in the Cleanup Action Plan (CAP; State of Washington 2015).

1.1.2 Remedial Actions Implemented

As described in the CAP, the remedial actions at the Site were determined for each parcel. The Lora Lake Apartments Parcel remedial actions taken include excavation of soils with a dioxin/furan toxic equivalent (TEQ) greater than 100 picograms per gram (pg/g), construction of a temporary clean soil cap, and future implementation of a constructed engineered surface to contain remaining soils with concentrations greater than the dioxin/furan TEQ cleanup level of 13 pg/g at the time of future site redevelopment. The final engineered surface shall be installed by October 31, 2026, as approved by Ecology via email on September 8, 2021. The excavation and temporary clean soil cap were completed in 2018. The Lora Lake Parcel remedial actions taken include construction of a sand cap, followed by site restoration into an intermittent scrub/shrub wetland. The sand cap was completed in 2019, and the wetland restoration was completed in early 2020. DMCA remedial actions completed include construction of a wildlife barrier. Restrictive Covenants limiting future site uses have been implemented for all parcels, for protection from contact with contamination remaining in place. Restrictive Covenants for the Lora Lake Apartments Parcel, Lora Lake Parcel, DMCA, and the former Sunnydale Substation Parcel were filed with King County on January 28, 2022, after receipt of Ecology signatures. Compliance monitoring of the remedial actions is being conducted under the CMP (Floyd|Snider 2022).

1.1.3 Compliance Monitoring Requirements

In accordance with Washington Administrative Code 173-340-410, compliance monitoring of site groundwater is required to confirm that human health and the environment are adequately protected, the remedial action has achieved the cleanup standards, and the cleanup action remains protective after cleanup standards have been met.

The Ecology-approved CMP includes requirements for each of the three parcels of the Site. Requirements for the Lora Lake Apartments Parcel include analysis of groundwater for arsenic, pentachlorophenol, and dioxins/furans, and four consecutive events with concentrations less than the established cleanup levels throughout the monitoring network prior to termination of sampling. The CMP also includes annual inspections of the soil cap to identify and document

general condition, as well as any areas of exposed underlying soil, loss of barrier material, or substantial plant growth that may impact the functionality of the cap. Once constructed, annual monitoring of the permanent cap (redeveloped surface) will also be required to ensure integrity of the cap.

The Lora Lake Parcel requirements include annual analysis of groundwater for arsenic and dioxins/furans. Groundwater data will be subject to a 5-year periodic review to assess appropriate monitoring frequency for the next 5 years, and subsequent 5-year reviews will set the frequency for the following 5-year period. Additionally, as described in the CMP, sediment remedy compliance will also be evaluated every 5 years, through a statistical comparison of Lora Lake Parcel groundwater quality to site vicinity groundwater quality, for assessment of the sediment cap performance to contain contamination in the now-contained subsurface sediment beneath the restored wetland. The first 5-year period review and sediment remedy compliance evaluation will be conducted after the 2024 monitoring event.

Compliance monitoring requirements at the DMCA include annual wildlife barrier physical inspections to identify and document general condition, as well as any areas of exposed underlying soil, loss of barrier material, or substantial plant growth that may impact the functionality of the wildlife barrier.

2.0 Lora Lake Apartments Parcel

2.1 COMPLIANCE MONITORING PLAN ACTIVITIES COMPLETED

2.1.1 Groundwater Monitoring Program

Compliance monitoring at the Lora Lake Apartments Parcel began in December 2018. Four consecutive quarters of groundwater samples with pentachlorophenol and dioxin/furan concentrations less than cleanup levels were collected at MW-C1, MW-C2, and MW-C3 during the December 2018, March 2019, June 2019, and September 2019 monitoring events. With Ecology's approval, sampling for pentachlorophenol and dioxin/furan analysis was terminated after the September 2019 event. Sampling for dissolved arsenic continues as discussed below.

Groundwater samples, as described in this report, were collected from the full monitoring network (MW-C1, MW-C2, MW-C3, and MW-C4) on March 30, 2020, and June 20, 2020. In August 2020, Floyd|Snider submitted the *Evaluation of Arsenic in Groundwater at the Lora Lake Apartments Site* memorandum (hereafter referred to as the Arsenic Evaluation Memorandum; Floyd|Snider 2020) to Ecology on behalf of the Port to describe outlier arsenic data trends observed at MW-C2 and propose a change in the monitoring approach.

As described in the Arsenic Evaluation Memorandum, seasonal exceedances of arsenic concentrations correlated with elevated pH and high groundwater table elevation, likely associated with the crushed concrete fill placed after the demolition of the Lora Lake Apartments buildings and excavation of underlying impacted soil. This recycled concrete was placed above the historical high water table elevation but may be impacting pH and arsenic in groundwater during the wet season. Because the pattern observed at MW-C2 is unique to the location and not observed within the rest of the monitoring network, the Port requested termination of quarterly sampling of the full monitoring network. The Port proposed annual sampling of MW-C2 and downgradient location MW-C3 during the wet season to continue to confirm that elevated arsenic concentrations are not migrating off-site.

On September 21, 2020, Ecology approved the proposed approach of terminating quarterly sampling at the Lora Lake Apartments Parcel and coordinating annual sampling of MW-C2 and the downgradient location, MW-C3, concurrent with Lora Lake annual monitoring each spring (refer to Appendix A of the 2020 Annual Compliance Monitoring Report [Floyd|Snider 2021]). Annual monitoring of MW-C2 and MW-C3 will monitor trends and confirm arsenic-impacted waters are not migrating off property. The first round of annual monitoring of MW-C2 and MW-C3 occurred on October 27, 2020, rather than in the spring, due to sampling schedule impacts related to the COVID-19 pandemic. The subsequent monitoring events occurred on the regular spring schedule. The 2023 annual monitoring is described in this report.

2.1.2 Maintenance Activities Completed

In June and July 2023, the Port completed maintenance activities for items noted in the April 14, 2023, cap inspection, as detailed in Section 2.4. The Port seeded sparsely vegetated areas in

June 2023 and mowed the entire parcel in July. The broken bollard identified near MW-C1/VB1 was replaced and painted on July 14, 2023. Additional mowing and seeding was done throughout the Lora Lake Apartments Parcel between August and October 2023.

2.2 GROUNDWATER COMPLIANCE MONITORING SUMMARY

MW-C2 and MW-C3 were sampled in coordination with the Lora Lake Parcel annual groundwater monitoring event on April 14, 2023. The groundwater monitoring network is presented in Figure 2.1.

Groundwater samples were collected using standard low-flow sampling methods. The collected samples were generally clear, with no apparent odor. Purge water was collected and placed in an on-site, labeled, 55-gallon drum. The Port removed the purge water drums on July 28, 2023, and placed a new drum on the Site for future purge water disposal. All samples were submitted to Analytical Resources, LLC (ARL) under chain-of-custody procedures for analysis of arsenic. Groundwater sample collection forms for the event are included in Appendix A.

2.3 GROUNDWATER ANALYTICAL SUMMARY

This section summarizes the analytical results for arsenic. Analytical results are presented in Figure 2.1 and Table 2.1, and laboratory reports and data validation summaries are included in Appendix B.

2.3.1 Arsenic

In the sample collected from MW-C3, arsenic was detected at an estimated concentration of 0.18 micrograms per liter (µg/L), less than the Site cleanup level of 5 µg/L. The arsenic concentration in the sample collected from MW-C2 was 55 µg/L, exceeding the Site cleanup level.

The elevated arsenic concentration on April 14, 2023, is consistent with the trend observed between 2019 and 2022. The likely cause of elevated arsenic at MW-C2 was evaluated and described in Section 2.1.1 and in the Arsenic Evaluation Memorandum (Floyd|Snider 2020).

2.3.2 Data Validation

A Compliance Screening (USEPA Stage 2B) data quality review was performed on metals data resulting from laboratory analysis by U.S. Environmental Protection Agency (USEPA) Methods 6020B. The analytical data were validated by Floyd|Snider in accordance with the USEPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2020).

Field and laboratory quality control parameters for all samples met project criteria. At some monitoring well locations, arsenic results were detected at concentrations less than the method reporting limit; these results were qualified by the laboratory as estimated concentrations. No additional qualifiers were added to the analytical results for metals based on the data quality

review. Metals data are determined to be of acceptable quality for use as reported by the laboratory.

2.4 TEMPORARY SOIL CAP INSPECTION

On April 14, 2023, a cap inspection was conducted to document the integrity of the temporary soil cap that was installed at the Lora Lake Apartments Parcel in October 2017. The cap inspection was conducted in accordance with the CMP. During the cap inspection, the following items were noted for maintenance: (1) areas in need of vegetation replacement near the biofiltration swale at the southeast portion of the property, (2) vegetation loss and exposed soil at the top of the slopes around the northwest fence line, southwest fence line, and south fence line near the entrance of the property, (3) a damaged bollard near MW-C1/VB1 at the northeast corner of the Site, and (4) some animal burrowing.

A follow-up site inspection was conducted on November 16, 2023, to reassess the vegetation loss and exposed soil identified above. During the follow-up inspection, the areas of concern were identified to be a result of maintenance (mowing) in early spring. The areas appeared stable with visible new growth. The temporary soil cap inspection log and photographs from both site inspections are included in Appendix C.

Instruction for required maintenance of the temporary soil cap was provided to the Port as part of required landscape operations and maintenance. Maintenance activities were completed on the Lora Lake Apartments Parcel in June, July, September, and October 2023, as described in Section 2.1.2. Appendix D includes photographs of post-maintenance site conditions. Photographs reflect reseeding in areas previously marked for maintenance due to vegetation loss and exposed soils, bollard repairs, and site-wide maintenance and landscaping.

3.0 Lora Lake Parcel

3.1 COMPLIANCE MONITORING PLAN ACTIVITIES COMPLETED

3.1.1 Groundwater Monitoring Completed

Annual monitoring was completed at the Lora Lake Parcel in October 2020, March 2021, and March 2022. The fourth round of annual monitoring occurred on April 13 and 14, 2023, and is described in this report. In accordance with the CMP, on-site and vicinity well locations were sampled for arsenic and dioxins/furans. The full monitoring network includes on-site well locations MW-CP1, MW-CP2, MW-CP3, MW-CP4, MW-CP5, MW-CP6, and MW-CP-7, as well as vicinity well locations MW-C1/VB1, MW-VB2, MW-VB3, and HCOO-B312 (Figure 3.1).

3.1.2 Maintenance Activities Completed

No maintenance actions were identified for the Lora Lake Parcel, and no maintenance activities were conducted during the year.

3.2 GROUNDWATER COMPLIANCE MONITORING SUMMARY

This section summarizes the compliance monitoring events at the Lora Lake Parcel in 2023. The monitoring network is presented in Figure 3.1, and the groundwater sample collection forms are in Appendix A.

The full monitoring network (MW-CP1, MW-CP2, MW-CP3, MW-CP4, MW-CP5, MW-CP6, MW-CP-7, MW-C1/VB1, MW-VB2, MW-VB3, and HCOO-B312) was sampled on April 13 and 14, 2023. Groundwater samples were collected using standard low-flow groundwater sampling methods. Duplicate samples were collected at MW-C1/VB1 and MW-CP1 for laboratory quality control. Samples were generally clear with no visible turbidity and no apparent odor. Purge water was collected and placed in an on-site, labeled, 55-gallon drum for future disposal by the Port. All samples were submitted to ARL under chain-of-custody procedures for analysis of arsenic and dioxins/furans.

3.3 GROUNDWATER ANALYTICAL SUMMARY

This section summarizes the analytical results for arsenic and dioxins/furans. Analytical results are presented in Figure 3.1 and Table 3.1, and laboratory reports and data validation summaries are included in Appendix B.

3.3.1 Arsenic

Arsenic concentrations in all samples collected from all on-site wells and all vicinity wells were less than the Site cleanup level of 5 µg/L. Within the monitoring well network, arsenic concentrations were typically less than 1 µg/L, with the exception of arsenic concentrations of 1.6 and 1.2 µg/L detected at MW-CP4 and MW-CP5, respectively, located south of the former Lora Lake footprint (Figure 3.1).

3.3.2 Dioxins/Furans

Dioxin/furan concentrations from all on-site wells and vicinity wells were less than the Site groundwater cleanup level of 6.7 picograms per liter (pg/L). Dioxin/furan TEQ was detected in one of the on-site wells (MW-CP2) at a concentration of 1.75 pg/L. Dioxin/furan TEQ was detected at an estimated concentration of 1.43 pg/L in the duplicate sample collected at vicinity well location MW-VB1.

3.3.3 Data Validation

A Compliance Screening (USEPA Stage 2B) data quality review was performed on metals data resulting from laboratory analysis by USEPA Method 6020B. The analytical data were validated by Floyd|Snider in accordance with the USEPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2020). A full data validation (USEPA Stage 4) was performed on dioxin/furan data resulting from laboratory analysis by USEPA Method 1613B. The dioxin/furan data were validated by EcoChem. EcoChem data validation reports are included in Appendix B.

Field and laboratory quality control parameters for samples met project criteria with the exception of MW-CP5-041323, which had a recovery value below the lower control limit of 70% as noted by the J qualifier added by EcoChem. No qualifiers were added to the analytical results for metals based on the data quality review. All data are determined to be of acceptable quality for use as reported or qualified.

3.3.4 Sediment Remedy Confirmation Monitoring

As detailed in the CMP, the sediment cap is designed to achieve compliance with surface water quality criteria at the cap surface. The surface water quality criterion of 0.005 pg/L dioxin/furan TEQ is significantly less than current laboratory practical quantitation limits. As described in the CMP, statistical comparison of groundwater confirmation samples collected within and downgradient of the former Lora Lake cleanup area to vicinity background groundwater samples will be conducted for confirmation of the sediment remedy performance. This statistical comparison method for confirmation monitoring samples provides a measurable method to determine if groundwater samples collected immediately above the sediment cap are different than samples collected from site vicinity background locations. This statistical analysis will be conducted after 5 years of annual monitoring, after the 2024 monitoring event, to provide vicinity background and site data sets with a minimum of 20 results each. Statistical comparison will be conducted in accordance with the procedures described in the CMP.

4.0 1982 Dredged Material Containment Area

4.1 WILDLIFE BARRIER INSPECTION

The DMCA wildlife barrier was inspected on April 14, 2023. Dust and organic debris associated with a large deciduous tree were documented at the southwest corner (station DMCA 09) of the DMCA area during the inspection. Dust and organic debris were also noted along the west cap boundary and at the northeast corner of the cap. The DMCA was swept on July 10, 2023, as part of regular maintenance to address dust and debris as noted during the inspection. Overall, the general integrity and condition of the pervious pavement was in good condition; however, potential signs of material loss at the surface was noted at DMCA 05. Although the potential material loss does not appear to impact the barrier's ability to restrict contact with underlying soils, continued monitoring of this location is recommended. The wildlife barrier inspection log and photographs are included in Appendix C.

5.0 Upcoming Events and Next Steps

5.1 2024 COMPLIANCE MONITORING

Annual groundwater and sediment remedy compliance monitoring at the Lora Lake Parcel will continue with the fifth annual monitoring event in spring 2024. Annual groundwater sampling of Lora Lake Apartments Parcel well locations MW-C2 and MW-C3 for arsenic monitoring will be coordinated with the Lora Lake Parcel sampling schedule.

The temporary soil cap at the Lora Lake Apartments Parcel and the wildlife barrier at the DMCA will be inspected concurrent with the annual groundwater and sediment remedy compliance monitoring event.

The first 5-year periodic review will be conducted after the 2024 monitoring event to confirm the effectiveness of the remedial action and identify when site-wide compliance with groundwater cleanup standards for the Site have been achieved and will be conducted in coordination with Ecology.

6.0 References

Floyd|Snider. 2020. *Evaluation of Arsenic in Groundwater at the Lora Lake Apartments Site.* Memorandum from Adia Jumper, Mark Jusayan, and Megan King, Floyd|Snider, to Sunny Becker, Washington State Department of Ecology. 17 August.

_____. 2021. *Port of Seattle Lora Lake Apartments Site 2020 Annual Compliance Monitoring Report.* March.

_____. 2022. *Port of Seattle Lora Lake Apartments Site Compliance Monitoring Plan.* Originally published September 2015, revised May 2020 and January 2022.

State of Washington. 2015. *Consent Decree re: Lora Lake Apartments Site, Burien, Washington*. 9 September.

U.S. Environmental Protection Agency (USEPA). 2020. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. EPA-540-R-20-006. November.

Lora Lake Apartments Site

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Tables

Table 2.1
Lora Lake Apartments Parcel Groundwater Analytical Data

Location Name				MW-C1													
Sample ID				MW-C1-121218	MW-C1-121218-D	MW-C1-031519	MW-C1-031519-D	MW-C1-062119	MW-C1-062119-D	MW-C1-092019	MW-C1-092019-D	MW-C1-121819	MW-C1-121819-D	MW-C1-033020	MW-C1-033020-D	MW-C1-061720	MW-C1-061720D
Sample Date				12/12/2018	12/12/2018	3/15/2019	3/15/2019	6/21/2019	6/21/2019	9/20/2019	9/20/2019	12/18/2019	12/18/2019	3/30/2020	3/30/2020	6/17/2020	6/17/2020
Analyte	**CAS No.**	**Site CUL**	**Units**														
Dissolved Metals by USEPA 200.8																	
Arsenic	7440-38-2	5	µg/L	0.11 JQ	0.11 JQ	0.11 JQ	0.096 JQ	0.15 JQ	0.12 JQ	0.16 JQ	0.15 JQ	0.10 JQ	0.091 JQ	0.12 JQ	0.13 JQ	0.14 JQ	0.14 JQ
Phenols by USEPA 8041A																	
Pentachlorophenol	87-86-5	1	µg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025	0.025	0.025 U	0.025 U						
Dioxins/Furans by USEPA 1613B																	
2,3,7,8-TCDD	1746-01-6	--	pg/L	0.520 U	0.290 U	2.68 U	1.65 U	1.01 U	0.860 U	2.11 U	1.53 U						
1,2,3,7,8-PeCDD	40321-76-4	--	pg/L	0.490 U	0.350 U	3.25 U	1.64 U	1.02 U	0.990 U	1.17 U	1.48 U						
1,2,3,4,7,8-HxCDD	39227-28-6	--	pg/L	0.470 U	0.330 U	3.02 U	1.71 U	0.850 U	0.920 U	1.28 U	1.83 U						
1,2,3,6,7,8-HxCDD	57653-85-7	--	pg/L	0.430 U	0.320 U	2.95 U	1.72 U	0.790 U	0.860 U	1.11 U	1.68 U						
1,2,3,7,8,9-HxCDD	19408-74-3	--	pg/L	0.470 U	0.340 U	3.11 U	1.79 U	0.850 U	0.920 U	1.22 U	1.80 U						
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	pg/L	1.48 U	0.980 U	11.0 U	2.11 UJ	1.54 UJ	1.24 UJ	2.04 U	1.60 U						
OCDD	3268-87-9	--	pg/L	3.37 J	5.71 J	148 J	9.90 J	4.65 UJ	5.59 UJ	7.48 UJ	15.5 U						
2,3,7,8-TCDF	51207-31-9	--	pg/L	0.380 U	0.340 U	2.64 U	1.67 U	1.32 U	1.10 U	1.95 U	1.45 U						
1,2,3,7,8-PeCDF	57117-41-6	--	pg/L	0.450 U	0.310 U	3.47 U	1.71 U	1.89 UJ	1.50 U	1.16 U	1.42 U						
2,3,4,7,8-PeCDF	57117-31-4	--	pg/L	0.410 U	0.280 U	3.14 U	1.53 U	1.43 U	1.24 U	0.930 U	1.15 U						
1,2,3,4,7,8-HxCDF	70648-26-9	--	pg/L	0.260 U	0.240 U	1.80 U	1.01 U	0.470 UJ	0.430 U	0.980 U	1.34 U						
1,2,3,6,7,8-HxCDF	57117-44-9	--	pg/L	0.260 U	0.250 U	1.86 U	1.01 U	0.500 UJ	0.450 UJ	0.960 U	1.42 U						
1,2,3,7,8,9-HxCDF	72918-21-9	--	pg/L	0.280 U	0.650 U	2.10 U	1.11 U	0.530 UJ	0.460 U	1.04 U	1.45 U						
2,3,4,6,7,8-HxCDF	60851-34-5	--	pg/L	0.260 U	0.240 U	1.66 U	0.960 U	0.450 UJ	0.410 UJ	0.980 U	1.34 U						
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	pg/L	0.270 U	0.290 U	1.74 U	1.20 U	0.420 UJ	0.580 UJ	1.02 U	0.720 U						
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	pg/L	0.370 U	0.250 U	2.36 U	1.70 UJ	0.600 UJ	0.860 UJ	1.69 U	1.06 U						
OCDF	39001-02-0	--	pg/L	1.22 UJ	0.860 UJ	11.2 UJ	4.23 UJ	1.53 UJ	1.99 UJ	2.65 UJ	2.15 U						
Dioxin/furan TEQ	--	6.7	pg/L	0.726 J	0.512 J	4.57 J	2.48 J	1.56 UJ	1.43 UJ	2.30 UJ	2.33 U						

Notes:

Blank cells are intentional.

-- Not available.

1 In 2018, location MW-C4 was found to be filled with sand and was not sampled in December 2018, March 2019, or June 2019. Following coordination with Ecology, this well was abandoned and a replacement well was installed within a few feet of the original well location in August 2019.

BOLD/RED Analyte detected at a concentration greater than the site cleanup level.

Abbreviations:

CAS Chemical Abstracts Service
CUL Cleanup level
Ecology Washington State Department of Ecology
HpCDD Heptachlorodibenzo-*p*-dioxin
HpCDF Heptachlorodibenzofuran
HxCDD Hexachlorodibenzo-*p*-dioxin
HxCDF Hexachlorodibenzofuran
µg/L Micrograms per liter
OCDD Octachlorodibenzodioxin
OCDF Octachlorodibenzofuran
PeCDD Pentachlorodibenzo-*p*-dioxin
PeCDF Pentachlorodibenzofuran
pg/L Picograms per liter
TCDD Tetrachlorodibenzo-*p*-dioxin
TCDF Tetrachlorodibenzofuran
TEQ Toxic equivalent
USEPA U.S. Environmental Protection Agency

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.
JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
U Analyte was not detected at the given reporting limit.
UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 2.1
Lora Lake Apartments Parcel Groundwater Analytical Data

			Location Name	MW-C2										
			Sample ID	MW-C2-121218	MW-C2-031519	MW-C2-062119	MW-C2-092019	MW-C2-121819	MW-C2-033020	MW-C2-061720	MW-C2-102820	MW-C2-031621	MW-C2-032422	MW-C2-041423
			Sample Date	12/12/2018	3/15/2019	6/21/2019	9/20/2019	12/18/2019	3/30/2020	6/17/2020	10/28/2020	3/16/2021	3/24/2022	4/14/2023
Analyte	**CAS No.**	**Site CUL**	**Units**											
Dissolved Metals by USEPA 200.8														
Arsenic	7440-38-2	5	µg/L	2.6	**14**	3.7	2.1	1.9	**27**	**11**	3.1	**22**	**24**	**55**
Phenols by USEPA 8041A														
Pentachlorophenol	87-86-5	1	µg/L	0.062	0.69	0.051	0.031							
Dioxins/Furans by USEPA 1613B														
2,3,7,8-TCDD	1746-01-6	--	pg/L	0.370 U	2.41 U	1.94 U	1.95 U							
1,2,3,7,8-PeCDD	40321-76-4	--	pg/L	0.440 U	3.25 U	1.82 U	1.17 U							
1,2,3,4,7,8-HxCDD	39227-28-6	--	pg/L	0.530 U	3.69 U	1.20 U	1.50 U							
1,2,3,6,7,8-HxCDD	57653-85-7	--	pg/L	0.900 U	4.96 J	1.11 U	1.29 U							
1,2,3,7,8,9-HxCDD	19408-74-3	--	pg/L	0.550 U	3.65 U	1.19 U	1.42 U							
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	pg/L	22.5	86.5	47.8	14.8							
OCDD	3268-87-9	--	pg/L	232 J	553	515 J	126 J							
2,3,7,8-TCDF	51207-31-9	--	pg/L	0.450 U	3.49 U	1.87 U	1.69 U							
1,2,3,7,8-PeCDF	57117-41-6	--	pg/L	0.670 U	2.62 U	1.67 U	1.42 U							
2,3,4,7,8-PeCDF	57117-31-4	--	pg/L	0.400 U	2.35 U	1.42 U	1.10 U							
1,2,3,4,7,8-HxCDF	70648-26-9	--	pg/L	0.550 J	1.87 U	1.26 U	1.11 U							
1,2,3,6,7,8-HxCDF	57117-44-9	--	pg/L	0.450 U	1.89 U	1.27 U	1.12 U							
1,2,3,7,8,9-HxCDF	72918-21-9	--	pg/L	0.330 U	2.08 U	1.31 U	1.25 U							
2,3,4,6,7,8-HxCDF	60851-34-5	--	pg/L	0.530 J	1.70 U	1.15 U	1.10 U							
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	pg/L	4.71 J	13.8	12.0 U	3.60 U							
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	pg/L	0.580 U	2.03 U	1.84 U	0.740 U							
OCDF	39001-02-0	--	pg/L	21.2 J	40.5	45.2 J	13.8 J							
Dioxin/furan TEQ	--	6.7	pg/L	1.09 J	5.83 J	3.35 J	2.48 J							

Notes:

Blank cells are intentional.

-- Not available.

1 In 2018, location MW-C4 was found to be filled with sand and was not sampled in December 2018, March 2019, or June 2019. Following coordination with Ecology, this well was abandoned and a replacement well was installed within a few feet of the original well location in August 2019.

BOLD/RED Analyte detected at a concentration greater than the site cleanup level.

Abbreviations:

CAS Chemical Abstracts Service
CUL Cleanup level
Ecology Washington State Department of Ecology
HpCDD Heptachlorodibenzo-*p*-dioxin
HpCDF Heptachlorodibenzofuran
HxCDD Hexachlorodibenzo-*p*-dioxin
HxCDF Hexachlorodibenzofuran
µg/L Micrograms per liter
OCDD Octachlorodibenzodioxin
OCDF Octachlorodibenzofuran
PeCDD Pentachlorodibenzo-*p*-dioxin
PeCDF Pentachlorodibenzofuran
pg/L Picograms per liter
TCDD Tetrachlorodibenzo-*p*-dioxin
TCDF Tetrachlorodibenzofuran
TEQ Toxic equivalent
USEPA U.S. Environmental Protection Agency

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.
JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
U Analyte was not detected at the given reporting limit.
UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 2.1
Lora Lake Apartments Parcel Groundwater Analytical Data

Location Name				MW-C3												MW-C4 [1]			
Sample ID				MW-C3-121218	MW-C3-031519	MW-C3-062119	MW-C3-092019	MW-C3-121819	MW-C3-033020	MW-C3-061720	MW-C3-102820	MW-C3-031621	MW-C3-031621-D	MW-C3-032422	MW-C3-041423	MW-C4-092019	MW-C4-121819	MW-C4-033020	MW-C4-061720
Sample Date				12/12/2018	3/15/2019	6/21/2019	9/20/2019	12/18/2019	3/30/2020	6/17/2020	10/28/2020	3/16/2021	3/16/2021	3/24/2022	4/14/2023	9/20/2019	12/18/2019	3/30/2020	6/17/2020
Analyte	**CAS No.**	**Site CUL**	**Units**																
Dissolved Metals by USEPA 200.8																			
Arsenic	7440-38-2	5	µg/L	0.24	0.26	0.20 JQ	0.22	0.22	0.25	0.22	0.22	0.19 JQ	0.21	0.19 JQ	0.18 J	0.47	0.42	0.37	0.49
Phenols by USEPA 8041A																			
Pentachlorophenol	87-86-5	1	µg/L	0.025 U	0.025 U	0.025	0.025 U									0.025 U			
Dioxins/Furans by USEPA 1613B																			
2,3,7,8-TCDD	1746-01-6	--	pg/L	0.350 U	0.650 U	2.01 U	1.71 U									1.73 U			
1,2,3,7,8-PeCDD	40321-76-4	--	pg/L	0.330 U	0.670 U	1.14 U	1.34 U									0.980 U			
1,2,3,4,7,8-HxCDD	39227-28-6	--	pg/L	0.390 U	0.770 U	1.02 U	1.55 UJ									0.960 U			
1,2,3,6,7,8-HxCDD	57653-85-7	--	pg/L	0.380 U	0.730 U	0.940 U	1.39 U									0.870 U			
1,2,3,7,8,9-HxCDD	19408-74-3	--	pg/L	0.400 U	0.780 U	1.01 U	1.50 U									0.930 U			
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	pg/L	0.520 U	1.03 U	1.45 U	1.60 U									1.45 U			
OCDD	3268-87-9	--	pg/L	3.23 J	9.11 J	4.34 J	4.98 UJ									10.7 U			
2,3,7,8-TCDF	51207-31-9	--	pg/L	0.310 U	0.710 U	1.49 U	1.92 U									1.82 U			
1,2,3,7,8-PeCDF	57117-41-6	--	pg/L	0.310 U	0.820 U	1.23 U	1.19 U									1.03 U			
2,3,4,7,8-PeCDF	57117-31-4	--	pg/L	0.290 U	0.750 U	1.00 U	0.960 U									0.850 U			
1,2,3,4,7,8-HxCDF	70648-26-9	--	pg/L	0.180 U	0.540 U	0.800 U	0.750 U									0.720 U			
1,2,3,6,7,8-HxCDF	57117-44-9	--	pg/L	0.180 U	0.510 U	0.830 U	0.720 U									0.700 U			
1,2,3,7,8,9-HxCDF	72918-21-9	--	pg/L	0.520 U	0.540 U	0.870 U	0.830 U									0.750 U			
2,3,4,6,7,8-HxCDF	60851-34-5	--	pg/L	0.180 U	0.500 U	0.760 U	0.740 U									0.700 U			
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	pg/L	0.140 U	0.330 U	0.580 U	0.550 U									0.590 U			
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	pg/L	0.180 U	0.440 U	0.750 UJ	0.810 U									0.860 U			
OCDF	39001-02-0	--	pg/L	0.690 UJ	1.02 U	2.82 UJ	2.76 UJ									2.80 U			
Dioxin/furan TEQ	--	6.7	pg/L	0.520 J	1.05 J	2.15 J	2.17 UJ									1.89 U			

Notes:

Blank cells are intentional.

-- Not available.

1 In 2018, location MW-C4 was found to be filled with sand and was not sampled in December 2018, March 2019, or June 2019. Following coordination with Ecology, this well was abandoned and a replacement well was installed within a few feet of the original well location in August 2019.

BOLD/RED Analyte detected at a concentration greater than the site cleanup level.

Abbreviations:

CAS Chemical Abstracts Service
CUL Cleanup level
Ecology Washington State Department of Ecology
HpCDD Heptachlorodibenzo-*p*-dioxin
HpCDF Heptachlorodibenzofuran
HxCDD Hexachlorodibenzo-*p*-dioxin
HxCDF Hexachlorodibenzofuran
µg/L Micrograms per liter
OCDD Octachlorodibenzodioxin
OCDF Octachlorodibenzofuran
PeCDD Pentachlorodibenzo-*p*-dioxin
PeCDF Pentachlorodibenzofuran
pg/L Picograms per liter
TCDD Tetrachlorodibenzo-*p*-dioxin
TCDF Tetrachlorodibenzofuran
TEQ Toxic equivalent
USEPA U.S. Environmental Protection Agency

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.
JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
U Analyte was not detected at the given reporting limit.
UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 3.1
Lora Lake Parcel Groundwater Analytical Data

Location Group				On-Site Wells											
Location Name				MW-CP1						MW-CP2					
Sample ID				MW-CP1-102720	MW-CP1-031721	MW-CP1-032322	MW-CP1-032322-D	MW-CP1-041323	MW-CP1-041323-D	MW-CP2-102720	MW-CP2-102720-D	MW-CP2-031721	MW-CP2-031721-D	MW-CP2-032322	MW-CP2-041323
Sample Date				10/27/2020	3/17/2021	3/23/2022	3/23/2022	4/13/2023	4/13/2023	10/27/2020	10/27/2020	3/17/2021	3/17/2021	3/23/2022	4/13/2023
Analyte	**CAS No.**	**Site CUL**	**Unit**												
Dissolved Metals by USEPA 200.8															
Arsenic	7440-38-2	5	µg/L	0.46	0.46	0.55	0.51	0.49	0.49	0.21	0.24	0.21	0.21	0.33	0.39
Dioxin/Furans by USEPA 1613B															
2,3,7,8-TCDD	1746-01-6	--	pg/L	1.05 U	0.580 U	1.38 U	1.19 U	1.05 U	0.730 U	0.960 U	0.800 U	0.630 U	0.450 U	1.44 U	0.780 U
1,2,3,7,8-PeCDD	40321-76-4	--	pg/L	0.870 U	0.720 U	1.60 U	1.43 U	1.11 U	1.02 U	0.950 U	0.620 U	0.760 U	0.500 U	1.93 U	1.44 U
1,2,3,4,7,8-HxCDD	39227-28-6	--	pg/L	1.37 U	0.780 U	1.74 U	1.44 U	0.980 U	0.700 U	1.06 U	0.780 U	0.700 U	0.660 U	1.69 U	0.820 U
1,2,3,6,7,8-HxCDD	57653-85-7	--	pg/L	1.20 U	0.710 U	1.65 U	1.23 U	0.900 U	0.670 U	0.900 U	0.650 U	0.650 U	0.670 U	1.65 U	0.760 U
1,2,3,7,8,9-HxCDD	19408-74-3	--	pg/L	1.43 U	0.770 U	1.83 U	1.36 U	1.03 U	0.750 U	1.09 U	0.790 U	0.690 U	0.710 U	1.80 U	0.870 U
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	pg/L	9.24 U	0.990 U	1.79 J	3.19 U	2.83 U	1.91 U	1.68 U	1.26 U	0.820 U	0.620 U	1.64 U	11.2 U
OCDD	3268-87-9	--	pg/L	165 J	6.64 U	17.3 U	15.7 U	7.62 U	5.58 U	27.0 UJ	21.3 UJ	6.64 U	3.10 U	3.60 U	72.9 U
2,3,7,8-TCDF	51207-31-9	--	pg/L	1.16 U	0.640 U	1.11 U	0.780 U	1.13 U	0.960 U	1.15 U	0.800 U	0.620 U	0.530 U	0.940 U	1.03 U
1,2,3,7,8-PeCDF	57117-41-6	--	pg/L	1.64 U	0.700 U	1.08 U	1.60 U	1.33 U	1.02 U	1.39 U	1.11 U	0.820 U	0.940 U	1.14 U	1.24 U
2,3,4,7,8-PeCDF	57117-31-4	--	pg/L	1.51 U	0.630 U	1.01 U	0.750 U	1.20 U	0.930 U	1.26 U	0.990 U	0.750 U	0.690 U	1.04 U	1.16 U
1,2,3,4,7,8-HxCDF	70648-26-9	--	pg/L	0.850 U	0.640 U	1.30 U	1.85 U	1.13 U	0.660 U	0.610 U	0.440 U	0.660 U	0.620 U	1.36 U	0.620 U
1,2,3,6,7,8-HxCDF	57117-44-9	--	pg/L	0.880 U	0.660 U	1.35 U	1.83 J	0.880 U	0.650 U	0.570 U	0.430 U	0.670 U	0.630 U	1.39 U	0.620 U
1,2,3,7,8,9-HxCDF	72918-21-9	--	pg/L	1.25 U	0.740 U	1.60 U	1.15 U	0.950 U	0.750 U	0.900 U	0.630 U	0.770 U	0.710 U	1.66 U	0.710 U
2,3,4,6,7,8-HxCDF	60851-34-5	--	pg/L	0.900 U	0.620 U	1.33 U	0.990 U	0.890 U	0.690 U	0.600 U	0.460 U	0.640 U	0.610 U	1.39 U	0.640 U
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	pg/L	2.35 U	0.620 U	1.18 U	0.900 U	1.14 U	0.830 U	0.560 U	0.550 U	0.550 U	0.940 U	1.15 U	5.84 J
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	pg/L	1.23 U	0.790 U	1.72 U	1.20 U	1.63 U	1.21 U	0.840 U	0.790 U	0.720 U	0.690 U	1.59 U	1.37 U
OCDF	39001-02-0	--	pg/L	20.2 UJ	18.8 U	2.71 U	1.70 U	2.12 U	2.27 U	3.08 UJ	2.88 UJ	12.0 U	6.36 U	2.86 U	29.3
Dioxin/furan TEQ	--	6.7	pg/L	1.78 J	0.720 U	2.29 J	2.35 J	1.11 U	1.02 U	0.480 UJ	1.14 UJ	0.760 U	0.500 U	1.93 U	1.75 J

Notes:

-- Not available.

1 On October 28, 2020, MW-VB2 was dry and samples were unable to be collected.

Abbreviations:

CAS Chemical Abstracts Service
CUL Cleanup level
HpCDD Heptachlorodibenzo-*p*-dioxin
HpCDF Heptachlorodibenzofuran
HxCDD Hexachlorodibenzo-*p*-dioxin
HxCDF Hexachlorodibenzofuran
µg/L Micrograms per liter
NS Not sampled
OCDD Octachlorodibenzodioxin
OCDF Octachlorodibenzofuran
PeCDD Pentachlorodibenzo-*p*-dioxin
PeCDF Pentachlorodibenzofuran
pg/L Picograms per liter
TCDD Tetrachlorodibenzo-*p*-dioxin
TCDF Tetrachlorodibenzofuran
TEQ Toxic equivalent
USEPA U.S. Environmental Protection Agency

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.
JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
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UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 3.1
Lora Lake Parcel Groundwater Analytical Data

			Location Group	On-Site Wells				Vicinity Wells							
			Location Name	MW-CP3				MW-CP4				MW-CP5			
			Sample ID	MW-CP3-102720	MW-CP3-031721	MW-CP3-032322	MW-CP3-041323	MW-CP4-102720	MW-CP4-031621	MW-CP4-032322	MW-CP4-041323	MW-CP5-102720	MW-CP5-031621	MW-CP5-032322	MW-CP5-041323
			Sample Date	10/27/2020	3/17/2021	3/23/2022	4/13/2023	10/27/2020	3/16/2021	3/23/2022	4/13/2023	10/27/2020	3/16/2021	3/23/2022	4/13/2023
Analyte	**CAS No.**	**Site CUL**	**Unit**												
Dissolved Metals by USEPA 200.8															
Arsenic	7440-38-2	5	µg/L	0.41	0.33	0.97	0.11 J	0.098 JQ	0.14 JQ	0.093 JQ	1.6	3.2	2.1	3.7	1.2
Dioxin/Furans by USEPA 1613B															
2,3,7,8-TCDD	1746-01-6	--	pg/L	1.03 U	0.800 U	1.31 U	0.860 U	1.05 U	0.630 U	1.22 U	1.27 U	0.780 U	0.690 U	1.38 U	3.86 UJ
1,2,3,7,8-PeCDD	40321-76-4	--	pg/L	0.840 U	0.730 U	1.53 U	1.36 U	0.940 U	0.950 U	1.31 U	1.27 U	0.670 U	0.930 U	1.66 U	3.30 UJ
1,2,3,4,7,8-HxCDD	39227-28-6	--	pg/L	1.36 U	0.650 U	1.75 U	1.05 U	1.41 U	0.960 U	1.53 U	0.980 U	0.670 U	0.720 U	1.55 U	1.72 UJ
1,2,3,6,7,8-HxCDD	57653-85-7	--	pg/L	1.18 U	0.620 U	1.67 U	1.01 U	1.21 U	0.930 U	1.54 U	0.920 U	0.630 UJ	0.720 U	1.44 U	1.61 UJ
1,2,3,7,8,9-HxCDD	19408-74-3	--	pg/L	1.41 U	0.650 U	1.24 U	1.13 U	1.46 U	0.970 U	1.66 U	1.04 U	0.720 U	0.740 U	1.61 U	1.83 UJ
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	pg/L	2.03 U	0.700 U	1.78 U	1.49 U	2.57 U	1.74 U	1.47 U	1.38 U	2.18 J	2.12 U	1.74 U	3.33 UJ
OCDD	3268-87-9	--	pg/L	33.0 UJ	9.26 U	3.54 U	6.58 U	54.1 UJ	5.92 U	5.33 U	5.61 U	23.8 UJ	10.6 U	4.65 U	17.0 UJ
2,3,7,8-TCDF	51207-31-9	--	pg/L	1.4 U	0.710 U	0.950 U	1.32 U	1.23 U	0.550 U	0.890 U	1.49 U	0.780 U	0.680 U	0.950 U	5.23 UJ
1,2,3,7,8-PeCDF	57117-41-6	--	pg/L	1.3 U	0.900 U	1.02 U	1.73 U	1.83 U	0.850 U	1.20 U	1.38 U	1.32 U	1.07 U	1.09 U	3.53 UJ
2,3,4,7,8-PeCDF	57117-31-4	--	pg/L	1.17 U	0.860 U	0.960 U	1.19 U	1.65 U	0.770 U	1.12 U	1.25 U	1.18 U	0.780 U	1.07 U	3.18 UJ
1,2,3,4,7,8-HxCDF	70648-26-9	--	pg/L	0.790 U	0.590 U	1.31 U	0.820 U	0.720 U	0.660 U	1.06 U	0.790 U	0.590 U	0.640 U	1.10 U	1.58 UJ
1,2,3,6,7,8-HxCDF	57117-44-9	--	pg/L	0.740 U	0.590 U	1.30 U	0.790 U	0.650 U	0.630 U	1.07 U	0.820 U	0.570 U	0.670 U	1.07 U	1.46 UJ
1,2,3,7,8,9-HxCDF	72918-21-9	--	pg/L	1.200 U	0.700 U	1.69 U	0.970 U	1.05 U	0.810 U	1.33 U	0.890 U	0.760 U	0.750 U	1.35 U	1.83 UJ
2,3,4,6,7,8-HxCDF	60851-34-5	--	pg/L	0.820 U	0.590 U	1.33 U	0.860 U	0.770 U	0.660 U	1.06 U	0.800 U	0.560 U	0.630 U	1.04 U	1.56 UJ
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	pg/L	0.880 U	1.13 U	1.25 U	0.960 U	0.600 U	1.07 U	1.06 U	1.08 U	0.680 U	1.26 U	1.25 U	2.17 UJ
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	pg/L	1.14 U	0.690 U	1.71 U	1.43 U	0.960 U	1.49 U	1.58 U	1.60 U	0.760 U	0.710 U	1.68 U	3.01 UJ
OCDF	39001-02-0	--	pg/L	2.84 UJ	24.3 U	2.66 U	3.09 U	5.93 J	18.2 U	2.10 U	2.23 U	4.01 UJ	24.8 U	2.40 U	3.35 UJ
Dioxin/furan TEQ	--	6.7	pg/L	0.515 UJ	0.800 U	2.23 U	1.36 U	1.73 J	0.950 U	1.98 U	1.27 U	1.22 J	0.930 U	2.23 U	3.86 UJ

Notes:

-- Not available.

1 On October 28, 2020, MW-VB2 was dry and samples were unable to be collected.

Abbreviations:

CAS	Chemical Abstracts Service	OCDF	Octachlorodibenzofuran
CUL	Cleanup level	PeCDD	Pentachlorodibenzo-*p* -dioxin
HpCDD	Heptachlorodibenzo-*p* -dioxin	PeCDF	Pentachlorodibenzofuran
HpCDF	Heptachlorodibenzofuran	pg/L	Picograms per liter
HxCDD	Hexachlorodibenzo-*p* -dioxin	TCDD	Tetrachlorodibenzo-*p* -dioxin
HxCDF	Hexachlorodibenzofuran	TCDF	Tetrachlorodibenzofuran
µg/L	Micrograms per liter	TEQ	Toxic equivalent
NS	Not sampled	USEPA	U.S. Environmental Protection Agency
OCDD	Octachlorodibenzodioxin		

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.

JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.

U Analyte was not detected at the given reporting limit.

UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 3.1
Lora Lake Parcel Groundwater Analytical Data

Location Group				Vicinity Wells (cont.)											
Location Name				MW-CP6				MW-CP7				HCOO-B312			
Sample ID				MW-CP6-102720	MW-CP6-031621	MW-CP6-032322	MW-CP6-041323	MW-CP7-102720	MW-CP7-031621	MW-CP7-032322	MW-CP7-041323	HCOO-B312-102820	HCOO-B312-031621	HCOO-B312-032322	HCOO-B312-041323
Sample Date				10/27/2020	3/16/2021	3/23/2022	4/13/2023	10/27/2020	3/16/2021	3/23/2022	4/13/2023	10/28/2020	3/16/2021	3/23/2022	4/13/2023
Analyte	**CAS No.**	**Site CUL**	**Unit**												
Dissolved Metals by USEPA 200.8															
Arsenic	7440-38-2	5	µg/L	1.1	1.1	0.85	0.68	0.42	0.43	0.37	0.38	0.17 JQ	0.17 JQ	0.17 JQ	0.15 J
Dioxin/Furans by USEPA 1613B															
2,3,7,8-TCDD	1746-01-6	--	pg/L	0.930 U	1.33 U	0.980 U	1.76 U	0.670 U	1.15 U	1.01 U	0.830 U	0.870 U	2.89 UJ	1.11 U	0.710 U
1,2,3,7,8-PeCDD	40321-76-4	--	pg/L	0.920 UJ	2.26 U	1.41 U	0.960 U	0.660 U	1.08 U	1.29 U	1.26 U	0.910 U	3.16 UJ	1.48 U	1.17 U
1,2,3,4,7,8-HxCDD	39227-28-6	--	pg/L	1.40 U	1.95 U	1.50 U	0.760 U	0.810 U	1.36 U	0.940 U	1.15 U	1.08 U	3.33 U	1.33 U	0.890 U
1,2,3,6,7,8-HxCDD	57653-85-7	--	pg/L	1.20 U	1.93 U	1.44 U	0.720 U	0.680 U	1.29 U	0.890 U	1.09 U	1.00 U	3.21 U	1.31 U	0.840 U
1,2,3,7,8,9-HxCDD	19408-74-3	--	pg/L	1.44 U	2.00 U	1.59 U	0.810 U	0.830 U	1.36 U	0.980 U	1.23 U	1.16 U	3.36 U	1.43 U	0.950 U
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	pg/L	1.32 U	1.77 U	2.46 J	0.950 U	3.02 J	1.85 U	1.44 U	1.42 U	1.10 U	6.85 UJ	3.78 J	1.41 U
OCDD	3268-87-9	--	pg/L	28.6 UJ	2.46 U	34.6 U	6.55 U	36.1 UJ	10.5 U	3.28 U	9.81 U	10.2 UJ	16.4 UJ	23.3 U	5.86 U
2,3,7,8-TCDF	51207-31-9	--	pg/L	0.990 U	1.34 U	0.970 U	2.09 U	0.740 U	1.20 U	0.790 U	1.11 U	0.870 U	4.22 UJ	0.640 U	1.04 U
1,2,3,7,8-PeCDF	57117-41-6	--	pg/L	1.53 UJ	1.83 U	1.05 U	0.980 U	1.14 U	1.04 U	1.15 U	1.21 U	1.19 U	4.27 UJ	0.950 U	1.43 U
2,3,4,7,8-PeCDF	57117-31-4	--	pg/L	1.42 UJ	1.73 U	0.970 U	0.890 U	1.01 U	0.950 U	0.910 U	1.09 U	1.07 U	4.39 UJ	1.70 U	1.30 U
1,2,3,4,7,8-HxCDF	70648-26-9	--	pg/L	0.700 U	1.59 U	1.18 U	0.520 U	0.540 U	1.25 U	0.940 U	0.740 U	0.600 U	2.67 U	0.920 U	0.730 U
1,2,3,6,7,8-HxCDF	57117-44-9	--	pg/L	0.690 U	1.63 U	1.22 U	0.520 U	0.500 U	1.25 U	0.960 U	0.740 U	0.570 U	2.67 U	0.970 U	0.730 U
1,2,3,7,8,9-HxCDF	72918-21-9	--	pg/L	1.09 U	2.04 U	1.55 U	0.640 U	0.790 U	1.55 U	1.27 U	0.870 U	0.850 U	6.79 UJ	1.21 U	0.890 U
2,3,4,6,7,8-HxCDF	60851-34-5	--	pg/L	0.720 U	1.81 U	1.20 U	0.520 U	0.570 U	1.25 U	0.960 U	0.790 U	0.640 U	5.20 UJ	1.07 J	0.750 U
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	pg/L	0.660 U	1.02 U	1.12 U	0.630 U	0.510 U	1.43 U	0.760 U	1.12 U	0.590 U	4.44 J	1.28 U	0.970 U
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	pg/L	1.06 U	1.44 U	1.63 U	0.900 U	0.730 U	1.96 U	1.11 U	1.65 U	0.820 U	6.37 UJ	1.89 U	1.51 U
OCDF	39001-02-0	--	pg/L	3.20 UJ	15.3 U	2.08 U	1.63 U	5.16 UJ	25.4 U	2.03 U	3.32 U	2.09 UJ	117 UJ	2.82 U	2.49 U
Dioxin/furan TEQ	--	6.7	pg/L	0.465 UJ	2.26 U	1.94 J	1.76 U	1.15 J	1.15 U	1.73 U	1.26 U	0.455 UJ	5.45 J	2.43 J	1.17 U

Notes:

-- Not available.

1 On October 28, 2020, MW-VB2 was dry and samples were unable to be collected.

Abbreviations:

CAS	Chemical Abstracts Service	OCDF	Octachlorodibenzofuran
CUL	Cleanup level	PeCDD	Pentachlorodibenzo-*p* -dioxin
HpCDD	Heptachlorodibenzo-*p* -dioxin	PeCDF	Pentachlorodibenzofuran
HpCDF	Heptachlorodibenzofuran	pg/L	Picograms per liter
HxCDD	Hexachlorodibenzo-*p* -dioxin	TCDD	Tetrachlorodibenzo-*p* -dioxin
HxCDF	Hexachlorodibenzofuran	TCDF	Tetrachlorodibenzofuran
µg/L	Micrograms per liter	TEQ	Toxic equivalent
NS	Not sampled	USEPA	U.S. Environmental Protection Agency
OCDD	Octachlorodibenzodioxin		

Qualifiers:

J	Analyte was detected; concentration is considered to be an estimate.
JQ	Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
U	Analyte was not detected at the given reporting limit.
UJ	Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 3.1
Lora Lake Parcel Groundwater Analytical Data

			Location Group	Vicinity Wells (cont.)														
			Location Name	MW-C1/VB1							MW-VB2				MW-VB3			
			Sample ID	MW-C1/VB1-102820	MW-C101-102820	MW-C1/VB1-031721	MW-C1/VB1-032422	MW-C1/VB1-032422-D	MW-VB1-041423	MW-VB1-041423-D	--	MW-VB2-031721	MW-VB2-032422	MW-VB2-041423	MW-VB3-102720	MW-VB3-031621	MW-VB3-032322	MW-VB3-041323
			Sample Date	10/28/2020	10/28/2020	3/17/2021	3/24/2022	3/24/2022	4/14/2023	4/14/2023	10/28/2020 [1]	3/17/2021	3/24/2022	4/14/2023	10/27/2020	3/16/2021	3/23/2022	4/13/2023
Analyte	**CAS No.**	**Site CUL**	**Unit**															
Dissolved Metals by USEPA 200.8																		
Arsenic	7440-38-2	5	µg/L	0.16 JQ	0.16 JQ	0.11 JQ	0.077 JQ	0.090 JQ	0.11 J	0.10 J	NS	0.47	0.35	0.37	0.45	0.39	0.38	0.38
Dioxin/Furans by USEPA 1613B																		
2,3,7,8-TCDD	1746-01-6	--	pg/L	0.750 U	0.860 U	0.460 U	1.12 U	1.11 U	0.670 U	0.710 U	NS	0.750 U	1.09 U	0.670 U	1.10 U	0.550 U	1.09 U	0.810 U
1,2,3,7,8-PeCDD	40321-76-4	--	pg/L	0.900 U	0.820 UJ	0.560 U	1.55 U	1.49 U	1.31 U	1.10 U	NS	1.00 U	1.41 U	1.13 U	0.910 U	0.510 U	1.72 U	1.11 U
1,2,3,4,7,8-HxCDD	39227-28-6	--	pg/L	1.03 U	0.990 U	1.08 U	1.91 U	1.47 U	0.950 U	0.690 U	NS	0.900 U	1.24 U	0.980 U	1.07 U	0.590 U	1.56 U	1.02 U
1,2,3,6,7,8-HxCDD	57653-85-7	--	pg/L	0.920 U	0.840 U	1.03 U	1.79 U	1.42 U	0.900 U	0.670 U	NS	0.860 U	1.19 U	0.940 U	0.960 U	0.580 U	1.43 U	0.950 U
1,2,3,7,8,9-HxCDD	19408-74-3	--	pg/L	1.08 U	1.02 U	1.08 U	1.99 U	1.56 U	1.02 U	0.750 U	NS	0.910 U	1.31 U	1.05 U	1.13 U	0.600 U	1.61 U	1.08 U
1,2,3,4,6,7,8-HpCDD	35822-46-9	--	pg/L	1.76 U	1.42 U	2.16 U	1.53 U	2.91 U	1.42 U	3.61 J	NS	1.32 U	2.02 U	1.93 U	1.74 U	1.25 U	3.18 U	1.67 U
OCDD	3268-87-9	--	pg/L	49.1 UJ	66.5 UJ	10.8 U	3.18 U	5.59 U	2.02 U	9.88 U	NS	7.27 U	8.71 U	8.10 U	35.3 UJ	9.72 U	23.9 U	8.28 U
2,3,7,8-TCDF	51207-31-9	--	pg/L	1.11 U	0.810 U	0.470 U	0.730 U	0.880 U	1.12 U	1.08 U	NS	0.680 U	0.770 U	0.970 U	1.29 U	0.660 U	0.980 U	1.15 U
1,2,3,7,8-PeCDF	57117-41-6	--	pg/L	1.41 U	1.29 U	0.660 U	1.09 U	0.910 U	1.34 U	1.13 U	NS	0.800 U	0.830 J	1.14 U	1.63 U	0.680 U	1.04 U	1.20 U
2,3,4,7,8-PeCDF	57117-31-4	--	pg/L	1.36 U	1.18 UJ	0.490 U	1.03 U	0.880 U	1.22 U	1.04 U	NS	0.730 U	0.900 U	1.01 U	1.47 U	0.620 U	1.03 U	1.08 U
1,2,3,4,7,8-HxCDF	70648-26-9	--	pg/L	0.710 U	0.650 U	0.620 U	1.15 U	1.19 U	0.830 U	0.690 U	NS	0.940 U	1.17 U	0.640 U	0.780 U	0.460 U	1.28 U	0.840 U
1,2,3,6,7,8-HxCDF	57117-44-9	--	pg/L	0.730 U	0.590 U	0.590 U	1.17 U	1.18 U	0.870 U	0.690 U	NS	0.890 U	1.15 U	0.690 U	0.690 U	0.450 U	1.29 U	0.810 U
1,2,3,7,8,9-HxCDF	72918-21-9	--	pg/L	1.11 U	0.940 U	0.710 U	1.55 U	1.58 U	0.940 U	0.780 U	NS	1.13 U	1.48 U	0.730 U	1.15 U	0.570 U	1.65 U	0.990 U
2,3,4,6,7,8-HxCDF	60851-34-5	--	pg/L	0.750 U	0.690 U	0.600 U	1.17 U	1.22 U	0.910 U	0.740 U	NS	1.30 J	1.14 U	0.690 U	0.820 U	0.450 U	1.38 U	0.900 U
1,2,3,4,6,7,8-HpCDF	67562-39-4	--	pg/L	0.660 U	0.770 U	0.550 U	1.01 U	1.18 U	1.11 U	0.930 U	NS	0.820 U	0.840 U	0.940 U	1.35 U	1.24 U	2.17 U	0.930 U
1,2,3,4,7,8,9-HpCDF	55673-89-7	--	pg/L	0.940 U	1.25 U	0.700 U	1.52 U	1.64 U	1.55 U	1.36 U	NS	1.16 U	1.23 U	1.37 U	1.30 U	0.680 U	2.03 U	1.25 U
OCDF	39001-02-0	--	pg/L	5.84 UJ	10.2 J	28.9 U	1.96 U	2.36 U	2.20 U	2.37 U	NS	9.61 U	2.61 U	2.52 U	5.29 J	23.3 U	2.50 U	2.98 U
Dioxin/furan TEQ	--	6.7	pg/L	0.450 UJ	1.39 J	0.560 U	2.10 U	2.15 U	1.31 U	1.43 J	NS	1.46 J	1.91 J	1.13 U	1.67 J	0.550 U	2.21 U	1.11 U

Notes:

-- Not available.

1 On October 28, 2020, MW-VB2 was dry and samples were unable to be collected.

Abbreviations:

CAS	Chemical Abstracts Service	OCDF	Octachlorodibenzofuran
CUL	Cleanup level	PeCDD	Pentachlorodibenzo-*p* -dioxin
HpCDD	Heptachlorodibenzo-*p* -dioxin	PeCDF	Pentachlorodibenzofuran
HpCDF	Heptachlorodibenzofuran	pg/L	Picograms per liter
HxCDD	Hexachlorodibenzo-*p* -dioxin	TCDD	Tetrachlorodibenzo-*p* -dioxin
HxCDF	Hexachlorodibenzofuran	TCDF	Tetrachlorodibenzofuran
µg/L	Micrograms per liter	TEQ	Toxic equivalent
NS	Not sampled	USEPA	U.S. Environmental Protection Agency
OCDD	Octachlorodibenzodioxin		

Qualifiers:

J	Analyte was detected; concentration is considered to be an estimate.
JQ	Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
U	Analyte was not detected at the given reporting limit.
UJ	Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Lora Lake Apartments Site

2023 Annual Compliance Monitoring Report

Figures

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Lora Lake Apartments Site
Burien, Washington

Figure 1.1
Site Map

I:\GIS\Projects\POS_LLA\MXD\Task8140\Annual Compliance Monitoring Report\2023\Figure 1.1 Site Map.mxd
10/9/2023

Legend

- Groundwater Confirmation Monitoring Location
- Sediment Cap Performance Monitoring Location
- Sediment Cap Performance Site Vicinity Monitoring Location
- City Boundary
- Tax Parcel Boundary

Label Key

MW-C3
As:
0.18 J

← Location Name
← Arsenic Result (µg/L)

Notes:
1. Per the *Evaluation of Arsenic in Groundwater at the Lora Lake Apartments Site* memorandum (Floyd|Snider 2020) and subsequent Ecology approval, monitoring at MW-C1 and MW-C4 is no longer required for the Lora Lake Apartments Parcel. However, MW-C1 was renamed MW-C1/VB1 in 2020 and monitoring is ongoing because it serves as a vicinity well for the Lora Lake Parcel. Data is presented on Figure 3.1.

- Results shown in **RED BOLD** exceed the site cleanup level for arsenic of 5 µg/L.
- All results are from samples collected on 4/14/2023.
- Analytical results for duplicate samples are not presented.
- Tax parcel boundaries based on King County tax parcel data.
- City boundary data provided by King County.
- Orthoimagery obtained from Nearmap, 2023.

Abbreviations:
As = Arsenic
Ecology = Washington State Department of Ecology
µg/L = Micrograms per liter
WSDOT = Washington State Department of Transportation

Qualifier:
J = Analyte was detected; concentration is considered to be an estimate.

0 100 200
Scale in Feet

N

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Lora Lake Apartments Site
Burien, Washington

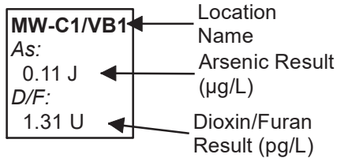
Figure 2.1
Lora Lake Apartments Parcel
2023 Groundwater Analytical Results

I:\GIS\Projects\POS_LLA\MXD\Task8140\Annual Compliance Monitoring Report\2023\Figure 2.1 Lora Lake Apartments Parcel 2023 Groundwater Analytical Results.mxd
10/9/2023

Legend

- Groundwater Confirmation Monitoring Location
- Sediment Cap Performance Monitoring Location
- Sediment Cap Performance Site Vicinity Monitoring Location
- City Boundary
- Tax Parcel Boundary

Label Key

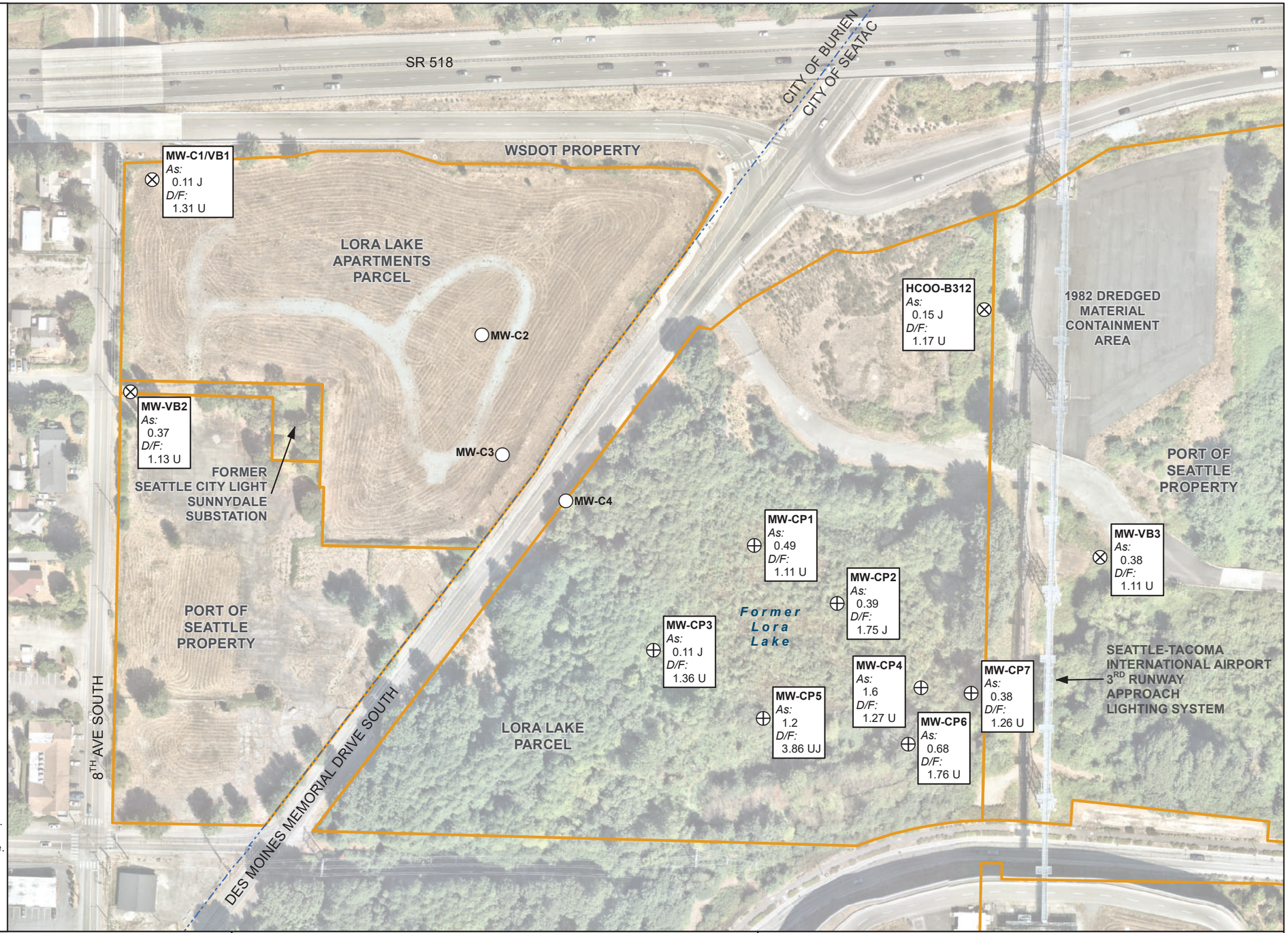


Notes:
- Cleanup levels for arsenic and dioxins/furans are 5 µg/L and 6.7 pg/L, respectively.
- All results are from samples collected on 4/13/2023 or 4/14/2023.
- Analytical results for duplicate samples are not presented.
- Tax parcel boundaries based on King County tax parcel data.
- City boundary data provided by King County.
- Orthoimagery obtained from Nearmap, 2023.

Abbreviation:
As = Arsenic
D/F = Dioxins/Furans
µg/L = Micrograms per liter
pg/L = Picograms per liter
WSDOT = Washington State Department of Transportation

Qualifiers:
J = Analyte was detected; concentration is considered to be an estimate.
U = Analyte was not detected at the given reporting limit.
UJ = Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

0 150 300
Scale in Feet
N



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Lora Lake Apartments Site
Burien, Washington

Figure 3.1
Lora Lake Parcel
2023 Groundwater Analytical Results

I:\GIS\Projects\POS_LLA\MXD\Task8140\Annual Compliance Monitoring Report\2023\Figure 3.1 Lora Lake Parcel 2023 Groundwater Analytical Results.mxd
10/9/2023

Lora Lake Apartments Site

2023 Annual Compliance Monitoring Report

Appendix A
Groundwater Sample Collection Forms

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: PDS-LLA Date of Collection: 4/13/23

Task: 8140 Field Personnel: AJ + MM

Purge Data

Well ID: MWCP1 Secure: ☐ Yes ☐ No Ecology Tag #: _____ Casing Type/Diameter/Screened Interval _____

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: _____

Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from TOC): 3.06 Time: 1352

Total Depth (from log or field measurement): _____

After 5 minutes of purging (from top of casing): 3.05

Begin purge (time): 1354 End purge (time): _____

Volume purged: 6 Purge water disposal method: on site drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1405	3.05	1	6.90	1.93	186.9	1.57	10.3	132.4	
1410	3.05	2	6.77	0.30	192.0	1.09	10.0	127.2	
1415	3.05	3	6.71	0.11	205.9	0.78	10.0	127.4	
1420	3.05	4	6.69	0.04	209.8	0.75	10.0	127.0	

Sampling Data

Sample No: MWCP1-041323 Location and Depth: _____

Date Collected (mo/dy/yr): 4/13/23 Time Collected: 1425 Weather: _____

Type: ☑ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☑ Unfiltered Filter Type: _____

Sample Collected with: ☐ Bailer ☑ Pump Other: _____ Type: ☐ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS ☐ Turbidity Meter ☐ Other: _____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☑ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): Slight yellow tint, with no apparent odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: MWCP1-041323-D Duplicate Time: 1430 MS/MSD: ☐ Yes ☑ No

Signature: _____ Date: 4/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LL Date of Collection: 4/13/23

Task: 8140 Field Personnel: AS + MM

Purge Data

Well ID: MWCP2 Secure: ☑ Yes ☐ No Ecology Tag #: _____ Casing Type/Diameter/Screened Interval _____

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: _____

Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from TOC): 3.601 Time: 1244

Total Depth (from log or field measurement): _____

After 5 minutes of purging (from top of casing): 3.604

Begin purge (time): 1244 End purge (time): 1330

Volume purged: 4.5 Purge water disposal method: on site drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1255	3.69	1	6.79	5.09	191.2	3.86	11.3	99.8	
1300	3.64	2	6.56	1.01	193.5	1.27	11.2	105.2	
1305	3.64	3	6.55	0.48	195	0.62	11.1	106.7	

Sampling Data

Sample No: MWCP2-041323 Location and Depth: _____

Date Collected (mo/dy/yr): 4/13/23 Time Collected: 1310 Weather: _____

Type: ☑ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☑ Unfiltered Filter Type: _____

Sample Collected with: ☐ Bailer ☑ Pump Other: _____ Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS ☐ Turbidity Meter ☐ Other: _____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☑ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): Clear, no apparent odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: NA Duplicate Time: NA MS/MSD: ☐ Yes ☑ No

Signature: _____ Date: 4/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: 905-LLA Date of Collection: 4/13/23

Task: 8140 Field Personnel: AJ + MM

Purge Data

Well ID: MWCP3 Secure: ☑ Yes ☐ No Ecology Tag #: _____ Casing Type/Diameter/Screened Interval _____

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: _____

Depth Sounder decontaminated Prior to Placement in Well: ☐ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from TOC): 3.04 Time: 1530

Total Depth (from log or field measurement): _____

After 5 minutes of purging (from top of casing): 3.06

Begin purge (time): 1530 End purge (time): 1630

Volume purged: 5 Purge water disposal method on-site drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1545	3.06	1.5	6.95	0.82	220.8	0.710	8.8	133.7	
1550	3.06	2	6.92	0.18	224.8	0.712	8.6	123.9	
1555	3.06	3	6.91	0.101	224.7	0.714	8.6	118.6	

Sampling Data

Sample No: MWCP3-041323 Location and Depth: _____

Date Collected (mo/dy/yr): 041323 Time Collected: 1610 Weather: _____

Type: ☑ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☑ Unfiltered Filter Type: _____

Sample Collected with: ☐ Bailer ☑ Pump Other: _____ Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS ☐ Turbidity Meter ☐ Other: _____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☑ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): Clear, no apparent odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: NA Duplicate Time: NA MS/MSD: ☐ Yes ☑ No

Signature: _____ Date: 4/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: Lora Lake DOS-LL Date of Collection: 04/13/23

Task: Compliance monitoring Field Personnel: MM

Purge Data

Well ID: MW-CP4 Secure: ☒ Yes ☐ No Ecology Tag #: _____ Casing Type/Diameter/Screened Interval 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: _____

Depth Sounder decontaminated Prior to Placement in Well: ☐ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from TOC): 1.96 Time: 14:50

Total Depth (from log or field measurement): _____

After 5 minutes of purging (from top of casing): 1.97

Begin purge (time): 14:50 End purge (time): 15:30

Volume purged: 6L Purge water disposal method drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
14:58	1.97	1	6.94	1.81	197.4	2.61	9.3	95.6	
15:03	1.97	2	6.72	0.67	196.8	1.65	9.3	97.5	
15:08	1.97	3	6.69	0.49	197.0	1.23	9.4	96.7	
15:13	1.96	4	6.68	0.40	197.2	1.12	9.4	95.7	
15:18	1.96	5	6.67	0.34	197.4	1.12	9.3	94.6	

Sampling Data

Sample No: MW-CP4-041323 Location and Depth: MW-CP4

Date Collected (mo/dy/yr): 04/14/23 Time Collected: 15:25 Weather: Sunny, 50s

Type: ☒ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☐ Unfiltered Filter Type: _____

Sample Collected with: ☐ Bailer ☒ Pump Other: _____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS ☒ Turbidity Meter ☐ Other: _____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☒ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): clear, no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: _____ Duplicate Time: _____ MS/MSD: ☐ Yes ☐ No

Signature: [signature] **Date:** 04/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: DOSLC Ice Rink Date of Collection: 04/13/23

Task: Compliance monitoring Field Personnel: MM

Purge Data

Well ID: MW-CP5 Secure: ☒ Yes ☐ No Ecology Tag #: BLK315 Casing Type/Diameter/Screened Interval 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ____

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): ____

Depth of water (from TOC): 3.22' Time: 15:50

Total Depth (from log or field measurement): ____

After 5 minutes of purging (from top of casing): 3.56'

Begin purge (time): 15:55 End purge (time): 16:40

Volume purged: 7L Purge water disposal method drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
16:02	3.80	1	6.40	1.10	394.2	7.17	8.9	110.4	
16:07	3.90	2	6.35	0.39	398.7	5.19	8.8	90.3	
16:12	3.95	3	6.35	0.24	399.5	4.28	8.7	70.1	
16:17	3.95	4	6.35	0.19	400.0	3.04	8.6	54.9	
16:22	3.95	5	6.35	0.16	403.6	2.58	8.7	44.4	
16:27	3.94	6	6.36	0.15	403.7	2.13	8.7	41.3	
16:30	3.95	6.75	6.36	0.14	405.6	2.43	8.6	38.5	

Sampling Data

Sample No: MW-CP5-041323 Location and Depth: MW-CP5

Date Collected (mo/dy/yr): 041323 Time Collected: 16:33 Weather: Sunny, 50s

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Filter Type: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS ☒ Turbidity Meter ☐ Other: ____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing; ☒ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): Slight yellow tint, no odor, some flocculant

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: ____ Duplicate Time: ____ MS/MSD: ☐ Yes ☐ No

Signature: [signature] Date: 04/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: Lora Lake POS - LL Date of Collection: 04/13/23

Task: Compliance Monitoring Field Personnel: MM

Purge Data

Well ID: MW-CP6 Secure: ☒ Yes ☐ No Ecology Tag #: BLK314 Casing Type/Diameter/Screened Interval: 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☒ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ____

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): ____

Depth of water (from TOC): 2.72' Time: 12:36

Total Depth (from log or field measurement): ____

After 5 minutes of purging (from top of casing): 2.90'

Begin purge (time): 12:37 End purge (time): 13:25

Volume purged: 7L Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
12:45	2.90	1.75	6.57	1.03	167.5	8.22	11.1	110.6	
12:50	2.90	2.75	6.45	0.33	168.2	5.65	11.0	106.9	
12:55	2.89	3.75	6.44	0.25	168.6	9.97	11.0	102.3	
13:00	2.90	4.75	6.44	0.21	169.2	12.4	11.0	96.0	
13:05	2.90	5.75	6.44	0.18	169.2	11.4	10.9	91.5	
13:10	2.90	6.75	6.44	0.16	168.6	12.3	10.9	88.6	

Sampling Data

Sample No: MW-CP6-041323 Location and Depth: MW-CP6

Date Collected (mo/dy/yr): 04/13/23 Time Collected: 13:20 Weather: cloudy, 50°

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Filter Type: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS ☒ Turbidity Meter ☐ Other: ____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☒ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): clear, no odor, slight flocculant

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: ____ Duplicate Time: ____ MS/MSD: ☐ Yes ☐ No

Signature: [signature] Date: 04/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: Lola Lake POS-LL Date of Collection: 04/13/23

Task: Compliance monitoring Field Personnel: mm

Purge Data

Well ID: MW-CP7 Secure: ☒ Yes ☐ No Ecology Tag #: BLK316 Casing Type/Diameter/Screened Interval 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ____

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): ____

Depth of water (from TOC): 4.17' Time: 14:02

Total Depth (from log or field measurement): ____

After 5 minutes of purging (from top of casing): 4.21'

Begin purge (time): 14:02 End purge (time): 14:40

Volume purged: 6.5 L Purge water disposal method drum

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
14:10	4.20	2	6.23	1.86	228.0	1.54	11.7	101.7	
14:15	4.20	3	6.13	1.10	229.5	1.01	11.7	108.8	
14:20	4.20	4	6.11	0.99	229.3	0.92	11.6	111.2	
14:25	4.20	5	6.11	0.93	229.1	0.99	11.6	112.3	
14:30	4.20	6	6.11	0.93	229.0	0.97	11.6	112.7	

Sampling Data

Sample No: MW-CP7-041323 Location and Depth: MW-CP7

Date Collected (mo/dy/yr): 04/13/23 Time Collected: 14:35 Weather: Sunny, 50s

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Filter Type: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS ☒ Turbidity Meter ☐ Other: ____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☒ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): Clear, no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: ____ Duplicate Time: ____ MS/MSD: ☐ Yes ☐ No

Signature: [signature] **Date:** 04/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LL Date of Collection: 4/13/23

Task: 8140 Field Personnel: AJ + MM

Purge Data

Well ID: MW-VB3 Secure: ☑ Yes ☐ No Ecology Tag #: _____ Casing Type/Diameter/Screened Interval _____

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: _____

Depth Sounder decontaminated Prior to Placement in Well: ☐ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from TOC): 10.12 Time: 10:37

Total Depth (from log or field measurement): _____

After 5 minutes of purging (from top of casing): _____

Begin purge (time): 10:37 End purge (time): 11:25

Volume purged: 4 Purge water disposal method on site drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
10:45	10.23	1	6.00	2.05	289.9	1.66	10.9	99.5	
10:50	10.24	1.5	5.98	0.29	286.5	1.29	11.1	105.3	
10:55	10.24	2	5.98	0.15	287.8	1.20	11.0	108.4	
11:00	10.24	2.5	5.98	0.10	287.5	0.86	10.9	109.9	

Sampling Data

Sample No: MW-VB3-041323 Location and Depth: _____

Date Collected (mo/dy/yr): 4/13/23 Time Collected: 11:05 Weather: _____

Type: ☑ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☑ Unfiltered Filter Type: _____

Sample Collected with: ☐ Bailer ☑ Pump Other: _____ Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS ☐ Turbidity Meter ☐ Other: _____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☑ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): Clear, no apparent odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: NA Duplicate Time: NA MS/MSD: ☐ Yes ☑ No

Signature: _____ **Date:** 4/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: Lora Lake POS-LL Date of Collection: 04/13/23

Task: Compliance monitoring Field Personnel: MM

Purge Data

Well ID: HC00-B312 Secure: ☒ Yes ☐ No Ecology Tag #: _____ Casing Type/Diameter/Screened Interval: 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: _____

Depth Sounder decontaminated Prior to Placement in Well: ☐ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from TOC): 12.65' Time: 10:30

Total Depth (from log or field measurement): _____

After 5 minutes of purging (from top of casing): 12.64'

Begin purge (time): 10:30 End purge (time): 11:17

Volume purged: 7L Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
10:40	12.67	1	5.75	1.23	242.3	5.15	11.0	124.8	
10:45	12.70	2	5.90	0.40	241.3	4.91	10.9	134.2	
10:50	12.70	3	5.90	0.29	240.6	3.28	11.0	136.5	
10:55	12.70	4	5.90	0.25	239.3	2.83	11.0	137.4	
11:00	12.70	5	5.89	0.25	239.2	2.20	10.9	141.7	

Sampling Data

Sample No: HC00-B312-041322 Location and Depth: HC00-B312

Date Collected (mo/dy/yr): 04/13/23 Time Collected: 11:10 Weather: cloudy, 50°

Type: ☒ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☒ Unfiltered Filter Type: _____

Sample Collected with: ☐ Bailer ☒ Pump Other: _____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS ☒ Turbidity Meter ☐ Other: _____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☒ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): clear, no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: _____ Duplicate Time: _____ MS/MSD: ☐ Yes ☐ No

Signature: [signature] **Date:** 04/13/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS - LLA Date of Collection: 4/14/23

Task: 8140 Field Personnel: AJ + MM

Purge Data

Well ID: MW-VB1 Secure: ☑ Yes ☐ No Ecology Tag #: _____ Casing Type/Diameter/Screened Interval _____

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: _____

Depth Sounder decontaminated Prior to Placement in Well: ☐ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from TOC): 8.82 Time: 8:40

Total Depth (from log or field measurement): _____

After 5 minutes of purging (from top of casing): 8.90

Begin purge (time): 840 End purge (time): 935

Volume purged: 5.5 Purge water disposal method: on site drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
850	8.93	1	7.22	8.20	99.62	0.66	9.8	71.4	
855	8.94	2	6.60	7.86	98.2	1.13	9.6	94.7	
900	8.95	3	6.55	7.87	98.7	1.00	9.9	101.9	
905	8.95	4	6.49	7.80	98.8	1.00	10.1	102.7	

Sampling Data

Sample No: MWVB1-041423 Location and Depth: _____

Date Collected (mo/dy/yr): 4/14/23 Time Collected: 9:12 Weather: _____

Type: ☑ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☑ Unfiltered Filter Type: _____

Sample Collected with: ☐ Bailer ☑ Pump Other: _____ Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS ☐ Turbidity Meter ☐ Other: _____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☑ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): clear, no apparent odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: MWVB1-041423-D Duplicate Time: 922 MS/MSD: ☐ Yes ☑ No

Signature: _____ **Date:** 4/14/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: BOS-LL Date of Collection: 4/14/23

Task: 8140 Field Personnel: AJ + MM

Purge Data

Well ID: MW-C2 Secure: ☑ Yes ☐ No Ecology Tag #: _____ Casing Type/Diameter/Screened Interval _____

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: _____

Depth Sounder decontaminated Prior to Placement in Well: ☐ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from TOC): 15.64 Time: 10:42

Total Depth (from log or field measurement): _____

After 5 minutes of purging (from top of casing): 15.75

Begin purge (time): 1048 End purge (time): _____

Volume purged: _____ Purge water disposal method _____

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1055	15.80	1.5	11.17	0.35	409.1	4.53	11.1	-96.9	
1100	15.80	2.5	11.16	0.24	420.1	4.35	11.0	-111.3	
1105	15.80	3.5	11.15	0.20	426.2	3.76	11.0	-117.4	
1110	15.80	4.5	11.14	0.18	427.7	3.57	11.0	-122.7	

Sampling Data

Sample No: MWC2-041423 Location and Depth: _____

Date Collected (mo/dy/yr): 4.14.23 Time Collected: 1116 Weather: _____

Type: ☐ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☑ Unfiltered Filter Type: _____

Sample Collected with: ☐ Baller ☑ Pump Other: _____ Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS ☐ Turbidity Meter ☐ Other: _____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☑ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): _____

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: N/A Duplicate Time: N/A MS/MSD: ☐ Yes ☒ No

Signature: _____ **Date:** 4/14/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS - U Cora Lake Date of Collection: 04/14/23

Task: Compliance Monitoring Field Personnel: mm

Purge Data

Well ID: MW-C3 Secure: ☒ Yes ☐ No Ecology Tag #: BKA342 Casing Type/Diameter/Screened Interval 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ____

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): ____

Depth of water (from TOC): 17.45' Time: 10:28

Total Depth (from log or field measurement): ____

After 5 minutes of purging (from top of casing): 17.49

Begin purge (time): 10:30 End purge (time): 11:05

Volume purged: 5L Purge water disposal method drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
mm									
10:38 ~~10:33~~	17.48	1	6.78	8.77	93.0	2.84	10.9	145.9	
10:43 ~~10:38~~	17.48	2	6.51	8.39	93.5	2.36	10.8	151.3	
10:48 ~~10:43~~	17.48	3	6.49	8.33	95.6	1.83	10.8	154.1	
10:53 ~~10:48~~	17.48	4	6.49	8.19	99.4	1.90	10.9	155.9	
10:56	17.48	4.75	6.49	8.12	99.7	1.84	11.0	156.5	

Sampling Data

Sample No: MW-C3-041423 Location and Depth: MW-C3

Date Collected (mo/dy/yr): 04/14/23 Time Collected: 11:00 Weather: partly cloudy, 45°

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Filter Type: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS ☒ Turbidity Meter ☐ Other: ____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☒ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): clear, no odor.

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: ____ Duplicate Time: ____ MS/MSD: ☐ Yes ☐ No

Signature: [signature] **Date:** 04/14/23

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: DOS-LLA Date of Collection: 04/14/23

Task: Compliance monitoring Field Personnel: MM

Purge Data

Well ID: MW-VB2 Secure: ☒ Yes ☐ No Ecology Tag #: BKA340 Casing Type/Diameter/Screened Interval: 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ____

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): ____

Depth of water (from TOC): 9.45' Time: 08:18

Total Depth (from log or field measurement): ____

After 5 minutes of purging (from top of casing): 9.45'

Begin purge (time): 08:20 End purge (time): 09:00

Volume purged: 5.5 L Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
08:30	9.45	1	6.23	0.99	2845	5.39	10.4	132.2	
08:35	9.45	2	6.21	0.24	236.9	3.92	10.5	131.7	
08:40	9.44	3	6.21	0.14	236.4	3.13	10.5	132.0	
08:45	9.44	3.75	6.20	0.11	236.2	2.34	10.6	132.4	
08:50	9.45	4.50	6.20	0.08	235.9	2.01	10.6	133.0	

Sampling Data

Sample No: MW-VB2-041423 Location and Depth: MW-VB2

Date Collected (mo/dy/yr): 04/14/23 Time Collected: 08:55 Weather: Sunny; 45°

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Filter Type: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS ☒ Turbidity Meter ☐ Other: ____

Sample Decon Procedure: Sample collected with: ☐ decontaminated all tubing; ☐ disposable tubing ☒ dedicated silicon and poly tubing; ☐ dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): clear, no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

QC samples

Duplicate Sample No: ____ Duplicate Time: ____ MS/MSD: ☐ Yes ☐ No

Signature: [signature] **Date:** ____

Lora Lake Apartments Site

2023 Annual Compliance Monitoring Report

Appendix B
Laboratory Reports and Data Validation Summaries

Analytical Resources, LLC
Analytical Chemists and Consultants

24 May 2023

Amanda McKay
Floyd - Snider
601 Union Street Two Union Square, Suite 600
Seattle, WA 98101-2341

RE: Lora Lake 2021-2023 sec II. 5.3.21

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)
23D0412	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 enclosed 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

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.

Kelly Bottem, Client Services Manager

Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 2300412	Turn-around Requested: Standard
ARI Client Company: Floyd | Snider	Phone: 206-292-2078
Client Contact: Amanda McKay	
Client Project Name: POS-LLA	
Client Project #: POS-LLA	Samplers: Adia Jumper, Meg McCann

Page: 1 of 2

Date: 04/14/2023 Ice Present? Y

No. of Coolers: 2 Cooler Temps: 3.7, 5.4

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dissolved Arsenic	Analysis Requested: Dioxins/Furans	Notes/Comments
MWCP1-041323	4/13/23	1425	GW	3	X	X	As samples to be lab filtered & lab preserved
MWCP1-041323-D	4/13/23	1430		3	X	X	
MWCP2-041323	4/13/23	1310		3	X	X	
MWCP3-041323	4/13/23	1610		3	X	X	
MW-CP4-041323	4/13/23	15:25		3	X	X	
MW-CP5-041323	4/13/23	16:33 ~~1305~~		3	X	X	Time is 1633
MW-CP6-041323	4/13/23	1320		3	X	X	
MW-CP7-041323	4/13/23	1435		3	X	X	
MWVB3-041323	4/13/23	1605		3	X	X	
H COO-B312-041323	4/13/23	1110	↓	3	X	X	

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Adia Jumper	(Signature) Phillip Bates	(Signature)	(Signature)
	Printed Name: Adia Jumper	Printed Name: Phillip Bates	Printed Name:	Printed Name:
	Company: Floyd Snider	Company: AR	Company:	Company:
	Date & Time: 4/14/23 1217	Date & Time: 4/14/23 12:17	Date & Time:	Date & Time:

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 2300412	Turn-around Requested: Standard	Page: 2 of 2	
ARI Client Company: Floyd | Snider	Phone: 206-292-2078	Date: 04/14/23	Ice Present? Y
Client Contact: Amanda McKay		No. of Coolers: 2	Cooler Temps: 3.7, 5.4
Client Project Name: POS - LLA			
Client Project #: POS - LLA	Samplers: Adia Jumper, Meg McCann		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dissolved Arsenic	Analysis Requested: Dioxins/Furans	Notes/Comments
MWVB1-041423	04/14/23	09:12	GW	3	X	X	As samples to be lab filtered + lab preserved
MWVB1-041423-D	04/14/23	09:22		3	X	X	
MW-VB2-041423	04/14/23	08:55		3	X	X	
MWC2-041423	04/14/23	11:16		1	X		
MW-C3-041423	04/14/23	11:00	↓	1	X		

Comments/Special Instructions	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:
	Adia Jumper	Adia Jumper	Floyd|Snider	4/14/23 1217	Phillip Bates	Phillip Bates	AR	4/14/23 12:17								

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 4/17/2023 4:01:10PM

WORK ORDER

23D0412

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

Client: Floyd - Snider | **Project Manager:** Kelly Bottem

Project: Lora Lake | **Project Number:** POS-LLA

Preservation Confirmation

Container ID	Container Type	pH
23D0412-01 A	HDPE NM, 500 mL	>2 fail
23D0412-01 B	Glass NM, Amber, 1000 mL	
23D0412-01 C	Glass NM, Amber, 1000 mL	
23D0412-02 A	HDPE NM, 500 mL	>2 fail
23D0412-02 B	Glass NM, Amber, 1000 mL	
23D0412-02 C	Glass NM, Amber, 1000 mL	
23D0412-03 A	HDPE NM, 500 mL	>2 fail
23D0412-03 B	Glass NM, Amber, 1000 mL	
23D0412-03 C	Glass NM, Amber, 1000 mL	
23D0412-04 A	HDPE NM, 500 mL	>2 fail
23D0412-04 B	Glass NM, Amber, 1000 mL	
23D0412-04 C	Glass NM, Amber, 1000 mL	
23D0412-05 A	HDPE NM, 500 mL	>2 fail
23D0412-05 B	Glass NM, Amber, 1000 mL	
23D0412-05 C	Glass NM, Amber, 1000 mL	
23D0412-06 A	HDPE NM, 500 mL	>2 fail
23D0412-06 B	Glass NM, Amber, 1000 mL	
23D0412-06 C	Glass NM, Amber, 1000 mL	
23D0412-07 A	HDPE NM, 500 mL	>2 fail
23D0412-07 B	Glass NM, Amber, 1000 mL	
23D0412-07 C	Glass NM, Amber, 1000 mL	
23D0412-08 A	HDPE NM, 500 mL	>2 fail
23D0412-08 B	Glass NM, Amber, 1000 mL	
23D0412-08 C	Glass NM, Amber, 1000 mL	
23D0412-09 A	HDPE NM, 500 mL	>2 fail
23D0412-09 B	Glass NM, Amber, 1000 mL	
23D0412-09 C	Glass NM, Amber, 1000 mL	
23D0412-10 A	HDPE NM, 500 mL	>2 fail
23D0412-10 B	Glass NM, Amber, 1000 mL	
23D0412-10 C	Glass NM, Amber, 1000 mL	
23D0412-11 A	HDPE NM, 500 mL	>2 fail
23D0412-11 B	Glass NM, Amber, 1000 mL	
23D0412-11 C	Glass NM, Amber, 1000 mL	
23D0412-12 A	HDPE NM, 500 mL	>2 fail

Reviewed By

Date

WORK ORDER

23D0412

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

Client: Floyd - Snider | **Project Manager:** Kelly Bottem

Project: Lora Lake | **Project Number:** POS-LLA

23D0412-12 B	Glass NM, Amber, 1000 mL			
23D0412-12 C	Glass NM, Amber, 1000 mL			
23D0412-13 A	HDPE NM, 500 mL	>2	fail	(1)
23D0412-13 B	Glass NM, Amber, 1000 mL			
23D0412-13 C	Glass NM, Amber, 1000 mL			
23D0412-14 A	HDPE NM, 500 mL	>2	fail	
23D0412-15 A	HDPE NM, 500 mL	>2	fail	

PIB
Preservation Confirmed By

4/17/23
Date

(1) Preserved to pH<2 with 0.75mL of Conc HNO_3 (L2078) AR 4/18/23

Reviewed By

Date

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 4/17/2023 4:01:10PM

WORK ORDER

23D0412

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

Client: Floyd - Snider | **Project Manager:** Kelly Bottem

Project: Lora Lake | **Project Number:** POS-LLA

Preservation Confirmation

Container ID	Container Type	pH
23D0412-01 A	HDPE NM, 500 mL	>2 fail
23D0412-01 B	Glass NM, Amber, 1000 mL	
23D0412-01 C	Glass NM, Amber, 1000 mL	
23D0412-02 A	HDPE NM, 500 mL	>2 fail
23D0412-02 B	Glass NM, Amber, 1000 mL	
23D0412-02 C	Glass NM, Amber, 1000 mL	
23D0412-03 A	HDPE NM, 500 mL	>2 fail
23D0412-03 B	Glass NM, Amber, 1000 mL	
23D0412-03 C	Glass NM, Amber, 1000 mL	
23D0412-04 A	HDPE NM, 500 mL	>2 fail
23D0412-04 B	Glass NM, Amber, 1000 mL	
23D0412-04 C	Glass NM, Amber, 1000 mL	
23D0412-05 A	HDPE NM, 500 mL	>2 fail
23D0412-05 B	Glass NM, Amber, 1000 mL	
23D0412-05 C	Glass NM, Amber, 1000 mL	
23D0412-06 A	HDPE NM, 500 mL	>2 fail
23D0412-06 B	Glass NM, Amber, 1000 mL	
23D0412-06 C	Glass NM, Amber, 1000 mL	
23D0412-07 A	HDPE NM, 500 mL	>2 fail
23D0412-07 B	Glass NM, Amber, 1000 mL	
23D0412-07 C	Glass NM, Amber, 1000 mL	
23D0412-08 A	HDPE NM, 500 mL	>2 fail
23D0412-08 B	Glass NM, Amber, 1000 mL	
23D0412-08 C	Glass NM, Amber, 1000 mL	
23D0412-09 A	HDPE NM, 500 mL	>2 fail
23D0412-09 B	Glass NM, Amber, 1000 mL	
23D0412-09 C	Glass NM, Amber, 1000 mL	
23D0412-10 A	HDPE NM, 500 mL	>2 fail
23D0412-10 B	Glass NM, Amber, 1000 mL	
23D0412-10 C	Glass NM, Amber, 1000 mL	
23D0412-11 A	HDPE NM, 500 mL	>2 fail
23D0412-11 B	Glass NM, Amber, 1000 mL	
23D0412-11 C	Glass NM, Amber, 1000 mL	
23D0412-12 A	HDPE NM, 500 mL	>2 fail

Reviewed By

Date

WORK ORDER

23D0412

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

Client: Floyd - Snider **Project Manager: Kelly Bottem**

Project: Lora Lake **Project Number: POS-LLA**

23D0412-12 B	Glass NM, Amber, 1000 mL		
23D0412-12 C	Glass NM, Amber, 1000 mL		
23D0412-13 A	HDPE NM, 500 mL	>2	fail
23D0412-13 B	Glass NM, Amber, 1000 mL		
23D0412-13 C	Glass NM, Amber, 1000 mL		
23D0412-14 A	HDPE NM, 500 mL	>2	fail
23D0412-15 A	HDPE NM, 500 mL	>2	fail

PLB
Preservation Confirmed By

4/17/23
Date

Reviewed By

Date

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snider

Project Name: POS-LLA

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 2300412

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) 3.7 5.4

Time 12:17

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 500708

Cooler Accepted by: PTB Date: 4/14/23 Time: 12:17

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: PTB Date: 4/17/23 Time: 15:52 Labels checked by: PLB

***** 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:

By: Date:

Analytical Resources, LLC
Analytical Chemists and Consultants

Floyd - Snider	Project: Lora Lake 2021-2023 sec II. 5.3.21	
601 Union Street Two Union Square, Suite 600	Project Number: Lora Lake 2021-2023 sec II. 5.3.21	**Reported:**
Seattle, WA 98101-2341	Project Manager: Amanda McKay	05/24/2023 12:19

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
23D0412-01	MWCP1-041323	Water	04/13/23 14:25	04/14/23 12:17
23D0412-02	MWCP1-041323-D	Water	04/13/23 14:30	04/14/23 12:17
23D0412-03	MWCP2-041323	Water	04/13/23 13:10	04/14/23 12:17
23D0412-04	MWCP3-041323	Water	04/13/23 16:10	04/14/23 12:17
23D0412-05	MWCP4-041323	Water	04/13/23 15:25	04/14/23 12:17
23D0412-06	MWCP5-041323	Water	04/13/23 16:33	04/14/23 12:17
23D0412-07	MWCP6-041323	Water	04/13/23 13:20	04/14/23 12:17
23D0412-08	MWCP7-041323	Water	04/13/23 14:35	04/14/23 12:17
23D0412-09	MWVB3-041323	Water	04/13/23 11:05	04/14/23 12:17
23D0412-10	HC00-B312-041323	Water	04/13/23 11:10	04/14/23 12:17
23D0412-11	MWVB1-041423	Water	04/14/23 09:12	04/14/23 12:17
23D0412-12	MWVB1-041423-D	Water	04/14/23 09:22	04/14/23 12:17
23D0412-13	MWVB2-041423	Water	04/14/23 08:55	04/14/23 12:17
23D0412-14	MWC2-041423	Water	04/14/23 11:16	04/14/23 12:17
23D0412-15	MWC3-041423	Water	04/14/23 11:00	04/14/23 12:17

Floyd - Snider	Project: Lora Lake 2021-2023 sec II. 5.3.21	
601 Union Street Two Union Square, Suite 600	Project Number: Lora Lake 2021-2023 sec II. 5.3.21	**Reported:**
Seattle WA, 98101-2341	Project Manager: Amanda McKay	24-May-2023 12:19

Case Narrative

Dioxin/Furans - EPA Method 1613

The sample(s) were extracted and analyzed within the recommended holding times. Analysis was performed using an application specific column developed by Restek. The RTX-Dioxin2 column has unique isomer separation for the 2378-TCDF, eliminating the need for confirmation analysis.

Initial and continuing calibrations were within method requirements.

Labeled internal standard areas were within limits.

The cleanup surrogate percent recoveries were within control limits.

The method blank(s) contained "J" qualifed values. Associated samples that contain analyte have been flagged with a "B" qualifer.

The OPR (Ongoing Precision and Recovery) standard percent recoveries were within control limits.

Dissolved Metals - EPA Method 6020B

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.

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

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
J	Estimated concentration value detected below the reporting limit.
EMPC	Estimated Maximum Possible Concentration qualifier for HRGCMS Dioxin
D	The reported value is from a dilution
B	This analyte was detected in the method blank.
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

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP1-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-01 B	File ID:	23052207
Sampled:	04/13/23 14:25	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 15:20
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1040 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.13	9.62	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	1.05	9.62	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.33	9.62	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.20	9.62	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.11	9.62	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.816	1.054-1.426	0.83	9.62	1.13	pg/L	EMPC, J
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.88	9.62	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.89	9.62	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.95	9.62	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.98	9.62	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.90	9.62	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.03	9.62	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	1.14	19.2	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.63	9.62	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.789	0.893-1.208	1.63	9.62	2.83	pg/L	EMPC, J, B
39001-02-0	OCDF	1		0.757-1.024	2.12	19.2	ND	pg/L	U
3268-87-9	OCDD	1	0.998	0.757-1.024	1.59	48.1	7.62	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.62	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.62	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.62	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.62	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.62	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.62	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.62	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.62	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.144

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.78

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWCP1-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-01	File ID:	23052207
Sampled:	04/13/23 14:25	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 15:20
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1040 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.764	0.655-0.886	1.35	102	24 - 169 %	
13C12-2,3,7,8-TCDD		0.788	0.655-0.886	2.04	115	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.528	1.318-1.783	2.81	106	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.544	1.318-1.783	3.12	112	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.602	1.318-1.783	1.91	108	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.504	0.434-0.587	3.98	91.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.560	0.434-0.587	3.36	90.8	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.510	0.434-0.587	4.12	91.5	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.509	0.434-0.587	4.99	107	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.277	1.054-1.426	3.07	107	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.242	1.054-1.426	2.64	105	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.450	0.374-0.506	3.96	96.8	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.432	0.374-0.506	4.60	97.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.061	0.893-1.208	3.27	92.3	23 - 140 %	
13C12-OCDD		0.832	0.757-1.024	3.99	96.2	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		1.03	107	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP1-041323-D

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-02 B	File ID:	23052208
Sampled:	04/13/23 14:30	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 16:09
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1060 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	0.96	9.43	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.73	9.43	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.02	9.43	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	0.93	9.43	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.02	9.43	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.66	9.43	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.65	9.43	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.69	9.43	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.75	9.43	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.70	9.43	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.67	9.43	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	0.75	9.43	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.83	18.9	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.21	9.43	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	2.974	0.893-1.208	1.08	9.43	1.91	pg/L	EMPC, J, B
39001-02-0	OCDF	1		0.757-1.024	2.27	18.9	ND	pg/L	U
3268-87-9	OCDD	1	1.004	0.757-1.024	1.56	47.2	5.58	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.43	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.43	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.43	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.43	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.43	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.43	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.43	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.43	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.021

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWCP1-041323-D

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-02	File ID:	23052208
Sampled:	04/13/23 14:30	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 16:09
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1060 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.778	0.655-0.886	1.16	97.6	24 - 169 %	
13C12-2,3,7,8-TCDD		0.779	0.655-0.886	1.55	114	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.505	1.318-1.783	3.31	105	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.538	1.318-1.783	3.67	111	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.599	1.318-1.783	1.78	106	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.504	0.434-0.587	2.43	94.3	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.509	0.434-0.587	2.04	89.8	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.514	0.434-0.587	2.51	93.0	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.507	0.434-0.587	3.04	106	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.247	1.054-1.426	2.43	107	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.213	1.054-1.426	2.09	107	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.446	0.374-0.506	3.18	99.4	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.443	0.374-0.506	3.70	96.2	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.124	0.893-1.208	2.02	93.7	23 - 140 %	
13C12-OCDD		0.944	0.757-1.024	3.11	96.8	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.75	104	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP2-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-03 B	File ID:	23052209
Sampled:	04/13/23 13:10	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 16:58
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1040 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.03	9.62	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.78	9.62	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.24	9.62	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.16	9.62	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.44	9.62	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.62	9.62	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.62	9.62	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.64	9.62	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.71	9.62	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.82	9.62	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.76	9.62	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	0.87	9.62	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.014	0.893-1.208	0.96	19.2	5.84	pg/L	J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.37	9.62	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.240	0.893-1.208	1.61	9.62	11.2	pg/L	EMPC, B
39001-02-0	OCDF	1	0.905	0.757-1.024	2.57	19.2	29.3	pg/L	
3268-87-9	OCDD	1	0.925	0.757-1.024	2.22	48.1	72.9	pg/L	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.62	ND	pg/L	
41903-57-5	Total TCDD	1	0.000			9.62	ND	pg/L	
30402-15-4	Total PeCDF	1	0.000			9.62	ND	pg/L	
36088-22-9	Total PeCDD	1	0.000			9.62	ND	pg/L	
55684-94-1	Total HxCDF	1	0.000			9.62	2.13	pg/L	
34465-46-8	Total HxCDD	1	0.000			9.62	ND	pg/L	
38998-75-3	Total HpCDF	1	0.000			9.62	25.4	pg/L	
37871-00-4	Total HpCDD	1	0.000			9.62	7.69	pg/L	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.201

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.81

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWCP2-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-03	File ID:	23052209
Sampled:	04/13/23 13:10	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 16:58
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1040 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.755	0.655-0.886	0.99	87.8	24 - 169 %	
13C12-2,3,7,8-TCDD		0.771	0.655-0.886	1.66	103	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.530	1.318-1.783	3.13	90.4	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.519	1.318-1.783	3.48	96.4	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.659	1.318-1.783	1.92	90.0	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.507	0.434-0.587	1.88	80.2	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.503	0.434-0.587	1.58	77.5	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.501	0.434-0.587	1.94	81.4	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.504	0.434-0.587	2.36	88.9	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.236	1.054-1.426	2.15	92.8	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.189	1.054-1.426	1.85	89.6	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.453	0.374-0.506	3.54	81.3	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.437	0.374-0.506	4.12	79.7	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.080	0.893-1.208	2.19	77.8	23 - 140 %	
13C12-OCDD		0.974	0.757-1.024	3.05	78.4	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.89	92.3	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP3-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-04 B	File ID:	23052210
Sampled:	04/13/23 16:10	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 17:47
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1020 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.32	9.80	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.86	9.80	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.377	1.318-1.783	1.31	9.80	1.73	pg/L	EMPC, J
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.19	9.80	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.36	9.80	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.82	9.80	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.79	9.80	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.86	9.80	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.97	9.80	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.05	9.80	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	1.01	9.80	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.13	9.80	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.96	19.6	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.43	9.80	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	1.49	9.80	ND	pg/L	U
39001-02-0	OCDF	1		0.757-1.024	3.09	19.6	ND	pg/L	U
3268-87-9	OCDD	1	0.964	0.757-1.024	2.58	49.0	6.58	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.80	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.80	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.80	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.80	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.80	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.80	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.80	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.80	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.054

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.76

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWCP3-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-04	File ID:	23052210
Sampled:	04/13/23 16:10	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 17:47
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1020 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.756	0.655-0.886	1.04	89.5	24 - 169 %	
13C12-2,3,7,8-TCDD		0.786	0.655-0.886	1.42	103	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.555	1.318-1.783	2.37	92.2	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.505	1.318-1.783	2.63	96.0	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.662	1.318-1.783	1.98	91.5	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.515	0.434-0.587	2.53	80.7	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.468	0.434-0.587	2.13	81.7	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.520	0.434-0.587	2.62	81.8	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.506	0.434-0.587	3.17	87.2	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.264	1.054-1.426	2.25	89.8	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.259	1.054-1.426	1.93	84.3	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.441	0.374-0.506	3.00	80.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.439	0.374-0.506	3.49	76.9	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.011	0.893-1.208	2.34	72.8	23 - 140 %	
13C12-OCDD		0.877	0.757-1.024	4.00	71.8	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.76	96.9	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP4-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-05 B	File ID:	23052211
Sampled:	04/13/23 15:25	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 18:36
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1030 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.49	9.71	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	1.27	9.71	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.38	9.71	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.25	9.71	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.27	9.71	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.79	9.71	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.82	9.71	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.80	9.71	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.89	9.71	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.98	9.71	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.92	9.71	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.04	9.71	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	1.08	19.4	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.60	9.71	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.854	0.893-1.208	1.45	9.71	1.38	pg/L	EMPC, J, B
39001-02-0	OCDF	1		0.757-1.024	2.23	19.4	ND	pg/L	U
3268-87-9	OCDD	1	0.886	0.757-1.024	1.51	48.5	5.61	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.71	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.71	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.71	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.71	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.71	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.71	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.71	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.71	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.015

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.89

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWCP4-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-05	File ID:	23052211
Sampled:	04/13/23 15:25	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 18:36
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1030 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.766	0.655-0.886	1.29	90.2	24 - 169 %	
13C12-2,3,7,8-TCDD		0.770	0.655-0.886	1.61	106	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.508	1.318-1.783	2.83	94.8	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.531	1.318-1.783	3.14	100	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.616	1.318-1.783	2.02	95.3	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.508	0.434-0.587	2.25	85.5	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.542	0.434-0.587	1.90	82.5	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.507	0.434-0.587	2.33	86.9	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.506	0.434-0.587	2.82	97.4	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.263	1.054-1.426	3.07	96.5	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.220	1.054-1.426	2.64	96.8	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.450	0.374-0.506	2.92	87.7	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.444	0.374-0.506	3.40	86.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.047	0.893-1.208	2.27	82.0	23 - 140 %	
13C12-OCDD		0.894	0.757-1.024	2.52	82.1	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.81	92.9	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP5-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Water	Laboratory ID:	23D0412-06 B	File ID:	23051509
Sampled:	04/13/23 16:33	Prepared:	04/20/23 12:45	Analyzed:	05/15/23 18:06
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1030 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0240	Calibration:	GC00015
Batch:	BLD0507	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	5.23	9.71	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	3.86	9.71	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	3.53	9.71	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	3.18	9.71	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	3.30	9.71	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	1.58	9.71	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	1.46	9.71	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	1.56	9.71	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	1.83	9.71	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.72	9.71	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	1.61	9.71	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.83	9.71	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	2.17	19.4	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	3.01	9.71	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.683	0.893-1.208	3.11	9.71	3.33	pg/L	EMPC, J, B
39001-02-0	OCDF	1		0.757-1.024	3.35	19.4	ND	pg/L	U
3268-87-9	OCDD	1	0.853	0.757-1.024	3.33	48.5	17.0	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.71	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.71	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.71	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.71	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.71	1.09	pg/L
34465-46-8	Total HxCDD	1	0.000			9.71	1.65	pg/L
38998-75-3	Total HpCDF	1	0.000			9.71	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.71	6.42	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.038

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 5.02

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWCP5-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Water	Laboratory ID:	23D0412-06	File ID:	23051509
Sampled:	04/13/23 16:33	Prepared:	04/20/23 12:45	Analyzed:	05/15/23 18:06
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1030 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0240	Calibration:	GC00015
Batch:	BLD0507	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.775	0.655-0.886	1.09	25.2	24 - 169 %	
13C12-2,3,7,8-TCDD		0.753	0.655-0.886	1.66	31.1	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.495	1.318-1.783	2.03	47.6	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.530	1.318-1.783	2.26	51.7	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.606	1.318-1.783	2.39	56.7	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.511	0.434-0.587	1.96	51.1	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.479	0.434-0.587	1.65	51.5	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.509	0.434-0.587	2.03	56.4	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.506	0.434-0.587	2.46	58.3	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.273	1.054-1.426	2.54	58.6	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.221	1.054-1.426	2.19	57.0	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.428	0.374-0.506	3.15	61.1	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.433	0.374-0.506	3.67	60.6	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.055	0.893-1.208	2.40	61.6	23 - 140 %	
13C12-OCDD		0.867	0.757-1.024	4.48	68.5	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.72	51.3	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP6-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Water	Laboratory ID:	23D0412-07 B	File ID:	23051510
Sampled:	04/13/23 13:20	Prepared:	04/20/23 12:45	Analyzed:	05/15/23 18:55
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1020 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0240	Calibration:	GC00015
Batch:	BLD0507	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	2.09	9.80	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	1.76	9.80	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	0.98	9.80	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	0.89	9.80	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.96	9.80	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.52	9.80	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.52	9.80	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.52	9.80	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.64	9.80	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.76	9.80	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.72	9.80	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	0.81	9.80	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.63	19.6	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	0.90	9.80	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	0.95	9.80	ND	pg/L	U
39001-02-0	OCDF	1		0.757-1.024	1.63	19.6	ND	pg/L	U
3268-87-9	OCDD	1	0.508	0.757-1.024	1.43	49.0	6.55	pg/L	EMPC, J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.80	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.80	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.80	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.80	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.80	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.80	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.80	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.80	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.002

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.85

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWCP6-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Water	Laboratory ID:	23D0412-07	File ID:	23051510
Sampled:	04/13/23 13:20	Prepared:	04/20/23 12:45	Analyzed:	05/15/23 18:55
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1020 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0240	Calibration:	GC00015
Batch:	BLD0507	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.777	0.655-0.886	1.62	89.3	24 - 169 %	
13C12-2,3,7,8-TCDD		0.794	0.655-0.886	1.99	101	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.504	1.318-1.783	2.15	109	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.532	1.318-1.783	2.38	114	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.593	1.318-1.783	1.72	121	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.511	0.434-0.587	2.44	95.1	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.472	0.434-0.587	2.05	94.7	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.499	0.434-0.587	2.52	102	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.514	0.434-0.587	3.06	103	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.256	1.054-1.426	2.56	109	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.186	1.054-1.426	2.20	103	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.428	0.374-0.506	2.77	105	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.438	0.374-0.506	3.22	108	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.053	0.893-1.208	2.08	105	23 - 140 %	
13C12-OCDD		0.906	0.757-1.024	2.53	112	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.95	93.7	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP7-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-08 B	File ID:	23052212
Sampled:	04/13/23 14:35	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 19:25
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.11	10.0	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.83	10.0	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.21	10.0	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.09	10.0	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.26	10.0	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.74	10.0	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.74	10.0	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.79	10.0	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.87	10.0	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.15	10.0	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	1.09	10.0	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.23	10.0	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	1.12	20.0	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.65	10.0	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	1.42	10.0	ND	pg/L	U
39001-02-0	OCDF	1		0.757-1.024	3.32	20.0	ND	pg/L	U
3268-87-9	OCDD	1	1.189	0.757-1.024	1.77	50.0	9.81	pg/L	EMPC, J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			10.0	ND	pg/L	
41903-57-5	Total TCDD	1	0.000			10.0	ND	pg/L	
30402-15-4	Total PeCDF	1	0.000			10.0	ND	pg/L	
36088-22-9	Total PeCDD	1	0.000			10.0	ND	pg/L	
55684-94-1	Total HxCDF	1	0.000			10.0	ND	pg/L	
34465-46-8	Total HxCDD	1	0.000			10.0	ND	pg/L	
38998-75-3	Total HpCDF	1	0.000			10.0	ND	pg/L	
37871-00-4	Total HpCDD	1	0.000			10.0	ND	pg/L	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.003

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.64

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWCP7-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-08	File ID:	23052212
Sampled:	04/13/23 14:35	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 19:25
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.745	0.655-0.886	1.00	90.3	24 - 169 %	
13C12-2,3,7,8-TCDD		0.783	0.655-0.886	1.59	105	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.541	1.318-1.783	2.82	94.7	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.534	1.318-1.783	3.13	99.1	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.622	1.318-1.783	2.03	96.5	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.509	0.434-0.587	2.62	86.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.503	0.434-0.587	2.21	90.3	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.498	0.434-0.587	2.71	86.8	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.517	0.434-0.587	3.29	98.0	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.254	1.054-1.426	2.80	96.7	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.227	1.054-1.426	2.41	92.8	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.435	0.374-0.506	3.33	86.8	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.473	0.374-0.506	3.88	88.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.068	0.893-1.208	2.43	81.6	23 - 140 %	
13C12-OCDD		0.907	0.757-1.024	3.93	82.5	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.80	91.7	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWVB3-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-09 B	File ID:	23052213
Sampled:	04/13/23 11:05	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 20:14
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1020 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.15	9.80	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.81	9.80	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.20	9.80	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.08	9.80	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.11	9.80	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.84	9.80	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.81	9.80	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.90	9.80	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.99	9.80	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.02	9.80	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.95	9.80	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.08	9.80	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.93	19.6	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.25	9.80	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	1.67	9.80	ND	pg/L	U
39001-02-0	OCDF	1		0.757-1.024	2.98	19.6	ND	pg/L	U
3268-87-9	OCDD	1	1.035	0.757-1.024	2.23	49.0	8.28	pg/L	EMPC, J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.80	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.80	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.80	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.80	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.80	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.80	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.80	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.80	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.002

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.55

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWVB3-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-09	File ID:	23052213
Sampled:	04/13/23 11:05	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 20:14
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1020 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.769	0.655-0.886	1.12	88.3	24 - 169 %	
13C12-2,3,7,8-TCDD		0.781	0.655-0.886	1.59	105	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.541	1.318-1.783	2.52	93.7	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.537	1.318-1.783	2.80	97.5	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.602	1.318-1.783	1.94	93.5	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.495	0.434-0.587	2.25	86.4	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.460	0.434-0.587	1.89	86.2	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.505	0.434-0.587	2.32	86.1	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.514	0.434-0.587	2.82	94.4	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.272	1.054-1.426	2.62	94.3	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.214	1.054-1.426	2.25	94.0	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.450	0.374-0.506	3.37	85.8	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.403	0.374-0.506	3.92	88.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.037	0.893-1.208	2.50	79.2	23 - 140 %	
13C12-OCDD		0.927	0.757-1.024	3.32	77.6	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.72	92.4	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HC00-B312-041323

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-10 B	File ID:	23052216
Sampled:	04/13/23 11:10	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 22:47
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1030 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.04	9.71	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.71	9.71	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.43	9.71	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.30	9.71	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.17	9.71	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.73	9.71	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.73	9.71	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.75	9.71	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.89	9.71	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.89	9.71	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.84	9.71	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	0.95	9.71	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.97	19.4	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.51	9.71	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	1.41	9.71	ND	pg/L	U
39001-02-0	OCDF	1		0.757-1.024	2.49	19.4	ND	pg/L	U
3268-87-9	OCDD	1	0.818	0.757-1.024	2.27	48.5	5.86	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.71	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.71	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.71	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.71	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.71	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.71	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.71	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.71	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.002

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.52

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HC00-B312-041323

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-10	File ID:	23052216
Sampled:	04/13/23 11:10	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 22:47
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1030 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.749	0.655-0.886	1.17	96.7	24 - 169 %	
13C12-2,3,7,8-TCDD		0.771	0.655-0.886	1.54	116	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.514	1.318-1.783	2.75	103	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.526	1.318-1.783	3.06	109	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.563	1.318-1.783	1.71	102	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.510	0.434-0.587	3.47	97.9	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.536	0.434-0.587	2.92	96.5	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.497	0.434-0.587	3.59	99.4	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.500	0.434-0.587	4.35	102	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.268	1.054-1.426	3.62	110	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.280	1.054-1.426	3.11	107	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.445	0.374-0.506	3.66	96.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.440	0.374-0.506	4.25	92.1	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.067	0.893-1.208	3.19	86.6	23 - 140 %	
13C12-OCDD		0.839	0.757-1.024	4.69	91.4	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.62	102	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWVB1-041423

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-11 B	File ID:	23052217
Sampled:	04/14/23 09:12	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 23:36
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1060 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.12	9.43	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.67	9.43	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.34	9.43	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.22	9.43	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.31	9.43	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.83	9.43	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.87	9.43	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.91	9.43	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.94	9.43	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.95	9.43	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.90	9.43	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.02	9.43	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	1.11	18.9	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.55	9.43	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	1.42	9.43	ND	pg/L	U
39001-02-0	OCDF	1		0.757-1.024	2.20	18.9	ND	pg/L	U
3268-87-9	OCDD	1		0.757-1.024	2.02	47.2	ND	pg/L	U

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.43	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.43	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.43	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.43	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.43	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.43	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.43	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.43	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.000

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.59

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWVB1-041423

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-11	File ID:	23052217
Sampled:	04/14/23 09:12	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 23:36
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1060 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.752	0.655-0.886	1.09	95.1	24 - 169 %	
13C12-2,3,7,8-TCDD		0.805	0.655-0.886	1.79	112	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.532	1.318-1.783	3.84	97.2	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.503	1.318-1.783	4.26	103	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.620	1.318-1.783	2.20	95.8	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.511	0.434-0.587	2.68	89.2	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.567	0.434-0.587	2.26	89.3	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.552	0.434-0.587	2.77	92.6	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.516	0.434-0.587	3.36	103	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.267	1.054-1.426	3.90	100	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.230	1.054-1.426	3.35	98.0	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.444	0.374-0.506	3.58	90.7	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.411	0.374-0.506	4.17	91.4	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.048	0.893-1.208	2.52	82.6	23 - 140 %	
13C12-OCDD		0.954	0.757-1.024	4.85	85.9	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.71	97.2	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWVB1-041423-D

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-12 B	File ID:	23052218
Sampled:	04/14/23 09:22	Prepared:	04/20/23 08:15	Analyzed:	05/23/23 00:25
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1060 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.08	9.43	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.71	9.43	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.13	9.43	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.04	9.43	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.10	9.43	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.69	9.43	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.69	9.43	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.74	9.43	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.78	9.43	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.69	9.43	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.67	9.43	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	0.75	9.43	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.93	18.9	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.36	9.43	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.183	0.893-1.208	1.35	9.43	3.61	pg/L	J, B
39001-02-0	OCDF	1		0.757-1.024	2.37	18.9	ND	pg/L	U
3268-87-9	OCDD	1	0.850	0.757-1.024	2.46	47.2	9.88	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.43	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.43	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.43	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.43	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.43	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.43	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.43	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.43	4.63	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.039

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.43

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWVB1-041423-D

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-12	File ID:	23052218
Sampled:	04/14/23 09:22	Prepared:	04/20/23 08:15	Analyzed:	05/23/23 00:25
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1060 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.770	0.655-0.886	1.11	90.8	24 - 169 %	
13C12-2,3,7,8-TCDD		0.789	0.655-0.886	1.38	110	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.516	1.318-1.783	2.70	99.5	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.541	1.318-1.783	2.99	104	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.610	1.318-1.783	1.41	97.4	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.511	0.434-0.587	3.20	91.2	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.545	0.434-0.587	2.70	88.3	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.521	0.434-0.587	3.32	89.8	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.511	0.434-0.587	4.02	102	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.262	1.054-1.426	3.95	99.4	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.238	1.054-1.426	3.40	99.0	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.445	0.374-0.506	3.74	92.1	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.435	0.374-0.506	4.35	89.9	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.009	0.893-1.208	2.41	85.8	23 - 140 %	
13C12-OCDD		0.885	0.757-1.024	3.87	84.5	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.54	96.7	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWVB2-041423

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-13 B	File ID:	23052219
Sampled:	04/14/23 08:55	Prepared:	04/20/23 08:15	Analyzed:	05/23/23 01:14
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1060 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	0.97	9.43	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.67	9.43	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.14	9.43	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.01	9.43	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	1.13	9.43	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.64	9.43	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.69	9.43	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.69	9.43	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.73	9.43	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.98	9.43	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.94	9.43	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.05	9.43	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.94	18.9	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.37	9.43	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.478	0.893-1.208	1.25	9.43	1.93	pg/L	EMPC, J, B
39001-02-0	OCDF	1		0.757-1.024	2.52	18.9	ND	pg/L	U
3268-87-9	OCDD	1	0.979	0.757-1.024	1.97	47.2	8.10	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.43	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.43	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.43	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.43	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.43	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.43	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.43	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.43	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.022

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.44

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MWVB2-041423

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Ground Water	Laboratory ID:	23D0412-13	File ID:	23052219
Sampled:	04/14/23 08:55	Prepared:	04/20/23 08:15	Analyzed:	05/23/23 01:14
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1060 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.762	0.655-0.886	1.03	92.5	24 - 169 %	
13C12-2,3,7,8-TCDD		0.780	0.655-0.886	1.59	107	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.515	1.318-1.783	3.14	97.0	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.525	1.318-1.783	3.49	102	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.579	1.318-1.783	2.43	98.1	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.510	0.434-0.587	3.33	90.2	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.553	0.434-0.587	2.80	89.1	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.507	0.434-0.587	3.44	89.3	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.510	0.434-0.587	4.17	103	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.276	1.054-1.426	2.27	101	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.258	1.054-1.426	1.95	97.1	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.449	0.374-0.506	3.91	91.2	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.445	0.374-0.506	4.54	88.2	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.074	0.893-1.208	2.48	83.7	23 - 140 %	
13C12-OCDD		0.902	0.757-1.024	3.25	82.6	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.64	95.8	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.21
Batch:	BLD0507	Batch Matrix:	Water	Preparation:	EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MWCP5-041323	23D0412-06	23051509	04/20/23 12:45	
MWCP6-041323	23D0412-07	23051510	04/20/23 12:45	
Blank	BLD0507-BLK1	23051505	04/20/23 12:45	
LCS	BLD0507-BS1	23051506	04/20/23 12:45	
LCS Dup	BLD0507-BSD1	23051507	04/20/23 12:45	

Analytical Resources, LLC
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A or 1613B

Batch: BLD0507

Aqueous Samples

ARI Work Orders:	23D0359, 23D0412	
Method (circle one)	Solid Phase Extraction	Separatory Funnel
Extraction Method	Start Date/Time:	End Date/Time:
Soxhlet / SepF Shake out	4/24/23 1245	4/24/23 0545
Tumble	4/24/23 0610	4/24/23 1015

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Basic Silica		L0000710	TW	5/2/23
Na2SO4		1040375	M	4/25/23
H2SO4		L0041033	M	4/25/23
XAD-2		L040355b	M	4/24/23
Hexane		L040957	M	4/21/23
MeOH		L000411	AL	4/20/23
CH2Cl2		L000621	TW	5/2/23
~~Balance~~				
Acid Silica		L0004519	TW	5/2/23
Other (Toluene)		L040423	M	4/24/23
0% Silica		L040208S1	M	4/20/23
Activated Florisil		L0005456	TW	5/2/23
Nonane		H000038	TW	5/2/23
KI Strips		E041858	M	4/24/23
pH Paper		L000056	AL	4/24/23
Glasswool		J012850	TW	5/2/23

Lab Number & Container	Sample Name	Sample Vol (mL) (Target)/Actual	pH >9 Adjust 7-9	Res Cl Check	RotoVap 45 °C	Final Vol (uL)
23D0359-11 A	MW5-0423	(1,000.00) 960	7	P / F	1 (2)	20
23D0412-06 B	MWCP5-041323	(1,000.00) 1030	7	P / F	1 / 2	20
23D0412-07 B	MWCP6-041323	(1,000.00) 1020	7	P / F	1 / 2	20
BLD0507-BLK1	Blank	(1,000.00)	7	P / F	1 / 2	20
BLD0507-BS1	LCS	(1,000.00)	7	P / F	1 / 2	20
BLD0507-BSD1	LCS Dup	(1,000.00)	7	P / F	1 / 2	20
Prep Analyst / Date:	M 4/24/23					

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL	L040352G	2/4 ng/mL	4/5/24	M	M X2	4/24/23
OPR	1.0 mL	L040046	0.2/1.0/2.0 ng/mL	1/3/24	M	M X2	4/24/23
~~QCS Standard~~	~~1.0 mL~~		~~0.4/0.8/1.6 ng/mL~~				
Clean-up Standard	1.0 mL	L0003536	0.8 ng/mL	4/5/24	TW	[illegible]	5/2/23

Verify Client ID
Analyst / Date: M 4/24/23

Acid Clean [Y] N
Analyst / Date: M 4/25/23

Silica-Florisil Clean [Y] N
Analyst / Date: TW 5/2/23

Supervisor Review By — 5/3/23 Date

Printed: 4/20/2023 5:48:02AM

Analytical Resources, LLC
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A or 1613B

Batch: BLD0507

Aqueous Samples

ARI Work Orders:	23D0359, 23D0412	
Method (circle one)	Solid Phase Extraction	Separatory Funnel
Extraction Method	Start Date/Time:	End Date/Time:
Soxhlet SepF Shake out		
Tumble		

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Basic Silica				
Na2SO4				
H2SO4				
XAD-2				
Hexane				
MeOH				
CH2Cl2				
Toluene				
Acid Silica				
Other (Toluene)				
0% Silica				
Activated Florisil				
Nonane				
KI Strips				
pH Paper				
Glasswool				

Lab Number & Container	Sample Name	Sample Vol (mL) (Target)/Actual	pH >9 Adjust 7-9	Res Cl Check	RotoVap 45 °C	Final Vol (uL)
23D0359-11 A	MW5-0423	(1,000.00) ____		P / F	1 / 2	20 ____
23D0412-06 B	MWCP5-041323	(1,000.00) ____		P / F	1 / 2	20 ____
23D0412-07 B	MWCP6-041323	(1,000.00) ____		P / F	1 / 2	20 ____
BLD0507-BLK1	Blank	(1,000.00) ____		P / F	1 / 2	20 ____
BLD0507-BS1	LCS	(1,000.00) ____		P / F	1 / 2	20 ____
BLD0507-BSD1	LCS Dup	(1,000.00) ____		P / F	1 / 2	20 ____
Prep Analyst / Date:						

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL		2/4 ng/mL				
OPR	1.0 mL		0.2/1.0/2.0 ng/mL				
QCS Standard	1.0 mL		50/100/500 ng/mL				
Clean-up Standard	1.0 mL		0.8 ng/mL				

Verify Client ID

Analyst / Date:

Acid Clean [Y] N

Analyst / Date:

Silica-Florisil Clean [Y] N

Analyst / Date:

Supervisor Review By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: Dioxin Extraction Batch: BLD05Ø7

Total Solids Batch: N/A Work Order(s): 23D0359, 23D0412

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☑ No Anomalies	
☒ Turbid/Color= 23D0412 - Ø6B = Tan turbid, Ø7A & 23D0359-11 = Light tan turbid	M 4/20/23
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). BLDØ5Ø7-BS1 fell down funnel felt down while loading Sample onto the Thimble Lost a Log of the XAD2	M 4/20/23
23D0412-Ø6A: Due to cycle error, the Rb flask did not received any Extract Solvent, except the Soxlet body trap	M 4/21/23
☐ Share Samples Y / N all Solvent	
☐ ~~Multiple Jars Y / N~~ water trap vol: Blk1 = 12.4ml, BS1 = 7.8ml, BSD1 = 6.6ml	
☐ ~~Sample Pre-Screens~~ Indicate analyte activity= 23D0359-11A: 8.4ml, 23D0412-1B: 3.4ml, Ø7B: 6.4ml	M 4/21/23
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin Extraction Laboratory – Glassware

Batch ID: BLDΦ5Φ7 Work Order: 23DΦ559, 23DΦ412 Extraction Parameter: DIOVLN ARI Analyst NJ

ARI Sample ID	300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Turbo-Vap	Vortex Mixer	Heating Mantle
BLDΦ5Φ7 - BLK1	7Φ		65	~~18~~	L8	220	130	67				4	4	A1
BS1	85		61		22	200	57	68				4	4	A2
BSD1	83		23		33	19	5	72				4	4	A3
23DΦ359 - 11A	19		59		34	41	24	50				4	4	A5 ~~A4~~
23DΦ412 - Φ6B	16		49		57	21	65	4				4	4	A6 ~~A5~~
Φ7B	9		2		55	217	37	62				4	4	B1 ~~A6~~
												4	4	
												4	4	
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Analytical Resources, LLC
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Batch: BLD0508 Batch Matrix: Water
Preparation: EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MWCP1-041323	23D0412-01	23052207	04/20/23 08:15	
MWCP1-041323-D	23D0412-02	23052208	04/20/23 08:15	
MWCP2-041323	23D0412-03	23052209	04/20/23 08:15	
MWCP3-041323	23D0412-04	23052210	04/20/23 08:15	
MWCP4-041323	23D0412-05	23052211	04/20/23 08:15	
MWCP7-041323	23D0412-08	23052212	04/20/23 08:15	
MWVB3-041323	23D0412-09	23052213	04/20/23 08:15	
HC00-B312-041323	23D0412-10	23052216	04/20/23 08:15	
MWVB1-041423	23D0412-11	23052217	04/20/23 08:15	
MWVB1-041423-D	23D0412-12	23052218	04/20/23 08:15	
MWVB2-041423	23D0412-13	23052219	04/20/23 08:15	
Blank	BLD0508-BLK1	23052204	04/20/23 08:15	
LCS	BLD0508-BS1	23052205	04/20/23 08:15	
LCS Dup	BLD0508-BSD1	23052206	04/20/23 08:15	

Analytical Resources, LLC
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A or 1613B

Batch: BLD0508

Aqueous Samples

ARI Work Orders:	23D0412	
Method (circle one)	Solid Phase Extraction	**Separatory Funnel**
Extraction Method	Start Date/Time:	End Date/Time:
Soxhlet SepF Shake out	4/20/23 08:15	4/20/23 09:54
Tumble		

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Basic Silica		L000710	TW	4/28/23
Na2SO4		L003657	TW	4/26/23
~~H2SO4~~				
~~XAD-2~~				
Hexane		L003500	TW	4/24/23
~~MeOH~~				
CH2Cl2		L002621	TW	4/20/23
~~Balance~~				
Acid Silica		L004579	TW	4/28/23
~~Other ( )~~				
0% Silica		L002081	TW	4/28/23
Activated Florisil		K005956	TW	4/28/23
Nonane		Heptane	TW	4/28/23
KI Strips		E001358	TW	4/20/23
pH Paper		L000566	TW	4/20/23
Glasswool		J012850	TW	4/20/23 4/28/23

Lab Number & Container	Sample Name	Sample Vol (mL) (Target)/Actual	pH >9 Adjust 7-9	Res Cl Check	RotoVap 45 °C	Final Vol (uL)
23D0412-01 B	MWCP1-041323	(1,000.00) 1040	7	(P) / F	1 (2)	20
23D0412-02 B	MWCP1-041323-D	(1,000.00) 1060	7	(P) / F	(1) 2	20
23D0412-03 B	MWCP2-041323	(1,000.00) 1040	7	(P) / F	1 (2)	20
23D0412-04 B	MWCP3-041323	(1,000.00) 1020	7	(P) / F	(1) 2	20
23D0412-05 B	MWCP4-041323	(1,000.00) 1030	7	(P) / F	1 (2)	20
23D0412-08 B	MWCP7-041323	(1,000.00) 1000	7	(P) / F	(1) 2	20
23D0412-09 B	MWVB3-041323	(1,000.00) 1020	7	(P) / F	1 (2)	20
23D0412-10 B	HC00-B312-041323	(1,000.00) 1030	7	(P) / F	(1) 2	20
23D0412-11 B	MWVB1-041423	(1,000.00) 1060	7	(P) / F	1 (2)	20
23D0412-12 B	MWVB1-041423-D	(1,000.00) 1060	7	(P) / F	(1) 2	20
23D0412-13 B	MWVB2-041423	(1,000.00) 1060	7	(P) / F	1 (2)	20
BLD0508-BLK1	Blank	(1,000.00) 1000		P / F	(1) 2	20
BLD0508-BS1	LCS	(1,000.00) 1000		P / F	1 (2)	20
BLD0508-BSD1	LCS Dup	(1,000.00) 1000		P / F	(1) 2	20
Prep Analyst / Date:		TW 4/20/23			TW 4/24/23	

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL	L003529	2/4 ng/mL	5/4/24	TW	M	4/20/23
OPR	1.0 mL	L0400046	0.2/1.0/2.0 ng/mL	1/3/24	TW	M	4/20/23
~~QLS Standard~~	~~1.0 mL~~		~~0.1/0.05/0.1ng/mL ng/L~~				
Clean-up Standard	1.0 mL	L003530	0.8 ng/mL	4/5/24	TW	M	4/28/23

Verify Client ID

Analyst / Date: TW 4/20/23

Acid Clean Y **N**

Analyst / Date:

Silica-Florisil Clean **Y** N

Analyst / Date: TW 4/28/23

Supervisor Review By 5/2/23 Date

Printed: 4/19/2023 11:13:11AM

Analytical Resources, LLC
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A or 1613B

Batch: BLD0508

Aqueous Samples

ARI Work Orders:	23D0412	
Method (circle one)	Solid Phase Extraction	Separatory Funnel
Extraction Method	Start Date/Time:	End Date/Time:
Soxhlet SepF Shake out		
Tumble		

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Basic Silica				
Na2SO4				
[redacted]				
[redacted]				
Hexane				
[redacted]				
CH2Cl2				
Balance				
Acid Silica				
[redacted]				
0% Silica				
Activated Florisil				
Nonane				
KI Strips				
pH Paper				
Glasswool				

Lab Number & Container	Sample Name	Sample Vol (mL) (Target)/Actual	pH >9 Adjust 7-9	Res Cl Check	RotoVap 45 °C	Final Vol (uL)
23D0412-01 B	MWCP1-041323	(1,000.00)		P/F	1/2	20
23D0412-02 B	MWCP1-041323-D	(1,000.00)		P/F	1/2	20
23D0412-03 B	MWCP2-041323	(1,000.00)		P/F	1/2	20
23D0412-04 B	MWCP3-041323	(1,000.00)		P/F	1/2	20
23D0412-05 B	MWCP4-041323	(1,000.00)		P/F	1/2	20
23D0412-08 B	MWCP7-041323	(1,000.00)		P/F	1/2	20
23D0412-09 B	MWVB3-041323	(1,000.00)		P/F	1/2	20
23D0412-10 B	HC00-B312-041323	(1,000.00)		P/F	1/2	20
23D0412-11 B	MWVB1-041423	(1,000.00)		P/F	1/2	20
23D0412-12 B	MWVB1-041423-D	(1,000.00)		P/F	1/2	20
23D0412-13 B	MWVB2-041423	(1,000.00)		P/F	1/2	20
BLD0508-BLK1	Blank	(1,000.00)		P/F	1/2	20
BLD0508-BS1	LCS	(1,000.00)		P/F	1/2	20
BLD0508-BSD1	LCS Dup	(1,000.00)		P/F	1/2	20
Prep Analyst / Date:						

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL		2/4 ng/mL				
OPR	1.0 mL		0.2/1.0/2.0 ng/mL				
[redacted]	[redacted]		[redacted]				
Clean-up Standard	1.0 mL		0.8 ng/mL				

Verify Client ID
Analyst / Date:

Acid Clean Y [N]
Analyst / Date:

Silica-Florisil Clean [Y] N
Analyst / Date:

Supervisor Review By Date

Printed: 4/19/2023 11:13:11AM

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: Dioxin Extraction Batch BLD0508

Total Solids Batch: N/A Work Order(s): 23D0412

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☑ Turbid/Color= 412-13 = light yellow	TW 4/20/23
☑ Particulates(%)=(Note: >5%=Notify Supervisor/Lead) <1% Fine black particulate = 01,03,04,05	TW 4/20/23
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin Extraction Laboratory – Glassware

Batch ID: BLD0508 Work Order: 23D0412 Extraction Parameter: Dioxin ARI Analyst TW

ARI Sample ID	300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Turbo-Vap	Vortex Mixer	Heating Mantle
BLD0508 -BLK1	W-16				W-28	W-31	W-19	W-7	38	4		4	4	
-BS1	W-6				W-35	W-21	W-7	W-39	26	3		4	4	
-BSD1	W-3				W-50	W-13	W-24	W-13	7	22		4	4	
23D0412 -01	W-45				W-30	W-36	W-5	W-16	18	18		4	4	
-02	W-12				W-49	W-22	W-13	W-31	~~88~~	5		4	4	
-03	W-10				W-27	W-18	W-4	W-47	55	1		4	4	
-04	W-29				W-31	W-37	W-1	W-2	48	24		4	4	
-05	W-1				W-51	W-3	W-27	W-18	50	55		4	4	
-08	W-2				W-46	W-2	W-2	W-19	35	23		4	4	
-09	W-20				W-33	W-28	W-28	W-40	41	29		4	4	
-10	W-13				W-26	W-23	W-21	W-8	16	30		4	4	
-11	W-7				W-12	W-32	W-17	W-45	2	17		4	4	
-12	W-24				W-32	W-35	W-25	W-7	15	13		4	4	
-13	W-18				W-39	W-40	W-6	W-46	40	15		4	4	
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Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Cleanup Batch:	CLD0200	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MWVB1-041423	23D0412-11	23052217	04/28/2023	
MWCP1-041323-D	23D0412-02	23052208	04/28/2023	
MWCP2-041323	23D0412-03	23052209	04/28/2023	
MWCP3-041323	23D0412-04	23052210	04/28/2023	
MWCP4-041323	23D0412-05	23052211	04/28/2023	
MWCP7-041323	23D0412-08	23052212	04/28/2023	
MWCP1-041323	23D0412-01	23052207	04/28/2023	
MWVB1-041423-D	23D0412-12	23052218	04/28/2023	
MWVB2-041423	23D0412-13	23052219	04/28/2023	
LCS Dup	BLD0508-BSD1	23052206	04/28/2023	
HC00-B312-041323	23D0412-10	23052216	04/28/2023	
LCS	BLD0508-BS1	23052205	04/28/2023	
Blank	BLD0508-BLK1	23052204	04/28/2023	
MWVB3-041323	23D0412-09	23052213	04/28/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLD0200

Matrix: Water **Cleanup using: HRGCMS - EPA 3630C Silica Gel Cleanup - uL** **Printed: 4/28/2023 2:17:42PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0412-01	B	MWCP1-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-02	B	MWCP1-041323-D	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-03	B	MWCP2-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-04	B	MWCP3-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-05	B	MWCP4-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-08	B	MWCP7-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-09	B	MWVB3-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-10	B	HC00-B312-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-11	B	MWVB1-041423	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-12	B	MWVB1-041423-D	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-13	B	MWVB2-041423	B 01	20	20	1613B Dioxin	4/28/2023	TW	
BLD0508-BLK1	-	Blank	-	20	20	-	4/28/2023	TW	
BLD0508-BS1	-	LCS	-	20	20	-	4/28/2023	TW	
BLD0508-BSD1	-	LCS Dup	-	20	20	-	4/28/2023	TW	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Cleanup Batch:	CLD0201	Cleanup Type:	Florisil
Cleanup Method:	EPA 3620B Florisil Cleanup (uL)	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MWVB2-041423	23D0412-13	23052219	04/28/2023	
Blank	BLD0508-BLK1	23052204	04/28/2023	
MWVB1-041423-D	23D0412-12	23052218	04/28/2023	
LCS Dup	BLD0508-BSD1	23052206	04/28/2023	
LCS	BLD0508-BS1	23052205	04/28/2023	
MWCP1-041323-D	23D0412-02	23052208	04/28/2023	
MWVB3-041323	23D0412-09	23052213	04/28/2023	
MWCP1-041323	23D0412-01	23052207	04/28/2023	
HC00-B312-041323	23D0412-10	23052216	04/28/2023	
MWCP2-041323	23D0412-03	23052209	04/28/2023	
MWCP3-041323	23D0412-04	23052210	04/28/2023	
MWCP4-041323	23D0412-05	23052211	04/28/2023	
MWCP7-041323	23D0412-08	23052212	04/28/2023	
MWVB1-041423	23D0412-11	23052217	04/28/2023	

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CLEANUP BENCH SHEET

CLD0201

Matrix: Water **Cleanup using: HRGCMS - EPA 3620B Florisil Cleanup (uL)** **Check Standard: CKK0015-FLO1** **Printed: 4/28/2023 2:18:08PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0412-01	B	MWCP1-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-02	B	MWCP1-041323-D	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-03	B	MWCP2-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-04	B	MWCP3-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-05	B	MWCP4-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-08	B	MWCP7-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-09	B	MWVB3-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-10	B	HC00-B312-041323	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-11	B	MWVB1-041423	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-12	B	MWVB1-041423-D	B 01	20	20	1613B Dioxin	4/28/2023	TW	
23D0412-13	B	MWVB2-041423	B 01	20	20	1613B Dioxin	4/28/2023	TW	
BLD0508-BLK1	-	Blank	-	20	20	-	4/28/2023	TW	
BLD0508-BS1	-	LCS	-	20	20	-	4/28/2023	TW	
BLD0508-BSD1	-	LCS Dup	-	20	20	-	4/28/2023	TW	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Cleanup Batch:	CLE0024	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS Dup	BLD0507-BSD1	23051507	04/25/2023	
MWCP6-041323	23D0412-07	23051510	04/25/2023	
LCS	BLD0507-BS1	23051506	04/25/2023	
Blank	BLD0507-BLK1	23051505	04/25/2023	
MWCP5-041323	23D0412-06	23051509	04/25/2023	

Analytical Resources, LLC
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CLEANUP BENCH SHEET

CLE0024

Matrix: Water **Cleanup using: HRGCMS - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 5/2/2023 2:43:10PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0359-11	A	MW5-0423	A 01	20	20	1613B Dioxin	4/25/2023	NPL	
23D0412-06	B	MWCP5-041323	B 01	20	20	1613B Dioxin	4/25/2023	NPL	
23D0412-07	B	MWCP6-041323	B 01	20	20	1613B Dioxin	4/25/2023	NPL	
BLD0507-BLK1	-	Blank	-	20	20	-	4/25/2023	NPL	
BLD0507-BS1	-	LCS	-	20	20	-	4/25/2023	NPL	
BLD0507-BSD1	-	LCS Dup	-	20	20	-	4/25/2023	NPL	

Analytical Resources, LLC
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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Cleanup Batch:	CLE0025	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS Dup	BLD0507-BSD1	23051507	05/02/2023	
LCS	BLD0507-BS1	23051506	05/02/2023	
Blank	BLD0507-BLK1	23051505	05/02/2023	
MWCP6-041323	23D0412-07	23051510	05/02/2023	
MWCP5-041323	23D0412-06	23051509	05/02/2023	

Analytical Resources, LLC
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CLEANUP BENCH SHEET

CLE0025

Matrix: Water **Cleanup using: HRGCMS - EPA 3630C Silica Gel Cleanup - uL** **Printed: 5/2/2023 2:44:00PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0359-11	A	MW5-0423	A 01	20	20	1613B Dioxin	5/2/2023	TW	
23D0412-06	B	MWCP5-041323	B 01	20	20	1613B Dioxin	5/2/2023	TW	
23D0412-07	B	MWCP6-041323	B 01	20	20	1613B Dioxin	5/2/2023	TW	
BLD0507-BLK1	-	Blank	-	20	20	-	5/2/2023	TW	
BLD0507-BS1	-	LCS	-	20	20	-	5/2/2023	TW	
BLD0507-BSD1	-	LCS Dup	-	20	20	-	5/2/2023	TW	

Analytical Resources, LLC
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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Cleanup Batch:	CLE0026	Cleanup Type:	Florisil
Cleanup Method:	EPA 3620B Florisil Cleanup (uL)	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS	BLD0507-BS1	23051506	05/02/2023	
Blank	BLD0507-BLK1	23051505	05/02/2023	
MWCP5-041323	23D0412-06	23051509	05/02/2023	
MWCP6-041323	23D0412-07	23051510	05/02/2023	
LCS Dup	BLD0507-BSD1	23051507	05/02/2023	

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CLEANUP BENCH SHEET

CLE0026

Matrix: Water **Cleanup using: HRGCMS - EPA 3620B Florisil Cleanup (uL)** **Check Standard: CKK0015-FLO1** **Printed: 5/2/2023 2:44:34PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0359-11	A	MW5-0423	A 01	20	20	1613B Dioxin	5/2/2023	TW	
23D0412-06	B	MWCP5-041323	B 01	20	20	1613B Dioxin	5/2/2023	TW	
23D0412-07	B	MWCP6-041323	B 01	20	20	1613B Dioxin	5/2/2023	TW	
BLD0507-BLK1	-	Blank	-	20	20	-	5/2/2023	TW	
BLD0507-BS1	-	LCS	-	20	20	-	5/2/2023	TW	
BLD0507-BSD1	-	LCS Dup	-	20	20	-	5/2/2023	TW	

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Form 1
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Water	Laboratory ID:	BLD0507-BLK1	File ID:	23051505
Sampled:	N/A	Prepared:	04/20/23 12:45	Analyzed:	05/15/23 14:50
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0240	Calibration:	GC00015
Batch:	BLD0507	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.000	0.655-0.886	1.31	10.0	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	1.42	10.0	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.72	10.0	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.65	10.0	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.77	10.0	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.44	10.0	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.43	10.0	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.44	10.0	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	0.59	10.0	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.55	10.0	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.53	10.0	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.59	10.0	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.164	0.893-1.208	0.51	20.0	0.981	pg/L	J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.72	10.0	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.402	0.893-1.208	0.98	10.0	2.65	pg/L	EMPC, J
39001-02-0	OCDF	1	1.253	0.757-1.024	1.35	20.0	1.84	pg/L	EMPC, J
3268-87-9	OCDD	1	0.859	0.757-1.024	1.60	50.0	24.6	pg/L	J

Homologue Groups

55722-27-5	Total TCDF	1	0.000			10.0	ND	pg/L
41903-57-5	Total TCDD	1	0.000			10.0	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			10.0	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			10.0	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			10.0	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			10.0	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			10.0	1.95	pg/L
37871-00-4	Total HpCDD	1	0.000			10.0	1.83	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.044

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.50

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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Form 2
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Water	Laboratory ID:	BLD0507-BLK1	File ID:	23051505
Sampled:	N/A	Prepared:	04/20/23 12:45	Analyzed:	05/15/23 14:50
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0240	Calibration:	GC00015
Batch:	BLD0507	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.763	0.655-0.886	0.00	52.4	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.762	0.655-0.886	0.00	63.7	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.517	1.318-1.783	0.00	84.2	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.520	1.318-1.783	0.00	87.4	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.594	1.318-1.783	0.00	96.8	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.501	0.434-0.587	0.00	77.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.520	0.434-0.587	0.00	77.4	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF	1	0.507	0.434-0.587	0.00	82.1	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.574	0.434-0.587	0.00	79.9	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.269	1.054-1.426	0.00	88.7	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD	1	1.262	1.054-1.426	0.00	85.4	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF	1	0.439	0.374-0.506	0.00	85.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF	1	0.446	0.374-0.506	0.00	86.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.136	0.893-1.208	0.00	88.7	23 - 140 %	
13C12-OCDD	1	0.907	0.757-1.024	0.00	93.6	17 - 157 %	
37Cl4-2,3,7,8-TCDD	1	328.000		0.00	64.8	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

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Form 1
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Water	Laboratory ID:	BLD0508-BLK1	File ID:	23052204
Sampled:	N/A	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 12:50
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.000	0.655-0.886	1.28	10.0	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.81	10.0	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	1.03	10.0	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.94	10.0	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	1.06	10.0	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.72	10.0	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.69	10.0	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.76	10.0	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	0.88	10.0	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.91	10.0	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.90	10.0	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.99	10.0	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.000	0.893-1.208	1.23	20.0	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	1.71	10.0	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.803	0.893-1.208	1.43	10.0	3.55	pg/L	EMPC, J
39001-02-0	OCDF	1	0.000	0.757-1.024	2.75	20.0	ND	pg/L	U
3268-87-9	OCDD	1	0.963	0.757-1.024	2.07	50.0	22.9	pg/L	J

Homologue Groups

55722-27-5	Total TCDF	1	0.000			10.0	ND	pg/L
41903-57-5	Total TCDD	1	0.000			10.0	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			10.0	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			10.0	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			10.0	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			10.0	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			10.0	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			10.0	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.042
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.50

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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Form 2
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23D0412
Client:	Floyd - Snider			Project:	Lora Lake 2021-2023 sec II. 5.3.2
Matrix:	Water	Laboratory ID:	BLD0508-BLK1	File ID:	23052204
Sampled:	N/A	Prepared:	04/20/23 08:15	Analyzed:	05/22/23 12:50
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SLE0354	Calibration:	GC00015
Batch:	BLD0508	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.776	0.655-0.886	0.00	98.7	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.778	0.655-0.886	0.00	114	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.525	1.318-1.783	0.00	103	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.527	1.318-1.783	0.00	107	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.601	1.318-1.783	0.00	110	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.504	0.434-0.587	0.00	89.4	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.504	0.434-0.587	0.00	90.3	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF	1	0.512	0.434-0.587	0.00	87.6	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.512	0.434-0.587	0.00	92.7	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.247	1.054-1.426	0.00	103	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD	1	1.189	1.054-1.426	0.00	101	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF	1	0.463	0.374-0.506	0.00	91.7	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF	1	0.453	0.374-0.506	0.00	92.6	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.067	0.893-1.208	0.00	85.8	23 - 140 %	
13C12-OCDD	1	0.893	0.757-1.024	0.00	91.4	17 - 157 %	
37Cl4-2,3,7,8-TCDD	1	328.000		0.00	98.1	35 - 197 %	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

LCS RECOVERY
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Matrix:	Water	Analyzed:	05/15/23 15:38
Batch:	BLD0507	Laboratory ID:	BLD0507-BS1
Preparation:	EPA 1613	Sequence Name:	LCS
Initial/Final:	1000 mL / 20 uL		

COMPOUND	SPIKE ADDED (pg/L)	LCS CONCENTRATION (pg/L)	Q	LCS % REC. #	QC LIMITS REC.
2,3,7,8-TCDF	200	227		113	75 - 158
2,3,7,8-TCDD	200	206		103	67 - 158
1,2,3,7,8-PeCDF	1000	1200		120	80 - 134
2,3,4,7,8-PeCDF	1000	1150		115	68 - 160
1,2,3,7,8-PeCDD	1000	1030		103	70 - 142
1,2,3,4,7,8-HxCDF	1000	1050		105	72 - 134
1,2,3,6,7,8-HxCDF	1000	1060		106	84 - 130
2,3,4,6,7,8-HxCDF	1000	1060		106	70 - 156
1,2,3,7,8,9-HxCDF	1000	1110		111	78 - 130
1,2,3,4,7,8-HxCDD	1000	1020		102	70 - 164
1,2,3,6,7,8-HxCDD	1000	1060		106	76 - 134
1,2,3,7,8,9-HxCDD	1000	1110		111	64 - 162
1,2,3,4,6,7,8-HpCDF	1000	1100	B	110	82 - 122
1,2,3,4,7,8,9-HpCDF	1000	1130		113	78 - 138
1,2,3,4,6,7,8-HpCDD	1000	1090	B	109	70 - 140
OCDF	2000	2230	B	111	63 - 170
OCDD	2000	2150	B	108	78 - 144

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (pg/L)	LCSD CONCENTRATION (pg/L)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
2,3,7,8-TCDF	200	219		110	3.17	25	75 - 158
2,3,7,8-TCDD	200	207		104	0.674	25	67 - 158
1,2,3,7,8-PeCDF	1000	1180		118	1.25	25	80 - 134
2,3,4,7,8-PeCDF	1000	1140		114	1.26	25	68 - 160
1,2,3,7,8-PeCDD	1000	1010		101	1.84	25	70 - 142
1,2,3,4,7,8-HxCDF	1000	1130		113	6.80	25	72 - 134
1,2,3,6,7,8-HxCDF	1000	1010		101	4.35	25	84 - 130
2,3,4,6,7,8-HxCDF	1000	1060		106	0.318	25	70 - 156
1,2,3,7,8,9-HxCDF	1000	1120		112	0.746	25	78 - 130
1,2,3,4,7,8-HxCDD	1000	998		99.8	2.05	25	70 - 164

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

LCS DUPLICATE RECOVERY/RPD
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Matrix:	Water	Analyzed:	05/15/23 16:28
Batch:	BLD0507	Laboratory ID:	BLD0507-BSD1
Preparation:	EPA 1613	Sequence Name:	LCS Dup
Initial/Final:	1000 mL / 20 uL		

COMPOUND	SPIKE ADDED (pg/L)	LCSD CONCENTRATION (pg/L)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
1,2,3,6,7,8-HxCDD	1000	1020		102	4.26	25	76 - 134
1,2,3,7,8,9-HxCDD	1000	1100		110	0.528	25	64 - 162
1,2,3,4,6,7,8-HpCDF	1000	1090	B	109	0.872	25	82 - 122
1,2,3,4,7,8,9-HpCDF	1000	1120		112	0.878	25	78 - 138
1,2,3,4,6,7,8-HpCDD	1000	1040	B	104	4.06	25	70 - 140
OCDF	2000	2260	B	113	1.36	25	63 - 170
OCDD	2000	2100	B	105	2.35	25	78 - 144

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

LCS RECOVERY
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Matrix:	Water	Analyzed:	05/22/23 13:40
Batch:	BLD0508	Laboratory ID:	BLD0508-BS1
Preparation:	EPA 1613	Sequence Name:	LCS
Initial/Final:	1000 mL / 20 uL		

COMPOUND	SPIKE ADDED (pg/L)	LCS CONCENTRATION (pg/L)	Q	LCS % REC. #	QC LIMITS REC.
2,3,7,8-TCDF	200	221		110	75 - 158
2,3,7,8-TCDD	200	200		100	67 - 158
1,2,3,7,8-PeCDF	1000	1180		118	80 - 134
2,3,4,7,8-PeCDF	1000	1140		114	68 - 160
1,2,3,7,8-PeCDD	1000	1070		107	70 - 142
1,2,3,4,7,8-HxCDF	1000	1030		103	72 - 134
1,2,3,6,7,8-HxCDF	1000	1080		108	84 - 130
2,3,4,6,7,8-HxCDF	1000	1120		112	70 - 156
1,2,3,7,8,9-HxCDF	1000	1060		106	78 - 130
1,2,3,4,7,8-HxCDD	1000	997		99.7	70 - 164
1,2,3,6,7,8-HxCDD	1000	969		96.9	76 - 134
1,2,3,7,8,9-HxCDD	1000	1050		105	64 - 162
1,2,3,4,6,7,8-HpCDF	1000	1080		108	82 - 122
1,2,3,4,7,8,9-HpCDF	1000	1150		115	78 - 138
1,2,3,4,6,7,8-HpCDD	1000	1070	B	107	70 - 140
OCDF	2000	2290		115	63 - 170
OCDD	2000	2190	B	110	78 - 144

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (pg/L)	LCSD CONCENTRATION (pg/L)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
2,3,7,8-TCDF	200	210		105	4.72	25	75 - 158
2,3,7,8-TCDD	200	192		96.2	3.88	25	67 - 158
1,2,3,7,8-PeCDF	1000	1200		120	1.49	25	80 - 134
2,3,4,7,8-PeCDF	1000	1130		113	0.465	25	68 - 160
1,2,3,7,8-PeCDD	1000	1100		110	2.08	25	70 - 142
1,2,3,4,7,8-HxCDF	1000	1040		104	0.864	25	72 - 134
1,2,3,6,7,8-HxCDF	1000	1120		112	3.45	25	84 - 130
2,3,4,6,7,8-HxCDF	1000	1100		110	2.32	25	70 - 156
1,2,3,7,8,9-HxCDF	1000	1100		110	4.05	25	78 - 130
1,2,3,4,7,8-HxCDD	1000	999		99.9	0.198	25	70 - 164

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

LCS DUPLICATE RECOVERY/RPD
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Matrix:	Water	Analyzed:	05/22/23 14:32
Batch:	BLD0508	Laboratory ID:	BLD0508-BSD1
Preparation:	EPA 1613	Sequence Name:	LCS Dup
Initial/Final:	1000 mL / 20 uL		

COMPOUND	SPIKE ADDED (pg/L)	LCSD CONCENTRATION (pg/L)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,2,3,6,7,8-HxCDD	1000	1010		101	4.53	25	76 - 134
1,2,3,7,8,9-HxCDD	1000	1040		104	0.744	25	64 - 162
1,2,3,4,6,7,8-HpCDF	1000	1060		106	1.55	25	82 - 122
1,2,3,4,7,8,9-HpCDF	1000	1160		116	0.603	25	78 - 138
1,2,3,4,6,7,8-HpCDD	1000	1080	B	108	0.869	25	70 - 140
OCDF	2000	2170		109	5.32	25	63 - 170
OCDD	2000	2180	B	109	0.685	25	78 - 144

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
2,3,7,8-TCDF			0.5	0.6926363	2	0.6813224	10	0.7107923	40	0.719723	200	0.7031621
2,3,7,8-TCDD			0.5	1.116738	2	1.187915	10	1.134128	40	1.147736	200	1.156792
1,2,3,7,8-PeCDF	0.5	0.7064839	2.5	0.5889757	10	0.710829	50	0.6668491	200	0.6891968	1000	0.7130453
2,3,4,7,8-PeCDF	0.5	0.7979673	2.5	0.750268	10	0.8092124	50	0.7777683	200	0.7907891	1000	0.7910175
1,2,3,7,8-PeCDD	0.5	1.103364	2.5	0.959607	10	1.01992	50	1.019473	200	1.01999	1000	1.008719
1,2,3,4,7,8-HxCDF	0.5	1.217557	2.5	1.181192	10	1.149885	50	1.142227	200	1.15269	1000	1.152678
1,2,3,6,7,8-HxCDF	0.5	1.080855	2.5	1.053928	10	1.175308	50	1.102076	200	1.035098	1000	1.097184
2,3,4,6,7,8-HxCDF	0.5	1.045907	2.5	1.140857	10	1.199347	50	1.11691	200	1.197861	1000	1.13731
1,2,3,7,8,9-HxCDF	0.5	1.190403	2.5	1.119796	10	1.130872	50	1.147742	200	1.139146	1000	1.094601
1,2,3,4,7,8-HxCDD	0.5	1.079554	2.5	0.961704	10	0.973768	50	0.967789	200	0.9862736	1000	1.004325
1,2,3,6,7,8-HxCDD	0.5	0.9586431	2.5	0.9983677	10	0.9838912	50	1.030566	200	1.022077	1000	1.012084
1,2,3,7,8,9-HxCDD	0.5	0.930997	2.5	0.8854269	10	0.8092562	50	0.9267543	200	0.9251392	1000	0.9651099
1,2,3,4,6,7,8-HpCDF	0.5	0.934103	2.5	1.075239	10	1.011687	50	0.9661089	200	1.026311	1000	1.004508
1,2,3,4,7,8,9-HpCDF	0.5	0.8861422	2.5	0.8930411	10	1.006144	50	0.9387033	200	0.9934576	1000	1.001203
1,2,3,4,6,7,8-HpCDD	0.5	1.103772	2.5	0.971421	10	1.040117	50	1.038088	200	1.030577	1000	1.050103
OCDF	1	0.8118871	5	0.7091624	20	0.7657645	100	0.7266152	400	0.8162858	2000	0.8371317
OCDD			5	1.012935	20	0.8906655	100	0.878436	400	0.9061913	2000	0.9115405
13C12-2,3,7,8-TCDF	100	1.631571	100	1.588495	100	1.670669	100	1.492829	100	1.645068	100	1.692541
13C12-2,3,7,8-TCDD	100	1.103543	100	1.165686	100	1.103763	100	1.147762	100	1.181831	100	1.211872
13C12-1,2,3,7,8-PeCDF	100	1.373516	100	0.8861478	100	1.254697	100	1.157546	100	1.425701	100	1.345107
13C12-2,3,4,7,8-PeCDF	100	1.219579	100	0.8983995	100	1.113808	100	0.8611233	100	1.32733	100	1.286474
13C12-1,2,3,7,8-PeCDD	100	0.9177021	100	0.7002528	100	0.8365419	100	0.5962156	100	0.9821822	100	0.939983
13C12-1,2,3,4,7,8-HxCDF	100	1.152029	100	1.095885	100	1.513935	100	1.121285	100	1.094572	100	1.032122
13C12-1,2,3,6,7,8-HxCDF	100	1.353853	100	1.348693	100	1.689158	100	1.367383	100	1.37092	100	1.188788
13C12-2,3,4,6,7,8-HxCDF	100	1.092029	100	1.127896	100	1.240354	100	1.126074	100	1.087409	100	1.101774
13C12-1,2,3,7,8,9-HxCDF	100	0.8958406	100	0.9493947	100	0.9152119	100	0.9630403	100	0.8996667	100	0.9673701
13C12-1,2,3,4,7,8-HxCDD	100	0.9718531	100	0.9656819	100	1.113686	100	0.9864835	100	0.9766715	100	0.95586
13C12-1,2,3,6,7,8-HxCDD	100	1.184228	100	1.157253	100	1.278683	100	1.163318	100	1.111106	100	1.045546

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
13C12-1,2,3,4,6,7,8-HpCDF	100	0.7396157	100	0.9023055	100	1.063192	100	0.9589237	100	0.7622694	100	0.9449039
13C12-1,2,3,4,7,8,9-HpCDF	100	0.6488087	100	0.8119515	100	0.8176949	100	0.8667001	100	0.665459	100	0.8078955
13C12-1,2,3,4,6,7,8-HpCDD	100	0.724191	100	0.8737196	100	0.9555336	100	0.9094052	100	0.7229358	100	0.8549505
13C12-OCDD	200	0.701507	200	0.6312376	200	0.823691	200	0.8980531	200	0.7066522	200	0.8436876
37Cl4-2,3,7,8-TCDD	0.1	1.576039	0.5	1.320077	2	1.177166	10	1.132717	40	1.2366	200	1.284223
13C12-1,2,3,4-TCDD	100	1	100	1	100	1	100	1	100	1	100	1
13C12-1,2,3,7,8,9-HxCDD	100	1	100	1	100	1	100	1	100	1	100	1

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
2,3,7,8-TCDF	0.7015272	2.1			RSD ()	
2,3,7,8-TCDD	1.148662	2.3			RSD ()	
1,2,3,7,8-PeCDF	0.67923	7.0			RSD ()	
2,3,4,7,8-PeCDF	0.7861704	2.6			RSD ()	
1,2,3,7,8-PeCDD	1.021845	4.5			RSD ()	
1,2,3,4,7,8-HxCDF	1.166038	2.4			RSD ()	
1,2,3,6,7,8-HxCDF	1.090741	4.5			RSD ()	
2,3,4,6,7,8-HxCDF	1.139699	5.0			RSD ()	
1,2,3,7,8,9-HxCDF	1.137093	2.8			RSD ()	
1,2,3,4,7,8-HxCDD	0.9955689	4.4			RSD ()	
1,2,3,6,7,8-HxCDD	1.000938	2.7			RSD ()	
1,2,3,7,8,9-HxCDD	0.9071139	6.0			RSD ()	
1,2,3,4,6,7,8-HpCDF	1.002993	4.9			RSD ()	
1,2,3,4,7,8,9-HpCDF	0.9531152	5.8			RSD ()	
1,2,3,4,6,7,8-HpCDD	1.039013	4.1			RSD ()	
OCDF	0.7778078	6.7			RSD ()	
OCDD	0.9199537	5.8			RSD ()	
13C12-2,3,7,8-TCDF	1.620196	4.4			RSD ()	
13C12-2,3,7,8-TCDD	1.152409	3.8			RSD ()	
13C12-1,2,3,7,8-PeCDF	1.240452	15.9			RSD ()	
13C12-2,3,4,7,8-PeCDF	1.117786	17.7			RSD ()	
13C12-1,2,3,7,8-PeCDD	0.8288129	18.3			RSD ()	
13C12-1,2,3,4,7,8-HxCDF	1.168305	14.9			RSD ()	
13C12-1,2,3,6,7,8-HxCDF	1.386466	11.8			RSD ()	
13C12-2,3,4,6,7,8-HxCDF	1.129256	5.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDF	0.9317541	3.4			RSD ()	
13C12-1,2,3,4,7,8-HxCDD	0.9950393	5.9			RSD ()	
13C12-1,2,3,6,7,8-HxCDD	1.156689	6.7			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDF	0.8952017	13.8			RSD ()	
13C12-1,2,3,4,7,8,9-HpCDF	0.7697516	11.7			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDD	0.8401226	11.5			RSD ()	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
13C12-OCDD	0.7674714	13.4			RSD ()	
37Cl4-2,3,7,8-TCDD	1.287804	12.2			RSD ()	
13C12-1,2,3,4-TCDD	1	0.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDD	1	0.0			RSD ()	

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 3/6/2023 2:56:51PM

ANALYSIS SEQUENCE

SLC0045

Instrument: AUTOSPEC01 HRGCMS Column ID: K2310
Calibration ID: GC00015 Tune File: FEB0923_1-5
EM Voltage: 350 Resolution check times : 9:51, 18:18

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0045-ICV1	CS3W1	QC		1	K009821		03/03/2023 09:51	23030302	PK	
SLC0045-RES1	ISCW1	QC		2	L002084		03/03/2023 10:39	23030303	PK	
SLC0045-CAL1	CSLCW	QC		3	I005460		03/03/2023 11:28	23030304	PK	
SLC0045-CAL2	CS1CW	QC		4	I005456		03/03/2023 12:23	23030305	PK	
SLC0045-CAL3	CS2CW	QC		5	I005457		03/03/2023 13:16	23030306	PK	
SLC0045-CAL4	CS3CW	QC		6	K009821		03/03/2023 14:06	23030307	PK	
SLC0045-CAL5	CS4CW	QC		7	I005458		03/03/2023 14:59	23030308	PK	
SLC0045-CAL6	CS5CW	QC		8	I005459		03/03/2023 15:47	23030309	PK	
SLC0045-SCV1	ICVCW	QC		9	H008219		03/03/2023 16:36	23030310	PK	
SLC0045-CCV1	CS3V4	QC		10	K009821		03/03/2023 17:25	23030311	PK	
SLC0045-RES2	ISCV4	QC		11	L002084		03/03/2023 18:18	23030312	PK	

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
Client: Floyd - Snider
Calibration: GC00015
Sequence: SLC0045

SDG: 23D0412
Project: Lora Lake 2021-2023 sec II. 5.3.21
Laboratory ID: SLC0045-SCV1
Sequence Name: ICVCW
Standard ID: H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
2,3,7,8-TCDF	10.000	9.84	-1.6	
2,3,7,8-TCDD	10.000	9.81	-1.9	
1,2,3,7,8-PeCDF	50.000	51.4	2.8	
2,3,4,7,8-PeCDF	50.000	49.0	-2.0	
1,2,3,7,8-PeCDD	50.000	48.5	-2.9	
1,2,3,4,7,8-HxCDF	50.000	48.2	-3.5	
1,2,3,6,7,8-HxCDF	50.000	48.0	-4.0	
2,3,4,6,7,8-HxCDF	50.000	50.2	0.4	
1,2,3,7,8,9-HxCDF	50.000	49.1	-1.8	
1,2,3,4,7,8-HxCDD	50.000	50.8	1.6	
1,2,3,6,7,8-HxCDD	50.000	50.2	0.3	
1,2,3,7,8,9-HxCDD	50.000	51.6	3.2	
1,2,3,4,6,7,8-HpCDF	50.000	51.8	3.7	
1,2,3,4,7,8,9-HpCDF	50.000	48.5	-3.1	
1,2,3,4,6,7,8-HpCDD	50.000	49.2	-1.6	
OCDF	100.00	104	3.5	
OCDD	100.00	99.4	-0.6	
13C12-2,3,7,8-TCDF	100.00	96.9	-3.1	
13C12-2,3,7,8-TCDD	100.00	96.6	-3.4	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	-26.8	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	-24.1	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	-23.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	-7.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	-2.0	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	-6.6	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	-2.1	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	-4.1	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	2.1	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	4.0	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	2.5	
13C12-OCDD	200.00	162	-19.2	
37Cl4-2,3,7,8-TCDD	10.000	8.71	-12.9	

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory:	Analytical Resources, LLC	**SDG:**	23D0412
Client:	Floyd - Snider	**Project:**	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GC00015	**Laboratory ID:**	SLC0045-SCV1
Sequence:	SLC0045	**Sequence Name:**	ICVCW
		Standard ID:	H008219

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GC00015
Laboratory ID: SLC0045-SCV1
Sequence: SLC0045
Standard ID: H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
OCDF	100.00	104	3.5	
OCDD	100.00	99.4	-0.6	
13C12-2,3,7,8-TCDF	100.00	96.9	-3.1	
13C12-2,3,7,8-TCDD	100.00	96.6	-3.4	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	-26.8	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	-24.1	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	-23.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	-7.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	-2.0	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	-6.6	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	-2.1	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	-4.1	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	2.1	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	4.0	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	2.5	
13C12-OCDD	200.00	162	-19.2	
37Cl4-2,3,7,8-TCDD	10.000	8.71	-12.9	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030302	Calibration Date:	03/03/2023
Sequence:	SLC0045	Injection Date:	03/03/23
Lab Sample ID:	SLC0045-ICV1	Injection Time:	09:51
Sequence Name:	CS3W1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	9.55	0.7015272	0.6699659		-4.5	+/-16
2,3,7,8-TCDD	A	10.000	9.45	1.1486620	1.0855020		-5.5	+/-22
1,2,3,7,8-PeCDF	A	50.000	49.6	0.6792300	0.6743560		-0.7	+/-18
2,3,4,7,8-PeCDF	A	50.000	47.5	0.7861704	0.7472986		-4.9	+/-18
1,2,3,7,8-PeCDD	A	50.000	49.7	1.0218450	1.0147700		-0.7	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.1	1.1660380	1.0988190		-5.8	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	49.6	1.0907410	1.0813380		-0.9	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.3	1.1396990	1.1246750		-1.3	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	47.0	1.1370930	1.0679460		-6.1	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.1	0.9955689	0.9966266		0.1	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	49.6	1.0009380	0.9938861		-0.7	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	54.2	0.9071139	0.9838286		8.5	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	47.5	1.0029930	0.9526502		-5.0	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	50.2	0.9531152	0.9573187		0.4	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	47.6	1.0390130	0.9895371		-4.8	+/-14
OCDF	A	100.00	88.6	0.7778078	0.6890651		-11.4	+/-37
OCDD	A	100.00	98.4	0.9199537	0.9055309		-1.6	+/-21
13C12-2,3,7,8-TCDF	A	100.00	94.0	1.6201960	1.5232274		-6.0	+/-29
13C12-2,3,7,8-TCDD	A	100.00	102	1.1524090	1.1727116		1.8	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	92.2	1.2404520	1.1438587		-7.8	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	87.6	1.1177860	0.9791895		-12.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	84.3	0.8288129	0.6985475		-15.7	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	84.0	1.1683050	0.9815313		-16.0	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	74.6	1.3864660	1.0348865		-25.4	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	88.7	1.1292560	1.0010969		-11.3	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	99.9	0.9317541	0.9305560		-0.1	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.5	0.9950393	0.9299453		-6.5	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	86.9	1.1566890	1.0052205		-13.1	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	95.3	0.8952017	0.8530837		-4.7	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	98.7	0.7697516	0.7594900		-1.3	+/-23

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030302	Calibration Date:	03/03/2023
Sequence:	SLC0045	Injection Date:	03/03/23
Lab Sample ID:	SLC0045-ICV1	Injection Time:	09:51
Sequence Name:	CS3W1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	105	0.8401226	0.8828452		5.1	+/-28
13C12-OCDD	A	200.00	214	0.7674714	0.8220320		7.1	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.05	1.2878040	1.1649542		-9.5	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23051502	Calibration Date:	03/03/2023
Sequence:	SLE0240	Injection Date:	05/15/23
Lab Sample ID:	SLE0240-ICV1	Injection Time:	12:04
Sequence Name:	CS3L5		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	9.89	0.7015272	0.6939211		-1.1	+/-16
2,3,7,8-TCDD	A	10.000	9.57	1.1486620	1.0993400		-4.3	+/-22
1,2,3,7,8-PeCDF	A	50.000	53.5	0.6792300	0.7270081		7.0	+/-18
2,3,4,7,8-PeCDF	A	50.000	52.7	0.7861704	0.8290223		5.5	+/-18
1,2,3,7,8-PeCDD	A	50.000	49.2	1.0218450	1.0051380		-1.6	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	50.4	1.1660380	1.1762900		0.9	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	52.9	1.0907410	1.1545610		5.9	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	48.9	1.1396990	1.1138350		-2.3	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	49.8	1.1370930	1.1319400		-0.5	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	51.6	0.9955689	1.0276800		3.2	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	50.2	1.0009380	1.0045590		0.4	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	55.8	0.9071139	1.0131230		11.7	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	49.5	1.0029930	0.9921724		-1.1	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	53.1	0.9531152	1.0123520		6.2	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	54.1	1.0390130	1.1239430		8.2	+/-14
OCDF	A	100.00	97.5	0.7778078	0.7584415		-2.5	+/-37
OCDD	A	100.00	101	0.9199537	0.9277312		0.8	+/-21
13C12-2,3,7,8-TCDF	A	100.00	103	1.6201960	1.6649104		2.8	+/-29
13C12-2,3,7,8-TCDD	A	100.00	106	1.1524090	1.2220758		6.0	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	103	1.2404520	1.2818698		3.3	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	106	1.1177860	1.1830970		5.8	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	103	0.8288129	0.8568411		3.4	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	96.6	1.1683050	1.1288353		-3.4	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	92.6	1.3864660	1.2836764		-7.4	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	103	1.1292560	1.1596850		2.7	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	107	0.9317541	0.9966117		7.0	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	96.6	0.9950393	0.9608064		-3.4	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	95.4	1.1566890	1.1032369		-4.6	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	117	0.8952017	1.0467117		16.9	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	118	0.7697516	0.9071448		17.8	+/-23

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23051502	Calibration Date:	03/03/2023
Sequence:	SLE0240	Injection Date:	05/15/23
Lab Sample ID:	SLE0240-ICV1	Injection Time:	12:04
Sequence Name:	CS3L5		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	108	0.8401226	0.9031674		7.5	+/-18
13C12-OCDD	A	200.00	253	0.7674714	0.9727219		26.7	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.16	1.2878040	1.1796328		-8.4	+/-21

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23052202	Calibration Date:	03/03/2023
Sequence:	SLE0354	Injection Date:	05/22/23
Lab Sample ID:	SLE0354-ICV1	Injection Time:	10:59
Sequence Name:	CS3N1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	10.6	0.7015272	0.7421461		5.8	+/-16
2,3,7,8-TCDD	A	10.000	9.18	1.1486620	1.0542760		-8.2	+/-22
1,2,3,7,8-PeCDF	A	50.000	54.1	0.6792300	0.7343543		8.1	+/-18
2,3,4,7,8-PeCDF	A	50.000	51.7	0.7861704	0.8124106		3.3	+/-18
1,2,3,7,8-PeCDD	A	50.000	48.6	1.0218450	0.9940272		-2.7	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	46.3	1.1660380	1.0803720		-7.3	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	47.1	1.0907410	1.0267520		-5.9	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	50.9	1.1396990	1.1595370		1.7	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	48.8	1.1370930	1.1099910		-2.4	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	46.1	0.9955689	0.9184259		-7.7	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	45.6	1.0009380	0.9136809		-8.7	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	51.2	0.9071139	0.9288098		2.4	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	49.7	1.0029930	0.9962391		-0.7	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	52.5	0.9531152	1.0004630		5.0	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	50.6	1.0390130	1.0522980		1.3	+/-14
OCDF	A	100.00	106	0.7778078	0.8278699		6.4	+/-37
OCDD	A	100.00	104	0.9199537	0.9586180		4.2	+/-21
13C12-2,3,7,8-TCDF	A	100.00	94.9	1.6201960	1.5377469		-5.1	+/-29
13C12-2,3,7,8-TCDD	A	100.00	105	1.1524090	1.2134528		5.3	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	104	1.2404520	1.2893520		3.9	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	108	1.1177860	1.2089763		8.2	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	106	0.8288129	0.8778283		5.9	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	83.0	1.1683050	0.9697679		-17.0	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	82.0	1.3864660	1.1366107		-18.0	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	81.5	1.1292560	0.9206928		-18.5	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	89.1	0.9317541	0.8297830		-10.9	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	95.7	0.9950393	0.9526176		-4.3	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	91.7	1.1566890	1.0605325		-8.3	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	91.3	0.8952017	0.8173542		-8.7	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	90.7	0.7697516	0.6977869		-9.3	+/-23

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23052202	Calibration Date:	03/03/2023
Sequence:	SLE0354	Injection Date:	05/22/23
Lab Sample ID:	SLE0354-ICV1	Injection Time:	10:59
Sequence Name:	CS3N1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	83.4	0.8401226	0.7009088		-16.6	+/-18
13C12-OCDD	A	200.00	192	0.7674714	0.7377860		-3.9	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.80	1.2878040	1.1333153		-12.0	+/-21

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030311	Calibration Date:	03/03/2023
Sequence:	SLC0045	Injection Date:	03/03/23
Lab Sample ID:	SLC0045-CCV1	Injection Time:	17:25
Sequence Name:	CS3V4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.1	0.7015272	0.7103909		1.3	+/-16
2,3,7,8-TCDD	A	10.000	9.02	1.1486620	1.0358000		-9.8	+/-22
1,2,3,7,8-PeCDF	A	50.000	47.7	0.6792300	0.6482723		-4.6	+/-18
2,3,4,7,8-PeCDF	A	50.000	48.6	0.7861704	0.7638484		-2.8	+/-18
1,2,3,7,8-PeCDD	A	50.000	50.8	1.0218450	1.0391930		1.7	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.3	1.1660380	1.1031690		-5.4	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	51.4	1.0907410	1.1209930		2.8	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	52.1	1.1396990	1.1864330		4.1	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	48.9	1.1370930	1.1121660		-2.2	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.7	0.9955689	1.0094320		1.4	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	51.1	1.0009380	1.0234880		2.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	51.7	0.9071139	0.9383686		3.4	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	47.7	1.0029930	0.9566603		-4.6	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	53.6	0.9531152	1.0217610		7.2	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	52.7	1.0390130	1.0955650		5.4	+/-14
OCDF	A	100.00	95.0	0.7778078	0.7390842		-5.0	+/-37
OCDD	A	100.00	97.1	0.9199537	0.8937318		-2.9	+/-21
13C12-2,3,7,8-TCDF	A	100.00	89.4	1.6201960	1.4487738		-10.6	+/-29
13C12-2,3,7,8-TCDD	A	100.00	86.0	1.1524090	0.9914363		-14.0	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	92.6	1.2404520	1.1488109		-7.4	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	91.6	1.1177860	1.0240744		-8.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	90.8	0.8288129	0.7523463		-9.2	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	95.2	1.1683050	1.1119828		-4.8	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	91.1	1.3864660	1.2630996		-8.9	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	96.9	1.1292560	1.0940819		-3.1	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	101	0.9317541	0.9426254		1.2	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	97.6	0.9950393	0.9710534		-2.4	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	98.4	1.1566890	1.1378328		-1.6	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	102	0.8952017	0.9116661		1.8	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	84.3	0.7697516	0.6486548		-15.7	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	92.0	0.8401226	0.7731635		-8.0	+/-28
13C12-OCDD	A	200.00	170	0.7674714	0.6532994		-14.9	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	7.54	1.2878040	0.9705402		-24.6	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030310	Calibration Date:	03/03/2023
Sequence:	SLC0045	Injection Date:	03/03/23
Lab Sample ID:	SLC0045-SCV1	Injection Time:	16:36
Sequence Name:	ICVCW		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	9.84	0.7015272	0.6901560		-1.6	
2,3,7,8-TCDD	A	10.000	9.81	1.1486620	1.1273700		-1.9	
1,2,3,7,8-PeCDF	A	50.000	51.4	0.6792300	0.6981249		2.8	
2,3,4,7,8-PeCDF	A	50.000	49.0	0.7861704	0.7701368		-2.0	
1,2,3,7,8-PeCDD	A	50.000	48.5	1.0218450	0.9921504		-2.9	
1,2,3,4,7,8-HxCDF	A	50.000	48.2	1.1660380	1.1251100		-3.5	
1,2,3,6,7,8-HxCDF	A	50.000	48.0	1.0907410	1.0469270		-4.0	
2,3,4,6,7,8-HxCDF	A	50.000	50.2	1.1396990	1.1448090		0.4	
1,2,3,7,8,9-HxCDF	A	50.000	49.1	1.1370930	1.1161010		-1.8	
1,2,3,4,7,8-HxCDD	A	50.000	50.8	0.9955689	1.0114830		1.6	
1,2,3,6,7,8-HxCDD	A	50.000	50.2	1.0009380	1.0044310		0.3	
1,2,3,7,8,9-HxCDD	A	50.000	51.6	0.9071139	8347.938		3.2	
1,2,3,4,6,7,8-HpCDF	A	50.000	51.8	1.0029930	1.0398620		3.7	
1,2,3,4,7,8,9-HpCDF	A	50.000	48.5	0.9531152	0.9237809		-3.1	
1,2,3,4,6,7,8-HpCDD	A	50.000	49.2	1.0390130	1.0223590		-1.6	
OCDF	A	100.00	104	0.7778078	0.8050743		3.5	
OCDD	A	100.00	99.4	0.9199537	0.9146365		-0.6	
13C12-2,3,7,8-TCDF	A	100.00	96.9	1.6201960	1.5703703		-3.1	
13C12-2,3,7,8-TCDD	A	100.00	96.6	1.1524090	1.1130294		-3.4	
13C12-1,2,3,7,8-PeCDF	A	100.00	73.2	1.2404520	0.9079224		-26.8	
13C12-2,3,4,7,8-PeCDF	A	100.00	75.9	1.1177860	0.8488817		-24.1	
13C12-1,2,3,7,8-PeCDD	A	100.00	76.6	0.8288129	0.6346243		-23.4	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	93.0	1.1683050	1.0861993		-7.0	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	98.0	1.3864660	1.3581552		-2.0	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	93.4	1.1292560	1.0544008		-6.6	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	97.9	0.9317541	0.9122440		-2.1	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	95.9	0.9950393	0.9546162		-4.1	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	97.7	1.1566890	1.1296183		-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	102	0.8952017	0.9144345		2.1	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	104	0.7697516	0.8001798		4.0	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	102	0.8401226	0.8609226		2.5	
13C12-OCDD	A	200.00	162	0.7674714	0.6199758		-19.2	
37Cl4-2,3,7,8-TCDD	A	10.000	8.71	1.2878040	1.1221835		-12.9	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23051514	Calibration Date:	03/03/2023
Sequence:	SLE0240	Injection Date:	05/15/23
Lab Sample ID:	SLE0240-CCV1	Injection Time:	22:11
Sequence Name:	CS3L6		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.2	0.7015272	0.7149168		1.9	+/-16
2,3,7,8-TCDD	A	10.000	9.82	1.1486620	1.1281570		-1.8	+/-22
1,2,3,7,8-PeCDF	A	50.000	56.4	0.6792300	0.7661250		12.8	+/-18
2,3,4,7,8-PeCDF	A	50.000	54.1	0.7861704	0.8501949		8.1	+/-18
1,2,3,7,8-PeCDD	A	50.000	47.9	1.0218450	0.9797968		-4.1	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	49.7	1.1660380	1.1598580		-0.5	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	48.5	1.0907410	1.0578330		-3.0	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.9	1.1396990	1.1363610		-0.3	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	51.0	1.1370930	1.1592830		2.0	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	47.8	0.9955689	0.9517617		-4.4	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	46.8	1.0009380	0.9378222		-6.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	52.9	0.9071139	0.9600998		5.8	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	49.9	1.0029930	1.0005080		-0.2	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	54.0	0.9531152	1.0296760		8.0	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	53.8	1.0390130	1.1182300		7.6	+/-14
OCDF	A	100.00	106	0.7778078	0.8258599		6.2	+/-37
OCDD	A	100.00	100	0.9199537	0.9228810		0.3	+/-21
13C12-2,3,7,8-TCDF	A	100.00	100	1.6201960	1.6255936		0.3	+/-29
13C12-2,3,7,8-TCDD	A	100.00	104	1.1524090	1.2039719		4.5	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	98.1	1.2404520	1.2168875		-1.9	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	104	1.1177860	1.1573303		3.5	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	104	0.8288129	0.8629286		4.1	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	88.5	1.1683050	1.0338890		-11.5	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	91.0	1.3864660	1.2620349		-9.0	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	92.0	1.1292560	1.0388909		-8.0	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	108	0.9317541	1.0064048		8.0	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	94.9	0.9950393	0.9443758		-5.1	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	91.3	1.1566890	1.0555649		-8.7	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	101	0.8952017	0.9075554		1.4	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	102	0.7697516	0.7852041		2.0	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	95.4	0.8401226	0.8015891		-4.6	+/-18
13C12-OCDD	A	200.00	219	0.7674714	0.8407195		9.5	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.17	1.2878040	1.1804638		-8.3	+/-21

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23051526	Calibration Date:	03/03/2023
Sequence:	SLE0240	Injection Date:	05/16/23
Lab Sample ID:	SLE0240-CCV2	Injection Time:	08:05
Sequence Name:	CS3L7		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.1	0.7015272	0.7090247		1.1	+/-16
2,3,7,8-TCDD	A	10.000	9.31	1.1486620	1.0689890		-6.9	+/-22
1,2,3,7,8-PeCDF	A	50.000	54.9	0.6792300	0.7454946		9.8	+/-18
2,3,4,7,8-PeCDF	A	50.000	51.5	0.7861704	0.8089710		2.9	+/-18
1,2,3,7,8-PeCDD	A	50.000	48.0	1.0218450	0.9817005		-3.9	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.5	1.1660380	1.1074420		-5.0	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	47.9	1.0907410	1.0446630		-4.2	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.4	1.1396990	1.1252650		-1.3	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	48.9	1.1370930	1.1119600		-2.2	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	49.6	0.9955689	0.9873793		-0.8	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	45.8	1.0009380	0.9176556		-8.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	53.1	0.9071139	0.9637581		6.2	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	51.1	1.0029930	1.0256180		2.3	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	51.0	0.9531152	0.9723439		2.0	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	48.0	1.0390130	0.9979494		-4.0	+/-14
OCDF	A	100.00	107	0.7778078	0.8341833		7.2	+/-37
OCDD	A	100.00	98.9	0.9199537	0.9094742		-1.1	+/-21
13C12-2,3,7,8-TCDF	A	100.00	98.8	1.6201960	1.6007915		-1.2	+/-29
13C12-2,3,7,8-TCDD	A	100.00	105	1.1524090	1.2068566		4.7	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	97.5	1.2404520	1.2090651		-2.5	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	103	1.1177860	1.1543834		3.3	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	103	0.8288129	0.8552024		3.2	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	90.2	1.1683050	1.0538789		-9.8	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	88.1	1.3864660	1.2216561		-11.9	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	91.3	1.1292560	1.0308361		-8.7	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	111	0.9317541	1.0299077		10.5	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.6	0.9950393	0.9310020		-6.4	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	92.1	1.1566890	1.0653856		-7.9	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	97.2	0.8952017	0.8701154		-2.8	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	99.4	0.7697516	0.7651148		-0.6	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	94.0	0.8401226	0.7896770		-6.0	+/-18
13C12-OCDD	A	200.00	213	0.7674714	0.8172795		6.5	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.92	1.2878040	1.1491003		-10.8	+/-21

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23052214	Calibration Date:	03/03/2023
Sequence:	SLE0354	Injection Date:	05/22/23
Lab Sample ID:	SLE0354-CCV1	Injection Time:	21:03
Sequence Name:	CS3N2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	9.31	0.7015272	0.6531891		-6.9	+/-16
2,3,7,8-TCDD	A	10.000	9.12	1.1486620	1.0476460		-8.8	+/-22
1,2,3,7,8-PeCDF	A	50.000	55.4	0.6792300	0.7520025		10.7	+/-18
2,3,4,7,8-PeCDF	A	50.000	52.4	0.7861704	0.8241364		4.8	+/-18
1,2,3,7,8-PeCDD	A	50.000	50.3	1.0218450	1.0280690		0.6	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	48.2	1.1660380	1.1241350		-3.6	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	51.6	1.0907410	1.1247410		3.1	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	50.3	1.1396990	1.1455070		0.5	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	49.1	1.1370930	1.1155110		-1.9	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	46.4	0.9955689	0.9240319		-7.2	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	46.7	1.0009380	0.9344767		-6.6	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	49.7	0.9071139	0.9009350		-0.7	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	48.6	1.0029930	0.9739615		-2.9	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	53.0	0.9531152	1.0109800		6.1	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	52.5	1.0390130	1.0913660		5.0	+/-14
OCDF	A	100.00	99.2	0.7778078	0.7717252		-0.8	+/-37
OCDD	A	100.00	101	0.9199537	0.9314885		1.3	+/-21
13C12-2,3,7,8-TCDF	A	100.00	90.3	1.6201960	1.4628344		-9.7	+/-29
13C12-2,3,7,8-TCDD	A	100.00	105	1.1524090	1.2134254		5.3	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	96.0	1.2404520	1.1907302		-4.0	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	101	1.1177860	1.1272887		0.9	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	96.4	0.8288129	0.7988774		-3.6	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	85.1	1.1683050	0.9943725		-14.9	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	83.6	1.3864660	1.1587082		-16.4	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	89.5	1.1292560	1.0109375		-10.5	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	102	0.9317541	0.9474172		1.7	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	96.8	0.9950393	0.9631666		-3.2	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	94.1	1.1566890	1.0879666		-5.9	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	92.7	0.8952017	0.8301792		-7.3	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	90.9	0.7697516	0.6999352		-9.1	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	84.2	0.8401226	0.7072510		-15.8	+/-18
13C12-OCDD	A	200.00	187	0.7674714	0.7165594		-6.6	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.92	1.2878040	1.1482779		-10.8	+/-21

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23052225	Calibration Date:	03/03/2023
Sequence:	SLE0354	Injection Date:	05/23/23
Lab Sample ID:	SLE0354-CCV2	Injection Time:	06:08
Sequence Name:	CS3N3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	8.97	0.7015272	0.6294941		-10.3	+/-16
2,3,7,8-TCDD	A	10.000	8.88	1.1486620	1.0195350		-11.2	+/-22
1,2,3,7,8-PeCDF	A	50.000	55.2	0.6792300	0.7495780		10.4	+/-18
2,3,4,7,8-PeCDF	A	50.000	51.8	0.7861704	0.8146587		3.6	+/-18
1,2,3,7,8-PeCDD	A	50.000	49.7	1.0218450	1.0156170		-0.6	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.2	1.1660380	1.1011780		-5.6	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	45.8	1.0907410	0.9992096		-8.4	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.9	1.1396990	1.1375370		-0.2	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	50.5	1.1370930	1.1493830		1.1	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	47.0	0.9955689	0.9356357		-6.0	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	47.7	1.0009380	0.9556614		-4.5	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	51.5	0.9071139	0.9344920		3.0	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	48.4	1.0029930	0.9710808		-3.2	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	48.9	0.9531152	0.9329914		-2.1	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	51.1	1.0390130	1.0612040		2.1	+/-14
OCDF	A	100.00	104	0.7778078	0.8079633		3.9	+/-37
OCDD	A	100.00	101	0.9199537	0.9266891		0.7	+/-21
13C12-2,3,7,8-TCDF	A	100.00	92.8	1.6201960	1.5038469		-7.2	+/-29
13C12-2,3,7,8-TCDD	A	100.00	107	1.1524090	1.2371913		7.4	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	97.0	1.2404520	1.2030702		-3.0	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	102	1.1177860	1.1409349		2.1	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	96.4	0.8288129	0.7986699		-3.6	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	87.4	1.1683050	1.0212170		-12.6	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	92.9	1.3864660	1.2874612		-7.1	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	89.8	1.1292560	1.0137367		-10.2	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	94.5	0.9317541	0.8804046		-5.5	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	98.5	0.9950393	0.9804427		-1.5	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	96.3	1.1566890	1.1138986		-3.7	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	91.5	0.8952017	0.8192921		-8.5	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	96.0	0.7697516	0.7387708		-4.0	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	80.8	0.8401226	0.6791960		-19.2	+/-18
13C12-OCDD	A	200.00	180	0.7674714	0.6920766		-9.8	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.75	1.2878040	1.1266070		-12.5	+/-21

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23D0412
Instrument .ID: AUTOSPEC01
Lab File ID: 23030303
Date Analyzed: 03/03/23
Time Analyzed: 10:39
Lab Sample ID: SLC0045-RES1
Sequence: SLC0045

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 8.8

3467-TCDF/2378-TCDF: 8.2

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0045-ICV1	CS3W1	23030302	03/03/2023	09:51
SLC0045-RES1	ISCW1	23030303	03/03/2023	10:39
SLC0045-CAL1	CSLCW	23030304	03/03/2023	11:28
SLC0045-CAL2	CS1CW	23030305	03/03/2023	12:23
SLC0045-CAL3	CS2CW	23030306	03/03/2023	13:16
SLC0045-CAL4	CS3CW	23030307	03/03/2023	14:06
SLC0045-CAL5	CS4CW	23030308	03/03/2023	14:59
SLC0045-CAL6	CS5CW	23030309	03/03/2023	15:47
SLC0045-SCV1	ICVCW	23030310	03/03/2023	16:36
SLC0045-CCV1	CS3V4	23030311	03/03/2023	17:25
SLC0045-RES2	ISCV4	23030312	03/03/2023	18:18

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23D0412
Instrument .ID: AUTOSPEC01
Lab File ID: 23030312
Date Analyzed: 03/03/23
Time Analyzed: 18:18
Lab Sample ID: SLC0045-RES2
Sequence: SLC0045

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 12.9

3467-TCDF/2378-TCDF: 11.7

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0045-ICV1	CS3W1	23030302	03/03/2023	09:51
SLC0045-RES1	ISCW1	23030303	03/03/2023	10:39
SLC0045-CAL1	CSLCW	23030304	03/03/2023	11:28
SLC0045-CAL2	CS1CW	23030305	03/03/2023	12:23
SLC0045-CAL3	CS2CW	23030306	03/03/2023	13:16
SLC0045-CAL4	CS3CW	23030307	03/03/2023	14:06
SLC0045-CAL5	CS4CW	23030308	03/03/2023	14:59
SLC0045-CAL6	CS5CW	23030309	03/03/2023	15:47
SLC0045-SCV1	ICVCW	23030310	03/03/2023	16:36
SLC0045-CCV1	CS3V4	23030311	03/03/2023	17:25
SLC0045-RES2	ISCV4	23030312	03/03/2023	18:18

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC SDG: 23D0412

Instrument .ID: AUTOSPEC01 Lab File ID: 23051503

Date Analyzed: 05/15/23 Time Analyzed: 12:58

Lab Sample ID: SLE0240-RES1 Sequence: SLE0240

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 9.8

3467-TCDF/2378-TCDF: 9.3

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLE0240-ICV1	CS3L5	23051502	05/15/2023	12:04
SLE0240-RES1	ISCL5	23051503	05/15/2023	12:58
BLD0507-BLK1	Blank	23051505	05/15/2023	14:50
BLD0507-BS1	LCS	23051506	05/15/2023	15:38
BLD0507-BSD1	LCS Dup	23051507	05/15/2023	16:28
23D0412-06	MWCP5-041323	23051509	05/15/2023	18:06
23D0412-07	MWCP6-041323	23051510	05/15/2023	18:55
SLE0240-CCV1	CS3L6	23051514	05/15/2023	22:11
SLE0240-RES2	ISCL6	23051515	05/15/2023	23:04
SLE0240-CCV2	CS3L7	23051526	05/16/2023	08:05
SLE0240-RES3	ISCL7	23051527	05/16/2023	08:58

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23D0412
Instrument .ID: AUTOSPEC01
Lab File ID: 23051515
Date Analyzed: 05/15/23
Time Analyzed: 23:04
Lab Sample ID: SLE0240-RES2
Sequence: SLE0240

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 12.8

3467-TCDF/2378-TCDF: 8.4

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLE0240-ICV1	CS3L5	23051502	05/15/2023	12:04
SLE0240-RES1	ISCL5	23051503	05/15/2023	12:58
BLD0507-BLK1	Blank	23051505	05/15/2023	14:50
BLD0507-BS1	LCS	23051506	05/15/2023	15:38
BLD0507-BSD1	LCS Dup	23051507	05/15/2023	16:28
23D0412-06	MWCP5-041323	23051509	05/15/2023	18:06
23D0412-07	MWCP6-041323	23051510	05/15/2023	18:55
SLE0240-CCV1	CS3L6	23051514	05/15/2023	22:11
SLE0240-RES2	ISCL6	23051515	05/15/2023	23:04
SLE0240-CCV2	CS3L7	23051526	05/16/2023	08:05
SLE0240-RES3	ISCL7	23051527	05/16/2023	08:58

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23D0412
Instrument .ID: AUTOSPEC01
Lab File ID: 23051527
Date Analyzed: 05/16/23
Time Analyzed: 08:58
Lab Sample ID: SLE0240-RES3
Sequence: SLE0240

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 10

3467-TCDF/2378-TCDF: 9.9

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLE0240-ICV1	CS3L5	23051502	05/15/2023	12:04
SLE0240-RES1	ISCL5	23051503	05/15/2023	12:58
BLD0507-BLK1	Blank	23051505	05/15/2023	14:50
BLD0507-BS1	LCS	23051506	05/15/2023	15:38
BLD0507-BSD1	LCS Dup	23051507	05/15/2023	16:28
23D0412-06	MWCP5-041323	23051509	05/15/2023	18:06
23D0412-07	MWCP6-041323	23051510	05/15/2023	18:55
SLE0240-CCV1	CS3L6	23051514	05/15/2023	22:11
SLE0240-RES2	ISCL6	23051515	05/15/2023	23:04
SLE0240-CCV2	CS3L7	23051526	05/16/2023	08:05
SLE0240-RES3	ISCL7	23051527	05/16/2023	08:58

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC SDG: 23D0412

Instrument .ID: AUTOSPEC01 Lab File ID: 23052203

Date Analyzed: 05/22/23 Time Analyzed: 11:53

Lab Sample ID: SLE0354-RES1 Sequence: SLE0354

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 14.1

3467-TCDF/2378-TCDF: 10.7

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLE0354-ICV1	CS3N1	23052202	05/22/2023	10:59
SLE0354-RES1	ISCN1	23052203	05/22/2023	11:53
BLD0508-BLK1	Blank	23052204	05/22/2023	12:50
BLD0508-BS1	LCS	23052205	05/22/2023	13:40
BLD0508-BSD1	LCS Dup	23052206	05/22/2023	14:32
23D0412-01	MWCP1-041323	23052207	05/22/2023	15:20
23D0412-02	MWCP1-041323-D	23052208	05/22/2023	16:09
23D0412-03	MWCP2-041323	23052209	05/22/2023	16:58
23D0412-04	MWCP3-041323	23052210	05/22/2023	17:47
23D0412-05	MWCP4-041323	23052211	05/22/2023	18:36
23D0412-08	MWCP7-041323	23052212	05/22/2023	19:25
23D0412-09	MWVB3-041323	23052213	05/22/2023	20:14
SLE0354-CCV1	CS3N2	23052214	05/22/2023	21:03
SLE0354-RES2	ISCN2	23052215	05/22/2023	21:56
23D0412-10	HC00-B312-041323	23052216	05/22/2023	22:47
23D0412-11	MWVB1-041423	23052217	05/22/2023	23:36
23D0412-12	MWVB1-041423-D	23052218	05/23/2023	00:25
23D0412-13	MWVB2-041423	23052219	05/23/2023	01:14
SLE0354-CCV2	CS3N3	23052225	05/23/2023	06:08
SLE0354-RES3	ISCN3	23052226	05/23/2023	07:01

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC

SDG: 23D0412

Instrument .ID: AUTOSPEC01

Lab File ID: 23052215

Date Analyzed: 05/22/23

Time Analyzed: 21:56

Lab Sample ID: SLE0354-RES2

Sequence: SLE0354

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 12.5

3467-TCDF/2378-TCDF: 16.4

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLE0354-ICV1	CS3N1	23052202	05/22/2023	10:59
SLE0354-RES1	ISCN1	23052203	05/22/2023	11:53
BLD0508-BLK1	Blank	23052204	05/22/2023	12:50
BLD0508-BS1	LCS	23052205	05/22/2023	13:40
BLD0508-BSD1	LCS Dup	23052206	05/22/2023	14:32
23D0412-01	MWCP1-041323	23052207	05/22/2023	15:20
23D0412-02	MWCP1-041323-D	23052208	05/22/2023	16:09
23D0412-03	MWCP2-041323	23052209	05/22/2023	16:58
23D0412-04	MWCP3-041323	23052210	05/22/2023	17:47
23D0412-05	MWCP4-041323	23052211	05/22/2023	18:36
23D0412-08	MWCP7-041323	23052212	05/22/2023	19:25
23D0412-09	MWVB3-041323	23052213	05/22/2023	20:14
SLE0354-CCV1	CS3N2	23052214	05/22/2023	21:03
SLE0354-RES2	ISCN2	23052215	05/22/2023	21:56
23D0412-10	HC00-B312-041323	23052216	05/22/2023	22:47
23D0412-11	MWVB1-041423	23052217	05/22/2023	23:36
23D0412-12	MWVB1-041423-D	23052218	05/23/2023	00:25
23D0412-13	MWVB2-041423	23052219	05/23/2023	01:14
SLE0354-CCV2	CS3N3	23052225	05/23/2023	06:08
SLE0354-RES3	ISCN3	23052226	05/23/2023	07:01

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23D0412
Instrument .ID: AUTOSPEC01
Lab File ID: 23052226
Date Analyzed: 05/23/23
Time Analyzed: 07:01
Lab Sample ID: SLE0354-RES3
Sequence: SLE0354

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 12.5
3467-TCDF/2378-TCDF: 12.2

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLE0354-ICV1	CS3N1	23052202	05/22/2023	10:59
SLE0354-RES1	ISCN1	23052203	05/22/2023	11:53
BLD0508-BLK1	Blank	23052204	05/22/2023	12:50
BLD0508-BS1	LCS	23052205	05/22/2023	13:40
BLD0508-BSD1	LCS Dup	23052206	05/22/2023	14:32
23D0412-01	MWCP1-041323	23052207	05/22/2023	15:20
23D0412-02	MWCP1-041323-D	23052208	05/22/2023	16:09
23D0412-03	MWCP2-041323	23052209	05/22/2023	16:58
23D0412-04	MWCP3-041323	23052210	05/22/2023	17:47
23D0412-05	MWCP4-041323	23052211	05/22/2023	18:36
23D0412-08	MWCP7-041323	23052212	05/22/2023	19:25
23D0412-09	MWVB3-041323	23052213	05/22/2023	20:14
SLE0354-CCV1	CS3N2	23052214	05/22/2023	21:03
SLE0354-RES2	ISCN2	23052215	05/22/2023	21:56
23D0412-10	HC00-B312-041323	23052216	05/22/2023	22:47
23D0412-11	MWVB1-041423	23052217	05/22/2023	23:36
23D0412-12	MWVB1-041423-D	23052218	05/23/2023	00:25
23D0412-13	MWVB2-041423	23052219	05/23/2023	01:14
SLE0354-CCV2	CS3N3	23052225	05/23/2023	06:08
SLE0354-RES3	ISCN3	23052226	05/23/2023	07:01

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLC0045	Instrument:	AUTOSPEC01
		Calibration:	GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3W1	SLC0045-ICV1	23030302	NA	03/03/23 09:51
ISCW1	SLC0045-RES1	23030303	NA	03/03/23 10:39
CSLCW	SLC0045-CAL1	23030304	NA	03/03/23 11:28
CS1CW	SLC0045-CAL2	23030305	NA	03/03/23 12:23
CS2CW	SLC0045-CAL3	23030306	NA	03/03/23 13:16
CS3CW	SLC0045-CAL4	23030307	NA	03/03/23 14:06
CS4CW	SLC0045-CAL5	23030308	NA	03/03/23 14:59
CS5CW	SLC0045-CAL6	23030309	NA	03/03/23 15:47
ICVCW	SLC0045-SCV1	23030310	NA	03/03/23 16:36
CS3V4	SLC0045-CCV1	23030311	NA	03/03/23 17:25
ISCV4	SLC0045-RES2	23030312	NA	03/03/23 18:18

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 3/6/2023 2:56:51PM

ANALYSIS SEQUENCE

SLC0045

Instrument: AUTOSPEC01 HRGCMS Column ID: K2310
Calibration ID: GC00015 Tune File: FEB0923_1-5
EM Voltage: 350 Resolution check times : 9:51, 18:18

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0045-ICV1	CS3W1	QC		1	K009821		03/03/2023 09:51	23030302	PK	
SLC0045-RES1	ISCW1	QC		2	L002084		03/03/2023 10:39	23030303	PK	
SLC0045-CAL1	CSLCW	QC		3	I005460		03/03/2023 11:28	23030304	PK	
SLC0045-CAL2	CS1CW	QC		4	I005456		03/03/2023 12:23	23030305	PK	
SLC0045-CAL3	CS2CW	QC		5	I005457		03/03/2023 13:16	23030306	PK	
SLC0045-CAL4	CS3CW	QC		6	K009821		03/03/2023 14:06	23030307	PK	
SLC0045-CAL5	CS4CW	QC		7	I005458		03/03/2023 14:59	23030308	PK	
SLC0045-CAL6	CS5CW	QC		8	I005459		03/03/2023 15:47	23030309	PK	
SLC0045-SCV1	ICVCW	QC		9	H008219		03/03/2023 16:36	23030310	PK	
SLC0045-CCV1	CS3V4	QC		10	K009821		03/03/2023 17:25	23030311	PK	
SLC0045-RES2	ISCV4	QC		11	L002084		03/03/2023 18:18	23030312	PK	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
		Calibration:	GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3L5	SLE0240-ICV1	23051502	NA	05/15/23 12:04
ISCL5	SLE0240-RES1	23051503	NA	05/15/23 12:58
Blank	BLD0507-BLK1	23051505	Water	05/15/23 14:50
LCS	BLD0507-BS1	23051506	Water	05/15/23 15:38
LCS Dup	BLD0507-BSD1	23051507	Water	05/15/23 16:28
MWCP5-041323	23D0412-06	23051509	Water	05/15/23 18:06
MWCP6-041323	23D0412-07	23051510	Water	05/15/23 18:55
CS3L6	SLE0240-CCV1	23051514	NA	05/15/23 22:11
ISCL6	SLE0240-RES2	23051515	NA	05/15/23 23:04
CS3L7	SLE0240-CCV2	23051526	NA	05/16/23 08:05
ISCL7	SLE0240-RES3	23051527	NA	05/16/23 08:58

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 5/16/2023 1:42:47PM

ANALYSIS SEQUENCE

SLE0240

Instrument: AUTOSPEC01 HRGCMS Column ID: L2313
Calibration ID: GC00015 Tune File: MAR2023_1-5
EM Voltage: 350 Resolution check times : 11:54, 23:04, 08:58

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0240-ICV1	CS3L5	QC		1	K009821		05/15/2023 12:04	23051502	PK	
SLE0240-RES1	ISCL5	QC		2	L002084		05/15/2023 12:58	23051503	PK	
23D0063-01	LDW23-SS1818	1613B Dioxin	C 02	3			05/15/2023 13:59	23051504	PK	
BLD0507-BLK1	Blank	QC		4		K011414	05/15/2023 14:50	23051505	PK	
BLD0507-BS1	LCS	QC		5		K011414	05/15/2023 15:38	23051506	PK	
BLD0507-BSD1	LCS Dup	QC		6		K011414	05/15/2023 16:28	23051507	PK	
23D0359-11	MW5-0423	1613B Dioxin	A 01	7		K011414	05/15/2023 17:17	23051508	PK	
23D0412-06	MWCP5-041323	1613B Dioxin	B 01	8		K011414	05/15/2023 18:06	23051509	PK	
23D0412-07	MWCP6-041323	1613B Dioxin	B 01	9		K011414	05/15/2023 18:55	23051510	PK	
BLD0547-BLK1	Blank	QC		10		K011414	05/15/2023 19:44	23051511	PK	
BLD0547-BS1	LCS	QC		11		K011414	05/15/2023 20:33	23051512	PK	
BLD0547-BSD1	LCS Dup	QC		12		K011414	05/15/2023 21:22	23051513	PK	
SLE0240-CCV1	CS3L6	QC		13	K009821		05/15/2023 22:11	23051514	PK	
SLE0240-RES2	ISCL6	QC		14	L002084		05/15/2023 23:04	23051515	PK	
23D0359-01	DUP01-0423	1613B Dioxin	A 01	15		K011414	05/15/2023 23:55	23051516	PK	
23D0359-02	MW9-0423	1613B Dioxin	A 01	16		K011414	05/16/2023 00:45	23051517	PK	
23D0359-03	MW8-0423	1613B Dioxin	A 01	17		K011414	05/16/2023 01:34	23051518	PK	
23D0359-04	MW3-0423	1613B Dioxin	A 01	18		K011414	05/16/2023 02:23	23051519	PK	
23D0359-05	MW4-0423	1613B Dioxin	A 01	19		K011414	05/16/2023 03:11	23051520	PK	
23D0359-06	MW7-0423	1613B Dioxin	A 01	20		K011414	05/16/2023 04:01	23051521	PK	
23D0359-07	MW1-0423	1613B Dioxin	A 01	21		K011414	05/16/2023 04:49	23051522	PK	
23D0359-09	MW6-0423	1613B Dioxin	A 01	22		K011414	05/16/2023 05:39	23051523	PK	

ANALYSIS SEQUENCE

SLE0240

Instrument: AUTOSPEC01 HRGCMS Column ID: L2313
Calibration ID: GC00015 Tune File: MAR2023_1-5
EM Voltage: 350 Resolution check times : 11:54, 23:04, 08:58

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
23D0359-10	MW2-0423	1613B Dioxin	A 01	23		K011414	05/16/2023 06:27	23051524	PK	
23D0476-03	45-334 April Sample	1613B Dioxin	A 01	24		K011414	05/16/2023 07:16	23051525	PK	
SLE0240-CCV2	CS3L7	QC		25	K009821		05/16/2023 08:05	23051526	PK	
SLE0240-RES3	ISCL7	QC		26	L002084		05/16/2023 08:58	23051527	PK	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
		Calibration:	GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3N1	SLE0354-ICV1	23052202	NA	05/22/23 10:59
ISCN1	SLE0354-RES1	23052203	NA	05/22/23 11:53
Blank	BLD0508-BLK1	23052204	Water	05/22/23 12:50
LCS	BLD0508-BS1	23052205	Water	05/22/23 13:40
LCS Dup	BLD0508-BSD1	23052206	Water	05/22/23 14:32
MWCP1-041323	23D0412-01	23052207	Water	05/22/23 15:20
MWCP1-041323-D	23D0412-02	23052208	Water	05/22/23 16:09
MWCP2-041323	23D0412-03	23052209	Water	05/22/23 16:58
MWCP3-041323	23D0412-04	23052210	Water	05/22/23 17:47
MWCP4-041323	23D0412-05	23052211	Water	05/22/23 18:36
MWCP7-041323	23D0412-08	23052212	Water	05/22/23 19:25
MWVB3-041323	23D0412-09	23052213	Water	05/22/23 20:14
CS3N2	SLE0354-CCV1	23052214	NA	05/22/23 21:03
ISCN2	SLE0354-RES2	23052215	NA	05/22/23 21:56
HC00-B312-041323	23D0412-10	23052216	Water	05/22/23 22:47
MWVB1-041423	23D0412-11	23052217	Water	05/22/23 23:36
MWVB1-041423-D	23D0412-12	23052218	Water	05/23/23 00:25
MWVB2-041423	23D0412-13	23052219	Water	05/23/23 01:14
CS3N3	SLE0354-CCV2	23052225	NA	05/23/23 06:08
ISCN3	SLE0354-RES3	23052226	NA	05/23/23 07:01

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 5/23/2023 2:36:36PM

ANALYSIS SEQUENCE

SLE0354

Instrument: AUTOSPEC01 HRGCMS Column ID: L2313
Calibration ID: GC00015 Tune File: MAR2023_1-5
EM Voltage: 350 Resolution check times : 10:59, 21:56, 07:01

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0354-ICV1	CS3N1	QC		1	K009821		05/22/2023 10:59	23052202	PK	
SLE0354-RES1	ISCN1	QC		2	L002084		05/22/2023 11:53	23052203	PK	
BLD0508-BLK1	Blank	QC		3		K011414	05/22/2023 12:50	23052204	PK	
BLD0508-BS1	LCS	QC		4		K011414	05/22/2023 13:40	23052205	PK	
BLD0508-BSD1	LCS Dup	QC		5		K011414	05/22/2023 14:32	23052206	PK	
23D0412-01	MWCP1-041323	1613B Dioxin	B 01	6		K011414	05/22/2023 15:20	23052207	PK	
23D0412-02	MWCP1-041323-D	1613B Dioxin	B 01	7		K011414	05/22/2023 16:09	23052208	PK	
23D0412-03	MWCP2-041323	1613B Dioxin	B 01	8		K011414	05/22/2023 16:58	23052209	PK	
23D0412-04	MWCP3-041323	1613B Dioxin	B 01	9		K011414	05/22/2023 17:47	23052210	PK	
23D0412-05	MWCP4-041323	1613B Dioxin	B 01	10		K011414	05/22/2023 18:36	23052211	PK	
23D0412-08	MWCP7-041323	1613B Dioxin	B 01	11		K011414	05/22/2023 19:25	23052212	PK	
23D0412-09	MWVB3-041323	1613B Dioxin	B 01	12		K011414	05/22/2023 20:14	23052213	PK	
SLE0354-CCV1	CS3N2	QC		13	K009821		05/22/2023 21:03	23052214	PK	
SLE0354-RES2	ISCN2	QC		14	L002084		05/22/2023 21:56	23052215	PK	
23D0412-10	HC00-B312-041323	1613B Dioxin	B 01	15		K011414	05/22/2023 22:47	23052216	PK	
23D0412-11	MWVB1-041423	1613B Dioxin	B 01	16		K011414	05/22/2023 23:36	23052217	PK	
23D0412-12	MWVB1-041423-D	1613B Dioxin	B 01	17		K011414	05/23/2023 00:25	23052218	PK	
23D0412-13	MWVB2-041423	1613B Dioxin	B 01	18		K011414	05/23/2023 01:14	23052219	PK	
BLE0388-BLK2	Blank	QC		19		K011414	05/17/2023 12:18	23051704A	PK	
BLE0388-BS2	LCS	QC		20		K011414	05/17/2023 13:06	23051705A	PK	
23E0243-01	MAF-MW-P-04-20230509	1613B Dioxin	H 01	21		K011414	05/23/2023 02:03	23052220	PK	
23E0243-03	MAF-MW-BG01-2023050	1613B Dioxin	G 01	22		K011414	05/23/2023 02:52	23052221	PK	

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 5/23/2023 2:36:36PM

ANALYSIS SEQUENCE

SLE0354

Instrument: AUTOSPEC01 HRGCMS Column ID: L2313
Calibration ID: GC00015 Tune File: MAR2023_1-5
EM Voltage: 350 Resolution check times : 10:59, 21:56, 07:01

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
23E0286-01	MAF-MW-P-01-20230510	1613B Dioxin	B 01	23		K011414	05/23/2023 03:41	23052222	PK	
23E0286-03	MAF-MW-P-02-20230510	1613B Dioxin	C 01	24		K011414	05/23/2023 04:30	23052223	PK	
23E0286-05	MAF-MW-P-52-20230510	1613B Dioxin	C 01	25		K011414	05/23/2023 05:19	23052224	PK	
SLE0354-CCV2	CS3N3	QC		26	K009821		05/23/2023 06:08	23052225	PK	
SLE0354-RES3	ISCN3	QC		27	L002084		05/23/2023 07:01	23052226	PK	

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLC0045	Instrument:	AUTOSPEC01
Sample ID:	SLC0045-ICV1	Calibration:	GC00015
File ID:	23030302	Analyzed:	03/03/23 09:51

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	94.0	71 - 129	25.7745	25.76487	0.0096	N/A	
13C12-2,3,7,8-TCDD	100.00	102	82 - 118	26.4242	26.40287	0.0213	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	92.2	76 - 124	29.9337	29.92235	0.0114	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	87.6	77 - 123	31.2707	31.2611	0.0096	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	84.3	62 - 138	31.5268	31.5192	0.0076	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	84.0	76 - 124	34.8915	34.88393	0.0076	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	74.6	70 - 130	35.0363	35.02318	0.0131	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	88.7	73 - 127	35.8942	35.88653	0.0077	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	99.9	74 - 126	36.9303	36.91718	0.0131	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	93.5	85 - 115	36.0167	36.00728	0.0094	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	86.9	85 - 115	36.1393	36.12053	0.0188	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	95.3	78 - 122	38.7685	38.7593	0.0092	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	98.7	77 - 123	41.008	40.99867	0.0093	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	105	72 - 128	40.2615	40.25773	0.0038	N/A	
13C12-OCDD	200.00	107	48 - 152	44.9993	44.98705	0.0122	N/A	
37Cl4-2,3,7,8-TCDD	10.000	90.5	0 - 200	26.4383	26.42402	0.0143	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLC0045	Instrument:	AUTOSPEC01
Sample ID:	SLC0045-SCV1	Calibration:	GC00015
File ID:	23030310	Analyzed:	03/03/23 16:36

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	96.9	0 - 200	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	100.00	96.6	0 - 200	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	0 - 200	29.9225	29.92235	0.0001	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	0 - 200	31.2593	31.2611	-0.0018	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	0 - 200	31.5155	31.5192	-0.0037	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	0 - 200	34.8802	34.88393	-0.0037	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	0 - 200	35.014	35.02318	-0.0092	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	0 - 200	35.8828	35.88653	-0.0037	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	0 - 200	36.9078	36.91718	-0.0094	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	0 - 200	36.0053	36.00728	-0.0020	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	0 - 200	36.1168	36.12053	-0.0037	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	0 - 200	38.7573	38.7593	-0.0020	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	0 - 200	40.9967	40.99867	-0.0020	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	0 - 200	40.2502	40.25773	-0.0075	N/A	
13C12-OCDD	200.00	80.8	0 - 200	44.9807	44.98705	-0.0064	N/A	
37Cl4-2,3,7,8-TCDD	10.000	87.1	0 - 200	26.4242	26.42402	0.0002	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLC0045	Instrument:	AUTOSPEC01
Sample ID:	SLC0045-CCV1	Calibration:	GC00015
File ID:	23030311	Analyzed:	03/03/23 17:25

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	89.4	71 - 129	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	100.00	86.0	82 - 118	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	92.6	76 - 124	29.9225	29.92235	0.0001	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	91.6	77 - 123	31.2593	31.2611	-0.0018	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	90.8	62 - 138	31.5157	31.5192	-0.0035	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	95.2	76 - 124	34.8805	34.88393	-0.0034	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	91.1	70 - 130	35.0253	35.02318	0.0021	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	96.9	73 - 127	35.883	35.88653	-0.0035	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	101	74 - 126	36.9193	36.91718	0.0021	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.6	85 - 115	36.0057	36.00728	-0.0016	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	98.4	85 - 115	36.117	36.12053	-0.0035	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	78 - 122	38.7577	38.7593	-0.0016	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	84.3	77 - 123	40.997	40.99867	-0.0017	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	92.0	72 - 128	40.2617	40.25773	0.0040	N/A	
13C12-OCDD	200.00	85.1	48 - 152	44.9903	44.98705	0.0032	N/A	
37Cl4-2,3,7,8-TCDD	10.000	75.4	0 - 200	26.424	26.42402	0.0000	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
Sample ID:	SLE0240-ICV1	Calibration:	GC00015
File ID:	23051502	Analyzed:	05/15/23 12:04

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	103	71 - 129	25.6895	25.76487	-0.0754	N/A	
13C12-2,3,7,8-TCDD	100.00	106	82 - 118	26.3252	26.40287	-0.0777	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	103	76 - 124	29.8445	29.92235	-0.0779	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	106	77 - 123	31.1813	31.2611	-0.0798	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	103	62 - 138	31.4377	31.5192	-0.0815	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	96.6	76 - 124	34.8023	34.88393	-0.0816	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	92.6	70 - 130	34.936	35.02318	-0.0872	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	103	73 - 127	35.8052	35.88653	-0.0813	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	107	74 - 126	36.8413	36.91718	-0.0759	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	96.6	85 - 115	35.9277	36.00728	-0.0796	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	95.4	85 - 115	36.0392	36.12053	-0.0813	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	117	78 - 122	38.6798	38.7593	-0.0795	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	118	77 - 123	40.908	40.99867	-0.0907	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	108	82 - 118	40.1615	40.25773	-0.0962	N/A	
13C12-OCDD	200.00	127	48 - 152	44.8605	44.98705	-0.1266	N/A	
37Cl4-2,3,7,8-TCDD	10.000	91.6	79 - 121	26.3535	26.42402	-0.0705	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
Sample ID:	BLD0507-BLK1	Calibration:	GC00015
File ID:	23051505	Analyzed:	05/15/23 14:50

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	52.4	24 - 169	25.7037	25.76487	-0.0612	N/A	
13C12-2,3,7,8-TCDD	2000.0	63.7	25 - 164	26.3393	26.40287	-0.0636	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	84.2	24 - 185	29.8443	29.92235	-0.0781	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	87.4	21 - 178	31.1813	31.2611	-0.0798	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	96.8	25 - 181	31.4375	31.5192	-0.0817	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	77.6	26 - 152	34.8022	34.88393	-0.0817	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	77.4	26 - 123	34.947	35.02318	-0.0762	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	82.1	28 - 136	35.805	35.88653	-0.0815	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	79.9	29 - 147	36.8412	36.91718	-0.0760	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	88.7	32 - 141	35.9275	36.00728	-0.0798	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	85.4	28 - 130	36.0388	36.12053	-0.0817	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	85.5	28 - 143	38.6795	38.7593	-0.0798	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	86.3	26 - 138	40.9077	40.99867	-0.0910	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	88.7	23 - 140	40.1723	40.25773	-0.0854	N/A	
13C12-OCDD	4000.0	93.6	17 - 157	44.8692	44.98705	-0.1179	N/A	
37Cl4-2,3,7,8-TCDD	800.00	64.8	35 - 197	26.3535	26.42402	-0.0705	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
Sample ID:	BLD0507-BS1	Calibration:	GC00015
File ID:	23051506	Analyzed:	05/15/23 15:38

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	64.6	24 - 169	25.6753	25.76487	-0.0896	N/A	
13C12-2,3,7,8-TCDD	2000.0	72.1	25 - 164	26.3108	26.40287	-0.0921	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	83.7	24 - 185	29.8332	29.92235	-0.0892	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	87.1	21 - 178	31.17	31.2611	-0.0911	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	92.1	25 - 181	31.4262	31.5192	-0.0930	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	73.3	26 - 152	34.7908	34.88393	-0.0931	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	70.1	26 - 123	34.9358	35.02318	-0.0874	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	76.4	28 - 136	35.7935	35.88653	-0.0930	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	74.8	29 - 147	36.8298	36.91718	-0.0874	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	84.4	32 - 141	35.9162	36.00728	-0.0911	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	79.0	28 - 130	36.0275	36.12053	-0.0930	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	82.7	28 - 143	38.6682	38.7593	-0.0911	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	84.5	26 - 138	40.8965	40.99867	-0.1022	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	84.2	23 - 140	40.161	40.25773	-0.0967	N/A	
13C12-OCDD	4000.0	88.6	17 - 157	44.8508	44.98705	-0.1363	N/A	
37Cl4-2,3,7,8-TCDD	800.00	75.6	35 - 197	26.3392	26.42402	-0.0848	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
Sample ID:	BLD0507-BSD1	Calibration:	GC00015
File ID:	23051507	Analyzed:	05/15/23 16:28

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	68.7	24 - 169	25.6895	25.76487	-0.0754	N/A	
13C12-2,3,7,8-TCDD	2000.0	76.1	25 - 164	26.3252	26.40287	-0.0777	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	95.1	24 - 185	29.8445	29.92235	-0.0779	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	97.4	21 - 178	31.1815	31.2611	-0.0796	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	106	25 - 181	31.4265	31.5192	-0.0927	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	78.1	26 - 152	34.8022	34.88393	-0.0817	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	87.6	26 - 123	34.936	35.02318	-0.0872	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	89.1	28 - 136	35.8048	35.88653	-0.0817	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	90.9	29 - 147	36.841	36.91718	-0.0762	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	98.6	32 - 141	35.9163	36.00728	-0.0910	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	91.6	28 - 130	36.0388	36.12053	-0.0817	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	95.4	28 - 143	38.6792	38.7593	-0.0801	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	95.3	26 - 138	40.9075	40.99867	-0.0912	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	95.2	23 - 140	40.161	40.25773	-0.0967	N/A	
13C12-OCDD	4000.0	104	17 - 157	44.86	44.98705	-0.1271	N/A	
37Cl4-2,3,7,8-TCDD	800.00	72.0	35 - 197	26.3393	26.42402	-0.0847	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
Sample ID:	23D0412-06	Calibration:	GC00015
File ID:	23051509	Analyzed:	05/15/23 18:06

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1941.7	25.2	24 - 169	25.6753	25.76487	-0.0896	N/A	
13C12-2,3,7,8-TCDD	1941.7	31.1	25 - 164	26.311	26.40287	-0.0919	N/A	
13C12-1,2,3,7,8-PeCDF	1941.7	47.6	24 - 185	29.8333	29.92235	-0.0891	N/A	
13C12-2,3,4,7,8-PeCDF	1941.7	51.7	21 - 178	31.159	31.2611	-0.1021	N/A	
13C12-1,2,3,7,8-PeCDD	1941.7	56.7	25 - 181	31.4153	31.5192	-0.1039	N/A	
13C12-1,2,3,4,7,8-HxCDF	1941.7	51.1	26 - 152	34.7913	34.88393	-0.0926	N/A	
13C12-1,2,3,6,7,8-HxCDF	1941.7	51.5	26 - 123	34.925	35.02318	-0.0982	N/A	
13C12-2,3,4,6,7,8-HxCDF	1941.7	56.4	28 - 136	35.794	35.88653	-0.0925	N/A	
13C12-1,2,3,7,8,9-HxCDF	1941.7	58.3	29 - 147	36.819	36.91718	-0.0982	N/A	
13C12-1,2,3,4,7,8-HxCDD	1941.7	58.6	32 - 141	35.9055	36.00728	-0.1018	N/A	
13C12-1,2,3,6,7,8-HxCDD	1941.7	57.0	28 - 130	36.028	36.12053	-0.0925	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1941.7	61.1	28 - 143	38.6685	38.7593	-0.0908	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1941.7	60.6	26 - 138	40.8968	40.99867	-0.1019	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1941.7	61.6	23 - 140	40.1503	40.25773	-0.1074	N/A	
13C12-OCDD	3883.5	68.5	17 - 157	44.8512	44.98705	-0.1359	N/A	
37Cl4-2,3,7,8-TCDD	776.70	51.3	35 - 197	26.3393	26.42402	-0.0847	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
Sample ID:	23D0412-07	Calibration:	GC00015
File ID:	23051510	Analyzed:	05/15/23 18:55

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1960.8	89.3	24 - 169	25.6753	25.76487	-0.0896	N/A	
13C12-2,3,7,8-TCDD	1960.8	101	25 - 164	26.311	26.40287	-0.0919	N/A	
13C12-1,2,3,7,8-PeCDF	1960.8	109	24 - 185	29.8333	29.92235	-0.0891	N/A	
13C12-2,3,4,7,8-PeCDF	1960.8	114	21 - 178	31.1703	31.2611	-0.0908	N/A	
13C12-1,2,3,7,8-PeCDD	1960.8	121	25 - 181	31.4153	31.5192	-0.1039	N/A	
13C12-1,2,3,4,7,8-HxCDF	1960.8	95.1	26 - 152	34.7913	34.88393	-0.0926	N/A	
13C12-1,2,3,6,7,8-HxCDF	1960.8	94.7	26 - 123	34.9248	35.02318	-0.0984	N/A	
13C12-2,3,4,6,7,8-HxCDF	1960.8	102	28 - 136	35.7938	35.88653	-0.0927	N/A	
13C12-1,2,3,7,8,9-HxCDF	1960.8	103	29 - 147	36.8302	36.91718	-0.0870	N/A	
13C12-1,2,3,4,7,8-HxCDD	1960.8	109	32 - 141	35.9165	36.00728	-0.0908	N/A	
13C12-1,2,3,6,7,8-HxCDD	1960.8	103	28 - 130	36.0278	36.12053	-0.0927	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1960.8	105	28 - 143	38.6685	38.7593	-0.0908	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1960.8	108	26 - 138	40.8968	40.99867	-0.1019	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1960.8	105	23 - 140	40.1613	40.25773	-0.0964	N/A	
13C12-OCDD	3921.6	112	17 - 157	44.8513	44.98705	-0.1358	N/A	
37Cl4-2,3,7,8-TCDD	784.31	93.7	35 - 197	26.3392	26.42402	-0.0848	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
Sample ID:	SLE0240-CCV1	Calibration:	GC00015
File ID:	23051514	Analyzed:	05/15/23 22:11

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	100	71 - 129	25.6755	25.76487	-0.0894	N/A	
13C12-2,3,7,8-TCDD	100.00	104	82 - 118	26.3112	26.40287	-0.0917	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	98.1	76 - 124	29.8223	29.92235	-0.1001	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	104	77 - 123	31.1593	31.2611	-0.1018	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	104	62 - 138	31.4155	31.5192	-0.1037	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	88.5	76 - 124	34.7913	34.88393	-0.0926	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	91.0	70 - 130	34.9252	35.02318	-0.0980	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	92.0	73 - 127	35.7942	35.88653	-0.0923	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	108	74 - 126	36.8192	36.91718	-0.0980	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	94.9	85 - 115	35.9055	36.00728	-0.1018	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	91.3	85 - 115	36.0282	36.12053	-0.0923	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	101	78 - 122	38.6688	38.7593	-0.0905	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	102	77 - 123	40.8858	40.99867	-0.1129	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	95.4	82 - 118	40.1507	40.25773	-0.1070	N/A	
13C12-OCDD	200.00	110	48 - 152	44.8515	44.98705	-0.1356	N/A	
37Cl4-2,3,7,8-TCDD	10.000	91.7	79 - 121	26.3252	26.42402	-0.0988	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0240	Instrument:	AUTOSPEC01
Sample ID:	SLE0240-CCV2	Calibration:	GC00015
File ID:	23051526	Analyzed:	05/16/23 08:05

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	98.8	71 - 129	25.6472	25.76487	-0.1177	N/A	
13C12-2,3,7,8-TCDD	100.00	105	82 - 118	26.297	26.40287	-0.1059	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	97.5	76 - 124	29.811	29.92235	-0.1114	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	103	77 - 123	31.1478	31.2611	-0.1133	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	103	62 - 138	31.404	31.5192	-0.1152	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	90.2	76 - 124	34.769	34.88393	-0.1149	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	88.1	70 - 130	34.9137	35.02318	-0.1095	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	91.3	73 - 127	35.7715	35.88653	-0.1150	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	111	74 - 126	36.8077	36.91718	-0.1095	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	93.6	85 - 115	35.8942	36.00728	-0.1131	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	92.1	85 - 115	36.0055	36.12053	-0.1150	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	97.2	78 - 122	38.657	38.7593	-0.1023	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	99.4	77 - 123	40.8742	40.99867	-0.1245	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	94.0	82 - 118	40.1388	40.25773	-0.1189	N/A	
13C12-OCDD	200.00	106	48 - 152	44.8325	44.98705	-0.1546	N/A	
37Cl4-2,3,7,8-TCDD	10.000	89.2	79 - 121	26.3112	26.42402	-0.1128	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	SLE0354-ICV1	Calibration:	GC00015
File ID:	23052202	Analyzed:	05/22/23 10:59

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	94.9	71 - 129	25.6473	25.76487	-0.1176	N/A	
13C12-2,3,7,8-TCDD	100.00	105	82 - 118	26.283	26.40287	-0.1199	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	104	76 - 124	29.8002	29.92235	-0.1222	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	108	77 - 123	31.1372	31.2611	-0.1239	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	106	62 - 138	31.3933	31.5192	-0.1259	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	83.0	76 - 124	34.7582	34.88393	-0.1257	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	82.0	70 - 130	34.903	35.02318	-0.1202	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	81.5	73 - 127	35.761	35.88653	-0.1255	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	89.1	74 - 126	36.7972	36.91718	-0.1200	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.7	85 - 115	35.8835	36.00728	-0.1238	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	91.7	85 - 115	35.995	36.12053	-0.1255	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	91.3	78 - 122	38.6357	38.7593	-0.1236	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	90.7	77 - 123	40.864	40.99867	-0.1347	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	83.4	82 - 118	40.1287	40.25773	-0.1290	N/A	
13C12-OCDD	200.00	96.1	48 - 152	44.8062	44.98705	-0.1809	N/A	
37Cl4-2,3,7,8-TCDD	10.000	88.0	79 - 121	26.3113	26.42402	-0.1127	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	BLD0508-BLK1	Calibration:	GC00015
File ID:	23052204	Analyzed:	05/22/23 12:50

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	98.7	24 - 169	25.6472	25.76487	-0.1177	N/A	
13C12-2,3,7,8-TCDD	2000.0	114	25 - 164	26.2828	26.40287	-0.1201	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	103	24 - 185	29.7998	29.92235	-0.1226	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	107	21 - 178	31.1368	31.2611	-0.1243	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	110	25 - 181	31.3932	31.5192	-0.1260	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	89.4	26 - 152	34.758	34.88393	-0.1259	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	90.3	26 - 123	34.9028	35.02318	-0.1204	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	87.6	28 - 136	35.7717	35.88653	-0.1148	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	92.7	29 - 147	36.7967	36.91718	-0.1205	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	103	32 - 141	35.8832	36.00728	-0.1241	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	101	28 - 130	35.9945	36.12053	-0.1260	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	91.7	28 - 143	38.6463	38.7593	-0.1130	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	92.6	26 - 138	40.8633	40.99867	-0.1354	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	85.8	23 - 140	40.128	40.25773	-0.1297	N/A	
13C12-OCDD	4000.0	91.4	17 - 157	44.8147	44.98705	-0.1724	N/A	
37Cl4-2,3,7,8-TCDD	800.00	98.1	35 - 197	26.3112	26.42402	-0.1128	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	BLD0508-BS1	Calibration:	GC00015
File ID:	23052205	Analyzed:	05/22/23 13:40

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	90.5	24 - 169	25.6472	25.76487	-0.1177	N/A	
13C12-2,3,7,8-TCDD	2000.0	101	25 - 164	26.2828	26.40287	-0.1201	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	100	24 - 185	29.7998	29.92235	-0.1226	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	107	21 - 178	31.1258	31.2611	-0.1353	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	107	25 - 181	31.382	31.5192	-0.1372	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	82.0	26 - 152	34.7577	34.88393	-0.1262	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	79.6	26 - 123	34.8915	35.02318	-0.1317	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	81.6	28 - 136	35.7603	35.88653	-0.1262	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	91.8	29 - 147	36.7965	36.91718	-0.1207	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	96.8	32 - 141	35.8828	36.00728	-0.1245	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	93.7	28 - 130	35.9943	36.12053	-0.1262	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	83.5	28 - 143	38.6348	38.7593	-0.1245	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	84.1	26 - 138	40.8632	40.99867	-0.1355	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	80.8	23 - 140	40.1278	40.25773	-0.1299	N/A	
13C12-OCDD	4000.0	81.5	17 - 157	44.8052	44.98705	-0.1819	N/A	
37Cl4-2,3,7,8-TCDD	800.00	92.0	35 - 197	26.2968	26.42402	-0.1272	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	BLD0508-BSD1	Calibration:	GC00015
File ID:	23052206	Analyzed:	05/22/23 14:32

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	92.5	24 - 169	25.6472	25.76487	-0.1177	N/A	
13C12-2,3,7,8-TCDD	2000.0	107	25 - 164	26.2828	26.40287	-0.1201	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	98.2	24 - 185	29.7888	29.92235	-0.1336	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	104	21 - 178	31.1257	31.2611	-0.1354	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	103	25 - 181	31.382	31.5192	-0.1372	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	84.5	26 - 152	34.7578	34.88393	-0.1261	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	79.6	26 - 123	34.8915	35.02318	-0.1317	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	87.4	28 - 136	35.7605	35.88653	-0.1260	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	94.1	29 - 147	36.7968	36.91718	-0.1204	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	102	32 - 141	35.8832	36.00728	-0.1241	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	95.4	28 - 130	35.9945	36.12053	-0.1260	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	89.4	28 - 143	38.6352	38.7593	-0.1241	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	88.1	26 - 138	40.8522	40.99867	-0.1465	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	82.9	23 - 140	40.1168	40.25773	-0.1409	N/A	
13C12-OCDD	4000.0	86.3	17 - 157	44.8055	44.98705	-0.1816	N/A	
37Cl4-2,3,7,8-TCDD	800.00	97.3	35 - 197	26.297	26.42402	-0.1270	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-01	Calibration:	GC00015
File ID:	23052207	Analyzed:	05/22/23 15:20

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1923.1	102	24 - 169	25.633	25.76487	-0.1319	N/A	
13C12-2,3,7,8-TCDD	1923.1	115	25 - 164	26.2687	26.40287	-0.1342	N/A	
13C12-1,2,3,7,8-PeCDF	1923.1	106	24 - 185	29.7775	29.92235	-0.1449	N/A	
13C12-2,3,4,7,8-PeCDF	1923.1	112	21 - 178	31.1143	31.2611	-0.1468	N/A	
13C12-1,2,3,7,8-PeCDD	1923.1	108	25 - 181	31.3707	31.5192	-0.1485	N/A	
13C12-1,2,3,4,7,8-HxCDF	1923.1	91.6	26 - 152	34.7465	34.88393	-0.1374	N/A	
13C12-1,2,3,6,7,8-HxCDF	1923.1	90.8	26 - 123	34.8802	35.02318	-0.1430	N/A	
13C12-2,3,4,6,7,8-HxCDF	1923.1	91.5	28 - 136	35.749	35.88653	-0.1375	N/A	
13C12-1,2,3,7,8,9-HxCDF	1923.1	107	29 - 147	36.7852	36.91718	-0.1320	N/A	
13C12-1,2,3,4,7,8-HxCDD	1923.1	107	32 - 141	35.8715	36.00728	-0.1358	N/A	
13C12-1,2,3,6,7,8-HxCDD	1923.1	105	28 - 130	35.983	36.12053	-0.1375	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1923.1	96.8	28 - 143	38.6235	38.7593	-0.1358	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1923.1	97.3	26 - 138	40.8517	40.99867	-0.1470	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1923.1	92.3	23 - 140	40.1052	40.25773	-0.1525	N/A	
13C12-OCDD	3846.2	96.2	17 - 157	44.7958	44.98705	-0.1913	N/A	
37Cl4-2,3,7,8-TCDD	769.23	107	35 - 197	26.2827	26.42402	-0.1413	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-02	Calibration:	GC00015
File ID:	23052208	Analyzed:	05/22/23 16:09

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1886.8	97.6	24 - 169	25.633	25.76487	-0.1319	N/A	
13C12-2,3,7,8-TCDD	1886.8	114	25 - 164	26.2687	26.40287	-0.1342	N/A	
13C12-1,2,3,7,8-PeCDF	1886.8	105	24 - 185	29.7887	29.92235	-0.1337	N/A	
13C12-2,3,4,7,8-PeCDF	1886.8	111	21 - 178	31.1257	31.2611	-0.1354	N/A	
13C12-1,2,3,7,8-PeCDD	1886.8	106	25 - 181	31.3818	31.5192	-0.1374	N/A	
13C12-1,2,3,4,7,8-HxCDF	1886.8	94.3	26 - 152	34.7467	34.88393	-0.1372	N/A	
13C12-1,2,3,6,7,8-HxCDF	1886.8	89.8	26 - 123	34.8915	35.02318	-0.1317	N/A	
13C12-2,3,4,6,7,8-HxCDF	1886.8	93.0	28 - 136	35.7605	35.88653	-0.1260	N/A	
13C12-1,2,3,7,8,9-HxCDF	1886.8	106	29 - 147	36.7855	36.91718	-0.1317	N/A	
13C12-1,2,3,4,7,8-HxCDD	1886.8	107	32 - 141	35.8718	36.00728	-0.1355	N/A	
13C12-1,2,3,6,7,8-HxCDD	1886.8	107	28 - 130	35.9945	36.12053	-0.1260	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1886.8	99.4	28 - 143	38.635	38.7593	-0.1243	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1886.8	96.2	26 - 138	40.852	40.99867	-0.1467	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1886.8	93.7	23 - 140	40.1167	40.25773	-0.1410	N/A	
13C12-OCDD	3773.6	96.8	17 - 157	44.8053	44.98705	-0.1818	N/A	
37Cl4-2,3,7,8-TCDD	754.72	104	35 - 197	26.2968	26.42402	-0.1272	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-03	Calibration:	GC00015
File ID:	23052209	Analyzed:	05/22/23 16:58

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1923.1	87.8	24 - 169	25.647	25.76487	-0.1179	N/A	
13C12-2,3,7,8-TCDD	1923.1	103	25 - 164	26.2827	26.40287	-0.1202	N/A	
13C12-1,2,3,7,8-PeCDF	1923.1	90.4	24 - 185	29.7885	29.92235	-0.1339	N/A	
13C12-2,3,4,7,8-PeCDF	1923.1	96.4	21 - 178	31.1255	31.2611	-0.1356	N/A	
13C12-1,2,3,7,8-PeCDD	1923.1	90.0	25 - 181	31.3817	31.5192	-0.1375	N/A	
13C12-1,2,3,4,7,8-HxCDF	1923.1	80.2	26 - 152	34.7575	34.88393	-0.1264	N/A	
13C12-1,2,3,6,7,8-HxCDF	1923.1	77.5	26 - 123	34.8912	35.02318	-0.1320	N/A	
13C12-2,3,4,6,7,8-HxCDF	1923.1	81.4	28 - 136	35.7602	35.88653	-0.1263	N/A	
13C12-1,2,3,7,8,9-HxCDF	1923.1	88.9	29 - 147	36.7963	36.91718	-0.1209	N/A	
13C12-1,2,3,4,7,8-HxCDD	1923.1	92.8	32 - 141	35.8828	36.00728	-0.1245	N/A	
13C12-1,2,3,6,7,8-HxCDD	1923.1	89.6	28 - 130	35.9942	36.12053	-0.1263	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1923.1	81.3	28 - 143	38.6347	38.7593	-0.1246	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1923.1	79.7	26 - 138	40.8518	40.99867	-0.1469	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1923.1	77.8	23 - 140	40.1165	40.25773	-0.1412	N/A	
13C12-OCDD	3846.2	78.4	17 - 157	44.805	44.98705	-0.1821	N/A	
37Cl4-2,3,7,8-TCDD	769.23	92.3	35 - 197	26.2968	26.42402	-0.1272	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-04	Calibration:	GC00015
File ID:	23052210	Analyzed:	05/22/23 17:47

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1960.8	89.5	24 - 169	25.6328	25.76487	-0.1321	N/A	
13C12-2,3,7,8-TCDD	1960.8	103	25 - 164	26.2683	26.40287	-0.1346	N/A	
13C12-1,2,3,7,8-PeCDF	1960.8	92.2	24 - 185	29.7883	29.92235	-0.1341	N/A	
13C12-2,3,4,7,8-PeCDF	1960.8	96.0	21 - 178	31.1253	31.2611	-0.1358	N/A	
13C12-1,2,3,7,8-PeCDD	1960.8	91.5	25 - 181	31.3815	31.5192	-0.1377	N/A	
13C12-1,2,3,4,7,8-HxCDF	1960.8	80.7	26 - 152	34.7573	34.88393	-0.1266	N/A	
13C12-1,2,3,6,7,8-HxCDF	1960.8	81.7	26 - 123	34.891	35.02318	-0.1322	N/A	
13C12-2,3,4,6,7,8-HxCDF	1960.8	81.8	28 - 136	35.76	35.88653	-0.1265	N/A	
13C12-1,2,3,7,8,9-HxCDF	1960.8	87.2	29 - 147	36.7962	36.91718	-0.1210	N/A	
13C12-1,2,3,4,7,8-HxCDD	1960.8	89.8	32 - 141	35.8825	36.00728	-0.1248	N/A	
13C12-1,2,3,6,7,8-HxCDD	1960.8	84.3	28 - 130	35.994	36.12053	-0.1265	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1960.8	80.5	28 - 143	38.6345	38.7593	-0.1248	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1960.8	76.9	26 - 138	40.8515	40.99867	-0.1472	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1960.8	72.8	23 - 140	40.1162	40.25773	-0.1415	N/A	
13C12-OCDD	3921.6	71.8	17 - 157	44.8045	44.98705	-0.1826	N/A	
37Cl4-2,3,7,8-TCDD	784.31	96.9	35 - 197	26.2967	26.42402	-0.1273	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-05	Calibration:	GC00015
File ID:	23052211	Analyzed:	05/22/23 18:36

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1941.7	90.2	24 - 169	25.633	25.76487	-0.1319	N/A	
13C12-2,3,7,8-TCDD	1941.7	106	25 - 164	26.2687	26.40287	-0.1342	N/A	
13C12-1,2,3,7,8-PeCDF	1941.7	94.8	24 - 185	29.7887	29.92235	-0.1337	N/A	
13C12-2,3,4,7,8-PeCDF	1941.7	100	21 - 178	31.1257	31.2611	-0.1354	N/A	
13C12-1,2,3,7,8-PeCDD	1941.7	95.3	25 - 181	31.3818	31.5192	-0.1374	N/A	
13C12-1,2,3,4,7,8-HxCDF	1941.7	85.5	26 - 152	34.7577	34.88393	-0.1262	N/A	
13C12-1,2,3,6,7,8-HxCDF	1941.7	82.5	26 - 123	34.8915	35.02318	-0.1317	N/A	
13C12-2,3,4,6,7,8-HxCDF	1941.7	86.9	28 - 136	35.7603	35.88653	-0.1262	N/A	
13C12-1,2,3,7,8,9-HxCDF	1941.7	97.4	29 - 147	36.7855	36.91718	-0.1317	N/A	
13C12-1,2,3,4,7,8-HxCDD	1941.7	96.5	32 - 141	35.8718	36.00728	-0.1355	N/A	
13C12-1,2,3,6,7,8-HxCDD	1941.7	96.8	28 - 130	35.9943	36.12053	-0.1262	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1941.7	87.7	28 - 143	38.635	38.7593	-0.1243	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1941.7	86.5	26 - 138	40.852	40.99867	-0.1467	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1941.7	82.0	23 - 140	40.1167	40.25773	-0.1410	N/A	
13C12-OCDD	3883.5	82.1	17 - 157	44.8053	44.98705	-0.1818	N/A	
37Cl4-2,3,7,8-TCDD	776.70	92.9	35 - 197	26.2968	26.42402	-0.1272	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-08	Calibration:	GC00015
File ID:	23052212	Analyzed:	05/22/23 19:25

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	90.3	24 - 169	25.6472	25.76487	-0.1177	N/A	
13C12-2,3,7,8-TCDD	2000.0	105	25 - 164	26.2827	26.40287	-0.1202	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	94.7	24 - 185	29.7885	29.92235	-0.1339	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	99.1	21 - 178	31.1253	31.2611	-0.1358	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	96.5	25 - 181	31.3817	31.5192	-0.1375	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	86.6	26 - 152	34.7575	34.88393	-0.1264	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	90.3	26 - 123	34.8912	35.02318	-0.1320	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	86.8	28 - 136	35.7602	35.88653	-0.1263	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	98.0	29 - 147	36.7963	36.91718	-0.1209	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	96.7	32 - 141	35.8827	36.00728	-0.1246	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	92.8	28 - 130	35.9942	36.12053	-0.1263	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	86.8	28 - 143	38.6347	38.7593	-0.1246	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	88.3	26 - 138	40.863	40.99867	-0.1357	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	81.6	23 - 140	40.1275	40.25773	-0.1302	N/A	
13C12-OCDD	4000.0	82.5	17 - 157	44.805	44.98705	-0.1821	N/A	
37Cl4-2,3,7,8-TCDD	800.00	91.7	35 - 197	26.2968	26.42402	-0.1272	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-09	Calibration:	GC00015
File ID:	23052213	Analyzed:	05/22/23 20:14

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1960.8	88.3	24 - 169	25.633	25.76487	-0.1319	N/A	
13C12-2,3,7,8-TCDD	1960.8	105	25 - 164	26.2687	26.40287	-0.1342	N/A	
13C12-1,2,3,7,8-PeCDF	1960.8	93.7	24 - 185	29.7885	29.92235	-0.1339	N/A	
13C12-2,3,4,7,8-PeCDF	1960.8	97.5	21 - 178	31.1255	31.2611	-0.1356	N/A	
13C12-1,2,3,7,8-PeCDD	1960.8	93.5	25 - 181	31.3817	31.5192	-0.1375	N/A	
13C12-1,2,3,4,7,8-HxCDF	1960.8	86.4	26 - 152	34.7575	34.88393	-0.1264	N/A	
13C12-1,2,3,6,7,8-HxCDF	1960.8	86.2	26 - 123	34.8912	35.02318	-0.1320	N/A	
13C12-2,3,4,6,7,8-HxCDF	1960.8	86.1	28 - 136	35.7602	35.88653	-0.1263	N/A	
13C12-1,2,3,7,8,9-HxCDF	1960.8	94.4	29 - 147	36.7963	36.91718	-0.1209	N/A	
13C12-1,2,3,4,7,8-HxCDD	1960.8	94.3	32 - 141	35.8827	36.00728	-0.1246	N/A	
13C12-1,2,3,6,7,8-HxCDD	1960.8	94.0	28 - 130	35.9942	36.12053	-0.1263	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1960.8	85.8	28 - 143	38.6347	38.7593	-0.1246	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1960.8	88.5	26 - 138	40.863	40.99867	-0.1357	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1960.8	79.2	23 - 140	40.1275	40.25773	-0.1302	N/A	
13C12-OCDD	3921.6	77.6	17 - 157	44.8142	44.98705	-0.1729	N/A	
37Cl4-2,3,7,8-TCDD	784.31	92.4	35 - 197	26.297	26.42402	-0.1270	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	SLE0354-CCV1	Calibration:	GC00015
File ID:	23052214	Analyzed:	05/22/23 21:03

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	90.3	71 - 129	25.6328	25.76487	-0.1321	N/A	
13C12-2,3,7,8-TCDD	100.00	105	82 - 118	26.2685	26.40287	-0.1344	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	96.0	76 - 124	29.7772	29.92235	-0.1452	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	101	77 - 123	31.1142	31.2611	-0.1469	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	96.4	62 - 138	31.3703	31.5192	-0.1489	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	85.1	76 - 124	34.746	34.88393	-0.1379	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	83.6	70 - 130	34.8797	35.02318	-0.1435	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	89.5	73 - 127	35.7487	35.88653	-0.1378	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	102	74 - 126	36.7848	36.91718	-0.1324	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	96.8	85 - 115	35.8713	36.00728	-0.1360	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	94.1	85 - 115	35.9827	36.12053	-0.1378	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	92.7	78 - 122	38.6342	38.7593	-0.1251	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	90.9	77 - 123	40.8512	40.99867	-0.1475	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	84.2	82 - 118	40.1158	40.25773	-0.1419	N/A	
13C12-OCDD	200.00	93.4	48 - 152	44.8043	44.98705	-0.1828	N/A	
37Cl4-2,3,7,8-TCDD	10.000	89.2	79 - 121	26.2825	26.42402	-0.1415	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-10	Calibration:	GC00015
File ID:	23052216	Analyzed:	05/22/23 22:47

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1941.7	96.7	24 - 169	25.6188	25.76487	-0.1461	N/A	
13C12-2,3,7,8-TCDD	1941.7	116	25 - 164	26.2545	26.40287	-0.1484	N/A	
13C12-1,2,3,7,8-PeCDF	1941.7	103	24 - 185	29.7775	29.92235	-0.1449	N/A	
13C12-2,3,4,7,8-PeCDF	1941.7	109	21 - 178	31.1145	31.2611	-0.1466	N/A	
13C12-1,2,3,7,8-PeCDD	1941.7	102	25 - 181	31.3707	31.5192	-0.1485	N/A	
13C12-1,2,3,4,7,8-HxCDF	1941.7	97.9	26 - 152	34.7467	34.88393	-0.1372	N/A	
13C12-1,2,3,6,7,8-HxCDF	1941.7	96.5	26 - 123	34.8803	35.02318	-0.1429	N/A	
13C12-2,3,4,6,7,8-HxCDF	1941.7	99.4	28 - 136	35.7493	35.88653	-0.1372	N/A	
13C12-1,2,3,7,8,9-HxCDF	1941.7	102	29 - 147	36.7855	36.91718	-0.1317	N/A	
13C12-1,2,3,4,7,8-HxCDD	1941.7	110	32 - 141	35.8607	36.00728	-0.1466	N/A	
13C12-1,2,3,6,7,8-HxCDD	1941.7	107	28 - 130	35.9833	36.12053	-0.1372	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1941.7	96.5	28 - 143	38.624	38.7593	-0.1353	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1941.7	92.1	26 - 138	40.841	40.99867	-0.1577	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1941.7	86.6	23 - 140	40.1057	40.25773	-0.1520	N/A	
13C12-OCDD	3883.5	91.4	17 - 157	44.7963	44.98705	-0.1908	N/A	
37Cl4-2,3,7,8-TCDD	776.70	102	35 - 197	26.2827	26.42402	-0.1413	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-11	Calibration:	GC00015
File ID:	23052217	Analyzed:	05/22/23 23:36

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1886.8	95.1	24 - 169	25.633	25.76487	-0.1319	N/A	
13C12-2,3,7,8-TCDD	1886.8	112	25 - 164	26.2687	26.40287	-0.1342	N/A	
13C12-1,2,3,7,8-PeCDF	1886.8	97.2	24 - 185	29.7885	29.92235	-0.1339	N/A	
13C12-2,3,4,7,8-PeCDF	1886.8	103	21 - 178	31.1253	31.2611	-0.1358	N/A	
13C12-1,2,3,7,8-PeCDD	1886.8	95.8	25 - 181	31.3817	31.5192	-0.1375	N/A	
13C12-1,2,3,4,7,8-HxCDF	1886.8	89.2	26 - 152	34.7575	34.88393	-0.1264	N/A	
13C12-1,2,3,6,7,8-HxCDF	1886.8	89.3	26 - 123	34.8912	35.02318	-0.1320	N/A	
13C12-2,3,4,6,7,8-HxCDF	1886.8	92.6	28 - 136	35.76	35.88653	-0.1265	N/A	
13C12-1,2,3,7,8,9-HxCDF	1886.8	103	29 - 147	36.7962	36.91718	-0.1210	N/A	
13C12-1,2,3,4,7,8-HxCDD	1886.8	100	32 - 141	35.8825	36.00728	-0.1248	N/A	
13C12-1,2,3,6,7,8-HxCDD	1886.8	98.0	28 - 130	35.994	36.12053	-0.1265	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1886.8	90.7	28 - 143	38.6457	38.7593	-0.1136	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1886.8	91.4	26 - 138	40.8628	40.99867	-0.1359	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1886.8	82.6	23 - 140	40.1273	40.25773	-0.1304	N/A	
13C12-OCDD	3773.6	85.9	17 - 157	44.814	44.98705	-0.1731	N/A	
37Cl4-2,3,7,8-TCDD	754.72	97.2	35 - 197	26.2968	26.42402	-0.1272	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-12	Calibration:	GC00015
File ID:	23052218	Analyzed:	05/23/23 00:25

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1886.8	90.8	24 - 169	25.6188	25.76487	-0.1461	N/A	
13C12-2,3,7,8-TCDD	1886.8	110	25 - 164	26.2545	26.40287	-0.1484	N/A	
13C12-1,2,3,7,8-PeCDF	1886.8	99.5	24 - 185	29.7775	29.92235	-0.1449	N/A	
13C12-2,3,4,7,8-PeCDF	1886.8	104	21 - 178	31.1145	31.2611	-0.1466	N/A	
13C12-1,2,3,7,8-PeCDD	1886.8	97.4	25 - 181	31.3595	31.5192	-0.1597	N/A	
13C12-1,2,3,4,7,8-HxCDF	1886.8	91.2	26 - 152	34.7355	34.88393	-0.1484	N/A	
13C12-1,2,3,6,7,8-HxCDF	1886.8	88.3	26 - 123	34.8803	35.02318	-0.1429	N/A	
13C12-2,3,4,6,7,8-HxCDF	1886.8	89.8	28 - 136	35.7492	35.88653	-0.1373	N/A	
13C12-1,2,3,7,8,9-HxCDF	1886.8	102	29 - 147	36.7743	36.91718	-0.1429	N/A	
13C12-1,2,3,4,7,8-HxCDD	1886.8	99.4	32 - 141	35.8607	36.00728	-0.1466	N/A	
13C12-1,2,3,6,7,8-HxCDD	1886.8	99.0	28 - 130	35.9832	36.12053	-0.1373	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1886.8	92.1	28 - 143	38.6237	38.7593	-0.1356	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1886.8	89.9	26 - 138	40.8407	40.99867	-0.1580	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1886.8	85.8	23 - 140	40.1053	40.25773	-0.1524	N/A	
13C12-OCDD	3773.6	84.5	17 - 157	44.7958	44.98705	-0.1913	N/A	
37Cl4-2,3,7,8-TCDD	754.72	96.7	35 - 197	26.2827	26.42402	-0.1413	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	23D0412-13	Calibration:	GC00015
File ID:	23052219	Analyzed:	05/23/23 01:14

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1886.8	92.5	24 - 169	25.633	25.76487	-0.1319	N/A	
13C12-2,3,7,8-TCDD	1886.8	107	25 - 164	26.2687	26.40287	-0.1342	N/A	
13C12-1,2,3,7,8-PeCDF	1886.8	97.0	24 - 185	29.7773	29.92235	-0.1451	N/A	
13C12-2,3,4,7,8-PeCDF	1886.8	102	21 - 178	31.1143	31.2611	-0.1468	N/A	
13C12-1,2,3,7,8-PeCDD	1886.8	98.1	25 - 181	31.3705	31.5192	-0.1487	N/A	
13C12-1,2,3,4,7,8-HxCDF	1886.8	90.2	26 - 152	34.7465	34.88393	-0.1374	N/A	
13C12-1,2,3,6,7,8-HxCDF	1886.8	89.1	26 - 123	34.8802	35.02318	-0.1430	N/A	
13C12-2,3,4,6,7,8-HxCDF	1886.8	89.3	28 - 136	35.7492	35.88653	-0.1373	N/A	
13C12-1,2,3,7,8,9-HxCDF	1886.8	103	29 - 147	36.7853	36.91718	-0.1319	N/A	
13C12-1,2,3,4,7,8-HxCDD	1886.8	101	32 - 141	35.8717	36.00728	-0.1356	N/A	
13C12-1,2,3,6,7,8-HxCDD	1886.8	97.1	28 - 130	35.9832	36.12053	-0.1373	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1886.8	91.2	28 - 143	38.6348	38.7593	-0.1245	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1886.8	88.2	26 - 138	40.8518	40.99867	-0.1469	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1886.8	83.7	23 - 140	40.1165	40.25773	-0.1412	N/A	
13C12-OCDD	3773.6	82.6	17 - 157	44.796	44.98705	-0.1911	N/A	
37Cl4-2,3,7,8-TCDD	754.72	95.8	35 - 197	26.2828	26.42402	-0.1412	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0354	Instrument:	AUTOSPEC01
Sample ID:	SLE0354-CCV2	Calibration:	GC00015
File ID:	23052225	Analyzed:	05/23/23 06:08

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	92.8	71 - 129	25.6328	25.76487	-0.1321	N/A	
13C12-2,3,7,8-TCDD	100.00	107	82 - 118	26.2685	26.40287	-0.1344	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	97.0	76 - 124	29.7883	29.92235	-0.1341	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	102	77 - 123	31.1253	31.2611	-0.1358	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	96.4	62 - 138	31.3815	31.5192	-0.1377	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	87.4	76 - 124	34.7575	34.88393	-0.1264	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	92.9	70 - 130	34.8913	35.02318	-0.1319	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	89.8	73 - 127	35.76	35.88653	-0.1265	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	94.5	74 - 126	36.7963	36.91718	-0.1209	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	98.5	85 - 115	35.8827	36.00728	-0.1246	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	96.3	85 - 115	35.994	36.12053	-0.1265	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	91.5	78 - 122	38.6347	38.7593	-0.1246	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	96.0	77 - 123	40.8518	40.99867	-0.1469	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	80.8	72 - 118	40.1165	40.25773	-0.1412	N/A	
13C12-OCDD	200.00	90.2	48 - 152	44.805	44.98705	-0.1821	N/A	
37Cl4-2,3,7,8-TCDD	10.000	87.5	79 - 121	26.2967	26.42402	-0.1273	N/A	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MWCP1-041323 23D0412-01	04/13/23 14:25	04/14/23 12:17	04/20/23 08:15	6	365	05/22/23 15:20	32	365	
MWCP1-041323-D 23D0412-02	04/13/23 14:30	04/14/23 12:17	04/20/23 08:15	6	365	05/22/23 16:09	32	365	
MWCP2-041323 23D0412-03	04/13/23 13:10	04/14/23 12:17	04/20/23 08:15	6	365	05/22/23 16:58	32	365	
MWCP3-041323 23D0412-04	04/13/23 16:10	04/14/23 12:17	04/20/23 08:15	6	365	05/22/23 17:47	32	365	
MWCP4-041323 23D0412-05	04/13/23 15:25	04/14/23 12:17	04/20/23 08:15	6	365	05/22/23 18:36	32	365	
MWCP5-041323 23D0412-06	04/13/23 16:33	04/14/23 12:17	04/20/23 12:45	6	365	05/15/23 18:06	25	365	
MWCP6-041323 23D0412-07	04/13/23 13:20	04/14/23 12:17	04/20/23 12:45	6	365	05/15/23 18:55	25	365	
MWCP7-041323 23D0412-08	04/13/23 14:35	04/14/23 12:17	04/20/23 08:15	6	365	05/22/23 19:25	32	365	
MWVB3-041323 23D0412-09	04/13/23 11:05	04/14/23 12:17	04/20/23 08:15	6	365	05/22/23 20:14	32	365	
HC00-B312-041323 23D0412-10	04/13/23 11:10	04/14/23 12:17	04/20/23 08:15	6	365	05/22/23 22:47	33	365	
MWVB1-041423 23D0412-11	04/14/23 09:12	04/14/23 12:17	04/20/23 08:15	5	365	05/22/23 23:36	33	365	
MWVB1-041423-D 23D0412-12	04/14/23 09:22	04/14/23 12:17	04/20/23 08:15	5	365	05/23/23 00:25	33	365	
MWVB2-041423 23D0412-13	04/14/23 08:55	04/14/23 12:17	04/20/23 08:15	5	365	05/23/23 01:14	33	365	

* Indicates hold time exceedance.

Analytical Resources, LLC
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Matrix: Water
Instrument: AUTOSPEC01

Analyte	MDL	RL	Units
2,3,7,8-TCDF	1.20	10.0	pg/L
2,3,7,8-TCDD	1.30	10.0	pg/L
1,2,3,7,8-PeCDF	4.20	10.0	pg/L
2,3,4,7,8-PeCDF	4.00	10.0	pg/L
1,2,3,7,8-PeCDD	4.00	10.0	pg/L
1,2,3,4,7,8-HxCDF	3.80	10.0	pg/L
1,2,3,6,7,8-HxCDF	3.90	10.0	pg/L
2,3,4,6,7,8-HxCDF	3.50	10.0	pg/L
1,2,3,7,8,9-HxCDF	3.60	10.0	pg/L
1,2,3,4,7,8-HxCDD	4.10	10.0	pg/L
1,2,3,6,7,8-HxCDD	3.80	10.0	pg/L
1,2,3,7,8,9-HxCDD	3.40	10.0	pg/L
1,2,3,4,6,7,8-HpCDF	11.0	20.0	pg/L
1,2,3,4,7,8,9-HpCDF	3.60	10.0	pg/L
1,2,3,4,6,7,8-HpCDD	6.00	10.0	pg/L
OCDF	16.0	20.0	pg/L
OCDD	39.0	50.0	pg/L
Total TCDF		10.0	pg/L
Total TCDD		10.0	pg/L
Total PeCDF		10.0	pg/L
Total PeCDD		10.0	pg/L
Total HxCDF		10.0	pg/L
Total HxCDD		10.0	pg/L
Total HpCDF		10.0	pg/L
Total HpCDD		10.0	pg/L

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Dissolved Metals

MWCP1-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-01 A 01	SDG:	23D0412
Sampled:	04/13/23 14:25	Prepared:	04/28/23 09:59	File ID:	XDT_m1230504B-195
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/05/23 07:35
Batch:	BLD0807	Sequence:	SLE0093	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00023

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.494	1	0.0373	0.200	

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Dissolved Metals

MWCP1-041323-D

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-02 A 01	SDG:	23D0412
Sampled:	04/13/23 14:30	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-189
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 03:50
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.485	1	0.0373	0.200	

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Dissolved Metals

MWCP2-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-03 A 01	SDG:	23D0412
Sampled:	04/13/23 13:10	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-190
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 03:55
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.386	1	0.0373	0.200	

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Dissolved Metals

MWCP3-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-04 A 01	SDG:	23D0412
Sampled:	04/13/23 16:10	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-191
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 03:59
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.114	1	0.0373	0.200	J

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Dissolved Metals

MWCP4-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-05 A 01	SDG:	23D0412
Sampled:	04/13/23 15:25	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-192
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:03
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	1.57	1	0.0373	0.200	

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Dissolved Metals

MWCP5-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Water	Laboratory ID:	23D0412-06 A 01	SDG:	23D0412
Sampled:	04/13/23 16:33	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-193
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:08
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	1.19	1	0.0373	0.200	

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Dissolved Metals

MWCP6-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Water	Laboratory ID:	23D0412-07 A 01	SDG:	23D0412
Sampled:	04/13/23 13:20	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-197
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:28
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.679	1	0.0373	0.200	

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Dissolved Metals

MWCP7-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-08 A 01	SDG:	23D0412
Sampled:	04/13/23 14:35	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-198
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:32
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.376	1	0.0373	0.200	

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Dissolved Metals

MWVB3-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-09 A 01	SDG:	23D0412
Sampled:	04/13/23 11:05	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-199
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:37
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.379	1	0.0373	0.200	

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Dissolved Metals

HC00-B312-041323

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-10 A 01	SDG:	23D0412
Sampled:	04/13/23 11:10	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-200
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:41
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.154	1	0.0373	0.200	J

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Dissolved Metals

MWVB1-041423

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-11 A 01	SDG:	23D0412
Sampled:	04/14/23 09:12	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-201
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:46
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.107	1	0.0373	0.200	J

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Dissolved Metals

MWVB1-041423-D

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-12 A 01	SDG:	23D0412
Sampled:	04/14/23 09:22	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-202
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:50
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.103	1	0.0373	0.200	J

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Dissolved Metals

MWVB2-041423

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-13 A 01	SDG:	23D0412
Sampled:	04/14/23 08:55	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-203
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:54
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.367	1	0.0373	0.200	

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INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Dissolved Metals

MWC2-041423

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-14 A 01	SDG:	23D0412
Sampled:	04/14/23 11:16	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-204
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 04:59
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	55.0	1	0.0373	0.200	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Dissolved Metals

MWC3-041423

Laboratory:	Analytical Resources, LLC				
Client:	Floyd - Snider				
Project:	Lora Lake 2021-2023 sec II. 5.3.21				
Matrix:	Ground Water	Laboratory ID:	23D0412-15 A 01	SDG:	23D0412
Sampled:	04/14/23 11:00	Prepared:	04/28/23 09:59	File ID:	XDT_m1230511-205
% Solids:	0.00	Preparation:	REN - EPA 3010A M	Analyzed:	05/12/23 05:03
Batch:	BLD0807	Sequence:	SLE0209	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.176	1	0.0373	0.200	J

Analytical Resources, LLC
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Batch: BLD0807 Batch Matrix: Water
Preparation: REN - EPA 3010A M

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MWCP1-041323	23D0412-01	XDT_m1230504B-195	04/28/23 09:59	
MWCP1-041323-D	23D0412-02	XDT_m1230511-189	04/28/23 09:59	
MWCP2-041323	23D0412-03	XDT_m1230511-190	04/28/23 09:59	
MWCP3-041323	23D0412-04	XDT_m1230511-191	04/28/23 09:59	
MWCP4-041323	23D0412-05	XDT_m1230511-192	04/28/23 09:59	
MWCP5-041323	23D0412-06	XDT_m1230511-193	04/28/23 09:59	
MWCP6-041323	23D0412-07	XDT_m1230511-197	04/28/23 09:59	
MWCP7-041323	23D0412-08	XDT_m1230511-198	04/28/23 09:59	
MWVB3-041323	23D0412-09	XDT_m1230511-199	04/28/23 09:59	
HC00-B312-041323	23D0412-10	XDT_m1230511-200	04/28/23 09:59	
MWVB1-041423	23D0412-11	XDT_m1230511-201	04/28/23 09:59	
MWVB1-041423-D	23D0412-12	XDT_m1230511-202	04/28/23 09:59	
MWVB2-041423	23D0412-13	XDT_m1230511-203	04/28/23 09:59	
MWC2-041423	23D0412-14	XDT_m1230511-204	04/28/23 09:59	
MWC3-041423	23D0412-15	XDT_m1230511-205	04/28/23 09:59	
Blank	BLD0807-BLK1	XDT_m1230504B-178	04/28/23 09:59	
LCS	BLD0807-BS1	XDT_m1230504B-179	04/28/23 09:59	
MWCP1-041323	BLD0807-DUP1	XDT_m1230504B-196	04/28/23 09:59	
MWCP1-041323	BLD0807-MS1	XDT_m1230504B-197	04/28/23 09:59	
MWCP1-041323	BLD0807-MSD1	XDT_m1230504B-198	04/28/23 09:59	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Dissolved Metals

Blank

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Batch: BLD0807
Laboratory ID: BLD0807-BLK1
Prepared: 04/28/23 09:59
Matrix: Water
Preparation: REN - EPA 3010A M
Analyzed: 05/05/23 06:29
Sequence: SLE0093
Calibration: GE00023
Instrument: ICPMS1

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	1	0.0373	0.200	U

Analytical Resources, LLC
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Dissolved Metals

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Matrix:	Water	Analyzed:	05/05/23 06:32
Batch:	BLD0807	Laboratory ID:	BLD0807-BS1
Preparation:	REN - EPA 3010A M	Sequence Name:	LCS
Initial/Final:	25 mL / 25 mL		

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	25.7		103	80 - 120

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP1-041323

DUPLICATES

EPA 6020B UCT-KED

Dissolved Metals

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Matrix: Water
Laboratory ID: BLD0807-DUP1
Batch: BLD0807
Lab Source ID: 23D0412-01
Preparation: REN - EPA 3010A M
Initial/Final: 25 mL / 25 mL
Source Sample Name: MWCP1-041323
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Arsenic-75a (dissolved)	20	0.494	0.465	6.05	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP1-041323

MS / MS DUPLICATE RECOVERY
EPA 6020B UCT-KED
Dissolved Metals

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Matrix:	Water	Analyzed:	05/05/23 07:43
Batch:	BLD0807	Laboratory ID:	BLD0807-MS1
Preparation:	REN - EPA 3010A M	Sequence Name:	Matrix Spike
Initial/Final:	25 mL / 25 mL	Source Sample:	MWCP1-041323

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	Q	MS CONCENTRATION (ug/L)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	0.494		27.8		109	75 - 125

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

MWCP1-041323

MS / MS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Dissolved Metals

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Matrix:	Water	Analyzed:	05/05/23 07:47
Batch:	BLD0807	Laboratory ID:	BLD0807-MSD1
Preparation:	REN - EPA 3010A M	Sequence Name:	Matrix Spike Dup
Initial/Final:	25 mL / 25 mL	Source Sample:	MWCP1-041323

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	26.8		105	3.69	20	75 - 125

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GE00023	Instrument:	ICPMS1
Calibration Date:	05/04/2023 16:48		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a, Dissolved	0	0	0.2	325	10	375.3	20	369	50	361.12	100	357.85

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

Instrument: ICPMS1

Calibration: GE00023

Calibration Date: 5/4/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a, Dissolved	298.045	49.3	0.9999		0.998	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GE00026	Instrument:	ICPMS1
Calibration Date:	05/05/2023 13:41		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a, Dissolved	0	0	0.2	370	10	320.6	20	312.8	50	302.32	100	295.74

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

Instrument: ICPMS1

Calibration: GE00026

Calibration Date: 5/5/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a, Dissolved	266.91	50.0	0.9998		0.998	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GE00030	Instrument:	ICPMS1
Calibration Date:	05/08/2023 13:46		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a, Dissolved	0	0	0.2	305	10	329.4	20	320.65	50	308.6	100	307.17

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

Instrument: ICPMS1

Calibration: GE00030

Calibration Date: 5/8/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a, Dissolved	261.8033	49.1	0.9999		0.998	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Calibration:	GE00042	Instrument:	ICPMS1
Calibration Date:	05/11/2023 13:56		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a, Dissolved	0	0	0.2	260	10	254.7	20	249.25	50	236.26	100	229.57

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

Instrument: ICPMS1

Calibration: GE00042

Calibration Date: 5/11/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a, Dissolved	204.9633	49.3	0.9996		0.998	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00023
Control Limt: +/- 10.00%
Sequence: SLE0093

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0093-ICV1	Arsenic-75a (dissolved)	50.000	47.7	95.4	ug/L	PA 6020B UCT-KE
SLE0093-CCV1	Arsenic-75a (dissolved)	50.000	50.0	100	ug/L	PA 6020B UCT-KE
SLE0093-CCV2	Arsenic-75a (dissolved)	50.000	48.1	96.2	ug/L	PA 6020B UCT-KE
SLE0093-CCV3	Arsenic-75a (dissolved)	50.000	49.8	99.5	ug/L	PA 6020B UCT-KE
SLE0093-CCV4	Arsenic-75a (dissolved)	50.000	49.1	98.1	ug/L	PA 6020B UCT-KE
SLE0093-CCV5	Arsenic-75a (dissolved)	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
SLE0093-CCV6	Arsenic-75a (dissolved)	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
SLE0093-CCV7	Arsenic-75a (dissolved)	50.000	50.1	100	ug/L	PA 6020B UCT-KE
SLE0093-CCV8	Arsenic-75a (dissolved)	50.000	50.2	100	ug/L	PA 6020B UCT-KE
SLE0093-CCV9	Arsenic-75a (dissolved)	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
SLE0093-CCVA	Arsenic-75a (dissolved)	50.000	50.4	101	ug/L	PA 6020B UCT-KE
SLE0093-CCVB	Arsenic-75a (dissolved)	50.000	50.3	101	ug/L	PA 6020B UCT-KE
SLE0093-CCVC	Arsenic-75a (dissolved)	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
SLE0093-CCVD	Arsenic-75a (dissolved)	50.000	50.5	101	ug/L	PA 6020B UCT-KE
SLE0093-CCVE	Arsenic-75a (dissolved)	50.000	50.3	101	ug/L	PA 6020B UCT-KE
SLE0093-CCVF	Arsenic-75a (dissolved)	50.000	49.4	98.9	ug/L	PA 6020B UCT-KE
SLE0093-CCVG	Arsenic-75a (dissolved)	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
SLE0093-CCVH	Arsenic-75a (dissolved)	50.000	50.1	100	ug/L	PA 6020B UCT-KE
SLE0093-CCVI	Arsenic-75a (dissolved)	50.000	51.2	102	ug/L	PA 6020B UCT-KE
SLE0093-CCVJ	Arsenic-75a (dissolved)	50.000	50.7	101	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00026
Control Limt: +/- 10.00%
Sequence: SLE0130

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0130-ICV1	Arsenic-75a (dissolved)	50.000	47.6	95.2	ug/L	PA 6020B UCT-KE
SLE0130-CCV1	Arsenic-75a (dissolved)	50.000	50.1	100	ug/L	PA 6020B UCT-KE
SLE0130-CCV2	Arsenic-75a (dissolved)	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
SLE0130-CCV3	Arsenic-75a (dissolved)	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
SLE0130-CCV4	Arsenic-75a (dissolved)	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
SLE0130-CCV5	Arsenic-75a (dissolved)	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
SLE0130-CCV6	Arsenic-75a (dissolved)	50.000	49.8	99.5	ug/L	PA 6020B UCT-KE
SLE0130-CCV7	Arsenic-75a (dissolved)	50.000	47.6	95.2	ug/L	PA 6020B UCT-KE
SLE0130-CCV8	Arsenic-75a (dissolved)	50.000	48.6	97.1	ug/L	PA 6020B UCT-KE
SLE0130-CCV9	Arsenic-75a (dissolved)	50.000	49.0	97.9	ug/L	PA 6020B UCT-KE
SLE0130-CCVA	Arsenic-75a (dissolved)	50.000	49.4	98.7	ug/L	PA 6020B UCT-KE
SLE0130-CCVB	Arsenic-75a (dissolved)	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
SLE0130-CCVC	Arsenic-75a (dissolved)	50.000	50.3	101	ug/L	PA 6020B UCT-KE
SLE0130-CCVD	Arsenic-75a (dissolved)	50.000	50.4	101	ug/L	PA 6020B UCT-KE
SLE0130-CCVE	Arsenic-75a (dissolved)	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
SLE0130-CCVF	Arsenic-75a (dissolved)	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
SLE0130-CCVG	Arsenic-75a (dissolved)	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
SLE0130-CCVH	Arsenic-75a (dissolved)	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
SLE0130-CCVI	Arsenic-75a (dissolved)	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
SLE0130-CCVJ	Arsenic-75a (dissolved)	50.000	46.3	92.7	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00030
Control Limt: +/- 10.00%
Sequence: SLE0138

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0138-ICV1	Arsenic-75a (dissolved)	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
SLE0138-CCV1	Arsenic-75a (dissolved)	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
SLE0138-CCV2	Arsenic-75a (dissolved)	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
SLE0138-CCV3	Arsenic-75a (dissolved)	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
SLE0138-CCV4	Arsenic-75a (dissolved)	50.000	49.2	98.5	ug/L	PA 6020B UCT-KE
SLE0138-CCV5	Arsenic-75a (dissolved)	50.000	48.3	96.7	ug/L	PA 6020B UCT-KE
SLE0138-CCV6	Arsenic-75a (dissolved)	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
SLE0138-CCV7	Arsenic-75a (dissolved)	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00042
Control Limt: +/- 10.00%
Sequence: SLE0209

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0209-ICV1	Arsenic-75a (dissolved)	50.000	48.3	96.6	ug/L	PA 6020B UCT-KE
SLE0209-CCV1	Arsenic-75a (dissolved)	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
SLE0209-CCV2	Arsenic-75a (dissolved)	50.000	48.6	97.2	ug/L	PA 6020B UCT-KE
SLE0209-CCV3	Arsenic-75a (dissolved)	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
SLE0209-CCV4	Arsenic-75a (dissolved)	50.000	50.2	100	ug/L	PA 6020B UCT-KE
SLE0209-CCV7	Arsenic-75a (dissolved)	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
SLE0209-CCV8	Arsenic-75a (dissolved)	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
SLE0209-CCVA	Arsenic-75a (dissolved)	50.000	50.8	102	ug/L	PA 6020B UCT-KE
SLE0209-CCVB	Arsenic-75a (dissolved)	50.000	50.3	101	ug/L	PA 6020B UCT-KE
SLE0209-CCVC	Arsenic-75a (dissolved)	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
SLE0209-CCVD	Arsenic-75a (dissolved)	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
SLE0209-CCVE	Arsenic-75a (dissolved)	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
SLE0209-CCVF	Arsenic-75a (dissolved)	50.000	49.4	98.9	ug/L	PA 6020B UCT-KE
SLE0209-CCVG	Arsenic-75a (dissolved)	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
SLE0209-CCVH	Arsenic-75a (dissolved)	50.000	50.1	100	ug/L	PA 6020B UCT-KE
SLE0209-CCVI	Arsenic-75a (dissolved)	50.000	49.4	98.7	ug/L	PA 6020B UCT-KE
SLE0209-CCVJ	Arsenic-75a (dissolved)	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
SLE0209-CCVK	Arsenic-75a (dissolved)	50.000	49.5	98.9	ug/L	PA 6020B UCT-KE
SLE0209-CCVL	Arsenic-75a (dissolved)	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
SLE0209-CCVM	Arsenic-75a (dissolved)	50.000	49.5	98.9	ug/L	PA 6020B UCT-KE
SLE0209-CCVN	Arsenic-75a (dissolved)	50.000	50.2	100	ug/L	PA 6020B UCT-KE
SLE0209-CCVO	Arsenic-75a (dissolved)	50.000	49.3	98.5	ug/L	PA 6020B UCT-KE
SLE0209-CCVP	Arsenic-75a (dissolved)	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
SLE0209-CCVQ	Arsenic-75a (dissolved)	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
SLE0209-CCVR	Arsenic-75a (dissolved)	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
SLE0209-CCVS	Arsenic-75a (dissolved)	50.000	50.1	100	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Floyd - Snider
Instrument ID: ICPMS1
Sequence: SLE0093

SDG: 23D0412
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00023
Date Analyzed: 05/04/23 17:22

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0093-IBL1	Arsenic-75a (dissolved)	0.00800	0.0373	0.200	ug/L	
SLE0093-ICB1	Arsenic-75a (dissolved)	0.00500	0.0373	0.200	ug/L	
SLE0093-CCB1	Arsenic-75a (dissolved)	0.0120	0.0373	0.200	ug/L	
SLE0093-IBL2	Arsenic-75a (dissolved)	0.0370	0.0373	0.200	ug/L	
SLE0093-CCB2	Arsenic-75a (dissolved)	0.0130	0.0373	0.200	ug/L	
SLE0093-IBL3	Arsenic-75a (dissolved)	0.00800	0.0373	0.200	ug/L	
SLE0093-IBL4	Arsenic-75a (dissolved)	0.00500	0.0373	0.200	ug/L	
SLE0093-CCB3	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0093-CCB4	Arsenic-75a (dissolved)	0.0110	0.0373	0.200	ug/L	
SLE0093-IBL5	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0093-CCB5	Arsenic-75a (dissolved)	0.0100	0.0373	0.200	ug/L	
SLE0093-IBL6	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0093-CCB6	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0093-IBL7	Arsenic-75a (dissolved)	0.00400	0.0373	0.200	ug/L	
SLE0093-CCB7	Arsenic-75a (dissolved)	0.00800	0.0373	0.200	ug/L	
SLE0093-IBL8	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0093-CCB8	Arsenic-75a (dissolved)	0.00800	0.0373	0.200	ug/L	
SLE0093-IBL9	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0093-IBLA	Arsenic-75a (dissolved)	0.0190	0.0373	0.200	ug/L	
SLE0093-CCB9	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0093-IBLB	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0093-IBLC	Arsenic-75a (dissolved)	0.00400	0.0373	0.200	ug/L	
SLE0093-CCBA	Arsenic-75a (dissolved)	0.00800	0.0373	0.200	ug/L	
SLE0093-CCBB	Arsenic-75a (dissolved)	0.00400	0.0373	0.200	ug/L	
SLE0093-IBLD	Arsenic-75a (dissolved)	-0.00200	0.0373	0.200	ug/L	
SLE0093-IBLE	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0093-CCBC	Arsenic-75a (dissolved)	0.00500	0.0373	0.200	ug/L	
SLE0093-IBLF	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0093-CCBD	Arsenic-75a (dissolved)	0.00100	0.0373	0.200	ug/L	
SLE0093-IBLG	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0093-CCBE	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0093-IBLH	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0093-IBLI	Arsenic-75a (dissolved)	0.0290	0.0373	0.200	ug/L	
SLE0093-CCBF	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0093-CCBG	Arsenic-75a (dissolved)	0.00400	0.0373	0.200	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00023
Sequence: SLE0093
Date Analyzed: 05/05/23 05:59

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0093-IBLJ	Arsenic-75a (dissolved)	-0.00300	0.0373	0.200	ug/L	
SLE0093-IBLK	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0093-CCBH	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0093-IBLL	Arsenic-75a (dissolved)	0.00200	0.0373	0.200	ug/L	
SLE0093-IBLM	Arsenic-75a (dissolved)	0.00100	0.0373	0.200	ug/L	
SLE0093-CCBI	Arsenic-75a (dissolved)	0.00400	0.0373	0.200	ug/L	
SLE0093-IBLN	Arsenic-75a (dissolved)	0.0100	0.0373	0.200	ug/L	
SLE0093-CCBJ	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Floyd - Snider
Instrument ID: ICPMS1
Sequence: SLE0130

SDG: 23D0412
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00026
Date Analyzed: 05/05/23 14:13

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0130-IBL1	Arsenic-75a (dissolved)	0.0230	0.0373	0.200	ug/L	
SLE0130-ICB1	Arsenic-75a (dissolved)	0.0120	0.0373	0.200	ug/L	
SLE0130-CCB1	Arsenic-75a (dissolved)	0.0130	0.0373	0.200	ug/L	
SLE0130-IBL2	Arsenic-75a (dissolved)	0.0140	0.0373	0.200	ug/L	
SLE0130-IBL3	Arsenic-75a (dissolved)	0.0210	0.0373	0.200	ug/L	
SLE0130-CCB2	Arsenic-75a (dissolved)	0.0140	0.0373	0.200	ug/L	
SLE0130-IBL4	Arsenic-75a (dissolved)	0.00800	0.0373	0.200	ug/L	
SLE0130-CCB3	Arsenic-75a (dissolved)	0.0120	0.0373	0.200	ug/L	
SLE0130-IBL5	Arsenic-75a (dissolved)	0.00500	0.0373	0.200	ug/L	
SLE0130-CCB4	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0130-CCB5	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0130-IBL6	Arsenic-75a (dissolved)	-0.00300	0.0373	0.200	ug/L	
SLE0130-CCB6	Arsenic-75a (dissolved)	-0.00400	0.0373	0.200	ug/L	
SLE0130-IBL7	Arsenic-75a (dissolved)	-0.00400	0.0373	0.200	ug/L	
SLE0130-CCB7	Arsenic-75a (dissolved)	-0.00400	0.0373	0.200	ug/L	
SLE0130-IBL8	Arsenic-75a (dissolved)	-0.00500	0.0373	0.200	ug/L	
SLE0130-CCB8	Arsenic-75a (dissolved)	-0.00200	0.0373	0.200	ug/L	
SLE0130-IBL9	Arsenic-75a (dissolved)	-0.00400	0.0373	0.200	ug/L	
SLE0130-CCB9	Arsenic-75a (dissolved)	-0.00800	0.0373	0.200	ug/L	
SLE0130-IBLA	Arsenic-75a (dissolved)	-0.0100	0.0373	0.200	ug/L	
SLE0130-CCBA	Arsenic-75a (dissolved)	-0.00600	0.0373	0.200	ug/L	
SLE0130-IBLB	Arsenic-75a (dissolved)	-0.00900	0.0373	0.200	ug/L	
SLE0130-CCBB	Arsenic-75a (dissolved)	-0.00400	0.0373	0.200	ug/L	
SLE0130-CCBC	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0130-IBLC	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0130-CCBD	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0130-IBLD	Arsenic-75a (dissolved)	-0.00200	0.0373	0.200	ug/L	
SLE0130-CCBE	Arsenic-75a (dissolved)	-0.00200	0.0373	0.200	ug/L	
SLE0130-IBLE	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0130-CCBF	Arsenic-75a (dissolved)	0.00200	0.0373	0.200	ug/L	
SLE0130-CCBG	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0130-IBLF	Arsenic-75a (dissolved)	-0.00300	0.0373	0.200	ug/L	
SLE0130-IBLG	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0130-CCBH	Arsenic-75a (dissolved)	-0.00300	0.0373	0.200	ug/L	
SLE0130-IBLH	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00026
Sequence: SLE0130
Date Analyzed: 05/06/23 04:43

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0130-IBLI	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0130-CCBI	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0130-IBLJ	Arsenic-75a (dissolved)	-0.00200	0.0373	0.200	ug/L	
SLE0130-CCBJ	Arsenic-75a (dissolved)	0.0110	0.0373	0.200	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00030
Sequence: SLE0138
Date Analyzed: 05/08/23 14:22

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0138-IBL1	Arsenic-75a (dissolved)	0.0120	0.0373	0.200	ug/L	
SLE0138-ICB1	Arsenic-75a (dissolved)	0.00800	0.0373	0.200	ug/L	
SLE0138-CCB1	Arsenic-75a (dissolved)	0.00600	0.0373	0.200	ug/L	
SLE0138-IBL2	Arsenic-75a (dissolved)	0.0170	0.0373	0.200	ug/L	
SLE0138-IBL3	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0138-CCB2	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0138-IBL4	Arsenic-75a (dissolved)	0.00600	0.0373	0.200	ug/L	
SLE0138-IBL5	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0138-CCB3	Arsenic-75a (dissolved)	0.0100	0.0373	0.200	ug/L	
SLE0138-CCB4	Arsenic-75a (dissolved)	0.00500	0.0373	0.200	ug/L	
SLE0138-IBL6	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0138-IBL7	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0138-CCB5	Arsenic-75a (dissolved)	0.00200	0.0373	0.200	ug/L	
SLE0138-IBL8	Arsenic-75a (dissolved)	0.00100	0.0373	0.200	ug/L	
SLE0138-IBL9	Arsenic-75a (dissolved)	-0.00300	0.0373	0.200	ug/L	
SLE0138-CCB6	Arsenic-75a (dissolved)	0.00100	0.0373	0.200	ug/L	
SLE0138-IBLA	Arsenic-75a (dissolved)	-0.00400	0.0373	0.200	ug/L	
SLE0138-CCB7	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	

Analytical Resources, LLC
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INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Floyd - Snider
Instrument ID: ICPMS1
Sequence: SLE0209

SDG: 23D0412
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00042
Date Analyzed: 05/11/23 14:29

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0209-IBL1	Arsenic-75a (dissolved)	0.0110	0.0373	0.200	ug/L	
SLE0209-ICB1	Arsenic-75a (dissolved)	0.00200	0.0373	0.200	ug/L	
SLE0209-CCB1	Arsenic-75a (dissolved)	0.00800	0.0373	0.200	ug/L	
SLE0209-IBL2	Arsenic-75a (dissolved)	0.0350	0.0373	0.200	ug/L	
SLE0209-IBL3	Arsenic-75a (dissolved)	0.0170	0.0373	0.200	ug/L	
SLE0209-CCB2	Arsenic-75a (dissolved)	0.0160	0.0373	0.200	ug/L	
SLE0209-CCB3	Arsenic-75a (dissolved)	0.00600	0.0373	0.200	ug/L	
SLE0209-IBL4	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0209-IBL5	Arsenic-75a (dissolved)	-0.00600	0.0373	0.200	ug/L	
SLE0209-CCB4	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0209-IBL9	Arsenic-75a (dissolved)	-0.00600	0.0373	0.200	ug/L	
SLE0209-IBLA	Arsenic-75a (dissolved)	-0.00500	0.0373	0.200	ug/L	
SLE0209-CCB7	Arsenic-75a (dissolved)	0.00400	0.0373	0.200	ug/L	
SLE0209-CCB8	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0209-CCBA	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0209-IBLC	Arsenic-75a (dissolved)	-0.00300	0.0373	0.200	ug/L	
SLE0209-IBLD	Arsenic-75a (dissolved)	0.00600	0.0373	0.200	ug/L	
SLE0209-CCBB	Arsenic-75a (dissolved)	0.00300	0.0373	0.200	ug/L	
SLE0209-IBLE	Arsenic-75a (dissolved)	-0.00200	0.0373	0.200	ug/L	
SLE0209-IBLF	Arsenic-75a (dissolved)	0.0290	0.0373	0.200	ug/L	
SLE0209-CCBC	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0209-CCBD	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0209-IBLG	Arsenic-75a (dissolved)	-0.00800	0.0373	0.200	ug/L	
SLE0209-CCBE	Arsenic-75a (dissolved)	0.00100	0.0373	0.200	ug/L	
SLE0209-IBLH	Arsenic-75a (dissolved)	-0.00400	0.0373	0.200	ug/L	
SLE0209-CCBF	Arsenic-75a (dissolved)	0.00200	0.0373	0.200	ug/L	
SLE0209-IBLI	Arsenic-75a (dissolved)	0.00100	0.0373	0.200	ug/L	
SLE0209-CCBG	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0209-IBLJ	Arsenic-75a (dissolved)	0.0180	0.0373	0.200	ug/L	
SLE0209-CCBH	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0209-IBLK	Arsenic-75a (dissolved)	-0.00600	0.0373	0.200	ug/L	
SLE0209-IBLL	Arsenic-75a (dissolved)	-0.00700	0.0373	0.200	ug/L	
SLE0209-CCBI	Arsenic-75a (dissolved)	-0.00500	0.0373	0.200	ug/L	
SLE0209-CCBJ	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0209-IBLM	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00042
Sequence: SLE0209
Date Analyzed: 05/12/23 04:12

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0209-IBLN	Arsenic-75a (dissolved)	-0.00100	0.0373	0.200	ug/L	
SLE0209-CCBK	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0209-IBLO	Arsenic-75a (dissolved)	-0.00300	0.0373	0.200	ug/L	
SLE0209-CCBL	Arsenic-75a (dissolved)	0.0280	0.0373	0.200	ug/L	
SLE0209-IBLP	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0209-CCBM	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0209-IBLQ	Arsenic-75a (dissolved)	-0.00200	0.0373	0.200	ug/L	
SLE0209-IBLR	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0209-CCBN	Arsenic-75a (dissolved)	0.00900	0.0373	0.200	ug/L	
SLE0209-CCBO	Arsenic-75a (dissolved)	0.00600	0.0373	0.200	ug/L	
SLE0209-IBLS	Arsenic-75a (dissolved)	0.00100	0.0373	0.200	ug/L	
SLE0209-CCBP	Arsenic-75a (dissolved)	0.0110	0.0373	0.200	ug/L	
SLE0209-IBLT	Arsenic-75a (dissolved)	0.00500	0.0373	0.200	ug/L	
SLE0209-CCBQ	Arsenic-75a (dissolved)	0.00400	0.0373	0.200	ug/L	
SLE0209-IBLU	Arsenic-75a (dissolved)	0.00700	0.0373	0.200	ug/L	
SLE0209-CCBR	Arsenic-75a (dissolved)	0.00200	0.0373	0.200	ug/L	
SLE0209-IBLV	Arsenic-75a (dissolved)	0.00	0.0373	0.200	ug/L	
SLE0209-CCBS	Arsenic-75a (dissolved)	0.00200	0.0373	0.200	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0093	Instrument:	ICPMS1
		Calibration:	GE00023

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0093-CAL1	XDT_m1230504B-004	NA	05/04/23 16:48
CAL 1 - LOW CHECK	SLE0093-CAL2	XDT_m1230504B-005	NA	05/04/23 16:53
CAL 2	SLE0093-CAL3	XDT_m1230504B-006	NA	05/04/23 16:57
CAL 3	SLE0093-CAL4	XDT_m1230504B-007	NA	05/04/23 17:02
CAL 4	SLE0093-CAL5	XDT_m1230504B-008	NA	05/04/23 17:07
CAL 5	SLE0093-CAL6	XDT_m1230504B-009	NA	05/04/23 17:14
RINSE	SLE0093-IBL1	XDT_m1230504B-010	NA	05/04/23 17:22
Initial Cal Check	SLE0093-ICV1	XDT_m1230504B-012	NA	05/04/23 17:28
Initial Cal Blank	SLE0093-ICB1	XDT_m1230504B-013	NA	05/04/23 17:35
Calibration Check	SLE0093-CCV1	XDT_m1230504B-014	NA	05/04/23 17:40
Calibration Blank	SLE0093-CCB1	XDT_m1230504B-015	NA	05/04/23 17:47
Instrument RL Check	SLE0093-CRL1	XDT_m1230504B-017	NA	05/04/23 17:57
Interference Check A	SLE0093-IFA1	XDT_m1230504B-018	NA	05/04/23 18:01
Interference Check B	SLE0093-IFB1	XDT_m1230504B-019	NA	05/04/23 18:06
LR200	SLE0093-HCV1	XDT_m1230504B-020	NA	05/04/23 18:11
LR300	SLE0093-HCV2	XDT_m1230504B-021	NA	05/04/23 18:16
Instrument Blank	SLE0093-IBL2	XDT_m1230504B-022	NA	05/04/23 18:23
Calibration Check	SLE0093-CCV2	XDT_m1230504B-023	NA	05/04/23 18:30
Calibration Blank	SLE0093-CCB2	XDT_m1230504B-024	NA	05/04/23 18:37
Instrument Blank	SLE0093-IBL3	XDT_m1230504B-033	NA	05/04/23 19:25
Instrument Blank	SLE0093-IBL4	XDT_m1230504B-034	NA	05/04/23 19:31
Calibration Check	SLE0093-CCV3	XDT_m1230504B-035	NA	05/04/23 19:35
Calibration Blank	SLE0093-CCB3	XDT_m1230504B-036	NA	05/04/23 19:43
Calibration Check	SLE0093-CCV4	XDT_m1230504B-038	NA	05/04/23 19:54
Calibration Blank	SLE0093-CCB4	XDT_m1230504B-039	NA	05/04/23 20:02
Instrument Blank	SLE0093-IBL5	XDT_m1230504B-049	NA	05/04/23 21:00
Calibration Check	SLE0093-CCV5	XDT_m1230504B-050	NA	05/04/23 21:05
Calibration Blank	SLE0093-CCB5	XDT_m1230504B-051	NA	05/04/23 21:12
ZZZZZ	23A0417-08	XDT_m1230504B-052	Solid	05/04/23 21:18

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Sequence: SLE0093
Instrument: ICPMS1
Calibration: GE00023

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0455-09	XDT_m1230504B-060	Solid	05/04/23 21:56
ZZZZZ	23A0455-09	XDT_m1230504B-060	Solid	05/04/23 21:56
ZZZZZ	23A0455-09	XDT_m1230504B-060	Solid	05/04/23 21:56
ZZZZZ	23A0455-09	XDT_m1230504B-060	Solid	05/04/23 21:56
Instrument Blank	SLE0093-IBL6	XDT_m1230504B-061	NA	05/04/23 22:01
Calibration Check	SLE0093-CCV6	XDT_m1230504B-062	NA	05/04/23 22:06
Calibration Blank	SLE0093-CCB6	XDT_m1230504B-063	NA	05/04/23 22:13
ZZZZZ	23D0297-02	XDT_m1230504B-066	Solid	05/04/23 22:28
ZZZZZ	23D0297-02	XDT_m1230504B-066	Solid	05/04/23 22:28
ZZZZZ	23D0297-02	XDT_m1230504B-066	Solid	05/04/23 22:28
ZZZZZ	23D0297-02	XDT_m1230504B-066	Solid	05/04/23 22:28
ZZZZZ	23D0297-02	XDT_m1230504B-066	Solid	05/04/23 22:28
ZZZZZ	23D0297-02	XDT_m1230504B-066	Solid	05/04/23 22:28
ZZZZZ	23D0297-03	XDT_m1230504B-067	Solid	05/04/23 22:32
ZZZZZ	23D0297-03	XDT_m1230504B-067	Solid	05/04/23 22:32
ZZZZZ	23D0297-03	XDT_m1230504B-067	Solid	05/04/23 22:32
ZZZZZ	23D0297-03	XDT_m1230504B-067	Solid	05/04/23 22:32
ZZZZZ	23D0297-03	XDT_m1230504B-067	Solid	05/04/23 22:32
ZZZZZ	23D0297-03	XDT_m1230504B-067	Solid	05/04/23 22:32
ZZZZZ	23D0297-04	XDT_m1230504B-068	Solid	05/04/23 22:37
ZZZZZ	23D0297-04	XDT_m1230504B-068	Solid	05/04/23 22:37
ZZZZZ	23D0297-04	XDT_m1230504B-068	Solid	05/04/23 22:37
ZZZZZ	23D0297-04	XDT_m1230504B-068	Solid	05/04/23 22:37
ZZZZZ	23D0297-04	XDT_m1230504B-068	Solid	05/04/23 22:37
ZZZZZ	23D0297-04	XDT_m1230504B-068	Solid	05/04/23 22:37
ZZZZZ	23D0297-05	XDT_m1230504B-069	Solid	05/04/23 22:42
ZZZZZ	23D0297-05	XDT_m1230504B-069	Solid	05/04/23 22:42
ZZZZZ	23D0297-05	XDT_m1230504B-069	Solid	05/04/23 22:42
ZZZZZ	23D0297-05	XDT_m1230504B-069	Solid	05/04/23 22:42

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0093	Instrument:	ICPMS1
		Calibration:	GE00023

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0297-05	XDT_m1230504B-069	Solid	05/04/23 22:42
ZZZZZ	23D0297-05	XDT_m1230504B-069	Solid	05/04/23 22:42
ZZZZZ	23D0297-01	XDT_m1230504B-070	Solid	05/04/23 22:47
ZZZZZ	23D0297-01	XDT_m1230504B-070	Solid	05/04/23 22:47
ZZZZZ	23D0297-01	XDT_m1230504B-070	Solid	05/04/23 22:47
ZZZZZ	23D0297-01	XDT_m1230504B-070	Solid	05/04/23 22:47
ZZZZZ	23D0297-01	XDT_m1230504B-070	Solid	05/04/23 22:47
ZZZZZ	23D0297-01	XDT_m1230504B-070	Solid	05/04/23 22:47
Instrument Blank	SLE0093-IBL7	XDT_m1230504B-073	NA	05/04/23 23:01
Calibration Check	SLE0093-CCV7	XDT_m1230504B-074	NA	05/04/23 23:06
Calibration Blank	SLE0093-CCB7	XDT_m1230504B-075	NA	05/04/23 23:14
ZZZZZ	23D0297-06	XDT_m1230504B-082	Solid	05/04/23 23:47
ZZZZZ	23D0297-06	XDT_m1230504B-082	Solid	05/04/23 23:47
ZZZZZ	23D0297-06	XDT_m1230504B-082	Solid	05/04/23 23:47
ZZZZZ	23D0297-06	XDT_m1230504B-082	Solid	05/04/23 23:47
ZZZZZ	23D0297-06	XDT_m1230504B-082	Solid	05/04/23 23:47
ZZZZZ	23D0297-06	XDT_m1230504B-082	Solid	05/04/23 23:47
ZZZZZ	23D0297-07	XDT_m1230504B-083	Solid	05/04/23 23:52
ZZZZZ	23D0297-07	XDT_m1230504B-083	Solid	05/04/23 23:52
ZZZZZ	23D0297-07	XDT_m1230504B-083	Solid	05/04/23 23:52
ZZZZZ	23D0297-07	XDT_m1230504B-083	Solid	05/04/23 23:52
ZZZZZ	23D0297-07	XDT_m1230504B-083	Solid	05/04/23 23:52
ZZZZZ	23D0297-07	XDT_m1230504B-083	Solid	05/04/23 23:52
ZZZZZ	23D0297-08	XDT_m1230504B-084	Solid	05/04/23 23:58
ZZZZZ	23D0297-08	XDT_m1230504B-084	Solid	05/04/23 23:58
ZZZZZ	23D0297-08	XDT_m1230504B-084	Solid	05/04/23 23:58
ZZZZZ	23D0297-08	XDT_m1230504B-084	Solid	05/04/23 23:58
ZZZZZ	23D0297-08	XDT_m1230504B-084	Solid	05/04/23 23:58
Instrument Blank	SLE0093-IBL8	XDT_m1230504B-085	NA	05/05/23 00:02

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Floyd - Snider
Sequence: SLE0093

SDG: 23D0412
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument: ICPMS1
Calibration: GE00023

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLE0093-CCV8	XDT_m1230504B-086	NA	05/05/23 00:05
Calibration Blank	SLE0093-CCB8	XDT_m1230504B-087	NA	05/05/23 00:12
Instrument Blank	SLE0093-IBL9	XDT_m1230504B-092	NA	05/05/23 00:31
Instrument Blank	SLE0093-IBLA	XDT_m1230504B-097	NA	05/05/23 00:50
Calibration Check	SLE0093-CCV9	XDT_m1230504B-098	NA	05/05/23 00:53
Calibration Blank	SLE0093-CCB9	XDT_m1230504B-099	NA	05/05/23 01:00
Instrument Blank	SLE0093-IBLB	XDT_m1230504B-104	NA	05/05/23 01:19
Instrument Blank	SLE0093-IBLC	XDT_m1230504B-109	NA	05/05/23 01:38
Calibration Check	SLE0093-CCVA	XDT_m1230504B-110	NA	05/05/23 01:42
Calibration Blank	SLE0093-CCBA	XDT_m1230504B-111	NA	05/05/23 01:48
Calibration Check	SLE0093-CCVB	XDT_m1230504B-113	NA	05/05/23 01:56
Calibration Blank	SLE0093-CCBB	XDT_m1230504B-114	NA	05/05/23 02:02
Instrument Blank	SLE0093-IBLD	XDT_m1230504B-119	NA	05/05/23 02:22
Instrument Blank	SLE0093-IBLE	XDT_m1230504B-124	NA	05/05/23 02:43
Calibration Check	SLE0093-CCVC	XDT_m1230504B-125	NA	05/05/23 02:47
Calibration Blank	SLE0093-CCBC	XDT_m1230504B-126	NA	05/05/23 02:53
Instrument Blank	SLE0093-IBLF	XDT_m1230504B-136	NA	05/05/23 03:32
Calibration Check	SLE0093-CCVD	XDT_m1230504B-137	NA	05/05/23 03:36
Calibration Blank	SLE0093-CCBD	XDT_m1230504B-138	NA	05/05/23 03:42
Instrument Blank	SLE0093-IBLG	XDT_m1230504B-148	NA	05/05/23 04:21
Calibration Check	SLE0093-CCVE	XDT_m1230504B-149	NA	05/05/23 04:24
Calibration Blank	SLE0093-CCBE	XDT_m1230504B-150	NA	05/05/23 04:31
Instrument Blank	SLE0093-IBLH	XDT_m1230504B-155	NA	05/05/23 04:51
Instrument Blank	SLE0093-IBLI	XDT_m1230504B-160	NA	05/05/23 05:11
Calibration Check	SLE0093-CCVF	XDT_m1230504B-161	NA	05/05/23 05:15
Calibration Blank	SLE0093-CCBF	XDT_m1230504B-162	NA	05/05/23 05:22
Calibration Check	SLE0093-CCVG	XDT_m1230504B-164	NA	05/05/23 05:29
Calibration Blank	SLE0093-CCBG	XDT_m1230504B-165	NA	05/05/23 05:35
ZZZZZ	23C0690-04	XDT_m1230504B-166	Water	05/05/23 05:39

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0093	Instrument:	ICPMS1
		Calibration:	GE00023

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23C0690-04	XDT_m1230504B-166	Water	05/05/23 05:39
ZZZZZ	23C0690-08	XDT_m1230504B-167	Water	05/05/23 05:43
ZZZZZ	23C0690-08	XDT_m1230504B-167	Water	05/05/23 05:43
ZZZZZ	23C0690-08	XDT_m1230504B-167	Water	05/05/23 05:43
ZZZZZ	23C0690-10	XDT_m1230504B-168	Water	05/05/23 05:46
ZZZZZ	23C0690-10	XDT_m1230504B-168	Water	05/05/23 05:46
ZZZZZ	23C0690-10	XDT_m1230504B-168	Water	05/05/23 05:46
ZZZZZ	23C0715-02	XDT_m1230504B-169	Water	05/05/23 05:51
ZZZZZ	23C0715-02	XDT_m1230504B-169	Water	05/05/23 05:51
ZZZZZ	23C0715-02	XDT_m1230504B-169	Water	05/05/23 05:51
ZZZZZ	23C0715-04	XDT_m1230504B-170	Water	05/05/23 05:56
ZZZZZ	23C0715-04	XDT_m1230504B-170	Water	05/05/23 05:56
ZZZZZ	23C0715-04	XDT_m1230504B-170	Water	05/05/23 05:56
Instrument Blank	SLE0093-IBLJ	XDT_m1230504B-171	NA	05/05/23 05:59
Instrument Blank	SLE0093-IBLK	XDT_m1230504B-175	NA	05/05/23 06:15
Calibration Check	SLE0093-CCVH	XDT_m1230504B-176	NA	05/05/23 06:18
Calibration Blank	SLE0093-CCBH	XDT_m1230504B-177	NA	05/05/23 06:25
Blank	BLD0807-BLK1	XDT_m1230504B-178	Water	05/05/23 06:29
LCS	BLD0807-BS1	XDT_m1230504B-179	Water	05/05/23 06:32
Instrument Blank	SLE0093-IBLL	XDT_m1230504B-183	NA	05/05/23 06:47
Instrument Blank	SLE0093-IBLM	XDT_m1230504B-187	NA	05/05/23 07:03
Calibration Check	SLE0093-CCVI	XDT_m1230504B-188	NA	05/05/23 07:06
Calibration Blank	SLE0093-CCBI	XDT_m1230504B-189	NA	05/05/23 07:13
MWCP1-041323	23D0412-01	XDT_m1230504B-195	Water	05/05/23 07:35
MWCP1-041323	BLD0807-DUP1	XDT_m1230504B-196	Water	05/05/23 07:39
MWCP1-041323	BLD0807-MS1	XDT_m1230504B-197	Water	05/05/23 07:43
MWCP1-041323	BLD0807-MSD1	XDT_m1230504B-198	Water	05/05/23 07:47
Instrument Blank	SLE0093-IBLN	XDT_m1230504B-199	NA	05/05/23 07:51
Calibration Check	SLE0093-CCVJ	XDT_m1230504B-200	NA	05/05/23 07:54

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0093	Instrument:	ICPMS1
		Calibration:	GE00023

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLE0093-CCBJ	XDT_m1230504B-201	NA	05/05/23 08:01

Analytical Resources, LLC
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Sequence: SLE0130
Instrument: ICPMS1
Calibration: GE00026

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0130-CAL1	XDT_m1230505-008	NA	05/05/23 13:41
CAL 1 - LOW CHECK	SLE0130-CAL2	XDT_m1230505-009	NA	05/05/23 13:45
CAL 2	SLE0130-CAL3	XDT_m1230505-010	NA	05/05/23 13:50
CAL 3	SLE0130-CAL4	XDT_m1230505-011	NA	05/05/23 13:55
CAL 4	SLE0130-CAL5	XDT_m1230505-012	NA	05/05/23 13:59
CAL 5	SLE0130-CAL6	XDT_m1230505-013	NA	05/05/23 14:06
RINSE	SLE0130-IBL1	XDT_m1230505-014	NA	05/05/23 14:13
Initial Cal Check	SLE0130-ICV1	XDT_m1230505-016	NA	05/05/23 14:19
Initial Cal Blank	SLE0130-ICB1	XDT_m1230505-017	NA	05/05/23 14:26
Calibration Check	SLE0130-CCV1	XDT_m1230505-018	NA	05/05/23 14:31
Calibration Blank	SLE0130-CCB1	XDT_m1230505-019	NA	05/05/23 14:38
Instrument RL Check	SLE0130-CRL1	XDT_m1230505-020	NA	05/05/23 14:43
Interference Check A	SLE0130-IFA1	XDT_m1230505-021	NA	05/05/23 14:50
Interference Check B	SLE0130-IFB1	XDT_m1230505-022	NA	05/05/23 14:55
LR200	SLE0130-HCV1	XDT_m1230505-023	NA	05/05/23 14:59
Instrument Blank	SLE0130-IBL2	XDT_m1230505-025	NA	05/05/23 15:11
LR300	SLE0130-HCV2	XDT_m1230505-026	NA	05/05/23 15:17
Instrument Blank	SLE0130-IBL3	XDT_m1230505-027	NA	05/05/23 15:25
Calibration Check	SLE0130-CCV2	XDT_m1230505-028	NA	05/05/23 15:30
Calibration Blank	SLE0130-CCB2	XDT_m1230505-029	NA	05/05/23 15:37
Instrument Blank	SLE0130-IBL4	XDT_m1230505-039	NA	05/05/23 16:27
Calibration Check	SLE0130-CCV3	XDT_m1230505-040	NA	05/05/23 16:32
Calibration Blank	SLE0130-CCB3	XDT_m1230505-041	NA	05/05/23 16:39
Instrument Blank	SLE0130-IBL5	XDT_m1230505-051	NA	05/05/23 17:32
Calibration Check	SLE0130-CCV4	XDT_m1230505-052	NA	05/05/23 17:36
Calibration Blank	SLE0130-CCB4	XDT_m1230505-053	NA	05/05/23 17:43
Calibration Check	SLE0130-CCV5	XDT_m1230505-055	NA	05/05/23 17:54
Calibration Blank	SLE0130-CCB5	XDT_m1230505-056	NA	05/05/23 18:01
Instrument Blank	SLE0130-IBL6	XDT_m1230505-066	NA	05/05/23 18:49

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0130	Instrument:	ICPMS1
		Calibration:	GE00026

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLE0130-CCV6	XDT_m1230505-067	NA	05/05/23 18:53
Calibration Blank	SLE0130-CCB6	XDT_m1230505-068	NA	05/05/23 19:00
Instrument Blank	SLE0130-IBL7	XDT_m1230505-078	NA	05/05/23 19:45
Calibration Check	SLE0130-CCV7	XDT_m1230505-079	NA	05/05/23 19:49
Calibration Blank	SLE0130-CCB7	XDT_m1230505-080	NA	05/05/23 19:56
Instrument Blank	SLE0130-IBL8	XDT_m1230505-090	NA	05/05/23 20:42
Calibration Check	SLE0130-CCV8	XDT_m1230505-091	NA	05/05/23 20:46
Calibration Blank	SLE0130-CCB8	XDT_m1230505-092	NA	05/05/23 20:53
Instrument Blank	SLE0130-IBL9	XDT_m1230505-102	NA	05/05/23 21:37
Calibration Check	SLE0130-CCV9	XDT_m1230505-103	NA	05/05/23 21:41
Calibration Blank	SLE0130-CCB9	XDT_m1230505-104	NA	05/05/23 21:48
Instrument Blank	SLE0130-IBLA	XDT_m1230505-114	NA	05/05/23 22:38
Calibration Check	SLE0130-CCVA	XDT_m1230505-115	NA	05/05/23 22:42
Calibration Blank	SLE0130-CCBA	XDT_m1230505-116	NA	05/05/23 22:48
ZZZZZ	BLD0806-BLK1	XDT_m1230505-117	Water	05/05/23 22:52
ZZZZZ	BLD0806-BS1	XDT_m1230505-118	Water	05/05/23 22:56
Instrument Blank	SLE0130-IBLB	XDT_m1230505-126	NA	05/05/23 23:32
Calibration Check	SLE0130-CCVB	XDT_m1230505-127	NA	05/05/23 23:36
Calibration Blank	SLE0130-CCBB	XDT_m1230505-128	NA	05/05/23 23:43
Calibration Check	SLE0130-CCVC	XDT_m1230505-130	NA	05/06/23 00:09
Calibration Blank	SLE0130-CCBC	XDT_m1230505-131	NA	05/06/23 00:16
Instrument Blank	SLE0130-IBLC	XDT_m1230505-141	NA	05/06/23 00:56
Calibration Check	SLE0130-CCVD	XDT_m1230505-142	NA	05/06/23 01:00
Calibration Blank	SLE0130-CCBD	XDT_m1230505-143	NA	05/06/23 01:07
ZZZZZ	BLE0106-BLK1	XDT_m1230505-146	Water	05/06/23 01:18
ZZZZZ	BLE0106-BS1	XDT_m1230505-147	Water	05/06/23 01:22
Instrument Blank	SLE0130-IBLD	XDT_m1230505-153	NA	05/06/23 01:46
Calibration Check	SLE0130-CCVE	XDT_m1230505-154	NA	05/06/23 01:50
Calibration Blank	SLE0130-CCBE	XDT_m1230505-155	NA	05/06/23 01:57

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Sequence: SLE0130
Instrument: ICPMS1
Calibration: GE00026

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Instrument Blank	SLE0130-IBLE	XDT_m1230505-165	NA	05/06/23 02:40
Calibration Check	SLE0130-CCVF	XDT_m1230505-166	NA	05/06/23 02:44
Calibration Blank	SLE0130-CCBF	XDT_m1230505-167	NA	05/06/23 02:51
Calibration Check	SLE0130-CCVG	XDT_m1230505-169	NA	05/06/23 02:58
Calibration Blank	SLE0130-CCBG	XDT_m1230505-170	NA	05/06/23 03:05
Instrument Blank	SLE0130-IBLF	XDT_m1230505-175	NA	05/06/23 03:27
Instrument Blank	SLE0130-IBLG	XDT_m1230505-180	NA	05/06/23 03:49
Calibration Check	SLE0130-CCVH	XDT_m1230505-181	NA	05/06/23 03:52
Calibration Blank	SLE0130-CCBH	XDT_m1230505-182	NA	05/06/23 03:59
Instrument Blank	SLE0130-IBLH	XDT_m1230505-187	NA	05/06/23 04:21
Instrument Blank	SLE0130-IBLI	XDT_m1230505-192	NA	05/06/23 04:43
Calibration Check	SLE0130-CCVI	XDT_m1230505-193	NA	05/06/23 04:47
Calibration Blank	SLE0130-CCBI	XDT_m1230505-194	NA	05/06/23 04:53
Instrument Blank	SLE0130-IBLJ	XDT_m1230505-204	NA	05/06/23 05:33
Calibration Check	SLE0130-CCVJ	XDT_m1230505-205	NA	05/06/23 05:37
Calibration Blank	SLE0130-CCBJ	XDT_m1230505-206	NA	05/06/23 05:44

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0138	Instrument:	ICPMS1
		Calibration:	GE00030

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0138-CAL1	XDT_m1230508-001	NA	05/08/23 13:46
CAL 1 - LOW CHECK	SLE0138-CAL2	XDT_m1230508-002	NA	05/08/23 13:51
CAL 2	SLE0138-CAL3	XDT_m1230508-003	NA	05/08/23 13:56
CAL 3	SLE0138-CAL4	XDT_m1230508-004	NA	05/08/23 14:02
CAL 4	SLE0138-CAL5	XDT_m1230508-005	NA	05/08/23 14:07
CAL 5	SLE0138-CAL6	XDT_m1230508-006	NA	05/08/23 14:14
RINSE	SLE0138-IBL1	XDT_m1230508-007	NA	05/08/23 14:22
Initial Cal Check	SLE0138-ICV1	XDT_m1230508-009	NA	05/08/23 14:28
Initial Cal Blank	SLE0138-ICB1	XDT_m1230508-010	NA	05/08/23 14:36
Calibration Check	SLE0138-CCV1	XDT_m1230508-011	NA	05/08/23 14:42
Calibration Blank	SLE0138-CCB1	XDT_m1230508-012	NA	05/08/23 14:49
Instrument RL Check	SLE0138-CRL1	XDT_m1230508-013	NA	05/08/23 15:02
Interference Check A	SLE0138-IFA1	XDT_m1230508-014	NA	05/08/23 15:07
Interference Check B	SLE0138-IFB1	XDT_m1230508-015	NA	05/08/23 15:12
LR200	SLE0138-HCV1	XDT_m1230508-016	NA	05/08/23 15:17
LR300	SLE0138-HCV2	XDT_m1230508-017	NA	05/08/23 15:22
Instrument Blank	SLE0138-IBL2	XDT_m1230508-018	NA	05/08/23 15:30
Instrument Blank	SLE0138-IBL3	XDT_m1230508-019	NA	05/08/23 15:39
Calibration Check	SLE0138-CCV2	XDT_m1230508-020	NA	05/08/23 15:45
Calibration Blank	SLE0138-CCB2	XDT_m1230508-021	NA	05/08/23 15:53
Instrument Blank	SLE0138-IBL4	XDT_m1230508-029	NA	05/08/23 16:44
Instrument Blank	SLE0138-IBL5	XDT_m1230508-031	NA	05/08/23 16:54
Calibration Check	SLE0138-CCV3	XDT_m1230508-032	NA	05/08/23 16:59
Calibration Blank	SLE0138-CCB3	XDT_m1230508-033	NA	05/08/23 17:07
Calibration Check	SLE0138-CCV4	XDT_m1230508-035	NA	05/08/23 17:19
Calibration Blank	SLE0138-CCB4	XDT_m1230508-036	NA	05/08/23 17:27
ZZZZZ	23C0715-06	XDT_m1230508-037	Water	05/08/23 17:34
ZZZZZ	23C0715-06	XDT_m1230508-037	Water	05/08/23 17:34
ZZZZZ	23C0715-06	XDT_m1230508-037	Water	05/08/23 17:34

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Sequence: SLE0138
Instrument: ICPMS1
Calibration: GE00030

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23C0715-06	XDT_m1230508-037	Water	05/08/23 17:34
ZZZZZ	23C0715-06	XDT_m1230508-037	Water	05/08/23 17:34
ZZZZZ	23C0715-06	XDT_m1230508-037	Water	05/08/23 17:34
ZZZZZ	23C0715-06	XDT_m1230508-037	Water	05/08/23 17:34
ZZZZZ	23C0715-08	XDT_m1230508-038	Water	05/08/23 17:39
ZZZZZ	23C0715-08	XDT_m1230508-038	Water	05/08/23 17:39
ZZZZZ	23C0715-08	XDT_m1230508-038	Water	05/08/23 17:39
ZZZZZ	23C0715-08	XDT_m1230508-038	Water	05/08/23 17:39
ZZZZZ	23C0715-08	XDT_m1230508-038	Water	05/08/23 17:39
ZZZZZ	23C0715-08	XDT_m1230508-038	Water	05/08/23 17:39
ZZZZZ	23C0715-08	XDT_m1230508-038	Water	05/08/23 17:39
ZZZZZ	23C0741-02	XDT_m1230508-039	Water	05/08/23 17:44
ZZZZZ	23C0741-02	XDT_m1230508-039	Water	05/08/23 17:44
ZZZZZ	23C0741-02	XDT_m1230508-039	Water	05/08/23 17:44
ZZZZZ	23C0741-02	XDT_m1230508-039	Water	05/08/23 17:44
ZZZZZ	23C0741-02	XDT_m1230508-039	Water	05/08/23 17:44
ZZZZZ	23C0741-02	XDT_m1230508-039	Water	05/08/23 17:44
ZZZZZ	23C0690-06	XDT_m1230508-040	Water	05/08/23 17:51
ZZZZZ	23C0690-06	XDT_m1230508-040	Water	05/08/23 17:51
ZZZZZ	23C0690-06	XDT_m1230508-040	Water	05/08/23 17:51
ZZZZZ	23C0690-06	XDT_m1230508-040	Water	05/08/23 17:51
ZZZZZ	23C0690-06	XDT_m1230508-040	Water	05/08/23 17:51
ZZZZZ	23C0690-06	XDT_m1230508-040	Water	05/08/23 17:51
ZZZZZ	23C0690-06	XDT_m1230508-040	Water	05/08/23 17:51
Instrument Blank	SLE0138-IBL6	XDT_m1230508-041	NA	05/08/23 17:56
ZZZZZ	23C0690-02	XDT_m1230508-042	Water	05/08/23 18:01
ZZZZZ	23C0690-02	XDT_m1230508-042	Water	05/08/23 18:01
ZZZZZ	23C0690-02	XDT_m1230508-042	Water	05/08/23 18:01
ZZZZZ	23C0690-02	XDT_m1230508-042	Water	05/08/23 18:01

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0138	Instrument:	ICPMS1
		Calibration:	GE00030

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23C0690-02	XDT_m1230508-042	Water	05/08/23 18:01
ZZZZZ	23C0690-02	XDT_m1230508-042	Water	05/08/23 18:01
ZZZZZ	23C0690-02	XDT_m1230508-042	Water	05/08/23 18:01
ZZZZZ	BLD0296-DUP1	XDT_m1230508-043	Water	05/08/23 18:06
ZZZZZ	BLD0296-MS1	XDT_m1230508-044	Water	05/08/23 18:12
ZZZZZ	BLD0296-MSD1	XDT_m1230508-045	Water	05/08/23 18:18
Instrument Blank	SLE0138-IBL7	XDT_m1230508-046	NA	05/08/23 18:23
Calibration Check	SLE0138-CCV5	XDT_m1230508-047	NA	05/08/23 18:29
Calibration Blank	SLE0138-CCB5	XDT_m1230508-048	NA	05/08/23 18:36
Instrument Blank	SLE0138-IBL8	XDT_m1230508-054	NA	05/08/23 19:13
ZZZZZ	23D0425-01	XDT_m1230508-056	Water	05/08/23 19:25
ZZZZZ	23D0425-01	XDT_m1230508-056	Water	05/08/23 19:25
ZZZZZ	23D0425-01	XDT_m1230508-056	Water	05/08/23 19:25
Instrument Blank	SLE0138-IBL9	XDT_m1230508-058	NA	05/08/23 19:39
Calibration Check	SLE0138-CCV6	XDT_m1230508-059	NA	05/08/23 19:44
Calibration Blank	SLE0138-CCB6	XDT_m1230508-060	NA	05/08/23 19:52
ZZZZZ	23D0414-02	XDT_m1230508-063	Water	05/08/23 20:10
ZZZZZ	23D0414-02	XDT_m1230508-063	Water	05/08/23 20:10
ZZZZZ	23D0414-02	XDT_m1230508-063	Water	05/08/23 20:10
ZZZZZ	23D0425-02	XDT_m1230508-067	Water	05/08/23 20:34
ZZZZZ	23D0425-02	XDT_m1230508-067	Water	05/08/23 20:34
ZZZZZ	23D0425-02	XDT_m1230508-067	Water	05/08/23 20:34
ZZZZZ	BLD0806-DUP1	XDT_m1230508-068	Water	05/08/23 20:39
ZZZZZ	BLD0806-MS1	XDT_m1230508-069	Water	05/08/23 20:44
Instrument Blank	SLE0138-IBLA	XDT_m1230508-070	NA	05/08/23 20:50
Calibration Check	SLE0138-CCV7	XDT_m1230508-071	NA	05/08/23 20:55
Calibration Blank	SLE0138-CCB7	XDT_m1230508-072	NA	05/08/23 21:03
ZZZZZ	23C0690-06RE1	XDT_m1230508-100	Water	05/08/23 23:16
ZZZZZ	23C0715-08RE1	XDT_m1230508-101	Water	05/08/23 23:20

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0138	Instrument:	ICPMS1
		Calibration:	GE00030

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0297-08	XDT_m1230508-108	Solid	05/08/23 23:48
ZZZZZ	23C0690-04	XDT_m1230508-112	Water	05/09/23 00:07

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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0209-CAL1	XDT_m1230511-006	NA	05/11/23 13:56
CAL 1 - LOW CHECK	SLE0209-CAL2	XDT_m1230511-007	NA	05/11/23 14:00
CAL 2	SLE0209-CAL3	XDT_m1230511-008	NA	05/11/23 14:05
CAL 3	SLE0209-CAL4	XDT_m1230511-009	NA	05/11/23 14:10
CAL 4	SLE0209-CAL5	XDT_m1230511-010	NA	05/11/23 14:15
CAL 5	SLE0209-CAL6	XDT_m1230511-011	NA	05/11/23 14:21
RINSE	SLE0209-IBL1	XDT_m1230511-012	NA	05/11/23 14:29
Initial Cal Check	SLE0209-ICV1	XDT_m1230511-014	NA	05/11/23 14:34
Initial Cal Blank	SLE0209-ICB1	XDT_m1230511-015	NA	05/11/23 14:42
Calibration Check	SLE0209-CCV1	XDT_m1230511-019	NA	05/11/23 15:06
Calibration Blank	SLE0209-CCB1	XDT_m1230511-020	NA	05/11/23 15:13
Instrument RL Check	SLE0209-CRL1	XDT_m1230511-021	NA	05/11/23 15:18
Interference Check A	SLE0209-IFA1	XDT_m1230511-022	NA	05/11/23 15:23
Interference Check B	SLE0209-IFB1	XDT_m1230511-023	NA	05/11/23 15:28
LR200	SLE0209-HCV1	XDT_m1230511-024	NA	05/11/23 15:32
LR300	SLE0209-HCV2	XDT_m1230511-025	NA	05/11/23 15:37
Instrument Blank	SLE0209-IBL2	XDT_m1230511-026	NA	05/11/23 15:50
Instrument Blank	SLE0209-IBL3	XDT_m1230511-027	NA	05/11/23 15:56
Calibration Check	SLE0209-CCV2	XDT_m1230511-028	NA	05/11/23 16:02
Calibration Blank	SLE0209-CCB2	XDT_m1230511-029	NA	05/11/23 16:09
Calibration Check	SLE0209-CCV3	XDT_m1230511-031	NA	05/11/23 16:19
Calibration Blank	SLE0209-CCB3	XDT_m1230511-032	NA	05/11/23 16:27
Instrument Blank	SLE0209-IBL4	XDT_m1230511-040	NA	05/11/23 17:10
Instrument Blank	SLE0209-IBL5	XDT_m1230511-042	NA	05/11/23 17:21
Calibration Check	SLE0209-CCV4	XDT_m1230511-043	NA	05/11/23 17:25
Calibration Blank	SLE0209-CCB4	XDT_m1230511-044	NA	05/11/23 17:32
Instrument Blank	SLE0209-IBL9	XDT_m1230511-073	NA	05/11/23 18:29
ZZZZZ	23D0702-04	XDT_m1230511-074	Water	05/11/23 18:34
ZZZZZ	23D0702-04	XDT_m1230511-074	Water	05/11/23 18:34

Analytical Resources, LLC
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0702-04	XDT_m1230511-074	Water	05/11/23 18:34
ZZZZZ	23D0702-04	XDT_m1230511-074	Water	05/11/23 18:34
Instrument Blank	SLE0209-IBLA	XDT_m1230511-078	NA	05/11/23 18:55
Calibration Check	SLE0209-CCV7	XDT_m1230511-079	NA	05/11/23 18:59
Calibration Blank	SLE0209-CCB7	XDT_m1230511-080	NA	05/11/23 19:07
Calibration Check	SLE0209-CCV8	XDT_m1230511-082	NA	05/11/23 19:18
Calibration Blank	SLE0209-CCB8	XDT_m1230511-083	NA	05/11/23 19:25
Calibration Check	SLE0209-CCVA	XDT_m1230511-094	NA	05/11/23 19:55
Calibration Blank	SLE0209-CCBA	XDT_m1230511-095	NA	05/11/23 20:00
Instrument Blank	SLE0209-IBLC	XDT_m1230511-100	NA	05/11/23 20:25
ZZZZZ	23D0568-08	XDT_m1230511-101	Solid	05/11/23 20:30
ZZZZZ	23D0568-08	XDT_m1230511-101	Solid	05/11/23 20:30
ZZZZZ	23D0568-08	XDT_m1230511-101	Solid	05/11/23 20:30
ZZZZZ	23D0568-08	XDT_m1230511-101	Solid	05/11/23 20:30
Instrument Blank	SLE0209-IBLD	XDT_m1230511-105	NA	05/11/23 20:49
Calibration Check	SLE0209-CCVB	XDT_m1230511-106	NA	05/11/23 20:53
Calibration Blank	SLE0209-CCBB	XDT_m1230511-107	NA	05/11/23 21:00
ZZZZZ	23D0568-02	XDT_m1230511-108	Solid	05/11/23 21:06
ZZZZZ	23D0568-02	XDT_m1230511-108	Solid	05/11/23 21:06
ZZZZZ	23D0568-02	XDT_m1230511-108	Solid	05/11/23 21:06
ZZZZZ	23D0568-02	XDT_m1230511-108	Solid	05/11/23 21:06
ZZZZZ	23D0568-03	XDT_m1230511-109	Solid	05/11/23 21:11
ZZZZZ	23D0568-03	XDT_m1230511-109	Solid	05/11/23 21:11
ZZZZZ	23D0568-03	XDT_m1230511-109	Solid	05/11/23 21:11
ZZZZZ	23D0568-03	XDT_m1230511-109	Solid	05/11/23 21:11
ZZZZZ	23D0568-04	XDT_m1230511-110	Solid	05/11/23 21:15
ZZZZZ	23D0568-04	XDT_m1230511-110	Solid	05/11/23 21:15
ZZZZZ	23D0568-04	XDT_m1230511-110	Solid	05/11/23 21:15
ZZZZZ	23D0568-04	XDT_m1230511-110	Solid	05/11/23 21:15

Analytical Resources, LLC
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0568-05	XDT_m1230511-111	Solid	05/11/23 21:20
ZZZZZ	23D0568-05	XDT_m1230511-111	Solid	05/11/23 21:20
ZZZZZ	23D0568-05	XDT_m1230511-111	Solid	05/11/23 21:20
ZZZZZ	23D0568-05	XDT_m1230511-111	Solid	05/11/23 21:20
ZZZZZ	23D0568-06	XDT_m1230511-112	Solid	05/11/23 21:24
ZZZZZ	23D0568-06	XDT_m1230511-112	Solid	05/11/23 21:24
ZZZZZ	23D0568-06	XDT_m1230511-112	Solid	05/11/23 21:24
ZZZZZ	23D0568-06	XDT_m1230511-112	Solid	05/11/23 21:24
ZZZZZ	23D0568-07	XDT_m1230511-113	Solid	05/11/23 21:29
ZZZZZ	23D0568-07	XDT_m1230511-113	Solid	05/11/23 21:29
ZZZZZ	23D0568-07	XDT_m1230511-113	Solid	05/11/23 21:29
ZZZZZ	23D0568-07	XDT_m1230511-113	Solid	05/11/23 21:29
Instrument Blank	SLE0209-IBLE	XDT_m1230511-114	NA	05/11/23 21:34
Instrument Blank	SLE0209-IBLF	XDT_m1230511-116	NA	05/11/23 21:46
Calibration Check	SLE0209-CCVC	XDT_m1230511-117	NA	05/11/23 21:50
Calibration Blank	SLE0209-CCBC	XDT_m1230511-118	NA	05/11/23 21:58
Calibration Check	SLE0209-CCVD	XDT_m1230511-120	NA	05/11/23 22:08
Calibration Blank	SLE0209-CCBD	XDT_m1230511-121	NA	05/11/23 22:15
ZZZZZ	23D0136-01	XDT_m1230511-125	Solid	05/11/23 22:35
ZZZZZ	23D0136-01	XDT_m1230511-125	Solid	05/11/23 22:35
ZZZZZ	23D0136-01	XDT_m1230511-125	Solid	05/11/23 22:35
ZZZZZ	23D0136-01	XDT_m1230511-125	Solid	05/11/23 22:35
ZZZZZ	23D0136-03	XDT_m1230511-126	Solid	05/11/23 22:40
ZZZZZ	23D0136-03	XDT_m1230511-126	Solid	05/11/23 22:40
ZZZZZ	23D0136-03	XDT_m1230511-126	Solid	05/11/23 22:40
ZZZZZ	23D0136-03	XDT_m1230511-126	Solid	05/11/23 22:40
ZZZZZ	23D0396-01	XDT_m1230511-127	Solid	05/11/23 22:44
ZZZZZ	23D0396-01	XDT_m1230511-127	Solid	05/11/23 22:44
ZZZZZ	23D0396-01	XDT_m1230511-127	Solid	05/11/23 22:44

Analytical Resources, LLC
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0396-01	XDT_m1230511-127	Solid	05/11/23 22:44
ZZZZZ	23D0396-03	XDT_m1230511-128	Solid	05/11/23 22:48
ZZZZZ	23D0396-03	XDT_m1230511-128	Solid	05/11/23 22:48
ZZZZZ	23D0396-03	XDT_m1230511-128	Solid	05/11/23 22:48
ZZZZZ	23D0396-03	XDT_m1230511-128	Solid	05/11/23 22:48
ZZZZZ	23D0394-02	XDT_m1230511-129	Solid	05/11/23 22:53
ZZZZZ	23D0394-02	XDT_m1230511-129	Solid	05/11/23 22:53
ZZZZZ	23D0394-02	XDT_m1230511-129	Solid	05/11/23 22:53
ZZZZZ	23D0394-02	XDT_m1230511-129	Solid	05/11/23 22:53
ZZZZZ	23D0394-04	XDT_m1230511-130	Solid	05/11/23 22:57
ZZZZZ	23D0394-04	XDT_m1230511-130	Solid	05/11/23 22:57
ZZZZZ	23D0394-04	XDT_m1230511-130	Solid	05/11/23 22:57
ZZZZZ	23D0394-04	XDT_m1230511-130	Solid	05/11/23 22:57
Instrument Blank	SLE0209-IBLG	XDT_m1230511-131	NA	05/11/23 23:02
Calibration Check	SLE0209-CCVE	XDT_m1230511-132	NA	05/11/23 23:07
Calibration Blank	SLE0209-CCBE	XDT_m1230511-133	NA	05/11/23 23:14
ZZZZZ	23D0394-06	XDT_m1230511-134	Solid	05/11/23 23:18
ZZZZZ	23D0394-06	XDT_m1230511-134	Solid	05/11/23 23:18
ZZZZZ	23D0394-06	XDT_m1230511-134	Solid	05/11/23 23:18
ZZZZZ	23D0394-06	XDT_m1230511-134	Solid	05/11/23 23:18
ZZZZZ	23D0394-07	XDT_m1230511-135	Solid	05/11/23 23:23
ZZZZZ	23D0394-07	XDT_m1230511-135	Solid	05/11/23 23:23
ZZZZZ	23D0394-07	XDT_m1230511-135	Solid	05/11/23 23:23
ZZZZZ	23D0394-07	XDT_m1230511-135	Solid	05/11/23 23:23
ZZZZZ	23D0394-08	XDT_m1230511-136	Solid	05/11/23 23:27
ZZZZZ	23D0394-08	XDT_m1230511-136	Solid	05/11/23 23:27
ZZZZZ	23D0394-08	XDT_m1230511-136	Solid	05/11/23 23:27
ZZZZZ	23D0394-08	XDT_m1230511-136	Solid	05/11/23 23:27
ZZZZZ	23D0394-11	XDT_m1230511-137	Solid	05/11/23 23:31

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Floyd - Snider
Sequence: SLE0209

SDG: 23D0412
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0394-11	XDT_m1230511-137	Solid	05/11/23 23:31
ZZZZZ	23D0394-12	XDT_m1230511-138	Solid	05/11/23 23:36
ZZZZZ	23D0394-12	XDT_m1230511-138	Solid	05/11/23 23:36
ZZZZZ	23D0394-12	XDT_m1230511-138	Solid	05/11/23 23:36
ZZZZZ	23D0394-12	XDT_m1230511-138	Solid	05/11/23 23:36
ZZZZZ	23D0394-13	XDT_m1230511-139	Solid	05/11/23 23:40
ZZZZZ	23D0394-13	XDT_m1230511-139	Solid	05/11/23 23:40
ZZZZZ	23D0394-13	XDT_m1230511-139	Solid	05/11/23 23:40
ZZZZZ	23D0394-13	XDT_m1230511-139	Solid	05/11/23 23:40
ZZZZZ	23D0393-24	XDT_m1230511-140	Solid	05/11/23 23:44
ZZZZZ	23D0393-24	XDT_m1230511-140	Solid	05/11/23 23:44
ZZZZZ	23D0393-24	XDT_m1230511-140	Solid	05/11/23 23:44
ZZZZZ	23D0393-24	XDT_m1230511-140	Solid	05/11/23 23:44
ZZZZZ	23D0393-28	XDT_m1230511-141	Solid	05/11/23 23:49
ZZZZZ	23D0393-28	XDT_m1230511-141	Solid	05/11/23 23:49
ZZZZZ	23D0393-28	XDT_m1230511-141	Solid	05/11/23 23:49
ZZZZZ	23D0393-28	XDT_m1230511-141	Solid	05/11/23 23:49
ZZZZZ	23D0393-29	XDT_m1230511-142	Solid	05/11/23 23:53
ZZZZZ	23D0393-29	XDT_m1230511-142	Solid	05/11/23 23:53
ZZZZZ	23D0393-29	XDT_m1230511-142	Solid	05/11/23 23:53
ZZZZZ	23D0393-29	XDT_m1230511-142	Solid	05/11/23 23:53
Instrument Blank	SLE0209-IBLH	XDT_m1230511-143	NA	05/11/23 23:58
Calibration Check	SLE0209-CCVF	XDT_m1230511-144	NA	05/12/23 00:02
Calibration Blank	SLE0209-CCBF	XDT_m1230511-145	NA	05/12/23 00:09
ZZZZZ	23D0393-10	XDT_m1230511-146	Solid	05/12/23 00:14
ZZZZZ	23D0393-10	XDT_m1230511-146	Solid	05/12/23 00:14
ZZZZZ	23D0393-10	XDT_m1230511-146	Solid	05/12/23 00:14
ZZZZZ	23D0393-10	XDT_m1230511-146	Solid	05/12/23 00:14
ZZZZZ	23D0393-11	XDT_m1230511-147	Solid	05/12/23 00:19

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0393-11	XDT_m1230511-147	Solid	05/12/23 00:19
ZZZZZ	23D0393-11	XDT_m1230511-147	Solid	05/12/23 00:19
ZZZZZ	23D0393-11	XDT_m1230511-147	Solid	05/12/23 00:19
ZZZZZ	23D0393-12	XDT_m1230511-148	Solid	05/12/23 00:23
ZZZZZ	23D0393-15	XDT_m1230511-149	Solid	05/12/23 00:27
ZZZZZ	23D0393-15	XDT_m1230511-149	Solid	05/12/23 00:27
ZZZZZ	23D0393-15	XDT_m1230511-149	Solid	05/12/23 00:27
ZZZZZ	23D0393-15	XDT_m1230511-149	Solid	05/12/23 00:27
ZZZZZ	23D0393-16	XDT_m1230511-150	Solid	05/12/23 00:34
ZZZZZ	23D0393-16	XDT_m1230511-150	Solid	05/12/23 00:34
ZZZZZ	23D0393-16	XDT_m1230511-150	Solid	05/12/23 00:34
ZZZZZ	23D0393-16	XDT_m1230511-150	Solid	05/12/23 00:34
ZZZZZ	23D0393-17	XDT_m1230511-151	Solid	05/12/23 00:38
ZZZZZ	23D0393-17	XDT_m1230511-151	Solid	05/12/23 00:38
ZZZZZ	23D0393-17	XDT_m1230511-151	Solid	05/12/23 00:38
ZZZZZ	23D0393-17	XDT_m1230511-151	Solid	05/12/23 00:38
ZZZZZ	23D0393-18	XDT_m1230511-152	Solid	05/12/23 00:43
ZZZZZ	23D0393-18	XDT_m1230511-152	Solid	05/12/23 00:43
ZZZZZ	23D0393-18	XDT_m1230511-152	Solid	05/12/23 00:43
ZZZZZ	23D0393-18	XDT_m1230511-152	Solid	05/12/23 00:43
ZZZZZ	23D0393-19	XDT_m1230511-153	Solid	05/12/23 00:47
ZZZZZ	23D0393-19	XDT_m1230511-153	Solid	05/12/23 00:47
ZZZZZ	23D0393-19	XDT_m1230511-153	Solid	05/12/23 00:47
ZZZZZ	23D0393-19	XDT_m1230511-153	Solid	05/12/23 00:47
ZZZZZ	23D0393-22	XDT_m1230511-154	Solid	05/12/23 00:51
ZZZZZ	23D0393-22	XDT_m1230511-154	Solid	05/12/23 00:51
ZZZZZ	23D0393-22	XDT_m1230511-154	Solid	05/12/23 00:51
Instrument Blank	SLE0209-IBLI	XDT_m1230511-155	NA	05/12/23 00:56
Calibration Check	SLE0209-CCVG	XDT_m1230511-156	NA	05/12/23 01:00

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLE0209-CCBG	XDT_m1230511-157	NA	05/12/23 01:07
ZZZZZ	23D0393-04RE1	XDT_m1230511-158	Solid	05/12/23 01:12
ZZZZZ	23D0393-04RE1	XDT_m1230511-158	Solid	05/12/23 01:12
ZZZZZ	23D0393-04	XDT_m1230511-162	Solid	05/12/23 01:29
ZZZZZ	23D0393-04	XDT_m1230511-162	Solid	05/12/23 01:29
ZZZZZ	23D0393-04	XDT_m1230511-162	Solid	05/12/23 01:29
ZZZZZ	23D0393-04	XDT_m1230511-162	Solid	05/12/23 01:29
Instrument Blank	SLE0209-IBLJ	XDT_m1230511-167	NA	05/12/23 01:54
Calibration Check	SLE0209-CCVH	XDT_m1230511-168	NA	05/12/23 01:58
Calibration Blank	SLE0209-CCBH	XDT_m1230511-169	NA	05/12/23 02:05
Instrument Blank	SLE0209-IBLK	XDT_m1230511-176	NA	05/12/23 02:36
Instrument Blank	SLE0209-IBLL	XDT_m1230511-179	NA	05/12/23 02:56
Calibration Check	SLE0209-CCVI	XDT_m1230511-180	NA	05/12/23 03:00
Calibration Blank	SLE0209-CCBI	XDT_m1230511-181	NA	05/12/23 03:07
Calibration Check	SLE0209-CCVJ	XDT_m1230511-183	NA	05/12/23 03:16
Calibration Blank	SLE0209-CCBJ	XDT_m1230511-184	NA	05/12/23 03:23
ZZZZZ	23D0393-05	XDT_m1230511-185	Solid	05/12/23 03:28
ZZZZZ	23D0393-06	XDT_m1230511-186	Solid	05/12/23 03:32
ZZZZZ	23D0393-06	XDT_m1230511-186	Solid	05/12/23 03:32
ZZZZZ	23D0393-06	XDT_m1230511-186	Solid	05/12/23 03:32
ZZZZZ	23D0393-06	XDT_m1230511-186	Solid	05/12/23 03:32
Instrument Blank	SLE0209-IBLM	XDT_m1230511-188	NA	05/12/23 03:46
MWCP1-041323-D	23D0412-02	XDT_m1230511-189	Water	05/12/23 03:50
MWCP2-041323	23D0412-03	XDT_m1230511-190	Water	05/12/23 03:55
MWCP3-041323	23D0412-04	XDT_m1230511-191	Water	05/12/23 03:59
MWCP4-041323	23D0412-05	XDT_m1230511-192	Water	05/12/23 04:03
MWCP5-041323	23D0412-06	XDT_m1230511-193	Water	05/12/23 04:08
Instrument Blank	SLE0209-IBLN	XDT_m1230511-194	NA	05/12/23 04:12
Calibration Check	SLE0209-CCVK	XDT_m1230511-195	NA	05/12/23 04:17

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLE0209-CCBK	XDT_m1230511-196	NA	05/12/23 04:24
MWCP6-041323	23D0412-07	XDT_m1230511-197	Water	05/12/23 04:28
MWCP7-041323	23D0412-08	XDT_m1230511-198	Water	05/12/23 04:32
MWVB3-041323	23D0412-09	XDT_m1230511-199	Water	05/12/23 04:37
HC00-B312-041323	23D0412-10	XDT_m1230511-200	Water	05/12/23 04:41
MWVB1-041423	23D0412-11	XDT_m1230511-201	Water	05/12/23 04:46
MWVB1-041423-D	23D0412-12	XDT_m1230511-202	Water	05/12/23 04:50
MWVB2-041423	23D0412-13	XDT_m1230511-203	Water	05/12/23 04:54
MWC2-041423	23D0412-14	XDT_m1230511-204	Water	05/12/23 04:59
MWC3-041423	23D0412-15	XDT_m1230511-205	Water	05/12/23 05:03
Instrument Blank	SLE0209-IBLO	XDT_m1230511-206	NA	05/12/23 05:08
Calibration Check	SLE0209-CCVL	XDT_m1230511-207	NA	05/12/23 05:12
Calibration Blank	SLE0209-CCBL	XDT_m1230511-208	NA	05/12/23 05:19
ZZZZZ	23D0442-03	XDT_m1230511-209	Water	05/12/23 05:23
ZZZZZ	23D0442-04	XDT_m1230511-210	Water	05/12/23 05:28
ZZZZZ	23D0442-06	XDT_m1230511-212	Water	05/12/23 05:36
ZZZZZ	23D0598-08	XDT_m1230511-215	Water	05/12/23 05:51
ZZZZZ	23D0598-08	XDT_m1230511-215	Water	05/12/23 05:51
ZZZZZ	23D0598-08	XDT_m1230511-215	Water	05/12/23 05:51
ZZZZZ	23D0598-08	XDT_m1230511-215	Water	05/12/23 05:51
ZZZZZ	23D0598-10	XDT_m1230511-216	Water	05/12/23 05:55
ZZZZZ	23D0598-10	XDT_m1230511-216	Water	05/12/23 05:55
ZZZZZ	23D0598-10	XDT_m1230511-216	Water	05/12/23 05:55
ZZZZZ	23D0598-10	XDT_m1230511-216	Water	05/12/23 05:55
ZZZZZ	23D0598-12	XDT_m1230511-217	Water	05/12/23 06:00
ZZZZZ	23D0598-12	XDT_m1230511-217	Water	05/12/23 06:00
ZZZZZ	23D0598-12	XDT_m1230511-217	Water	05/12/23 06:00
ZZZZZ	23D0598-12	XDT_m1230511-217	Water	05/12/23 06:00
Instrument Blank	SLE0209-IBLP	XDT_m1230511-218	NA	05/12/23 06:04

Analytical Resources, LLC
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLE0209-CCVM	XDT_m1230511-219	NA	05/12/23 06:09
Calibration Blank	SLE0209-CCBM	XDT_m1230511-220	NA	05/12/23 06:16
ZZZZZ	23D0514-02	XDT_m1230511-221	Water	05/12/23 06:20
ZZZZZ	23D0514-03	XDT_m1230511-222	Water	05/12/23 06:24
ZZZZZ	23D0514-04	XDT_m1230511-223	Water	05/12/23 06:29
ZZZZZ	23D0514-06	XDT_m1230511-224	Water	05/12/23 06:33
Instrument Blank	SLE0209-IBLQ	XDT_m1230511-225	NA	05/12/23 06:37
Instrument Blank	SLE0209-IBLR	XDT_m1230511-230	NA	05/12/23 07:00
Calibration Check	SLE0209-CCVN	XDT_m1230511-231	NA	05/12/23 07:04
Calibration Blank	SLE0209-CCBN	XDT_m1230511-232	NA	05/12/23 07:11
Calibration Check	SLE0209-CCVO	XDT_m1230511-234	NA	05/12/23 07:20
Calibration Blank	SLE0209-CCBO	XDT_m1230511-235	NA	05/12/23 07:27
ZZZZZ	23D0537-02	XDT_m1230511-236	Water	05/12/23 07:31
ZZZZZ	23D0537-03	XDT_m1230511-237	Water	05/12/23 07:36
ZZZZZ	23D0537-04	XDT_m1230511-238	Water	05/12/23 07:40
Instrument Blank	SLE0209-IBLS	XDT_m1230511-245	NA	05/12/23 08:11
Calibration Check	SLE0209-CCVP	XDT_m1230511-246	NA	05/12/23 08:15
Calibration Blank	SLE0209-CCBP	XDT_m1230511-247	NA	05/12/23 08:22
ZZZZZ	23D0578-02	XDT_m1230511-253	Water	05/12/23 08:46
Instrument Blank	SLE0209-IBLT	XDT_m1230511-257	NA	05/12/23 09:00
Calibration Check	SLE0209-CCVQ	XDT_m1230511-258	NA	05/12/23 09:04
Calibration Blank	SLE0209-CCBQ	XDT_m1230511-259	NA	05/12/23 09:10
ZZZZZ	23D0587-03	XDT_m1230511-268	Water	05/12/23 09:41
Instrument Blank	SLE0209-IBLU	XDT_m1230511-269	NA	05/12/23 09:45
Calibration Check	SLE0209-CCVR	XDT_m1230511-270	NA	05/12/23 09:48
Calibration Blank	SLE0209-CCBR	XDT_m1230511-271	NA	05/12/23 09:55
ZZZZZ	23D0587-02	XDT_m1230511-272	Water	05/12/23 09:58
ZZZZZ	23D0587-04	XDT_m1230511-273	Water	05/12/23 10:01
ZZZZZ	23D0587-05	XDT_m1230511-274	Water	05/12/23 10:05

Analytical Resources, LLC
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23D0412
Client:	Floyd - Snider	Project:	Lora Lake 2021-2023 sec II. 5.3.21
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0578-07	XDT_m1230511-275	Water	05/12/23 10:09
ZZZZZ	23D0578-08	XDT_m1230511-276	Water	05/12/23 10:12
ZZZZZ	23D0578-04	XDT_m1230511-277	Water	05/12/23 10:16
ZZZZZ	23D0578-06	XDT_m1230511-278	Water	05/12/23 10:19
ZZZZZ	23D0578-03	XDT_m1230511-279	Water	05/12/23 10:23
ZZZZZ	23D0578-05	XDT_m1230511-280	Water	05/12/23 10:26
Instrument Blank	SLE0209-IBLV	XDT_m1230511-281	NA	05/12/23 10:30
Calibration Check	SLE0209-CCVS	XDT_m1230511-282	NA	05/12/23 10:33
Calibration Blank	SLE0209-CCBS	XDT_m1230511-283	NA	05/12/23 10:39

Analytical Resources, LLC
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ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00023
Sequence: SLE0093
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0093-IFA1	Arsenic-75a (dissolved)	0	0.0390		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00023
Sequence: SLE0093
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0093-IFB1	Arsenic-75a (dissolved)	20.000	19.308	96.5	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00026
Sequence: SLE0130
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0130-IFA1	Arsenic-75a (dissolved)	0	0.0400		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00026
Sequence: SLE0130
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0130-IFB1	Arsenic-75a (dissolved)	20.000	19.580	97.9	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00030
Sequence: SLE0138
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0138-IFA1	Arsenic-75a (dissolved)	0	0.0410		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00030
Sequence: SLE0138
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0138-IFB1	Arsenic-75a (dissolved)	20.000	19.173	95.9	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00042
Sequence: SLE0209
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0209-IFA1	Arsenic-75a (dissolved)	0	0.0210		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00042
Sequence: SLE0209
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0209-IFB1	Arsenic-75a (dissolved)	20.000	19.554	97.8	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00023
Sequence: SLE0093
Lab Sample ID: SLE0093-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a (dissolved)	0.20000	0.193	96.5	ug/L	50 - 150

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00026
Sequence: SLE0130
Lab Sample ID: SLE0130-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a (dissolved)	0.20000	0.211	106	ug/L	50 - 150

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00030
Sequence: SLE0138
Lab Sample ID: SLE0138-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a (dissolved)	0.20000	0.227	114	ug/L	50 - 150

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Instrument ID: ICPMS1
Calibration: GE00042
Sequence: SLE0209
Lab Sample ID: SLE0209-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a (dissolved)	0.20000	0.199	99.5	ug/L	50 - 150

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00023
Laboratory ID: SLE0093-HCV1
Sequence: SLE0093
Standard ID: L004780

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	200.00	195	-2.4	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00023
Laboratory ID: SLE0093-HCV2
Sequence: SLE0093
Standard ID: L004781

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	300.00	298	-0.6	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00026
Laboratory ID: SLE0130-HCV1
Sequence: SLE0130
Standard ID: L004780

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	200.00	195	-2.4	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00026
Laboratory ID: SLE0130-HCV2
Sequence: SLE0130
Standard ID: L004781

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	300.00	299	-0.4	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00030
Laboratory ID: SLE0138-HCV1
Sequence: SLE0138
Standard ID: L004780

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	200.00	194	-3.1	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00030
Laboratory ID: SLE0138-HCV2
Sequence: SLE0138
Standard ID: L004781

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	300.00	296	-1.3	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00042
Laboratory ID: SLE0209-HCV1
Sequence: SLE0209
Standard ID: L004780

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	200.00	197	-1.5	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Calibration: GE00042
Laboratory ID: SLE0209-HCV2
Sequence: SLE0209
Standard ID: L004781

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	300.00	296	-1.2	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MWCP1-041323 23D0412-01	04/13/23 14:25	04/14/23 12:17	04/28/23 09:59	14	180	05/05/23 07:35	22	180	
MWCP1-041323-D 23D0412-02	04/13/23 14:30	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 03:50	29	180	
MWCP2-041323 23D0412-03	04/13/23 13:10	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 03:55	29	180	
MWCP3-041323 23D0412-04	04/13/23 16:10	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 03:59	28	180	
MWCP4-041323 23D0412-05	04/13/23 15:25	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:03	29	180	
MWCP5-041323 23D0412-06	04/13/23 16:33	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:08	28	180	
MWCP6-041323 23D0412-07	04/13/23 13:20	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:28	29	180	
MWCP7-041323 23D0412-08	04/13/23 14:35	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:32	29	180	
MWVB3-041323 23D0412-09	04/13/23 11:05	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:37	29	180	
HC00-B312-041323 23D0412-10	04/13/23 11:10	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:41	29	180	
MWVB1-041423 23D0412-11	04/14/23 09:12	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:46	28	180	
MWVB1-041423-D 23D0412-12	04/14/23 09:22	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:50	28	180	
MWVB2-041423 23D0412-13	04/14/23 08:55	04/14/23 12:17	04/28/23 09:59	14	180	05/12/23 04:54	28	180	
MWC2-041423 23D0412-14	04/14/23 11:16	04/14/23 12:17	04/28/23 09:59	13	180	05/12/23 04:59	28	180	
MWC3-041423 23D0412-15	04/14/23 11:00	04/14/23 12:17	04/28/23 09:59	13	180	05/12/23 05:03	28	180	
Duplicate BLD0807-DUP1	04/13/23 14:25	04/14/23 12:17	04/28/23 09:59	14	180	05/05/23 07:39	22	180	
Matrix Spike BLD0807-MS1	04/13/23 14:25	04/14/23 12:17	04/28/23 09:59	14	180	05/05/23 07:43	22	180	
Matrix Spike Dup BLD0807-MSD1	04/13/23 14:25	04/14/23 12:17	04/28/23 09:59	14	180	05/05/23 07:47	22	180	

* Indicates hold time exceedance.

Analytical Resources, LLC
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23D0412
Client: Floyd - Snider
Project: Lora Lake 2021-2023 sec II. 5.3.21
Matrix: Water
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a (dissolved)	0.0373	0.200	ug/L

FLOYD | SNIDER
strategy ▪ science ▪ engineering

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Data Validation Summary

Prepared by:	Cheronne Oreiro
Date:	October 11, 2023
Project No.:	POS-LLA Lora Lake Apartments Investigation & Site Remediation
Sample Event(s):	2023 Annual Monitoring
Sample Delivery Group(s):	23D0412
Sample Media:	Groundwater

A Compliance Screening (USEPA Stage 2B) data quality review was performed on dissolved arsenic data resulting from laboratory analysis. The data were reviewed using guidance and quality control (QC) criteria documented in the Sampling and Analysis Plan/Quality Assurance Project Plan included as Appendix B of the *Port of Seattle Lora Lake Apartments Remedial Investigation/Feasibility Study Work Plan* (Floyd|Snider 2010), *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (USEPA 1986), and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2020).

A total of 13 groundwater samples and 2 field duplicate samples were submitted to Analytical Resources, LLC (ARL) in Tukwila, Washington, for chemical analysis by U.S. Environmental Protection Agency (USEPA) method 6020B. The laboratory reported results under 1 sample delivery group, 23D0412.

DATA QUALITY REVIEW

Field and laboratory QC parameters for samples met all project criteria.

DATA QUALITY SUMMARY

Based on the data quality review, data are determined to be of acceptable quality for use as reported.

REFERENCES

Floyd|Snider. 2010. *Port of Seattle Lora Lake Apartments Remedial Investigation/Feasibility Study Work Plan.* 30 July.

U.S. Environmental Protection Agency (USEPA). 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods.* U.S. Prepared by the Office of Solid Waste and Emergency Response. EPA-530/SW-846.

_____. 2020. *National Functional Guidelines for Inorganic Superfund Methods Data Review.* Prepared by the Office of Superfund Remediation and Technology Innovation. EPA-542-R-20-006/OLEM 9240.1-66. November.

DATA VALIDATION REPORT

LORA LAKE - ANNUAL LAKESIDE GW MONITORING 2023

Prepared for:

Floyd | Snider
601 Union Street, Suite 600
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Prepared by:

EcoChem, Inc.
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EcoChem Project: C15231-4

June 9, 2023

Approved for Release:

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of data validation performed on groundwater and quality control (QC) sample data for the Lora Lake Lakeside GW Monitoring project. The dioxin data received full validation (EPA Stage 4). A complete list of samples is provided in the Sample Index.

Analytical Resources in Tukwila, WA performed the analyses. The analytical method and EcoChem project chemists are listed in the table below.

ANALYSIS	METHOD	PRIMARY REVIEW	SECONDARY REVIEW
Dioxins	EPA 1613B	E. Clayton	C. Ransom

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Port of Seattle Lora Lake Parcel, Remedial Investigation/Feasibility Study Work Plan* (Floyd Snider February 11, 2011); *National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans (CDFs) Data Review* (USEPA, September 2011); and *National Functional Guidelines for High Resolution Superfund Methods Data Review* (USEPA, April 2016).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R or DNR, the data should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Data qualifier definitions, reason codes, and validation criteria are included as Appendix A. A Qualified Data Summary Table is included in Appendix B. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

Sample Index
Lora Lake - Annual Lakeside GW Monitoring 2023

SDG	SAMPLE ID	LAB ID	1613B Dioxins
23D0412	MWCP1-041323	23D0412-01	✓
23D0412	MWCP1-041323-D	23D0412-02	✓
23D0412	MWCP2-041323	23D0412-03	✓
23D0412	MWCP3-041323	23D0412-04	✓
23D0412	MWCP4-041323	23D0412-05	✓
23D0412	MWCP5-041323	23D0412-06	✓
23D0412	MWCP6-041323	23D0412-07	✓
23D0412	MWCP7-041323	23D0412-08	✓
23D0412	MWVB3-041323	23D0412-09	✓
23D0412	HC00-B312-041323	23D0412-10	✓
23D0412	MWVB1-041423	23D0412-11	✓
23D0412	MWVB1-041423-D	23D0412-12	✓
23D0412	MWVB2-041423	23D0412-13	✓

DATA VALIDATION REPORT
Lora Lake - Annual Lakeside GW Monitoring 2023
Dioxin/Furan Compounds by Method 1613B

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc., Tukwila, Washington. Refer to the SAMPLE INDEX for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
23D0412	13 Groundwater	EPA Stage 4

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

Sample results and related quality control data were received as an electronic data deliverable (EDD) and laboratory report. The EDD was verified against the laboratory report (10%). The following discrepancies were noted:

The Sample IDs on the chain-of-custody did not always match the IDs used by the lab. The "-" between the "MW" and "CP" segments was missing. No action was taken other than to note the differences.

The following sample identifications (ID) did not match between the chains-of-custody (COC) and the EDD:

CLIENT ID ON COC	CLIENT ID IN EDD
MW-CP4-041323	MWCP4-041323
MW-CP5-041323	MWCP5-041323
MW-CP6-041323	MWCP6-041323
MW-CP7-041323	MWCP7-041323
MW-VB2-041423	MWVB2-041423

TECHNICAL DATA VALIDATION

The quality control (QC) requirements reviewed are summarized in the following table:

✓	Sample Receipt, Preservation, and Holding Times	✓	Ongoing Precision and Recovery (OPR)
✓	System Performance and Resolution Checks	1	Field Duplicates
✓	Initial Calibration (ICAL)	✓	Target Analyte List
✓	Calibration Verification	✓	Reported Results
2	Blanks (Laboratory and Field)	2	Compound Identification
2	Labeled Compounds	1	Calculation Verification

✓ ***Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.***
1 ***Quality control results are discussed below, but no data were qualified.***
2 ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Blanks

To assess the impact of any blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results. Contaminants reported with an EMPC flag were not considered positive detections and were treated as non-detects. Total homologs are not evaluated.

The compounds 1,2,3,4,6,7,8-HpCDF and OCDD were detected in the method blank for extraction batch BLD0507. The OCDD result for Sample MWCP5-041323 was less than the action level and was qualified as not-detected (U-7).

OCDD was detected in the method blank for extraction batch BLD0508. All positive results for OCDD in the associated samples were less than the action level and were qualified as not-detected (U-7).

No field blanks were submitted.

Labeled Compound Recovery

Isotope-stable labeled compounds were added to each field and QC sample. With the following exceptions, percent recovery (%R) values for the field samples were within the project specific criteria of 70%-130%. No action is taken for outliers associated with QC samples.

All labeled compound recoveries for Sample MWCP5-041323 were less than the lower control limit of 70%. All results for the native compounds in this sample were estimated (J/UJ-13L).

Field Duplicates

The RPD control limit is 35% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the difference between the sample and duplicate must be less than the RL.

Two sets of field duplicates were submitted: MWCP1-041323 & MWCP1-041323-D and MWVB1-041423 &. MWVB1-041423-D. Field precision was acceptable.

Compound Identification

The method requires the confirmation of 2,3,7,8-TCDF using an alternate GC column as the DB5 column that is typically used cannot fully separate 2,3,7,8-TCDF from closely eluting non-target TCDF isomers. The laboratory uses an RTX-Dioxin2 column which provides adequate resolution of the TCDF isomers as indicated by the acceptable peak to valley ratios. Since the 2,3,7,8-TCDF resolution was acceptable, no confirmation was necessary.

The laboratory assigned an "EMPC" flag to indicate that the ion ratio criterion for positive identification was not met. Since the ion abundance ratio is the primary identification criterion for high resolution mass spectroscopy, an outlier indicates that the reported result may be a false positive. These "EMPC" flagged results were qualified as not detected (U-25) at the reported concentration to stay consistent with historical treatment of EMPCs for this project.

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the labeled compound and on-going precision and recovery (OPR)/OPR Duplicate recoveries and precision was acceptable as demonstrated by the OPR/OPR Dup and field duplicate RPD values.

Detection limits were elevated based on ion ratio outliers and method blank contamination. Results were estimated due to labeled compound recovery outliers.

All data, as qualified, are acceptable for use.

ECOCHEM
Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS
REASON CODES
AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

Group	Code	Reason for Qualification
Sample Handling	1	Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times
Instrument Performance	24	Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass)
	5A	Initial Calibration (RF, %RSD, r^2)
	5B	Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L)[1] where appropriate
	5C	Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L)[1] where appropriate
Blank Contamination	6	Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.)
	7	Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L)[1] for negative instrument blanks
Precision and Accuracy	8	Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L)[1] where appropriate
	9	Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate)
	10	Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L)[1] where appropriate
	12	Reference Material Use bias flags (H,L)[1] where appropriate
	13	Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L)[1] where appropriate
Interferences	16	ICP/ICP-MS Serial Dilution Percent Difference
	17	ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L)[1] where appropriate
	19	Internal Standard Performance (i.e., area, retention time, recovery)
	22	Elevated Detection Limit due to Interference (i.e., chemical and/or matrix)
	23	Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides)
Identification and Quantitation	2	Chromatographic pattern in sample does not match pattern of calibration standard
	3	2nd column confirmation (RPD or %D)
	4	Tentatively Identified Compound (TIC) (associated with NJ only)
	20	Calibration Range or Linear Range Exceeded
	25	Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.)
Miscellaneous	11	A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only)
	14	Other (See DV report for details)
	26	Method QC information not provided

[1] H = high bias indicated
L = low bias indicated

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler/Storage Temperature Preservation	Waters/Solids ≤ 6°C & in the dark Tissues <-10°C & in the dark **Preservation Aqueous:** If Cl_2 is present Thiosulfate must be added and if pH > 9 it must be adjusted to 7 - 9	NFG [1] Method[2]	J(pos)/R(ND) if thiosulfate not added if Cl_2 present; J(pos)/UJ(ND) if pH not adjusted J(pos)/UJ(ND) if temp > 20°C	1	**EcoChem PJ, see TM-05**
Holding Time	**If properly stored, 1 year or:** **Extraction (all matrices):** 30 days from collection **Analysis (all matrices)**: 45 days from extraction	NFG [1] Method[2]	If not properly stored or HT exceedance: J(pos)/UJ(ND)	1	**EcoChem PJ, see TM-05** Gross exceedance = > 1 year 2011 NFG **Note:** Under CWA, SDWA, and RCRA the HT for H2O is 7 days.
Instrument Performance					
Mass Resolution (Tuning)	PFK (Perfluorokerosene) ≥10,000 resolving power at m/z 304.9824. Exact mass of m/z 380.9760 w/in 5 ppm of theoretical value (380.97410 to 380.97790) . Analyzed prior to ICAL and at the start and end of each 12 hr. shift.	NFG [1] Method [2]	R(pos/ND) all analytes in all samples associated with the tune	24	Notify PM
Windows Defining Mix	Peaks for first and last eluters must be within established retention time windows for each selector group (chlorination level)	NFG [1] Method [2]	If peaks are not completely within windows (clipped): If natives are ok, J(pos)/UJ(ND) homologs (Totals) If natives are affected, R all results for that selector group	24	Notify PM
Column Performance Mix	Both mixes must be analyzed before ICAL and CCAL Valley < 25% (valley = (x/y)*100%) where x = ht. of TCDD (or TCDF) & y = baseline to bottom of valley For all isomers eluting near the 2378-TCDD (TCDF) peak (TCDD only for 8290)	NFG [1] Method [2]	J(pos) if valley > 25%	24	**EcoChem PJ, see TM-05, Rev. 2**; Note: TCDF is evaluated only if second column confirmation is performed
Initial Calibration **Sensitivity**	S/N ratio > 10 for all native and labeled compounds in CS1 std.	NFG [1] Method [2]	If <10, elevate Det. Limit or R(ND)	5A	
Initial Calibration **Selectivity**	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	NFG [1] Method [2]	If 2 or more ion ratios are out for one compound in ICAL, J(pos)	5A	**EcoChem PJ, see TM-05, Rev. 2**

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Instrument Performance (continued)					
Initial Calibration (Minimum 5 stds.) **Stability**	%RSD < 20% for native compounds %RSD <30% for labeled compounds (%RSD < 35% for labeled compounds under 1613b)	NFG [1] Method [2]	J(pos) natives if %RSD > 20%	5A	
	Absolute RT of $^{13}C_{12}$-1234-TCDD >25 min on DB5 & >15 min on DB-225	NFG [1] Method [2]	Narrate, no action		**EcoChem PJ, see TM-05, Rev. 2**
Continuing Calibration (Prior to each 12 hr. shift) **Sensitivity**	S/N ratio for CS3 standard > 10	NFG [1] Method [2]	If <10, elevate Det. Limit or R(ND)	5B	
Continuing Calibration (Prior to each 12 hr. shift) **Selectivity**	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	NFG [1] Method [2]	For congener with ion ratio outlier, J(pos) natives in all samples associated with CCAL. No action for labeled congener ion ratio outliers.	25	**EcoChem PJ, see TM-05**
Continuing Calibration (Prior to each 12 hr. shift) **Stability**	%D+/-20% for native compounds %D +/-30% for labeled compounds **(Must meet limits in Table 6, Method 1613B)** If %D in the closing CCAL are within 25%/35%, the mean RF from the two CCAL may be used to calculate samples **(Section 8.3.2.4 of 8290)**.	NFG [1] Method [2]	**Labeled compounds:** Narrate, no action. **Native compounds:** 1613: J(pos)/UJ(ND)if %D is outside Table 6 limits J(pos)/R(ND) if %D is +/-75% of Table 6 limits 8290: J(pos)/UJ(ND) if %D = 20% - 75% J(pos)/R(ND) if %D > 75%	5B (H,L)[3]	
	Absolute RT of $^{13}C_{12}$-1234-TCDD and $^{13}C_{12}$-123789-HxCDD should be ± 15 seconds of ICAL RRT for all other compounds must meet criteria listed in Table 2 Method 1316.	NFG [1] Method [2]	Narrate, no action	5B	**EcoChem PJ, see TM-05**
Blank Contamination					
Method Blank (MB)	MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > RL	NFG [1] Method [2]	U(pos) if result is < 5X action level.	7	**Hierarchy of blank review:** **#1 - Review MB, qualify as needed** **#2 - Review FB , qualify as needed**
Field Blank (FB)	FB: frequency as per QAPP No detected compounds > RL		U(pos) if result is < 5X action level.	6	

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Precision and Accuracy					
MS/MSD (recovery)	**MS/MSD not typically required for HRMS analyses.** If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) if both %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias **PJ if only one %R outlier**	8 (H,L)[3]	No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only unless other QC indicates systematic problems.
MS/MSD (RPD)	**MS/MSD not typically required for HRMS analyses.** If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) in parent sample if RPD > CL	9	Qualify parent sample only.
LCS (or OPR)	One per lab batch (of ≤ 20 samples) Use most current laboratory control limits **or** Limits from Table 6 of 1613B	NFG [1] Method [2]	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	10 (H,L)[3]	No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples.
LCS/LCSD (RPD)	**LCSD not typically required for HRMS analyses.** One set per matrix and batch of 20 samples RPD < 35%	Method [2] Ecochem standard policy	J(pos) assoc. compound in all samples if RPD > CL	9	Qualify all associated samples.
Lab Duplicate (RPD)	**Lab Dup not typically required for HRMS analyses.** One per lab batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos)/UJ(ND) if RPD > CL	9	
Labeled Compounds (Internal Standards)	Added to all samples %R = 40% - 135% in all samples 8290 %R must meet limits in Table 7 Method 1613B	NFG [1] Method [2]	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	13 (H,L)[3]	
Field Duplicates	Solids: RPD <50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Narrate and qualify if required by project	9	**Use professional judgment**

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Compound ID and Calculation					
Quantitation/ Identification	All ions for each isomer must maximize within ± 2 seconds. S/N ratio >2.5 Ion ratios must meet criteria listed in Table 8 Method 8290, or Table 9 of 1613B; RRTs w/in limits in Table 2 of 1613B	NFG [1] Method [2]	Narrate in report; qualify if necessary NJ(pos) for retention time outliers. U(pos) for ion ratio outliers.	25	**EcoChem PJ, see TM-05**
EMPC (estimated maximum possible concentration)	If quantitation identification criteria are not met, laboratory should report an EMPC value.	NFG [1] Method [2]	If laboratory correctly reported an EMPC value, qualify the native compound U(pos) to indicate that the value is a detection limit and qualify total homolog groups J (pos)	25	**Use professional judgment See TM-18**
Interferences	Interferences from chlorodiphenyl ether compounds	NFG [1] Method [2]	J(pos)/UJ(ND) if present	23	**See TM-16**
	Lock masses must not deviate ± 20% from values in Table 8 of 1613B	Method [2]	J(pos)/UJ(ND) if present	24	**See TM-17**
Second Column Confirmation	All 2,3,7,8-TCDF hits must be confirmed on a DB-225 (or equiv) column. All QC criteria must also be met for the confirmation analysis.	NFG [1] Method [2]	Report the DB-225 value. If not performed use PJ.	3	DNR-11 DB5 result if both results from both columns are reported. **EcoChem PJ, see TM-05**
Calculation Check	Check 10% of field & QC sample results	EcoChem standard policy	Contact laboratory for resolution and/or corrective action	na	Full data validation only.
Electronic Data Deliverable (EDD)					
Verification of EDD to hardcopy data	EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages.		Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues).	na	EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	Standard reporting policy	Use "DNR" to flag results that will not be reported.	11	

(pos) - positive (detected) results; (ND) - not detected results

[1] National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) & Chlorinated Dibenzofurans (CDFs) Data Review, September 2011

[2] Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry (HRGC/HRMS), USEPA SW-846, Method 8290

[2] EPA Method 1613, Rev.B, Tetra-through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGS/HRMS, October 1994

[3] NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

ECOCHEM
Data Quality

APPENDIX B

QUALIFIED DATA SUMMARY TABLE

Qualified Data Summary Table
Lora Lake - Annual Lakeside GW Monitoring 2023

SAMPLE ID	LAB ID	METHOD	ANALYTE	RESULT	UNITS	LAB QUAL	DV QUAL	DV CODE
MWCP1-041323	23D0412-01	EPA 1613	OCDD	7.62	pg/L	J, B	U	7
MWCP1-041323	23D0412-01	EPA 1613	1,2,3,4,7,8-HxCDF	1.13	pg/L	EMPC, J	U	25
MWCP1-041323	23D0412-01	EPA 1613	1,2,3,4,6,7,8-HpCDD	2.83	pg/L	EMPC, J, B	U	25
MWCP1-041323-D	23D0412-02	EPA 1613	OCDD	5.58	pg/L	J, B	U	7
MWCP1-041323-D	23D0412-02	EPA 1613	1,2,3,4,6,7,8-HpCDD	1.91	pg/L	EMPC, J, B	U	25
MWCP2-041323	23D0412-03	EPA 1613	1,2,3,4,6,7,8-HpCDD	11.2	pg/L	EMPC, B	U	25
MWCP2-041323	23D0412-03	EPA 1613	OCDD	72.9	pg/L	B	U	7
MWCP3-041323	23D0412-04	EPA 1613	OCDD	6.58	pg/L	J, B	U	7
MWCP3-041323	23D0412-04	EPA 1613	1,2,3,7,8-PeCDF	1.73	pg/L	EMPC, J	U	25
MWCP4-041323	23D0412-05	EPA 1613	OCDD	5.61	pg/L	J, B	U	7
MWCP4-041323	23D0412-05	EPA 1613	1,2,3,4,6,7,8-HpCDD	1.38	pg/L	EMPC, J, B	U	25
MWCP5-041323	23D0412-06	EPA 1613	2,3,7,8-TCDF	5.23	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	OCDD	17	pg/L	J, B	UJ	7,13L
MWCP5-041323	23D0412-06	EPA 1613	2,3,7,8-TCDD	3.86	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,7,8-PeCDF	3.53	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	2,3,4,7,8-PeCDF	3.18	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,7,8-PeCDD	3.3	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,4,7,8-HxCDF	1.58	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,6,7,8-HxCDF	1.46	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	2,3,4,6,7,8-HxCDF	1.56	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,7,8,9-HxCDF	1.83	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,4,7,8-HxCDD	1.72	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,6,7,8-HxCDD	1.61	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,7,8,9-HxCDD	1.83	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,4,6,7,8-HpCDF	2.17	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,4,7,8,9-HpCDF	3.01	pg/L	U	UJ	13L
MWCP5-041323	23D0412-06	EPA 1613	1,2,3,4,6,7,8-HpCDD	3.33	pg/L	EMPC, J, B	UJ	13L,25
MWCP5-041323	23D0412-06	EPA 1613	OCDF	3.35	pg/L	U	UJ	13L
MWCP6-041323	23D0412-07	EPA 1613	OCDD	6.55	pg/L	EMPC, J, B	U	25
MWCP7-041323	23D0412-08	EPA 1613	OCDD	9.81	pg/L	EMPC, J, B	U	25
MWVB3-041323	23D0412-09	EPA 1613	OCDD	8.28	pg/L	EMPC, J, B	U	25
HC00-B312-041323	23D0412-10	EPA 1613	OCDD	5.86	pg/L	J, B	U	7
MWVB1-041423-D	23D0412-12	EPA 1613	OCDD	9.88	pg/L	J, B	U	7
MWVB2-041423	23D0412-13	EPA 1613	OCDD	8.1	pg/L	J, B	U	7
MWVB2-041423	23D0412-13	EPA 1613	1,2,3,4,6,7,8-HpCDD	1.93	pg/L	EMPC, J, B	U	25

Lora Lake Apartments Site

2023 Annual Compliance Monitoring Report

Appendix C
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

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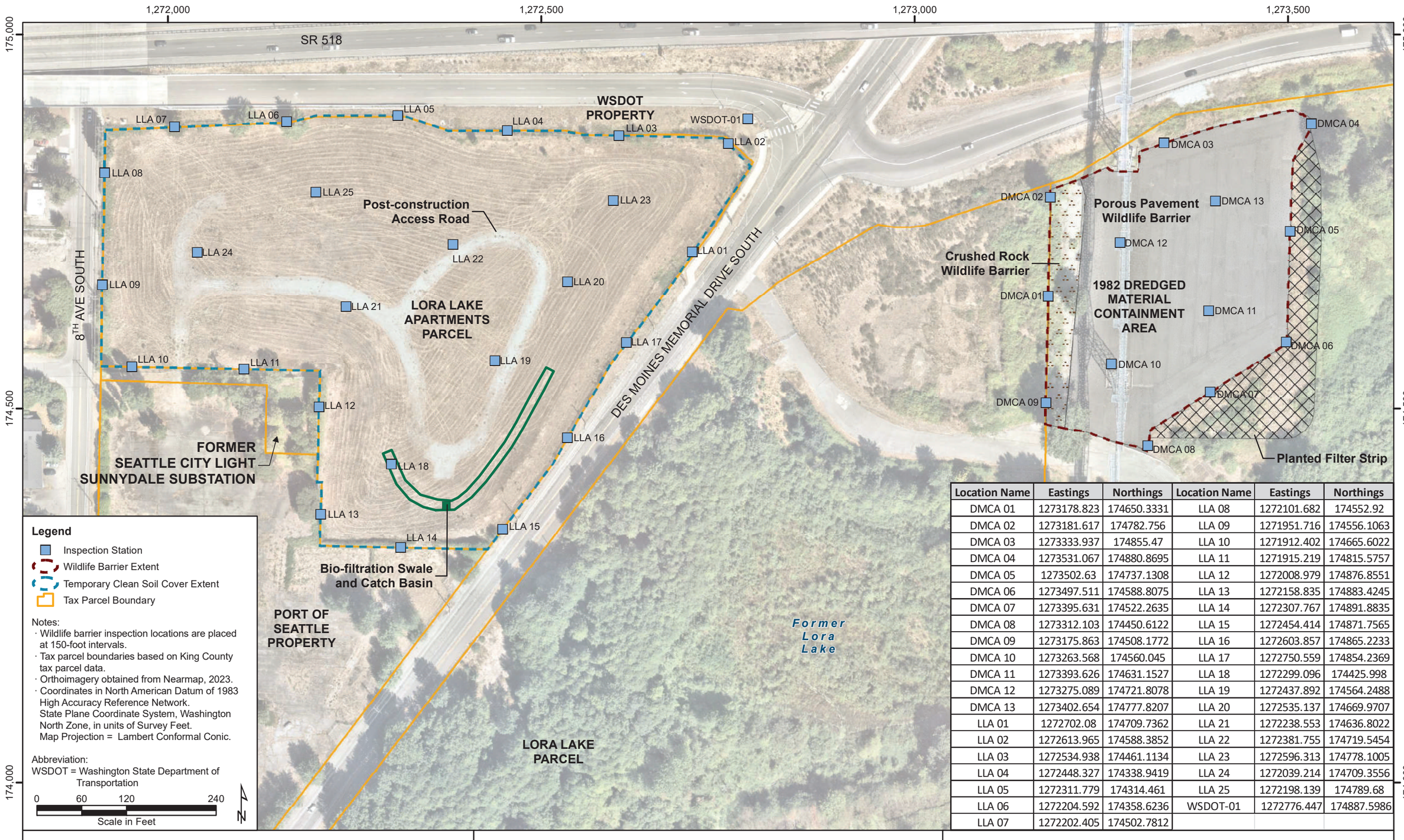
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

Figure



Location Name	Eastings	Northings	Location Name	Eastings	Northings
DMCA 01	1273178.823	174650.3331	LLA 08	1272101.682	174552.92
DMCA 02	1273181.617	174782.756	LLA 09	1271951.716	174556.1063
DMCA 03	1273333.937	174855.47	LLA 10	1271912.402	174665.6022
DMCA 04	1273531.067	174880.8695	LLA 11	1271915.219	174815.5757
DMCA 05	1273502.63	174737.1308	LLA 12	1272008.979	174876.8551
DMCA 06	1273497.511	174588.8075	LLA 13	1272158.835	174883.4245
DMCA 07	1273395.631	174522.2635	LLA 14	1272307.767	174891.8835
DMCA 08	1273312.103	174450.6122	LLA 15	1272454.414	174871.7565
DMCA 09	1273175.863	174508.1772	LLA 16	1272603.857	174865.2233
DMCA 10	1273263.568	174560.045	LLA 17	1272750.559	174854.2369
DMCA 11	1273393.626	174631.1527	LLA 18	1272299.096	174425.998
DMCA 12	1273275.089	174721.8078	LLA 19	1272437.892	174564.2488
DMCA 13	1273402.654	174777.8207	LLA 20	1272535.137	174669.9707
LLA 01	1272702.08	174709.7362	LLA 21	1272238.553	174636.8022
LLA 02	1272613.965	174588.3852	LLA 22	1272381.755	174719.5454
LLA 03	1272534.938	174461.1134	LLA 23	1272596.313	174778.1005
LLA 04	1272448.327	174338.9419	LLA 24	1272039.214	174709.3556
LLA 05	1272311.779	174314.461	LLA 25	1272198.139	174789.68
LLA 06	1272204.592	174358.6236	WSDOT-01	1272776.447	174887.5986
LLA 07	1272202.405	174502.7812			

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2023 Annual Compliance Monitoring Report
Lora Lake Apartments Site
Burien, Washington

Figure C.1
Wildlife Barrier Inspection Locations

I:\GIS\Projects\POS_LLA\MXD\Task8140\Annual Compliance Monitoring Report\2023\Appendix C\Figure C.1 Wildlife Barrier Inspection Locations.mxd
10/11/2023

Lora Lake Apartments Site

2023 Annual Compliance Monitoring Report

Appendix C
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

Attachment C.1
Lora Lake Apartments Parcel Inspection Log and Photographs

Lora Lake Apartments Temporary Cap Inspection Form

Monitoring Station	Photo Number	Check all that apply						Overall Condition of Barrier			Repair Needed		Comments/Observations
		Engineered surface characteristics condition compromised	Exposed underlying soil	Loss of barrier material	Down-slope movement of barrier material	Presence of debris on barrier surface	Substantial plant growth	Good	Fair	Poor	Yes	No	
LLA 01			X						X		X		Vegetation loss and exposed soil at the top and base of the slope
LLA 02	L1, L2		X						X		X		
LLA 03								X				X	
LLA 04								X				X	
LLA 05								X				X	
LLA 06									X		X		Some exposed soil
LLA 07	L3							X			X		Damaged bollard near MW-C1/VB1
LLA 08								X				X	
LLA 09							X	X				X	
LLA 10	L4, L5		X						X		X		Vegetation loss and exposed soil on the slope
LLA 11			X						X		X		
LLA 12			X						X		X		
LLA 13			X						X		X		
LLA 14			X						X			X	
LLA 15	L6, L7		X				X		X		X		Vegetation loss and exposed soil near the swale and slope
LLA 16			X						X		X		
LLA 17			X						X		X		
LLA 18									X			X	
LLA 19								X				X	
LLA 20	L8								X		X		Some rodent burrowing
LLA 21								X				X	
LLA 22								X				X	
LLA 23												X	
LLA 24												X	
LLA 25												X	
LLA 26												X	
LLA 27												X	
WSDOT 01												X	

Photograph L1. Station LLA 02 showing vegetation loss and exposed soil along the slope.

Photograph L2. Station LLA 02 during the November 16, 2023, follow-up site inspection. Improved conditions due to increased vegetation were noted; barrier repair is not required.

Photograph L3. Station LLA 07 showing damaged bollard near MW-C1/VB1.

Photograph L4. Stations LLA 10 through 13 showing vegetation loss and exposed soil.

Photograph L5. Stations LLA 10 through LLA 13 during the November 16, 2023, follow-up barrier inspection. Improved conditions due to increased vegetation were noted; barrier repair is not required. See Photograph L4 for previous conditions.

Photograph L6. Station LLA 15 showing signs of vegetation loss and exposed soil near the swale, similar to the loss noted at the slope near Stations LLA 16 and LLA 17.

Photograph L7. Stations LLA 15 during the November 16, 2023, follow-up barrier inspection. Improved conditions due to increased vegetation were noted; barrier repair is not required. See Photograph L6 for previous conditions.

Photograph L8. Signs of rodent burrowing at Station LLA 20.

Lora Lake Apartments Site

2023 Annual Compliance Monitoring Report

Appendix C
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

Attachment C.2
DMCA Inspection Log and Photographs

DMCA Wildlife Barrier Inspection Form

Monitoring Station	Photo Number	Check all that apply						Overall Condition of Barrier			Repair Needed		Comments/Observations
		Engineered surface characteristics condition compromised	Exposed underlying soil	Loss of barrier material	Down-slope movement of barrier material	Presence of debris on barrier surface	Substantial plant growth	Good	Fair	Poor	Yes	No	
DMCA 01	D1, D2	X							X		X		Sweeping and blackberry maintenance recommended
DMCA 02							X		X		X		
DMCA 03								X				X	
DMCA 04								X				X	
DMCA 05	D3			X					X			X	Potential signs of material loss - onging monitored recommended
DMCA 06								X				X	
DMCA 07								X				X	
DMCA 08									X			X	
DMCA 09	D4	X							X			X	Sweeping recommended
DMCA 10								X				X	
DMCA 11	D5							X				X	
DMCA 12								X				X	
DMCA 13								X				X	

Photograph D1. Station DMCA 01 at the west border of the DMCA with organic debris and blackberry growth.

Photograph D2. Stations DMCA 02 and 03 with organic debris and blackberry growth.

Photograph D3. East border of the DMCA near Station DMCA 05 showing potential signs of material loss, recommended for continued monitoring.

Photograph D4. Substantial organic debris at the southwest corner of the cap near Station DMCA 09.

Photograph D5. Stations DMCA 11, 12, and 13 in good condition.

Lora Lake Apartments Site

2023 Annual Compliance Monitoring Report

Appendix D
Post-Maintenance Photographs

Photographs provided by Port of Seattle (Port).

Photograph 1. On June 1, 2023, the Port conducted seeding in sparsely vegetated areas in the southern portion of the Lora Lake Apartments Parcel.

Photograph 2. The southwest corner of the 1982 Dredged Material Containment Area (DMCA) on July 12, 2023, after sweeping.

Photograph 3. The DMCA on July 12, 2023, photographed from DMCA 09 looking northeast, after sweeping.

Photograph 4. Mowed grass in the eastern portion of the Lora Lake Apartments Parcel, photographed on July 12, 2023.

Photograph 5. Mowed grass in the northern portion of the Lora Lake Apartments Parcel, photographed on July 12, 2023.

Photograph 6. Three purged groundwater drums ready for transport and disposal, photographed on July 12, 2023.

Photograph 7. New empty drum to replace the drums (Photograph 6) that were removed.

Photograph 8. Painted replacement bollard installed on July 14, 2023, near MW-C1/VB1 (northwest corner of the Lora Lake Apartments Parcel).