



REPORT

Compliance Monitoring Report
March 2024 Groundwater Sampling
Landsburg Mine Site

Submitted to:

Washington Department of Ecology

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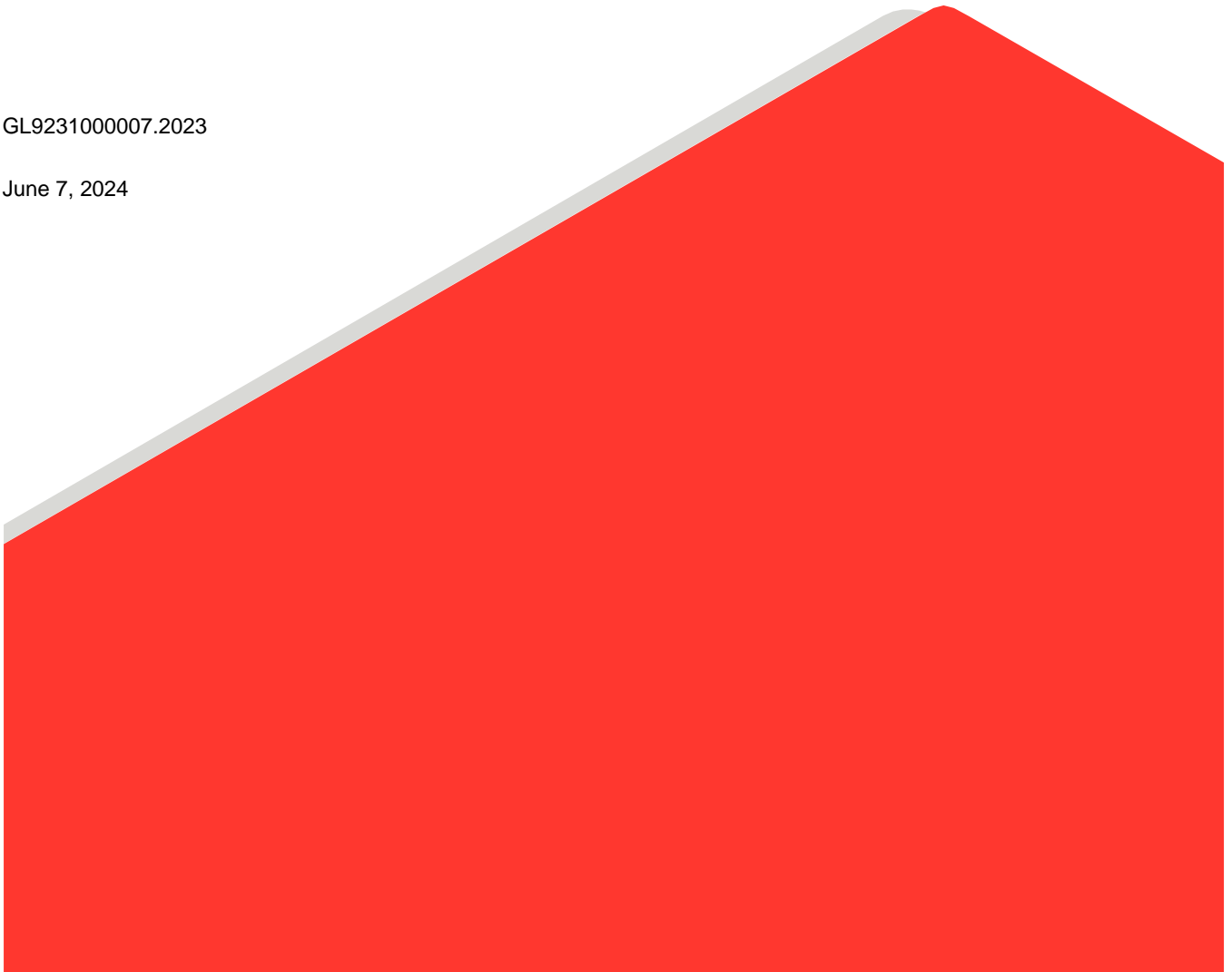
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Distribution List

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Table of Contents

1.0 INTRODUCTION 1

2.0 SAMPLING ACTIVITIES..... 1

3.0 RESULTS..... 2

4.0 NEXT SAMPLING EVENT 4

5.0 REFERENCES 5

TABLES

Table 1: Groundwater Elevation Data, Landsburg Mine Site, March 11, 2024

Table 2: March 2024 Groundwater Analytical Results Landsburg Mine Site

FIGURES

Figure 1: Groundwater Monitoring Locations

Figure 2: Cross-Section along Strike at Coal Seam, March 11, 2024

APPENDICES

APPENDIX A

Laboratory Analytical Report Data Validation and Quality Assurance / Quality Control Review Memorandum

APPENDIX B

Laboratory Analytical Report

APPENDIX C

Sample Integrity Data Sheets (SIDS)

1.0 INTRODUCTION

The Compliance Monitoring Plan (CMP) (Ecology 2017) describes the long-term confirmational monitoring required after remediation actions are completed at the Landsburg Mine Site (the Site). Additional groundwater monitoring requirements are specified in the Amendment to the Cleanup Action Plan (CAP) (Ecology 2021). This report presents the results of the confirmational monitoring event completed in March 2024.

The event was conducted on March 11, 12, 13, and 14, 2024, and included collecting groundwater samples from all Site monitoring wells LMW-2, LMW-3, LMW-4, LMW-5, LMW-6, LMW-7, LMW-8, LMW-9, LMW-10, LMW-11, LMW-12, LMW-13R, LMW-14, and LMW-15.

Figure 1 presents the locations of the monitoring wells. Figure 2 presents a cross-section along the strike at the coal seam that also depicts the location of the monitoring wells. Monitoring wells LMW-2, LMW-4, LMW-10, LMW-12, and LMW-13R are completed to monitor shallow, middle, and deeper zones within the north end of the Rogers Coal Mine subsidence trench. Monitoring wells LMW-3, LMW-5, LMW-8, LMW-9, LMW-11, LMW-14, and LMW-15 are completed to monitor shallow, middle, and deeper zones along the southern half of the Rogers Coal Mine. Wells LMW-6 and LMW-7 monitor groundwater from the Frasier and Landsburg Coal Mines to the west and east of the Rogers Coal Mine, respectively.

2.0 SAMPLING ACTIVITIES

Groundwater sampling was conducted in accordance with the CMP (Ecology 2017), and included the following activities:

- Measurement of static water levels at monitoring wells.
- Well purging with the dedicated pumping systems installed in each well to ensure sample representativeness.
- Measurement of field parameters including: pH, specific conductance, temperature, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity.
- Collection of representative samples in appropriate containers provided by the analytical laboratory.
- Analyses of groundwater samples for the following parameters:
 - Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) USEPA Method 8260D
 - Semivolatile Organic Compounds (SVOCs) by GC/MS, including 1,4-Dioxane following USEPA SW-846 Method 8270E
 - Total Petroleum Hydrocarbons (TPHs) by NWTPH-HCID
 - Low-Level Polychlorinated Biphenyls (PCBs) by USEPA SW-846 Method 8082A
 - Total Metals by USEPA SW-846 Method 200.8 and SW-846 6010D
 - Total Mercury by USEPA SW-846 Method 7470A

Appendix A presents the laboratory analytical data validation report with added data qualifiers noted. Appendix B presents the laboratory analytical data. Field sampling activities were documented on Sample Integrity Data Sheets (SIDS), provided in Appendix C.

Following sample collection, all bottles were sealed, labeled, and placed in an iced cooler until delivery to the laboratory. Groundwater samples were transported under chain-of-custody procedures to Analytical Resources LLC (ARI), of Tukwila, Washington, for analyses.

The laboratory data packages underwent data validation. Items of note are provided in a validation memorandum in Appendix A. In general, data were found to be acceptable with minor qualification, with the following exception: the analytical result for 2-chloroethyl vinyl ether for LMW-4-0324 was rejected. The matrix spike/ matrix spike duplicate (MS/MSD) results were non-detect and the calculated percent recovery of the associated MS/MSD did not recover. Following guidelines and using professional judgment, the non-detect result for 2-chloroethyl vinyl ether for LMW-4-0324 was rejected. 2-chloroethyl vinyl ether has never been detected at the Site.

Bis(2-ethylhexyl) phthalate was detected in LMW-2, but the field duplicate of LMW-2 was non-detect. Bis(2-ethylhexyl) phthalate is a known laboratory contaminant and is the most common member of the class of phthalates present in plastics. The sample from LMW-2 was re-analyzed, and bis(2-ethylhexyl) phthalate was not detected in the re-analysis. The re-analysis was performed past the recommended hold time, but the non-detect result combined with the non-detect in the duplicate sample from LMW-2, supports the conclusion that the initial detection was attributable to laboratory contamination. Using professional judgement, the data validation chemist qualified the initial detection as “W – non-detect” as further detailed in the Appendix A data validation memorandum.

Table 1 presents depths to groundwater measured during the event and calculated static water level elevations. Table 2 presents the field parameter measurements and laboratory analytical results for each groundwater sample at the Site.

3.0 RESULTS

The March 2024 groundwater monitoring results are summarized below:

- Laboratory analyses did not detect TPH, PCBs, or pesticides above the laboratory reporting limits in any of the groundwater samples.
- There were no VOCs detected in groundwater above the trigger level concentrations prescribed in the CMP (Ecology 2017) and only one VOC was detected above the laboratory reporting limit.
 - Chloroethane was detected in LMW-12 at 0.21 µg/L. The chloroethane detection in LMW-12 is consistent in concentration with previous detections of chloroethane in this well. The reported concentrations are significantly less than the MTCA Method B groundwater cleanup level of 80 µg/L.
- There were no SVOCs detected in groundwater above the trigger level concentrations prescribed in the CMP, except for 1,4-dioxane.
 - Bis(2-ethylhexyl) phthalate was detected in LMW-2 at 9.8 µg/L but was not detected in the associated duplicate sample of LMW-2. The MTCA Method B groundwater cleanup level is 6.3 µg/L. The laboratory re-analyzed the sample from LMW-2, and bis(2-ethylhexyl) phthalate was not detected in the re-analysis, although it was past hold time. Bis(2-ethylhexyl) phthalate is a known laboratory contaminant and is the

most common member of the class of phthalates present in plastics. This detection does not appear to be an actual change in groundwater conditions. Using professional judgement and historical standings, this detection result was qualified as non-detect as further detailed in the Appendix A data validation memorandum.

1,4-Dioxane was detected in LMW-2 and LMW-4 at 1.6 µg/L and 1.5 µg/L, respectively. These results are consistent with concentrations previously reported for samples from LMW-2 and LMW-4. 1,4-Dioxane was not detected in any other groundwater samples.

- Under the approved Amendment to the CAP (Ecology 2021), 5 years of quarterly groundwater samples (20 rounds of sampling) were collected to conduct a statistical analysis on 1,4-dioxane trends (CAP Amendment Section 4.2). The statistical trend analysis of 1,4-dioxane was completed following the completion of the March 2023 sampling round, and the results were presented to Ecology (WSP 2023). The statistical trend analyses using Mann-Kendall and Theil-Sen methods indicated that 1,4-dioxane concentrations in LMW-2 and LMW-12 were stable to decreasing. In LMW-4, 1,4-dioxane trends indicated no clear trend using the Theil-Sen statistical method and potentially increasing trends using the Mann-Kendall method. In an email response, Ecology indicated that based on the statistical trend analysis, future sampling of Site monitoring wells, except well LMW-4, shall continue at the frequency specified in the CMP (Ecology 2017). Ecology requested that quarterly monitoring of LMW-4 continue for 1,4-dioxane analysis until statistical trend analysis indicates concentrations are steady to decreasing in LMW-4.

An updated trend analysis for 1,4-dioxane concentrations reported in LMW-4 with the inclusion of data collected since the March 2023 analysis was completed and presented to Ecology (WSP 2024). Data were entered into the Environmental Protection Agency statistical program ProUCL version 5.1 (EPA 2016). Trend analyses were evaluated using Mann-Kendall and Theil-Sen statistical tests. Both the Mann-Kendall and Theil-Sen statistical tests indicated there was no statistically significant trends in the data. The overall analysis strongly indicated that the concentration of 1,4-dioxane in LMW-4 was steady. In an email response, Ecology approved that groundwater monitoring for 1,4-dioxane will be conducted in accordance with the general groundwater monitoring schedule prescribed in the CMP (Ecology 2017). Under the CMP groundwater monitoring schedule, wells are currently sampled semi-annually, with 1,4-dioxane analysis conducted in all wells during the spring sampling rounds (including this March 2024 event).

Metals detected in groundwater samples during the current sampling round include the following:

- The groundwater samples from LMW-2, LMW-4, LMW-5, LMW-6, LMW-7, LMW-8, LMW-9, LMW-11, LMW-12, LMW-13, LMW-14, and LMW-15 contained iron concentrations above the laboratory reporting limit, but below the MTCA Method B cleanup level of 11 milligrams per liter (mg/L); except in LMW-14, where iron was reported at 15.1 mg/L. Iron is a naturally occurring metal that is commonly associated with groundwater from coal mines (Fuste et al. 1983). The concentrations of iron reported during the March 2024 sampling event are within the range of typical concentrations reported during previous groundwater monitoring events at the Site.
- The groundwater sample from LMW-11 contained total arsenic at a concentration of 0.00904 mg/L. Arsenic in LMW-11 is greater than the MTCA Method A groundwater cleanup level (0.005 mg/L) but less than the Washington State primary drinking water MCL (0.01 mg/L). Arsenic was also detected in groundwater from

LMW-8 at a concentration of 0.00331 mg/L and LMW-15 at 0.00338 mg/L, which are below both the MTCA Method A groundwater cleanup level and the Washington State primary drinking water MCL. The MTCA groundwater cleanup level is based on typical groundwater background levels in the State of Washington. Arsenic has been detected in groundwater from LMW-11 near or above MTCA cleanup levels during every monitoring event since LMW-11 was installed. LMW-11 is screened within the deepest portions of the Rogers coal seam, where the groundwater is naturally reducing with low reduction-oxidation (redox) potential and low dissolved oxygen levels. Arsenic is a naturally occurring metal commonly detectable in groundwater, especially in groundwater having low redox and dissolved oxygen levels.

- Groundwater samples from LMW-14 contained a reported cobalt concentration of 0.0103 mg/L, which is above the MTCA Method B cleanup level of 0.0048 mg/L. Cobalt has been detected in LMW-14 in most monitoring events since it was installed. The March 2024 reported concentration of 0.0103 mg/L is less than half of the historical high of 0.0515 mg/L, detected in March 2020. The cobalt detection in LMW-14 is naturally occurring in association with the coal mine water (Golder 2020).

4.0 NEXT SAMPLING EVENT

The next confirmational monitoring event is scheduled to occur sometime during September-October 2024, and will include sampling of all Site groundwater monitoring wells: LMW-2 through LMW-15, and sampling of the private Landsburg Estates well if accessible.

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Tables

Table 1: Groundwater Elevation Data, Landsburg Mine Site, March 11, 2024

	LMW-1	LMW-2	LMW-3	LMW-4 ¹	LMW-5	LMW-6	LMW-7 ¹	LMW-8	LMW-9	LMW-10	LMW-11	LMW-12	LMW-13R	LMW-14 ¹	LMW-15
Water Depths															
Date of data collection	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024	3/11/2024
Time of data collection	10:05 AM	9:00 AM	11:06 AM	11:11 AM	11:10 AM	9:35 AM	1:35 PM	11:01 AM	10:32 AM	1:08 PM	10:25 AM	1:13 PM	1:16 PM	9:52 AM	10:17 AM
Measured to Top of PVC (ft btc)	130.61	6.04	11.16	8.11	12.61	22.58	211.79	3.39	97.69	0.07	155.61	6.21	6.86	157.89	149.46
Surveyed Elevation															
Top of PVC (ft NAVD88)	765.36	617.79	656.75	619.27	658.27	632.33	771.51	646.97	743.99	618.98	802.19	625.35	625.86	805.12	796.46
Top of Monument (ft NAVD88)	766.16	618.38	657.48	619.89	658.87	633.00	771.88	NC	NC	619.10	802.51	625.49	625.91	805.14	796.61
Ground Level (ft NAVD88)	763.02	614.92	654.40	617.37	655.63	629.95	768.79	645.25	741.13	615.78	799.89	621.90	622.07	802.22	792.64
Corrected Water Elevation															
Using PVC elevation (ft NAVD88)	634.75	611.75	645.59	611.16	645.66	609.75	559.72	643.58	646.30	618.91	646.58	619.14	619.00	647.23	647.00

Notes:
¹ Data corrected to accommodate well inclination from vertical
 NA = Not applicable
 NC = Data not collected
 ft btc = feet below top of casing
 ft NAVD88 = elevation in feet NAVD88

Table 2: March 2024 Groundwater Analytical Results Landsburg Mine Site

ANALYTE	UNITS	LMW-2	LMW-2 Duplicate	LMW-3	LMW-4	LMW-5	LMW-6	LMW-7	LMW-8	LMW-9	LMW-10	LMW-11	LMW-12	LMW-13R	LMW-14	LMW-15	Field Blank	Trip Blank	
		3/11/2024	3/11/2024	3/13/2024	3/11/2024	3/13/2024	3/12/2024	3/11/2024	3/13/2024	3/13/2024	3/14/2024	3/12/2024	3/14/2024	3/14/2024	3/12/2024	3/12/2024	3/11/2024	-	
Field Parameter																			
Temperature	°C	10.4	-	10.7	10	10.4	9.5	13.1	9.4	10	9.2	9.8	8.4	8.7	9.8	9.1	-	-	
pH	stnd	6.7	-	7.73	6.78	6.99	6.73	7.11	6.68	7.02	8.66	7.22	6.53	7.3	6.52	7.33	-	-	
Specific Conductance	uS/cm	830	-	304.5	677	568	266.9	456.6	580	518	355	415.1	513	655	846	395.6	-	-	
Dissolved Oxygen	mg/L	4.77	-	5.3	4.83	4.39	5.09	4.55	6.04	4.79	3.88	4.91	5.45	4.74	5.13	5.08	-	-	
ORP	mV	-53.1	-	72.3	-63.8	4.39	-27.1	-59.9	-88.8	-72	-120.4	-60.8	-55.3	-100.2	-29.3	-112.5	-	-	
Turbidity	NTU	0.54	-	0.18	0.21	0.24	0.47	0.62	3.42	0.27	0.92	0.57	1.91	0.56	2.06	1.85	-	-	
Metals (Total)																			
Aluminum	mg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Antimony	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	NA
Arsenic	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.00331	0.003 U	0.003 U	0.00904	0.003 U	0.003 U	0.003 U	0.00338	0.003 U	NA	
Barium	mg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
Beryllium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA
Cadmium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
Calcium	mg/L	109	113	35.2	106	78.2	26.2	50	63.9	77	6.3	58.7	53.8	85.9	187	60	0.5 U	NA	
Chromium	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA
Cobalt	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0103	0.01 U	0.01 U	NA
Copper	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	NA
Iron	mg/L	0.304	0.327	0.2 U	0.572	0.301	2.44	1.11	13.6	1.53	0.2 U	0.565	8.81	1.01	15.1	4.18	0.2 U	NA	
Lead	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	NA
Magnesium	mg/L	67.5	70.6	15.1	65.2	42.7	13.6	23.1	34.4	41.6	2.84	26.7	33.5	40.7	96.5	26.2	0.5 U	NA	
Manganese	mg/L	0.218	0.227	0.0142	0.166	0.191	0.0302	0.122	0.571	0.165	0.01 U	0.167	0.617	0.0261	0.741	0.358	0.01 U	NA	
Mercury	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	NA
Nickel	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.0144	0.01 U	0.01 U	NA
Potassium	mg/L	3.42	3.53	1.61	3.58	2.33	0.644	2.72	1.77	2.29	1.15	2.03	2.38	3.1	4.1	1.92	0.5 U	NA	
Selenium	mg/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	NA
Silver	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	NA
Sodium	mg/L	19	19.7	9.37	23.5	13.2	6.53	39.1	10.8	13.1	83.2	22.7	5.81	77.8	19.1	12.5	0.5 U	NA	
Thallium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	NA
Vanadium	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	NA
Zinc	mg/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	NA

Table 2: March 2024 Groundwater Analytical Results Landsburg Mine Site

ANALYTE	UNITS	LMW-2	LMW-2 Duplicate	LMW-3	LMW-4	LMW-5	LMW-6	LMW-7	LMW-8	LMW-9	LMW-10	LMW-11	LMW-12	LMW-13R	LMW-14	LMW-15	Field Blank	Trip Blank
1,1,2,2-Tetrachloroethane	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CFC-113	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	ug/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Acetate	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Chloride	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
m, p-Xylene	ug/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
o-Xylene	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Semi-Volatile Organic Compounds (SVOCs)																		
Phenol	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
bis(2-chloroethyl)Ether	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
2-Chlorophenol	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
1,3-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
1,4-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Benzyl Alcohol	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	NA
1,2-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
o-cresol	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Bis(2-chloro-1-methylethyl) ether	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
p-cresol	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	NA
N-Nitrosodi-n-propylamine	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Hexachloroethane	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	NA
Nitrobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Isophorone	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
2-Nitrophenol	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
2,4-Dimethylphenol	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
Bis(2-Chloroethoxy)Methane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Benzoic Acid	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	NA
2,4-Dichlorophenol	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
1,2,4-Trichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Naphthalene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
4-Chloroaniline	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
Hexachlorobutadiene	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
4-Chloro-3-Methylphenol	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
2-Methylnaphthalene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Hexachlorocyclopentadiene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
2,4,6-Trichlorophenol	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
2,4,5-Trichlorophenol	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
pcn-002	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
2-Nitroaniline	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
Dimethyl phthalate	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
Acenaphthylene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
2,6-Dinitrotoluene	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
m-Nitroaniline	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
Acenaphthene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
2,4-Dinitrophenol	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	NA
Dibenzofuran	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA
4-Nitrophenol	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA
2,4-Dinitrotoluene	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	NA
Fluorene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA

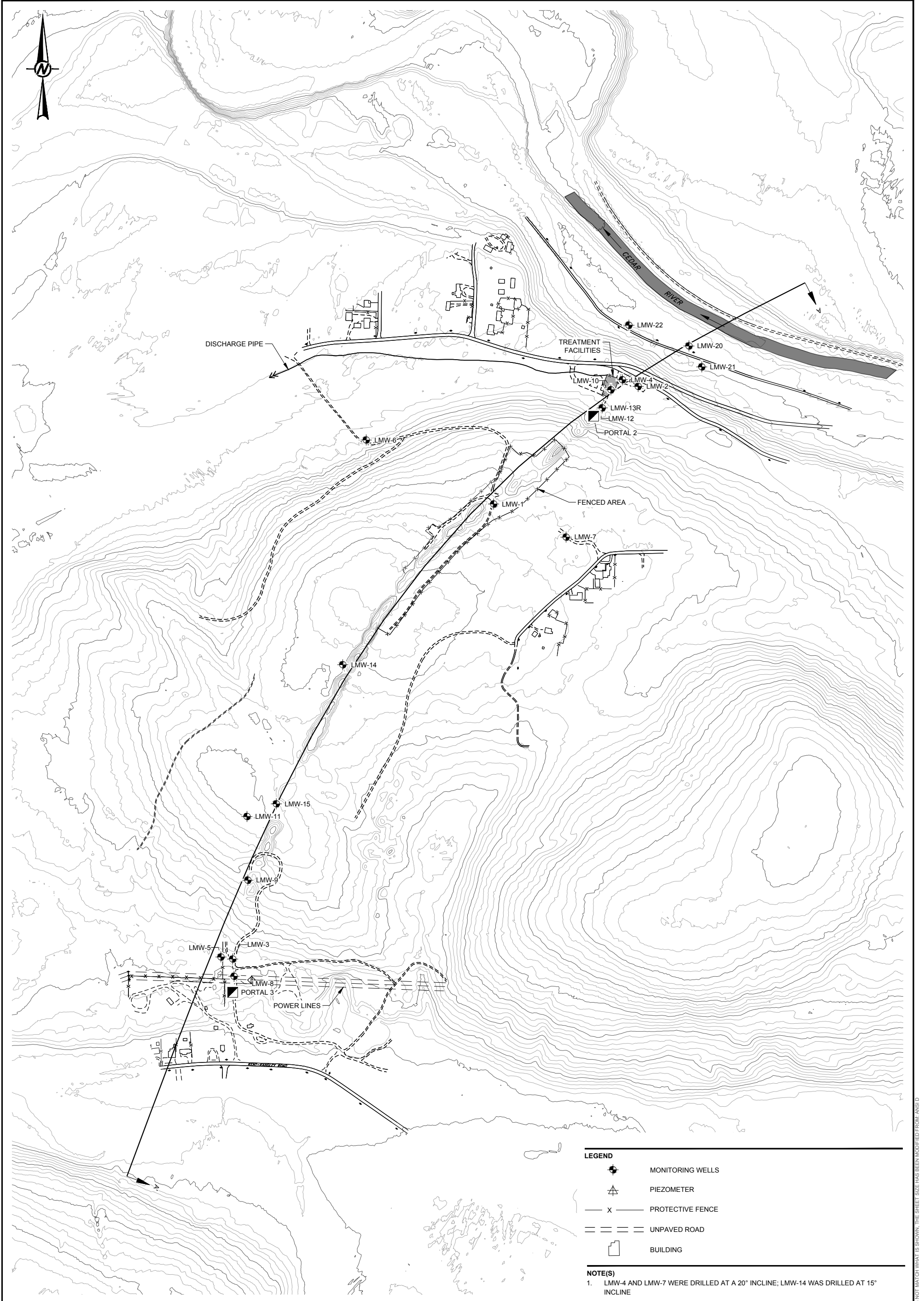
Table 2: March 2024 Groundwater Analytical Results Landsburg Mine Site

ANALYTE	UNITS	LMW-2	LMW-2 Duplicate	LMW-3	LMW-4	LMW-5	LMW-6	LMW-7	LMW-8	LMW-9	LMW-10	LMW-11	LMW-12	LMW-13R	LMW-14	LMW-15	Field Blank	Trip Blank
Hydrocarbon Identification																		
Diesel Range	mg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
Gas Range	mg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	NA
Lube Oil Range	mg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NA

Notes:

- U - Analyte was not detected above the Reporting Limit (RL).
- J - Analyte was detected above the Method Detection Limit (MDL) but below the RL.
- R - Analytical result is unusable because certain data quality criteria were not met.
- Bold** values indicate detections above the RL.
- W- Considered non-detect; see lab narrative. Re-analysis was non-detect
- NA - Not Applicable

Figures



LEGEND

- MONITORING WELLS
- PIEZOMETER
- PROTECTIVE FENCE
- UNPAVED ROAD
- BUILDING

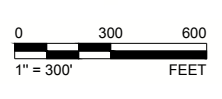
NOTE(S)
 1. LMW-4 AND LMW-7 WERE DRILLED AT A 20° INCLINE; LMW-14 WAS DRILLED AT 15° INCLINE

CLIENT
 LANDSBURG MINE SITE PLP GROUP

PROJECT
 LANDSBURG MINE SITE
 MTCA REMEDIAL ACTION

CONSULTANT	YYYY-MM-DD	2019-05-06
	DESIGNED	REDMOND
	PREPARED	JX
	REVIEWED	JX
	APPROVED	GZ

TITLE
GROUNDWATER MONITORING LOCATIONS



PROJECT NO.	PHASE	REV.	FIGURE
9231000005	1200	A	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANS/D

APPENDIX A

**Laboratory Analytical Report Data Validation
and Quality Assurance / Quality Control
Review Memorandum**



TECHNICAL MEMORANDUM

DATE May 28, 2024

Project No. GL923-1000-007.2023

TO Bill Kombol
Palmer Coking Coal Company

FROM Gary Zimmerman (WSP)

EMAIL gary.zimmerman@wsp.com

LANDSBURG MINE SITE MARCH 2024 DATA VALIDATION & QUALITY ASSURANCE / QUALITY CONTROL REVIEW

This Data Usability Summary Report (DUSR) presents the findings of the data quality assessment performed on the analyses of water samples collected on March 11, 12, 13, and 14, 2024 at the Landsburg Mine Site in Washington (Site) as part of the Landsburg Groundwater sampling project. Samples in the laboratory sample delivery group (SDG) as indicated in Table 1 was reviewed in this DUSR to identify quality issues which could affect the use of the sample data for decision making purposes.

Fourteen water samples, one field duplicate sample, one field blank, and one trip blank was collected by WSP. Samples were analyzed by Analytical Resources Inc. of Tukwila, Washington for the following parameters:

- Volatile Organic Compounds (VOCs) following United States Environmental Protection Agency (USEPA) USEPA SW-846¹ Method 8260D, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
- Semivolatile Organic Compounds (SVOCs) by GC/MS, including 1,4-Dioxane following USEPA SW-846 Method 8270E
- Low-Level Polychlorinated Biphenyls (PCBs) following USEPA SW-846 Method 8082A, Polychlorinated Biphenyls (PCBs) by Gas Chromatography
- Organochlorine Pesticides following USEPA SW-846 Method 8081B, Organochlorine Pesticides by Gas Chromatography
- Northwest Total Petroleum Hydrocarbons – Hydrocarbon Identification Scan by NWTPH-HCID
- Total Metals by USEPA SW-846 Method 200.8 and SW-846 6010D
- Total Mercury by USEPA SW-846 Method 7470A

Quality assurance / quality control (QA/QC) reviews of laboratory data were performed in the laboratory in accordance with the laboratory quality assurance program plan (QAPP). The data validation QA/QC review

¹ USEPA. 2020. Test methods for evaluating solid waste, physical/chemical methods (SW-846): 3rd edition, and subsequent updates, Environmental Protection Agency, National Center for Environmental Publications, Cincinnati, Ohio, accessed at URL <http://www.epa.gov/epaoswer/hazwaste/test/sw846.htm>

focused primarily on laboratory results and quality control data to ensure that work plan data quality objectives were met for the project.

Data validation was conducted in accordance with the criteria outlined in the National Functional Guidelines for Organic Review (USEPA 2020a²) and Inorganic Review (USEPA 2020b³), modified to include method specific requirements of the laboratory, and laboratory standard operating procedures. Where there was a discrepancy between the QC criteria in the Guidelines and the QC criterion established in the analytic methodology, method-specific criteria, the QAPP, or professional judgment was used.

In general, chemical results for the samples collected at the Site were evaluated based on laboratory preservation, hold times, laboratory and field blank contamination, outlying precision or accuracy parameters, or based on professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data during the data validation process.

Data Qualifier Definitions

- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- J- The result is an estimated quantity, but the result may be biased low.
- UJ The analyte was analyzed for but was not detected. 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.
- U The analyte was analyzed for but was not detected.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
- B The analyte was not detected in the method blank.
- W Considered non-detect; see lab narrative.

The validation level for the data is Tier 2A, and included the following:

- Data package completeness assessment
- Verification of required deliverables
- Evaluation of holding times
- Laboratory narrative evaluation

² United States Environmental Protection Agency (USEPA). 2020a. National Functional Guidelines for Organic Superfund Methods Data Review. OLEM 9240.0-51. EPA-540-R-20-005, November.

³ USEPA. 2020b. National Functional Guidelines for Inorganic Superfund Methods Data Review. OLEM 9240.0-66. EPA-542-R-20-006, November.

- Evaluation and qualification of QC elements for surrogates, matrix spike samples, laboratory control samples, blanks (method, equipment, and trip blank) laboratory duplicate samples, and field duplicate samples
- Evaluation of detection limits

Raw data and calibration elements, including GC instrument tuning and performance check, initial and continuing calibration, internal standard performance, and analyte identification, were not provided by the lab. Data review and validation was performed by an experienced QA personnel independent of the analytical laboratory and not directly involved in the project. Data qualifiers that were applied by the laboratory have been removed from the data summary report sheets, when applicable, and superseded by data validation qualifiers.

Overall, the data review showed that data are acceptable for use, except for 2-chloroethyl vinyl ether. The MS/MSD results were non-detect and the calculated percent recovery of the associated MS/MSD did not recover. Following Guidelines and using professional judgment, the results for 2-chloroethyl vinyl ether were rejected (R) in LMW-4. 2-chloroethyl vinyl ether was not detected during the March 2024 sampling round and has never been detected at the Site. Other minor data qualifiers were also reported as detailed in Attachment B.

The laboratory analyzed 2-chloroethyl vinyl ether, acrolein, and acrylonitrile from the preserved volatile organic analysis (VOA) vials. Due to the acid-labile nature of analytes 2-chloroethyl vinyl ether, acrolein and acrylonitrile, when samples were collected in acid-preserved vials but all associated LCS/LCSDs were within or above QC criteria, the associated non-detect results for these three analytes were qualified as estimated (UJ) due to possible acid degradation, except for 2-chloroethyl vinyl ether, the results for which were rejected in LMW-4 as noted above. 2-chloroethyl vinyl ether, acrolein, and acrylonitrile were not detected during the March 2024 sampling round and have never been detected at the Site.

Bis(2-ethylhexyl) phthalate, a common laboratory contaminant, was detected in LMW-2, but the field duplicate of LMW-2 was non-detect. The sample from LMW-2 was re-analyzed, and bis(2-ethylhexyl) phthalate was not detected in the re-analysis. The re-analysis was performed past the recommended holding time, but the non-detect result combined with the non-detect in the duplicate sample from LMW-2, supports the conclusion that the initial detection was attributable to laboratory contamination. Using professional judgement, the data validation chemist qualified the initial detection as “W – non-detect” as further detailed in Attachment B.

Qualifier Summary Table (Table 2) is included with the qualifiers applied. For details about the data validation, refer to the data validation checklist in Attachment A. The following bulleted items highlight comments and/or qualifications to specific parameters:

- A data completeness of 99% was achieved, which exceeds the QAPP stipulated completeness goal of 90%.

Attachments

Attachment A Tables

- Table 1: Sample Collection and Analysis Summary
- Table 2: Qualifier Summary Table
- Table 3: MS/MSD Recoveries
- Table 4: LCS/LCSD Recoveries

Attachment B Level 2A Data Validation Checklist

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ATTACHMENT A

Tables

Table 1: Sample Collection and Analysis Summary

Q1 Groundwater Sampling - March 2024

SDG	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses/Parameters							
						VOCs by 8260D	1,4-Dioxane by 8270E-SIM	NWTPH HCID	TPH-DX+TPH-GX	PCBs by 8082A	Organochlorine Pesticides by 8081B	SVOCs by 8270E	Total Priority Pollutant Metals
24C0326	LMW-2-0324	3/11/2024	24C0326-01	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-2-0324-D	3/11/2024	24C0326-02	GW	FD (LMW-2-0324)	X	X	X	X	X	X	X	X
24C0326	LMW-4-0324	3/11/2024	24C0326-03	GW	MS/MSD	X	X	X	X	X	X	X	X
24C0326	LMW-7-0324	3/11/2024	24C0326-04	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-14-0324	3/12/2024	24C0326-05	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-15-0324	3/12/2024	24C0326-06	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-11-0324	3/12/2024	24C0326-07	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-8-0324	3/13/2024	24C0326-08	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-3-0324	3/13/2024	24C0326-09	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-5-0324	3/13/2024	24C0326-10	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-9-0324	3/13/2024	24C0326-11	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-12-0324	3/14/2024	24C0326-12	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-13R-0324	3/14/2024	24C0326-13	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-10-0324	3/14/2024	24C0326-14	GW	-	X	X	X	X	X	X	X	X
24C0326	LMW-FB-0324	3/11/2024	24C0326-15	WQ	FB	X	X	X	X	X	X	X	X
24C0326	Trip Blank	3/11/2024	24C0326-16	WQ	TB	X	-	-	-	-	-	-	-
24C0326	LMW-6-0324	3/12/2024	24C0326-17	GW	-	X	X	X	X	X	X	X	X

Notes:

All analyses performed by Analytical Resources, Incorporated (ARI), Tukwila WA.
 Samples collected for TPH-DX and GX were placed on hold.
 MS/MSD was not collected for TPH-DX and HX

Abbreviations:

- GW: Groundwater
- WQ: Water quality
- VOCs: Volatile Organic Compounds
- SIM: Selective Ion Monitoring
- NWTPH: Northwest Total Petroleum Hydrocarbons
- HCID: Hydrocarbon Identification
- MS/MSD: Matrix Spike/Matrix Spike Duplicate
- FB: Field Blank
- TB: Trip Blank
- FD: Field Duplicate
- SDG: Sample Delivery Group



Table 2: Qualifier Summary Table

Q1 Groundwater Sampling - March 2024

SDG	Sample Name	Constituent	New Result	New MDL	New RL	Qualifier	Reason
24C0326	LMW-4-0324	2-chloroethyl vinyl ether	--	--	--	R	MS/MSD %R below lower control limit (not recovered); Improper sample preservation
24C0326	All samples	Acrolein	--	--	--	UJ	Improper sample preservation
24C0326	All samples	Acrylonitrile	--	--	--	UJ	Improper sample preservation
24C0326	All samples	2-Chloroethyl vinyl ether	--	--	--	UJ	Improper sample preservation
24C0326	LMW-4-0324	Aroclor 1260	--	--	--	UJ	MSD recovery less than lower QC limits and RPD greater than QC limits
24C0326	LMW-2-0324	bis(2-ethylhexyl) Phthalate	--	--	--	W	Non-detect, see data validation narrative
All SDGs	All Samples	All Results	--	--	--	--	Laboratory applied U-qualifiers are retained unless other qualifications are indicated in this table. All other laboratory qualifiers are removed.

Abbreviations

MDL - Method Detection Limit
 MS - Matrix Spike
 MSD - Matrix Spike Duplicate
 RL - Reporting Limit
 SDG - Sample Delivery Group
 %R - Percent Recovery

Qualifier Definitions

UJ: Non-Detect Result, RL is estimated
 R: Result is rejected and considered unusable
 W: Considered non-detect see lab narrative

May 2024

Table 3: MS/MSD Recoveries
Q1 Groundwater Sampling - March 2024

SDG	Sample Name	Parameter	Analyte	MS/MSD% R	RPD	%R/RPD Criteria	Sample>4x spike value
24C0326	LMW-4-0324	8260D	Acrolein	14.1/12.6	11.7	52-190/30	No
24C0326	LMW-4-0324	8260D	2-chloroethyl vinyl ether	0/0	0	64-120/--	No
24C0326	LMW-4-0324	8260D	n-Butylbenzene	134/133	0.21	74-129/30	No
24C0326	LMW-4-0324	8260D	t-Butylbenzene	122/126	3.57	78-125/30	No
24C0326	LMW-4-0324	8270E	Isophorone	121/129	6.09	62.3-120/30	No
24C0326	LMW-4-0324	8082A	Aroclor 1260	53.7/48.3	10.6	51-128/30	No

Abbreviations

MS - Matrix Spike

MSD - Matrix Spike Duplicate

SDG - Sample Delivery Group

%R - Percent Recovery

May 2024

Table 4 LCS/LCSD Recoveries
Q1 Groundwater Sampling - March 2024

SDG	Sample Name	Parameter	Analyte	LCS/LCSD% R	RPD	%R/RPD Criteria
24C0326	BMC0515-BS1 BMC0515-	8260D	n-Butylbenzene	137/ 127	7.05	74-129/30
24C0326	BMC0515-BS1 BMC0515-	8260D	Styrene	123/ 126	2.47	80-124/30
24C0326	BMC0515-BS1 BMC0515-	8260D	n-Propylbenzene	124 / 132	6.02	78-130/30
24C0326	BMC0515-BS1 BMC0515-	8260D	2-Chlorotoluene	121 / 127	4.43	78-122/30
24C0326	BMC0515-BS1 BMC0515-	8260D	4-Chlorotoluene	120 / 122	1.71	80-121/30
24C0326	BMC0462- BSD1	8270E	Isophorone	132/122	7.93	62.3-128/30
24C0326	BMC0462-BS1 BMC0462-	8270E	3,3'-Dichlorobenzidine	31.7/39.3	21.4	34.1-120/30
24C0326	BMC0462-BS1 BMC0462-	8270E	Benzo(g,h,i)perylene	121/113	6.7	37-120/30

Abbreviations

- Matrix Spike
- Matrix Spike Duplicate
- Sample Delivery Group
- Percent Recovery



ATTACHMENT B

Level 2A Data Validation Checklist

QA LEVEL 2A - DATA VERIFICATION/DATA VALIDATION CHECKLIST

Project Name: Landsburg Groundwater

Project Number/Phase/Task: US-WSP-GL9231000007-Palmer/Landsburg 2021 Env Rem/ GL9231000007 Task 2023.LBR-GW Mont&Report Lbr

Reviewing Company: WSP

Project Manager: Gary Zimmerman

Data Evaluator: Julia Campbell

Data Evaluation Date: April 23, 2024

Checked by: Michael Shadle

Review Date: May 6, 2024

Laboratory: Analytical Resources, Inc., Tukwila, WA

Lab SDG #: 24C0326

Matrix: Aqueous Soil Sediment Waste Air Other:

Analytical Methods: See Table 1.

Sample Information: See Table 1.

Work Plan or QAPP: Compliance Monitoring Plan and QAPP for Landsburg Mine Site (Exhibit D, to the Consent Decree, 2017).

Data Validation Guidance: National Functional Guidelines for Organic Superfund Methods Data Review, EPA-540-R-20-005, November 2020 and National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-EPA-542-R-20-006, November 2020.

COC and Sample Receipt	YES	NO	NA	COMMENT
a) COC complete and correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) COC documents release of custody (signed and dated)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Field QC types provided (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FB, FD, TB, MS/MSD; See Table 1
d) Did the cooler contents match the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
e) Were samples received in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 1 and 2
f) Were cooler temperatures within control limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

Data Package Information	YES	NO	NA	COMMENT
a) Laboratory name and location documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) All samples on COC reported in data package?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Requested analytical methods used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 3
d) Requested sample preparation methods used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e) Requested analyte list reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Requested units reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g) Did the laboratory define the qualifiers used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
h) Data package contains all information necessary to complete the data quality review?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Analytical Assessment	YES	NO	NA	COMMENT
a) Solid samples reported on a dry-weight basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were solid samples percent moisture criteria acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
d) Were detected concentrations less than the QL qualified by the laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Analytical Assessment	YES	NO	NA	COMMENT
e) Were detected concentrations above the calibration range reported by the laboratory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
f) Did the laboratory satisfy the requested sensitivity requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Laboratory Case Narrative	YES	NO	NA	COMMENT
a) Do the laboratory narrative or laboratory qualifiers indicate deficiencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Were all deficiencies noted in the laboratory qualifiers or narrative?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sample Preservation and Holding Time	YES	NO	NA	COMMENT
a) Were samples properly preserved?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Note 4
b) Were holding times met for sample preparation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Were holding times met for sample analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Blanks	YES	NO	NA	COMMENTS
a) Were blanks analyzed at the appropriate frequency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) Were any analytes detected in the associated preparation/method blank?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
c) Were any analytes detected in the associated trip blanks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d) Were any analytes detected in the associated field or equipment/rinsate blanks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e) Were any analytes detected in the associated storage blanks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Surrogates or Deuterated Monitoring Compounds	YES	NO	NA	COMMENTS
a) Were the correct surrogate compounds added to each sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Were surrogate recoveries within control limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 5
c) If not, were samples analyzed at dilution factors of 20x or greater?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
LCS/LCSD	YES	NO	NA	COMMENTS
a) Were LCS/LCSD reported at the appropriate frequency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
b) Were proper analytes included in the LCS/LCSD?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
c) Were LCS/LCSD recoveries within control limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		See Table 4 and Note 6
d) Were RPD values within control limits (if LCSD was analyzed)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MS/MSDs	YES	NO	NA	COMMENTS
a) Were project-specific MS (and MSD) reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		LMW-4-0324
b) Were proper analytes reported in the MS/MSD?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

MS/MSDs	YES	NO	NA	COMMENTS
c) Were project-specific MS/MSD recoveries within control limits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Table 3 and Note 7
d) If not, were sample concentrations greater than 4x the spiking concentration?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Table 3
e) Was the RPD or absolute difference within control limits (if project-specific MSD analyzed)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Table 3
f) Were project-specific post-digestion spikes analyzed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
g) Were project-specific post-digestion spike recoveries within control limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Duplicates	YES	NO	NA	COMMENTS
a) Were project-specific laboratory duplicates reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Was laboratory duplicate RPD or absolute difference criteria acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Were field duplicates reported?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LMW-2-0324/LMW-2-0324-D
d) Was field duplicate RPD or absolute difference criteria acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ICP Serial Dilution (SD)	YES	NO	NA	COMMENTS
a) Was project-specific ICP SD data provided?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Were project-specific ICP SD within acceptable criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Overall Evaluation	YES	NO	NA	COMMENTS
a) Were there any other technical problems not previously addressed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		See Note 8
b) Were data acceptable and usable, except where noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Comments/Notes:

- One sample container was received without a sample label. It was logged as LMW-10-0324, as it was the only sample missing a container. No further action is required other than to note.
- The cooler receipt form states that bubbles were present in sample LMW-12-0324. There is no indication of the size of the bubbles. Therefore, there is no other action but to note.
- The COC indicates that TPH-Dx and TPH-Gx were put on hold. The samples were not taken off hold or analyzed. There is no other action but to note.
- Samples for analysis of 2-chloroethyl vinyl, acrolein, and acrylonitrile were collected in preserved VOA vials and the recoveries were potentially lost due to the acid-labile nature of these compounds. Specifically, acrolein and acrylonitrile need to be preserved in sodium thiosulfate at a pH range between 4 to 5. Following Guidelines and using professional judgement not-detects are qualified as 'UJ'.
- Surrogate recoveries were outside of control limits, as shown in the table below. For SVOCs, data are not qualified when only one of the three surrogates per fraction (acid) was out of control limit.

Sample ID	Method	Analyte	Dilution	% R	% R Limits
LMW-11-0324	8270E	2,4,6-tribromophenol	10	40	52-120

6. LCS/LCSD recoveries were outside of acceptance criteria for select analytes, as summarized in Table 4. Using professional judgment, when only one QC indicator (LCS/LCSD/RPD) did not meet QC criteria, qualification was not required.
7. MS/MSD recoveries were outside of acceptance criteria for select analytes as summarized in Table 3. Using professional judgment, when only one QC indicator (MS/MSD/RPD) did not meet QC criteria, qualification was not required. If the parent sample concentration was four times greater than the spiking concentration, no qualification was required.

The MS/MSD results for 2-chloroethyl vinyl ether were non-detect and the lab did not calculate both the recoveries and the RPD. Samples were collected in preserved VOA vials and the recovery was most likely lost due to the acid-labile nature of 2-chloroethyl vinyl ether. Following Guidelines and using professional judgment, when the MS/MSD results were non-detect and the calculated percent recovery of the associated MS/MSD did not recover, the associated non-detect results were rejected (R). When the MS/MSD recoveries were less than the lower acceptance limit, the non-detect result in the parent sample was qualified as estimated (UJ). If the RPD and MSD were outside, and the associated result was non-detect the parent sample was qualified as estimated (UJ). No qualifications were required for a non-detect parent sample that had MS/MSD recoveries greater than the upper limit.

8. In sample LMW-2-0324, there was a detect for bis(2-ethylhexyl) phthalate but the field duplicate was non-detect. Historically this well has been non-detect for analyte bis(2-ethylhexyl) phthalate. There was suspicion that there was laboratory contamination. The sample was re-analyzed and it came up as non-detect but was analyzed outside of holding time. Using professional judgement and historical standings, the sample will be considered non-detect and qualified as W.

Data qualification: See Table 2.

APPENDIX B

Laboratory Analytical Report



22 April 2024

Gary Zimmerman
Golder Associates
18300 NE Union Hill Road Suite 200
Redmond, WA 98052-3333

RE: Landsburg (GL9231000007.2023)

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)
24C0326

Associated SDG ID(s)
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

Kelly Bottem, Client Services Manager

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



Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 24C0326		Turn-around Requested: Standard			Date: 3/14/24				Analytical Resources, Incorporated Analytical Chemists and Consultants 4611 South 134th Place, Suite 100 Tukwila, WA 98168 206-695-6200 206-695-6201 (fax)				
ARI Client Company: WSP		Phone: 425-883-0777			Page: 1 of 2								
Client Contact: Gary Zimmerman/Autumn Pearson					No. of Coolers:				Cooler Temps:				
Client Project Name: Landsburg 2024-03 Sampling					Analysis Requested							Notes/Comments	
Client Project #: GL9231000007.2023		Samplers: AP+ST+NO			VOCs	1,4-Dioxane	Total Priority Metal	TPH-HCID (NWTPH)	TPH-DX + TPH-GX (HOLD)	PCBs (8082A)	Organochlorine Pesticides (8081B)	SVOCs (8270E)	Analyze in accordance with MSA between Golder and ARI (HOLD WSP) Ecology EIM EDD
Sample ID	Date	Time	Matrix	No. Containers									
LMW-2-0324	3/11/24	0955	W	18	X	X	X	X	X	X	X	X	
LMW-2-0324-D	↓	1005	↓	18	X	X	X	X	X	X	X	X	
LMW-4-0324	↓	1200	↓	46	X	X	X	X	X	X	X	X	MS/MSD collected (except for -Gx, -Dx HOLDS)
LMW-7-0324	↓	1420	↓	18	X	X	X	X	X	X	X	X	
LMW-6-0324	3/12/24	0915	↓	18	X	X	X	X	X	X	X	X	
LMW-14-0324	↓	1030	↓	18	X	X	X	X	X	X	X	X	
LMW-15-0324	↓	1150	↓	18	X	X	X	X	X	X	X	X	
LMW-11-0324	↓	1315	↓	18	X	X	X	X	X	X	X	X	
LMW-8-0324	3/13/24	0900	↓	18	X	X	X	X	X	X	X	X	
LMW-3-0324	↓	1010	↓	18	X	X	X	X	X	X	X	X	
Comments/Special Instructions HOLD TPH FOLLOW-UPS. CLIENT SPECIFIC RLs/Analyte List		Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Relinquished by: (Signature)		Received by: (Signature)					
		Printed Name: Autumn Pearson		Printed Name: Matthew Paine		Printed Name:		Printed Name:					
		Company: WSP		Company: ARI		Company:		Company:					
		Date & Time: 3/14/24 1435		Date & Time: 03/14/24 1435		Date & Time:		Date & Time:					

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

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request



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

ARI Assigned Number: <u>2400326</u>	Turn-around Requested: <u>Standard</u>	Date: <u>3/14/24</u>
ARI Client Company: <u>WSP</u>	Phone: <u>425-883-0777</u>	Page: <u>2</u> of <u>2</u>
Client Contact: <u>Gary Zimmerman/Autumn Pearson</u>		No. of Coolers: _____ Cooler Temps: _____

Client Project Name: <u>Landsburg 2024-03 Sampling</u>	Analysis Requested							Notes/Comments		
Client Project #: <u>GL9231000007.2023</u>	Samplers: <u>AP + SJ + NO</u>	VOCs	1,4-Dioxane	Total Priority Metal	TPH-HCID (NWTPH)	TPH-DX + TPH-Gx (HOLD)	PCBs (8082A)	Organochlorine Pesticides (8081B)	SVOCS (8270E)	Analyze in accordance with MSA between Golder and ARI ^(now WSP) Ecology EIM EDD

Sample ID	Date	Time	Matrix	No. Containers	VOCs	1,4-Dioxane	Total Priority Metal	TPH-HCID (NWTPH)	TPH-DX + TPH-Gx (HOLD)	PCBs (8082A)	Organochlorine Pesticides (8081B)	SVOCS (8270E)
LMW-5-0324	3/13/24	1125	W	18	X	X	X	X	X	X	X	X
LMW-9-0324	↓	1240		18	X	X	X	X	X	X	X	X
LMW-12-0324	3/14/24	0920		18	X	X	X	X	X	X	X	X
LMW-13R-0324	↓	1045		18	X	X	X	X	X	X	X	X
LMW-10-0324	↓	1240		18	X	X	X	X	X	X	X	X
LMW-FB-0324	3/11/24	1450	↓	18	X	X	X	X	X	X	X	X
Trip Blank	-	-	↓	12	X							

Comments/Special Instructions HOLD TPH FOLLOW-UPS. CLIENT SPECIFIC RLs/Analyte List	Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>[Signature]</u>	Relinquished by: (Signature) _____	Received by: (Signature) _____
	Printed Name: <u>Autumn Pearson</u>	Printed Name: <u>Matthew [unclear]</u>	Printed Name: _____	Printed Name: _____
	Company: <u>WSP</u>	Company: <u>MNO 3/14/24</u> <u>03/14/24 ARICE</u>	Company: _____	Company: _____
	Date & Time: <u>3/14/24 1435</u>	Date & Time: <u>03/14/24 1435</u>	Date & Time: _____	Date & Time: _____

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

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LMW-2-0324	24C0326-01	Water	11-Mar-2024 09:55	14-Mar-2024 14:35
LMW-2-0324-D	24C0326-02	Water	11-Mar-2024 10:05	14-Mar-2024 14:35
LMW-4-0324	24C0326-03	Water	11-Mar-2024 12:00	14-Mar-2024 14:35
LMW-7-0324	24C0326-04	Water	11-Mar-2024 14:20	14-Mar-2024 14:35
LMW-14-0324	24C0326-05	Water	12-Mar-2024 10:30	14-Mar-2024 14:35
LMW-15-0324	24C0326-06	Water	12-Mar-2024 11:50	14-Mar-2024 14:35
LMW-11-0324	24C0326-07	Water	12-Mar-2024 13:15	14-Mar-2024 14:35
LMW-8-0324	24C0326-08	Water	13-Mar-2024 09:00	14-Mar-2024 14:35
LMW-3-0324	24C0326-09	Water	13-Mar-2024 10:10	14-Mar-2024 14:35
LMW-5-0324	24C0326-10	Water	13-Mar-2024 11:25	14-Mar-2024 14:35
LMW-9-0324	24C0326-11	Water	13-Mar-2024 12:40	14-Mar-2024 14:35
LMW-12-0324	24C0326-12	Water	14-Mar-2024 09:20	14-Mar-2024 14:35
LMW-13R-0324	24C0326-13	Water	14-Mar-2024 10:45	14-Mar-2024 14:35
LMW-10-0324	24C0326-14	Water	14-Mar-2024 12:40	14-Mar-2024 14:35
LMW-FB-0324	24C0326-15	Water	11-Mar-2024 14:50	14-Mar-2024 14:35
Trip Blank	24C0326-16	Water	11-Mar-2024 09:55	14-Mar-2024 14:35
LMW-6-0324	24C0326-17	Water	11-Mar-2024 14:20	14-Mar-2024 14:35



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Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Work Order Case Narrative

Pesticides - EPA Method SW8081B

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

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

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

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

PCB Aroclors - EPA Method SW8082A

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

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

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

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

Volatiles - EPA Method SW8260D

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

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

Internal standard areas were within limits.



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Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

The surrogate percent recoveries were within control limits.

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

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits with the exception of analytes flagged on the associated forms.

The matrix spike/matrix spike duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

Semivolatiles - EPA Method SW8270E

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

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

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits with the exception of surrogates flagged on the associated forms.

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

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits with the exception of analytes flagged on the associated forms.

The matrix spike/matrix spike duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

1,4-Dioxane- EPA Method SW8270E

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

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

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



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

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

Total Metals - EPA Method 200.8, 6010D and 7470A

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

Initial and continuing calibrations including interference checks were within method requirements for reported elements.

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.

Hydrocarbon Identification (HCID) - WA-Ecology Method NW-HCID

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

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

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



WORK ORDER

24C0326

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

Client: Golder Associates

Project Manager: Kelly Bottem

Project: Landsburg

Project Number: GL9231000007.2023

Preservation Confirmation

Container ID	Container Type	pH
24C0326-01 A	Glass NM, Amber, 1000 mL	
24C0326-01 B	Glass NM, Amber, 1000 mL	
24C0326-01 C	Glass NM, Amber, 1000 mL	
24C0326-01 D	Glass NM, Amber, 1000 mL	
24C0326-01 E	Glass NM, Amber, 1000 mL	
24C0326-01 F	Glass NM, Amber, 1000 mL	
24C0326-01 G	Glass NM, Amber, 500 mL	
24C0326-01 H	Glass NM, Amber, 500 mL	
24C0326-01 I	Glass NM, Amber, 500 mL	
24C0326-01 J	Glass NM, Amber, 500 mL	
24C0326-01 K	Glass NM, Amber, 500 mL	
24C0326-01 L	Glass NM, Amber, 500 mL	
24C0326-01 M	HDPE NM, 500 mL, 1:1 HNO3	22 P
24C0326-01 N	VOA Vial, Clear, 40 mL, HCL	
24C0326-01 O	VOA Vial, Clear, 40 mL, HCL	
24C0326-01 P	VOA Vial, Clear, 40 mL, HCL	
24C0326-01 Q	VOA Vial, Clear, 40 mL, HCL	
24C0326-01 R	VOA Vial, Clear, 40 mL, HCL	
24C0326-02 A	Glass NM, Amber, 1000 mL	
24C0326-02 B	Glass NM, Amber, 1000 mL	
24C0326-02 C	Glass NM, Amber, 1000 mL	
24C0326-02 D	Glass NM, Amber, 1000 mL	
24C0326-02 E	Glass NM, Amber, 1000 mL	
24C0326-02 F	Glass NM, Amber, 1000 mL	
24C0326-02 G	Glass NM, Amber, 500 mL	
24C0326-02 H	Glass NM, Amber, 500 mL	
24C0326-02 I	Glass NM, Amber, 500 mL	
24C0326-02 J	Glass NM, Amber, 500 mL	
24C0326-02 K	Glass NM, Amber, 500 mL	
24C0326-02 L	Glass NM, Amber, 500 mL	
24C0326-02 M	HDPE NM, 500 mL, 1:1 HNO3	22 P
24C0326-02 N	VOA Vial, Clear, 40 mL, HCL	
24C0326-02 O	VOA Vial, Clear, 40 mL, HCL	
24C0326-02 P	VOA Vial, Clear, 40 mL, HCL	



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24C0326

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Client: Golder Associates

Project Manager: Kelly Bottem

Project: Landsburg

Project Number: GL9231000007.2023

24C0326-02 Q	VOA Vial, Clear, 40 mL, HCL	
24C0326-02 R	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 A	Glass NM, Amber, 1000 mL	
24C0326-03 AA	Glass NM, Amber, 500 mL	
24C0326-03 AB	Glass NM, Amber, 500 mL	
24C0326-03 AC	Glass NM, Amber, 500 mL	
24C0326-03 AD	Glass NM, Amber, 500 mL	
24C0326-03 AE	HDPE NM, 500 mL, 1:1 HNO3	CR
24C0326-03 AF	HDPE NM, 500 mL, 1:1 HNO3	CR
24C0326-03 AG	HDPE NM, 500 mL, 1:1 HNO3	CR
24C0326-03 AH	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AI	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AJ	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AK	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AL	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AM	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AN	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AO	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AP	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AQ	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AR	VOA Vial, Clear, 40 mL, HCL	
24C0326-03 AS	Glass NM, Amber, 1000 mL	
24C0326-03 AT	Glass NM, Amber, 1000 mL	
24C0326-03 B	Glass NM, Amber, 1000 mL	
24C0326-03 C	Glass NM, Amber, 1000 mL	
24C0326-03 D	Glass NM, Amber, 1000 mL	
24C0326-03 E	Glass NM, Amber, 1000 mL	
24C0326-03 F	Glass NM, Amber, 1000 mL	
24C0326-03 G	Glass NM, Amber, 1000 mL	
24C0326-03 H	Glass NM, Amber, 1000 mL	
24C0326-03 I	Glass NM, Amber, 1000 mL	
24C0326-03 J	Glass NM, Amber, 1000 mL	
24C0326-03 K	Glass NM, Amber, 1000 mL	
24C0326-03 L	Glass NM, Amber, 1000 mL	
24C0326-03 M	Glass NM, Amber, 1000 mL	
24C0326-03 N	Glass NM, Amber, 1000 mL	



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Client: Golder Associates	Project Manager: Kelly Bottem
Project: Landsburg	Project Number: GL9231000007.2023

24C0326-03 O	Glass NM, Amber, 1000 mL
24C0326-03 P	Glass NM, Amber, 1000 mL
24C0326-03 Q	Glass NM, Amber, 500 mL
24C0326-03 R	Glass NM, Amber, 500 mL
24C0326-03 S	Glass NM, Amber, 500 mL
24C0326-03 T	Glass NM, Amber, 500 mL
24C0326-03 U	Glass NM, Amber, 500 mL
24C0326-03 V	Glass NM, Amber, 500 mL
24C0326-03 W	Glass NM, Amber, 500 mL
24C0326-03 X	Glass NM, Amber, 500 mL
24C0326-03 Y	Glass NM, Amber, 500 mL
24C0326-03 Z	Glass NM, Amber, 500 mL
24C0326-04 A	Glass NM, Amber, 1000 mL
24C0326-04 B	Glass NM, Amber, 1000 mL
24C0326-04 C	Glass NM, Amber, 1000 mL
24C0326-04 D	Glass NM, Amber, 1000 mL
24C0326-04 E	Glass NM, Amber, 1000 mL
24C0326-04 F	Glass NM, Amber, 1000 mL
24C0326-04 G	Glass NM, Amber, 500 mL
24C0326-04 H	Glass NM, Amber, 500 mL
24C0326-04 I	Glass NM, Amber, 500 mL
24C0326-04 J	Glass NM, Amber, 500 mL
24C0326-04 K	Glass NM, Amber, 500 mL
24C0326-04 L	Glass NM, Amber, 500 mL
24C0326-04 M	HDPE NM, 500 mL, 1:1 HNO3 <i>CL P</i>
24C0326-04 N	VOA Vial, Clear, 40 mL, HCL
24C0326-04 O	VOA Vial, Clear, 40 mL, HCL
24C0326-04 P	VOA Vial, Clear, 40 mL, HCL
24C0326-04 Q	VOA Vial, Clear, 40 mL, HCL
24C0326-04 R	VOA Vial, Clear, 40 mL, HCL
24C0326-05 A	Glass NM, Amber, 1000 mL
24C0326-05 B	Glass NM, Amber, 1000 mL
24C0326-05 C	Glass NM, Amber, 1000 mL
24C0326-05 D	Glass NM, Amber, 1000 mL
24C0326-05 E	Glass NM, Amber, 1000 mL
24C0326-05 F	Glass NM, Amber, 1000 mL



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24C0326

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Client: Golder Associates	Project Manager: Kelly Bottem
Project: Landsburg	Project Number: GL9231000007.2023

24C0326-05 G	Glass NM, Amber, 500 mL		
24C0326-05 H	Glass NM, Amber, 500 mL		
24C0326-05 I	Glass NM, Amber, 500 mL		
24C0326-05 J	Glass NM, Amber, 500 mL		
24C0326-05 K	Glass NM, Amber, 500 mL		
24C0326-05 L	Glass NM, Amber, 500 mL		
24C0326-05 M	HDPE NM, 500 mL, 1:1 HNO3	C2	P
24C0326-05 N	VOA Vial, Clear, 40 mL, HCL		
24C0326-05 O	VOA Vial, Clear, 40 mL, HCL		
24C0326-05 P	VOA Vial, Clear, 40 mL, HCL		
24C0326-05 Q	VOA Vial, Clear, 40 mL, HCL		
24C0326-05 R	VOA Vial, Clear, 40 mL, HCL		
24C0326-06 A	Glass NM, Amber, 1000 mL		
24C0326-06 B	Glass NM, Amber, 1000 mL		
24C0326-06 C	Glass NM, Amber, 1000 mL		
24C0326-06 D	Glass NM, Amber, 1000 mL		
24C0326-06 E	Glass NM, Amber, 1000 mL		
24C0326-06 F	Glass NM, Amber, 1000 mL		
24C0326-06 G	Glass NM, Amber, 500 mL		
24C0326-06 H	Glass NM, Amber, 500 mL		
24C0326-06 I	Glass NM, Amber, 500 mL		
24C0326-06 J	Glass NM, Amber, 500 mL		
24C0326-06 K	Glass NM, Amber, 500 mL		
24C0326-06 L	Glass NM, Amber, 500 mL		
24C0326-06 M	HDPE NM, 500 mL, 1:1 HNO3	C2	P
24C0326-06 N	VOA Vial, Clear, 40 mL, HCL		
24C0326-06 O	VOA Vial, Clear, 40 mL, HCL		
24C0326-06 P	VOA Vial, Clear, 40 mL, HCL		
24C0326-06 Q	VOA Vial, Clear, 40 mL, HCL		
24C0326-06 R	VOA Vial, Clear, 40 mL, HCL		
24C0326-07 A	Glass NM, Amber, 1000 mL		
24C0326-07 B	Glass NM, Amber, 1000 mL		
24C0326-07 C	Glass NM, Amber, 1000 mL		
24C0326-07 D	Glass NM, Amber, 1000 mL		
24C0326-07 E	Glass NM, Amber, 1000 mL		
24C0326-07 F	Glass NM, Amber, 1000 mL		



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24C0326

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Client: Golder Associates

Project Manager: Kelly Bottem

Project: Landsburg

Project Number: GL9231000007.2023

24C0326-07 G	Glass NM, Amber, 500 mL		
24C0326-07 H	Glass NM, Amber, 500 mL		
24C0326-07 I	Glass NM, Amber, 500 mL		
24C0326-07 J	Glass NM, Amber, 500 mL		
24C0326-07 K	Glass NM, Amber, 500 mL		
24C0326-07 L	Glass NM, Amber, 500 mL		
24C0326-07 M	HDPE NM, 500 mL, 1:1 HNO3	22	P
24C0326-07 N	VOA Vial, Clear, 40 mL, HCL		
24C0326-07 O	VOA Vial, Clear, 40 mL, HCL		
24C0326-07 P	VOA Vial, Clear, 40 mL, HCL		
24C0326-07 Q	VOA Vial, Clear, 40 mL, HCL		
24C0326-07 R	VOA Vial, Clear, 40 mL, HCL		
24C0326-08 A	Glass NM, Amber, 1000 mL		
24C0326-08 B	Glass NM, Amber, 1000 mL		
24C0326-08 C	Glass NM, Amber, 1000 mL		
24C0326-08 D	Glass NM, Amber, 1000 mL		
24C0326-08 E	Glass NM, Amber, 1000 mL		
24C0326-08 F	Glass NM, Amber, 1000 mL		
24C0326-08 G	Glass NM, Amber, 500 mL		
24C0326-08 H	Glass NM, Amber, 500 mL		
24C0326-08 I	Glass NM, Amber, 500 mL		
24C0326-08 J	Glass NM, Amber, 500 mL		
24C0326-08 K	Glass NM, Amber, 500 mL		
24C0326-08 L	Glass NM, Amber, 500 mL		
24C0326-08 M	HDPE NM, 500 mL, 1:1 HNO3	22	P
24C0326-08 N	VOA Vial, Clear, 40 mL, HCL		
24C0326-08 O	VOA Vial, Clear, 40 mL, HCL		
24C0326-08 P	VOA Vial, Clear, 40 mL, HCL		
24C0326-08 Q	VOA Vial, Clear, 40 mL, HCL		
24C0326-08 R	VOA Vial, Clear, 40 mL, HCL		
24C0326-09 A	Glass NM, Amber, 1000 mL		
24C0326-09 B	Glass NM, Amber, 1000 mL		
24C0326-09 C	Glass NM, Amber, 1000 mL		
24C0326-09 D	Glass NM, Amber, 1000 mL		
24C0326-09 E	Glass NM, Amber, 1000 mL		
24C0326-09 F	Glass NM, Amber, 1000 mL		



WORK ORDER

24C0326

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Client: Golder Associates	Project Manager: Kelly Bottem
Project: Landsburg	Project Number: GL9231000007.2023

24C0326-09 G	Glass NM, Amber, 500 mL
24C0326-09 H	Glass NM, Amber, 500 mL
24C0326-09 I	Glass NM, Amber, 500 mL
24C0326-09 J	Glass NM, Amber, 500 mL
24C0326-09 K	Glass NM, Amber, 500 mL
24C0326-09 L	Glass NM, Amber, 500 mL
24C0326-09 M	HDPE NM, 500 mL, 1:1 HNO3 C2 P
24C0326-09 N	VOA Vial, Clear, 40 mL, HCL
24C0326-09 O	VOA Vial, Clear, 40 mL, HCL
24C0326-09 P	VOA Vial, Clear, 40 mL, HCL
24C0326-09 Q	VOA Vial, Clear, 40 mL, HCL
24C0326-09 R	VOA Vial, Clear, 40 mL, HCL
24C0326-10 A	Glass NM, Amber, 1000 mL
24C0326-10 B	Glass NM, Amber, 1000 mL
24C0326-10 C	Glass NM, Amber, 1000 mL
24C0326-10 D	Glass NM, Amber, 1000 mL
24C0326-10 E	Glass NM, Amber, 1000 mL
24C0326-10 F	Glass NM, Amber, 1000 mL
24C0326-10 G	Glass NM, Amber, 500 mL
24C0326-10 H	Glass NM, Amber, 500 mL
24C0326-10 I	Glass NM, Amber, 500 mL
24C0326-10 J	Glass NM, Amber, 500 mL
24C0326-10 K	Glass NM, Amber, 500 mL
24C0326-10 L	Glass NM, Amber, 500 mL
24C0326-10 M	HDPE NM, 500 mL, 1:1 HNO3 C2 P
24C0326-10 N	VOA Vial, Clear, 40 mL, HCL
24C0326-10 O	VOA Vial, Clear, 40 mL, HCL
24C0326-10 P	VOA Vial, Clear, 40 mL, HCL
24C0326-10 Q	VOA Vial, Clear, 40 mL, HCL
24C0326-10 R	VOA Vial, Clear, 40 mL, HCL
24C0326-11 A	Glass NM, Amber, 1000 mL
24C0326-11 B	Glass NM, Amber, 1000 mL
24C0326-11 C	Glass NM, Amber, 1000 mL
24C0326-11 D	Glass NM, Amber, 1000 mL
24C0326-11 E	Glass NM, Amber, 1000 mL
24C0326-11 F	Glass NM, Amber, 1000 mL



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24C0326

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Client: Golder Associates

Project Manager: Kelly Bottem

Project: Landsburg

Project Number: GL9231000007.2023

24C0326-11 G	Glass NM, Amber, 500 mL	
24C0326-11 H	Glass NM, Amber, 500 mL	
24C0326-11 I	Glass NM, Amber, 500 mL	
24C0326-11 J	Glass NM, Amber, 500 mL	
24C0326-11 K	Glass NM, Amber, 500 mL	
24C0326-11 L	Glass NM, Amber, 500 mL	
24C0326-11 M	HDPE NM, 500 mL, 1:1 HNO3	CL P
24C0326-11 N	VOA Vial, Clear, 40 mL, HCL	
24C0326-11 O	VOA Vial, Clear, 40 mL, HCL	
24C0326-11 P	VOA Vial, Clear, 40 mL, HCL	
24C0326-11 Q	VOA Vial, Clear, 40 mL, HCL	
24C0326-11 R	VOA Vial, Clear, 40 mL, HCL	
24C0326-12 A	Glass NM, Amber, 1000 mL	
24C0326-12 B	Glass NM, Amber, 1000 mL	
24C0326-12 C	Glass NM, Amber, 1000 mL	
24C0326-12 D	Glass NM, Amber, 1000 mL	
24C0326-12 E	Glass NM, Amber, 1000 mL	
24C0326-12 F	Glass NM, Amber, 1000 mL	
24C0326-12 G	Glass NM, Amber, 500 mL	
24C0326-12 H	Glass NM, Amber, 500 mL	
24C0326-12 I	Glass NM, Amber, 500 mL	
24C0326-12 J	Glass NM, Amber, 500 mL	
24C0326-12 K	Glass NM, Amber, 500 mL	
24C0326-12 L	Glass NM, Amber, 500 mL	
24C0326-12 M	HDPE NM, 500 mL, 1:1 HNO3	CL P
24C0326-12 N	VOA Vial, Clear, 40 mL, HCL	
24C0326-12 O	VOA Vial, Clear, 40 mL, HCL	
24C0326-12 P	VOA Vial, Clear, 40 mL, HCL	
24C0326-12 Q	VOA Vial, Clear, 40 mL, HCL	
24C0326-12 R	VOA Vial, Clear, 40 mL, HCL	Bubble
24C0326-13 A	Glass NM, Amber, 1000 mL	
24C0326-13 B	Glass NM, Amber, 1000 mL	
24C0326-13 C	Glass NM, Amber, 1000 mL	
24C0326-13 D	Glass NM, Amber, 1000 mL	
24C0326-13 E	Glass NM, Amber, 1000 mL	
24C0326-13 F	Glass NM, Amber, 1000 mL	



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24C0326

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Project Manager: Kelly Bottem

Project: Landsburg

Project Number: GL9231000007.2023

24C0326-13 G	Glass NM, Amber, 500 mL	
24C0326-13 H	Glass NM, Amber, 500 mL	
24C0326-13 I	Glass NM, Amber, 500 mL	
24C0326-13 J	Glass NM, Amber, 500 mL	
24C0326-13 K	Glass NM, Amber, 500 mL	
24C0326-13 L	Glass NM, Amber, 500 mL	
24C0326-13 M	HDPE NM, 500 mL, 1:1 HNO3	C2 P
24C0326-13 N	VOA Vial, Clear, 40 mL, HCL	
24C0326-13 O	VOA Vial, Clear, 40 mL, HCL	
24C0326-13 P	VOA Vial, Clear, 40 mL, HCL	
24C0326-13 Q	VOA Vial, Clear, 40 mL, HCL	
24C0326-13 R	VOA Vial, Clear, 40 mL, HCL	
24C0326-14 A	Glass NM, Amber, 1000 mL	
24C0326-14 B	Glass NM, Amber, 1000 mL	
24C0326-14 C	Glass NM, Amber, 1000 mL	
24C0326-14 D	Glass NM, Amber, 1000 mL	
24C0326-14 E	Glass NM, Amber, 1000 mL	
24C0326-14 F	Glass NM, Amber, 1000 mL	
24C0326-14 G	Glass NM, Amber, 500 mL	
24C0326-14 H	Glass NM, Amber, 500 mL	
24C0326-14 I	Glass NM, Amber, 500 mL	
24C0326-14 J	Glass NM, Amber, 500 mL	
24C0326-14 K	Glass NM, Amber, 500 mL	
24C0326-14 L	Glass NM, Amber, 500 mL	
24C0326-14 M	HDPE NM, 500 mL, 1:1 HNO3	C2 P
24C0326-14 N	VOA Vial, Clear, 40 mL, HCL	
24C0326-14 O	VOA Vial, Clear, 40 mL, HCL	
24C0326-14 P	VOA Vial, Clear, 40 mL, HCL	
24C0326-14 Q	VOA Vial, Clear, 40 mL, HCL	
24C0326-14 R	VOA Vial, Clear, 40 mL, HCL	
24C0326-15 A	Glass NM, Amber, 1000 mL	
24C0326-15 B	Glass NM, Amber, 1000 mL	
24C0326-15 C	Glass NM, Amber, 1000 mL	
24C0326-15 D	Glass NM, Amber, 1000 mL	
24C0326-15 E	Glass NM, Amber, 1000 mL	
24C0326-15 F	Glass NM, Amber, 1000 mL	



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24C0326

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Client: Golder Associates	Project Manager: Kelly Bottem
Project: Landsburg	Project Number: GL9231000007.2023

24C0326-15 G	Glass NM, Amber, 500 mL
24C0326-15 H	Glass NM, Amber, 500 mL
24C0326-15 I	Glass NM, Amber, 500 mL
24C0326-15 J	Glass NM, Amber, 500 mL
24C0326-15 K	Glass NM, Amber, 500 mL
24C0326-15 L	Glass NM, Amber, 500 mL
24C0326-15 M	HDPE NM, 500 mL, 1:1 HNO3 2 P
24C0326-15 N	VOA Vial, Clear, 40 mL, HCL
24C0326-15 O	VOA Vial, Clear, 40 mL, HCL
24C0326-15 P	VOA Vial, Clear, 40 mL, HCL
24C0326-15 Q	VOA Vial, Clear, 40 mL, HCL
24C0326-15 R	VOA Vial, Clear, 40 mL, HCL
24C0326-16 A	VOA Vial, Clear, 40 mL, HCL
24C0326-16 B	VOA Vial, Clear, 40 mL, HCL
24C0326-16 C	VOA Vial, Clear, 40 mL, HCL
24C0326-16 D	VOA Vial, Clear, 40 mL, HCL
24C0326-16 E	VOA Vial, Clear, 40 mL, HCL
24C0326-16 F	VOA Vial, Clear, 40 mL, HCL
24C0326-16 G	VOA Vial, Clear, 40 mL, HCL
24C0326-16 H	VOA Vial, Clear, 40 mL, HCL
24C0326-16 I	VOA Vial, Clear, 40 mL, HCL
24C0326-16 J	VOA Vial, Clear, 40 mL, HCL
24C0326-16 K	VOA Vial, Clear, 40 mL, HCL
24C0326-16 L	VOA Vial, Clear, 40 mL, HCL
24C0326-17 A	Glass NM, Amber, 1000 mL
24C0326-17 B	Glass NM, Amber, 1000 mL
24C0326-17 C	Glass NM, Amber, 1000 mL
24C0326-17 D	Glass NM, Amber, 1000 mL
24C0326-17 E	Glass NM, Amber, 1000 mL
24C0326-17 F	Glass NM, Amber, 1000 mL
24C0326-17 G	Glass NM, Amber, 500 mL
24C0326-17 H	Glass NM, Amber, 500 mL
24C0326-17 I	Glass NM, Amber, 500 mL
24C0326-17 J	Glass NM, Amber, 500 mL
24C0326-17 K	Glass NM, Amber, 500 mL
24C0326-17 L	Glass NM, Amber, 500 mL



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24C0326

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Client: Golder Associates	Project Manager: Kelly Bottem
Project: Landsburg	Project Number: GL9231000007.2023

24C0326-17 M	HDPE NM, 500 mL, 1:1 HNO3	C2 P
24C0326-17 N	VOA Vial, Clear, 40 mL, HCL	
24C0326-17 O	VOA Vial, Clear, 40 mL, HCL	
24C0326-17 P	VOA Vial, Clear, 40 mL, HCL	
24C0326-17 Q	VOA Vial, Clear, 40 mL, HCL	
24C0326-17 R	VOA Vial, Clear, 40 mL, HCL	

dh

3/14/24

Preservation Confirmed By

Date



Cooler Receipt Form

ARI Client: WSP

Project Name: Landsburg 2024-05 Sampling

COC No(s): _____ (NA)

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

Assigned ARI Job No: 24C0326

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 (YES) NO

Were custody papers properly filled out (ink, signed, etc.) YES (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.8° 2.8 3.4 1.1 1.2 0.9 3.3 0.6 1.9 0.6 0.4 1.1 5.4 0.8 0.7 2.0 1.1

Time 1435

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 5009708

Cooler Accepted by: MD Date: 03/14/24 Time: 1435

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 (03/06/24)

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

Samples Logged by: MD Date: 3/15/24 Time: 1035 Labels checked by: _____

**** 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:

1 LAG received without a sample label. Logged with sample LMW-10-0324, as it was only sample missing a container.

By: MD Date: 03/15/24



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324
24C0326-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 09:55

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 09:17

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)
Preparation Batch: BMC0515
Prepared: 03/20/2024

Sample Size: 10 mL
Final Volume: 10 mL

Extract ID: 24C0326-01 R

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U



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18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324
24C0326-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 09:55

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 09:17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324
24C0326-01 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 09:55

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 09:17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>			<i>80-129 %</i>	<i>105</i>	<i>%</i>	
<i>Surrogate: Toluene-d8</i>			<i>80-120 %</i>	<i>109</i>	<i>%</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>			<i>80-120 %</i>	<i>92.1</i>	<i>%</i>	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			<i>80-120 %</i>	<i>103</i>	<i>%</i>	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324
24C0326-01 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 09:55

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 18:22

Sample Preparation:

Preparation Method: EPA 3520C (Liq Liq)

Extract ID: 24C0326-01 G 01

Preparation Batch: BMC0433

Sample Size: 500 mL

Prepared: 03/18/2024

Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324
24C0326-01 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 09:55

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 18:22

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	9.8	ug/L	
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	82.8	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	83.0	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	85.2	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	80.3	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	96.9	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	86.7	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324
24C0326-01 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 09:55

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 18:22

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	91.4	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	92.7	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324
24C0326-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/11/2024 09:55
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 14:46
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-01 J 01
Preparation Batch: BMC0442	Sample Size: 500 mL
Prepared: 03/18/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	1.6	ug/L	
<i>Surrogate: 1,4-Dioxane-d8</i>			33.6-120 %	59.8	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324
24C0326-01 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/11/2024 09:55
Instrument: FID4 Analyst: JGR Analyzed: 03/20/2024 15:25

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-01 H 01
Preparation Batch: BMC0438 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	78.8	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	120	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324
24C0326-01 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/11/2024 09:55
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 02:30

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-01 I 01
Preparation Batch: BMC0441 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>79.1</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>83.4</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>88.2</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>85.3</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324
24C0326-01 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/11/2024 09:55
Instrument: ECD7 Analyst: JGR		Analyzed: 04/15/2024 14:53
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0439 Prepared: 03/18/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-01 A 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0109 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-01 A 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0111 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-01 A 01
Sample Cleanup:	Cleanup Method: Sulfur Cleanup Batch: CMD0110 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-01 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	48.2	%	
Surrogate: Tetrachlorometaxylene			32-120 %	51.2	%	
Surrogate: Decachlorobiphenyl [2C]			29-120 %	48.7	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	44.2	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324
24C0326-01 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/11/2024 09:55
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 21:38
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-01 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324
24C0326-01 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1	Analyst: MCB	Sampled: 03/11/2024 09:55	Analyzed: 03/28/2024 21:38
Sample Preparation:	Preparation Method: REN - EPA 3010A M	Preparation Batch: BMC0644	Sample Size: 25 mL	Final Volume: 25 mL
	Prepared: 03/25/2024		Extract ID: 24C0326-01 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324
24C0326-01 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/11/2024 09:55 Analyzed: 04/02/2024 12:27
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-01 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	109	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	0.304	mg/L	
Magnesium	7439-95-4	1	0.500	67.5	mg/L	
Manganese	7439-96-5	1	0.0100	0.218	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	3.42	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	19.0	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324
24C0326-01 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Instrument: HYDRA Analyst: ML	Sampled: 03/11/2024 09:55 Analyzed: 03/29/2024 13:13
Sample Preparation:	Preparation Method: TWM EPA 7470A Preparation Batch: BMC0681 Prepared: 03/26/2024	Extract ID: 24C0326-01 M
	Sample Size: 20 mL Final Volume: 20 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324-D
24C0326-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 10:05

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 09:40

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-02 R

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324-D
24C0326-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 10:05

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 09:40

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 105 %



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324-D
24C0326-02 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 10:05

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 09:40

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	109	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	91.0	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	104	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324-D
24C0326-02 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 10:05

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 18:56

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)
Preparation Batch: BMC0433
Prepared: 03/18/2024

Sample Size: 500 mL
Final Volume: 0.5 mL

Extract ID: 24C0326-02 G 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-2-0324-D
24C0326-02 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 10:05

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 18:56

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	79.1	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	77.9	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	80.4	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	73.6	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	92.1	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	81.9	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324-D
24C0326-02 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/11/2024 10:05
Instrument: NT6 Analyst: JZ Analyzed: 03/21/2024 18:56

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	86.3	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	86.5	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324-D
24C0326-02 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/11/2024 10:05
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 15:12
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-02 J 01
Preparation Batch: BMC0442	Sample Size: 500 mL
Prepared: 03/18/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	1.6	ug/L	
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>59.4</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324-D
24C0326-02 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/11/2024 10:05
Instrument: FID4 Analyst: JGR Analyzed: 03/20/2024 15:45

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-02 H 01
Preparation Batch: BMC0438 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	95.1	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	142	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324-D
24C0326-02 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/11/2024 10:05
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 02:48

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-02 I 01
Preparation Batch: BMC0441 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>81.1</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>84.0</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>81.4</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>84.0</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324-D
24C0326-02 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/11/2024 10:05
Instrument: ECD7 Analyst: JGR		Analyzed: 04/15/2024 15:56
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0439 Prepared: 03/18/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-02 A 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0109 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-02 A 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0111 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-02 A 01
Sample Cleanup:	Cleanup Method: Sulfur Cleanup Batch: CMD0110 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-02 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			29-120 %	57.6	%	
<i>Surrogate: Tetrachlorometaxylene</i>			32-120 %	58.5	%	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			29-120 %	57.9	%	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			32-120 %	51.2	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324-D
24C0326-02 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/11/2024 10:05
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 21:43
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-02 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324-D
24C0326-02 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Sampled: 03/11/2024 10:05
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 21:43
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-02 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-2-0324-D
24C0326-02 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/11/2024 10:05 Analyzed: 04/02/2024 12:30
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-02 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	113	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	0.327	mg/L	
Magnesium	7439-95-4	1	0.500	70.6	mg/L	
Manganese	7439-96-5	1	0.0100	0.227	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	3.53	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	19.7	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



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LMW-2-0324-D
24C0326-02 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/11/2024 10:05
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:15
Sample Preparation: Preparation Method: TWM EPA 7470A	Extract ID: 24C0326-02 M
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-4-0324
24C0326-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 12:00

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 10:04

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-03 AH

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-4-0324
24C0326-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 12:00

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 10:04

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 106 %



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-4-0324
24C0326-03 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/11/2024 12:00
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 10:04

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	100	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	96.9	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	108	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-4-0324
24C0326-03 (Water)

Semivolatiles Organic Compounds

Method: EPA 8270E Sampled: 03/11/2024 12:00
Instrument: NT6 Analyst: JZ Analyzed: 03/21/2024 19:30

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-03 AA 01
Preparation Batch: BMC0433 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-4-0324
24C0326-03 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 12:00

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 19:30

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	72.7	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	74.8	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	74.6	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	70.3	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	86.0	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	77.9	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-4-0324
24C0326-03 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 12:00

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 19:30

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	79.5	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	83.5	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-4-0324
24C0326-03 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/11/2024 12:00
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 15:37
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-03 W 01
Preparation Batch: BMC0442	Sample Size: 500 mL
Prepared: 03/18/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	1.5	ug/L	
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>57.4</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-4-0324
24C0326-03 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/11/2024 12:00
Instrument: FID4 Analyst: JGR Analyzed: 03/20/2024 16:05

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-03 Q 01
Preparation Batch: BMC0438 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	93.4	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	136	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-4-0324
24C0326-03 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/11/2024 12:00
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 03:07

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-03 T 01
Preparation Batch: BMC0441 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>77.5</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>81.6</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>82.7</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>80.7</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-4-0324
24C0326-03 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/11/2024 12:00
Instrument: ECD7 Analyst: JGR		Analyzed: 04/15/2024 16:17
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0439 Prepared: 03/18/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-03 A 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0109 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-03 A 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0111 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-03 A 01
Sample Cleanup:	Cleanup Method: Sulfur Cleanup Batch: CMD0110 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-03 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	58.4	%	
Surrogate: Tetrachlorometaxylene			32-120 %	66.9	%	
Surrogate: Decachlorobiphenyl [2C]			29-120 %	59.4	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	54.6	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-4-0324
24C0326-03 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/11/2024 12:00
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 21:57
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-03 AG 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-4-0324
24C0326-03 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Sampled: 03/11/2024 12:00
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 21:57
Sample Preparation: Preparation Method: REN - EPA 3010A M Preparation Batch: BMC0644 Prepared: 03/25/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-03 AG 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-4-0324
24C0326-03 (Water)

Metals and Metallic Compounds

Method: EPA 6010D

Sampled: 03/11/2024 12:00

Instrument: ICP3 Analyst: SH

Analyzed: 04/02/2024 13:42

Sample Preparation: Preparation Method: TWC EPA 3010A
Preparation Batch: BMC0716
Prepared: 03/27/2024

Sample Size: 25 mL
Final Volume: 25 mL

Extract ID: 24C0326-03 AG 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	106	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	0.572	mg/L	
Magnesium	7439-95-4	1	0.500	65.2	mg/L	
Manganese	7439-96-5	1	0.0100	0.166	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	3.58	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	23.5	mg/L	
Sodium	7440-23-5	1	50.0	ND	mg/L	U
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-4-0324
24C0326-03 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Instrument: HYDRA Analyst: ML	Sampled: 03/11/2024 12:00 Analyzed: 03/29/2024 13:01
Sample Preparation:	Preparation Method: TWM EPA 7470A Preparation Batch: BMC0681 Prepared: 03/26/2024	Sample Size: 20 mL Final Volume: 20 mL Extract ID: 24C0326-03 AG

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-7-0324
24C0326-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 14:20

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 10:27

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-04 R

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-7-0324
24C0326-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 14:20

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 10:27

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 105 %



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/11/2024 14:20
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 10:27

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	92.4	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	99.0	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	112	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-7-0324
24C0326-04 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/11/2024 14:20
Instrument: NT6 Analyst: JZ Analyzed: 03/21/2024 21:12

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-04 G 01
Preparation Batch: BMC0433 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-7-0324
24C0326-04 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 14:20

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 21:12

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	77.8	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	76.7	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	78.1	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	74.8	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	90.7	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	79.8	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-7-0324
24C0326-04 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 14:20

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 21:12

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	85.7	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	86.0	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/11/2024 14:20
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 16:55
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-04 J 01
Preparation Batch: BMC0442	Sample Size: 500 mL
Prepared: 03/18/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>57.9</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/11/2024 14:20
Instrument: FID4 Analyst: JGR Analyzed: 03/20/2024 16:25

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-04 H 01
Preparation Batch: BMC0438 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	93.6	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	139	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/11/2024 14:20
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 04:01

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-04 I 01
Preparation Batch: BMC0441 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>72.4</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>76.3</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>78.3</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>78.9</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/11/2024 14:20
Instrument: ECD7 Analyst: JGR		Analyzed: 04/15/2024 17:20
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0439 Prepared: 03/18/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-04 A 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0109 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-04 A 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0111 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-04 A 01
Sample Cleanup:	Cleanup Method: Sulfur Cleanup Batch: CMD0110 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-04 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	45.1	%	
Surrogate: Tetrachlorometaxylene			32-120 %	60.7	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	44.8	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	40.9	%	P1



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/11/2024 14:20
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 21:48
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-04 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1	Analyst: MCB	Sampled: 03/11/2024 14:20	Analyzed: 03/28/2024 21:48
Sample Preparation:	Preparation Method: REN - EPA 3010A M	Preparation Batch: BMC0644	Sample Size: 25 mL	Final Volume: 25 mL
	Prepared: 03/25/2024		Extract ID: 24C0326-04 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/11/2024 14:20 Analyzed: 04/02/2024 12:33
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-04 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	50.0	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	1.11	mg/L	
Magnesium	7439-95-4	1	0.500	23.1	mg/L	
Manganese	7439-96-5	1	0.0100	0.122	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	2.72	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	39.1	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-7-0324
24C0326-04 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Instrument: HYDRA Analyst: ML	Sampled: 03/11/2024 14:20 Analyzed: 03/29/2024 13:18
Sample Preparation:	Preparation Method: TWM EPA 7470A Preparation Batch: BMC0681 Prepared: 03/26/2024	Sample Size: 20 mL Final Volume: 20 mL Extract ID: 24C0326-04 M

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-14-0324
24C0326-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/12/2024 10:30
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 10:50

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 24C0326-05 R
Preparation Batch: BMC0515 Sample Size: 10 mL
Prepared: 03/20/2024 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



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Reported:
22-Apr-2024 14:38

LMW-14-0324
24C0326-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/12/2024 10:30

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 10:50

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 106 %



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/12/2024 10:30
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 10:50

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	100	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	94.8	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	102	%	



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Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-14-0324
24C0326-05 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/12/2024 10:30

Instrument: NT6 Analyst: JZ

Analyzed: 03/23/2024 15:58

Sample Preparation:

Preparation Method: EPA 3520C (Liq Liq)

Extract ID: 24C0326-05 G 01

Preparation Batch: BMC0462

Sample Size: 500 mL

Prepared: 03/19/2024

Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-14-0324
24C0326-05 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/12/2024 10:30

Instrument: NT6 Analyst: JZ

Analyzed: 03/23/2024 15:58

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	70.4	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	68.1	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	72.8	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	66.2	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	83.4	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	72.5	%	



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Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-14-0324
24C0326-05 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/12/2024 10:30

Instrument: NT6 Analyst: JZ

Analyzed: 03/23/2024 15:58

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	80.4	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	89.8	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/12/2024 10:30
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 19:29
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-05 J 01
Preparation Batch: BMC0463	Sample Size: 500 mL
Prepared: 03/19/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>48.7</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID	Instrument: FID4 Analyst: JGR	Sampled: 03/12/2024 10:30 Analyzed: 03/22/2024 18:07
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0459 Prepared: 03/18/2024	Sample Size: 500 mL Final Volume: 1 mL Extract ID: 24C0326-05 H 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	107	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	150	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/12/2024 10:30
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 13:31

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-05 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>68.0</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>71.4</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>67.3</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>68.0</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/12/2024 10:30
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 11:41
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-05 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-05 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-05 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	64.2	%	
Surrogate: Tetrachlorometaxylene			32-120 %	97.9	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	56.0	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	57.1	%	P1



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/12/2024 10:30
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 21:53
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-05 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Sampled: 03/12/2024 10:30
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 21:53
Sample Preparation: Preparation Method: REN - EPA 3010A M Preparation Batch: BMC0644 Prepared: 03/25/2024	Extract ID: 24C0326-05 M 01
Sample Size: 25 mL Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/12/2024 10:30 Analyzed: 04/02/2024 12:36
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-05 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	187	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	0.0103	mg/L	
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	15.1	mg/L	
Magnesium	7439-95-4	1	0.500	96.5	mg/L	
Manganese	7439-96-5	1	0.0100	0.741	mg/L	
Nickel	7440-02-0	1	0.0100	0.0144	mg/L	
Potassium	7440-09-7	1	0.500	4.10	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	19.1	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-14-0324
24C0326-05 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/12/2024 10:30
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:25
Sample Preparation: Preparation Method: TWM EPA 7470A	Extract ID: 24C0326-05 M
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

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Reported:
22-Apr-2024 14:38

LMW-15-0324
24C0326-06 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/12/2024 11:50

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 11:13

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-06 Q

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



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Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-15-0324
24C0326-06 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/12/2024 11:50

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 11:13

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 103 %



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-15-0324
24C0326-06 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/12/2024 11:50

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 11:13

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	98.9	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	100	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	106	%	



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Project: Landsburg
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Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-15-0324
24C0326-06 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/12/2024 11:50

Instrument: NT6 Analyst: JZ

Analyzed: 03/23/2024 16:32

Sample Preparation:

Preparation Method: EPA 3520C (Liq Liq)

Extract ID: 24C0326-06 G 01

Preparation Batch: BMC0462

Sample Size: 500 mL

Prepared: 03/19/2024

Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-15-0324
24C0326-06 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/12/2024 11:50

Instrument: NT6 Analyst: JZ

Analyzed: 03/23/2024 16:32

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	76.1	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	73.1	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	78.2	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	71.6	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	87.5	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	77.9	%	



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-15-0324
24C0326-06 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/12/2024 11:50

Instrument: NT6 Analyst: JZ

Analyzed: 03/23/2024 16:32

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	88.0	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	94.0	%	



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LMW-15-0324
24C0326-06 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/12/2024 11:50
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 19:55
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-06 J 01
Preparation Batch: BMC0463	Sample Size: 500 mL
Prepared: 03/19/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>55.3</i>	<i>%</i>	



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LMW-15-0324
24C0326-06 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/12/2024 11:50
Instrument: FID4 Analyst: JGR Analyzed: 03/22/2024 18:27

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-06 H 01
Preparation Batch: BMC0459 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	98.6	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	137	%	



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LMW-15-0324
24C0326-06 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/12/2024 11:50
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 13:50

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-06 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>64.3</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>68.1</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>75.1</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>73.0</i>	<i>%</i>	



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LMW-15-0324
24C0326-06 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/12/2024 11:50
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 12:02
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-06 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-06 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-06 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			29-120 %	70.0	%	
<i>Surrogate: Tetrachlorometaxylene</i>			32-120 %	83.2	%	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			29-120 %	59.1	%	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			32-120 %	61.2	%	



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LMW-15-0324
24C0326-06 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/12/2024 11:50
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 22:34
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-06 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	0.00338	mg/L	
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



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LMW-15-0324
24C0326-06 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1 Analyst: MCB	Sampled: 03/12/2024 11:50 Analyzed: 03/28/2024 22:34
Sample Preparation:	Preparation Method: REN - EPA 3010A M Preparation Batch: BMC0644 Prepared: 03/25/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-06 M 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-15-0324
24C0326-06 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/12/2024 11:50 Analyzed: 04/02/2024 12:42
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-06 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	60.0	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	4.18	mg/L	
Magnesium	7439-95-4	1	0.500	26.2	mg/L	
Manganese	7439-96-5	1	0.0100	0.358	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	1.92	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	12.5	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



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LMW-15-0324
24C0326-06 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Instrument: HYDRA Analyst: ML	Sampled: 03/12/2024 11:50 Analyzed: 03/29/2024 13:27
Sample Preparation:	Preparation Method: TWM EPA 7470A Preparation Batch: BMC0681 Prepared: 03/26/2024	Extract ID: 24C0326-06 M
	Sample Size: 20 mL Final Volume: 20 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-11-0324
24C0326-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/12/2024 13:15

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 11:36

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-07 P

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-11-0324
24C0326-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/12/2024 13:15

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 11:36

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 99.8 %



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/12/2024 13:15
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 11:36

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	110	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	96.1	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	100	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-11-0324
24C0326-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/12/2024 13:15

Instrument: NT6 Analyst: JZ

Analyzed: 03/23/2024 19:54

Sample Preparation:

Preparation Method: EPA 3520C (Liq Liq)

Extract ID: 24C0326-07 G 01

Preparation Batch: BMC0462

Sample Size: 500 mL

Prepared: 03/19/2024

Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	10	10.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	10	10.0	ND	ug/L	U
2-Chlorophenol	95-57-8	10	10.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	10	10.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	10	10.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	10	20.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	10	10.0	ND	ug/L	U
2-Methylphenol	95-48-7	10	10.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	10	10.0	ND	ug/L	U
4-Methylphenol	106-44-5	10	20.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	10	10.0	ND	ug/L	U
Hexachloroethane	67-72-1	10	20.0	ND	ug/L	U
Nitrobenzene	98-95-3	10	10.0	ND	ug/L	U
Isophorone	78-59-1	10	10.0	ND	ug/L	U
2-Nitrophenol	88-75-5	10	30.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	10	30.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	10	10.0	ND	ug/L	U
Benzoic acid	65-85-0	10	200	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	10	30.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	10	10.0	ND	ug/L	U
Naphthalene	91-20-3	10	10.0	ND	ug/L	U
4-Chloroaniline	106-47-8	10	50.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	10	30.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	10	30.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	10	10.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	10	50.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	10	30.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	10	50.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	10	10.0	ND	ug/L	U
2-Nitroaniline	88-74-4	10	30.0	ND	ug/L	U
Dimethylphthalate	131-11-3	10	10.0	ND	ug/L	U
Acenaphthylene	208-96-8	10	10.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	10	30.0	ND	ug/L	U
3-Nitroaniline	99-09-2	10	30.0	ND	ug/L	U
Acenaphthene	83-32-9	10	10.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-11-0324
24C0326-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/12/2024 13:15

Instrument: NT6 Analyst: JZ

Analyzed: 03/23/2024 19:54

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	10	200	ND	ug/L	U
Dibenzofuran	132-64-9	10	10.0	ND	ug/L	U
4-Nitrophenol	100-02-7	10	100	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	10	30.0	ND	ug/L	U
Fluorene	86-73-7	10	10.0	ND	ug/L	U
Diethyl phthalate	84-66-2	10	10.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	10	10.0	ND	ug/L	U
4-Nitroaniline	100-01-6	10	30.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	10	100	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	10	10.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	10	10.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	10	10.0	ND	ug/L	U
Pentachlorophenol	87-86-5	10	100	ND	ug/L	U
Phenanthrene	85-01-8	10	10.0	ND	ug/L	U
Anthracene	120-12-7	10	10.0	ND	ug/L	U
Carbazole	86-74-8	10	10.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	10	10.0	ND	ug/L	U
Fluoranthene	206-44-0	10	10.0	ND	ug/L	U
Pyrene	129-00-0	10	10.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	10	10.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	10	10.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	10	50.0	ND	ug/L	U
Chrysene	218-01-9	10	10.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	10	30.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	10	10.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	10	10.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	10	10.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	10	10.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	10	10.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		10	20.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	10	10.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	74.4	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	69.0	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	77.6	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	78.4	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	90.6	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	85.0	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/12/2024 13:15
Instrument: NT6 Analyst: JZ Analyzed: 03/23/2024 19:54

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	40.0	%	*
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	100	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/12/2024 13:15
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 20:21
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-07 J 01
Preparation Batch: BMC0463	Sample Size: 500 mL
Prepared: 03/19/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>55.2</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/12/2024 13:15
Instrument: FID4 Analyst: JGR Analyzed: 03/22/2024 18:47

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-07 H 01
Preparation Batch: BMC0459 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	96.2	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	137	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/12/2024 13:15
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 14:08

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-07 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>71.9</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>74.7</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>76.5</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>68.4</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/12/2024 13:15
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 12:23
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-07 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-07 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-07 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	74.2	%	
Surrogate: Tetrachlorometaxylene			32-120 %	75.0	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	65.9	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	46.5	%	P1



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/12/2024 13:15
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 22:39
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-07 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	0.00904	mg/L	
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1	Analyst: MCB	Sampled: 03/12/2024 13:15	Analyzed: 03/28/2024 22:39
Sample Preparation:	Preparation Method: REN - EPA 3010A M	Preparation Batch: BMC0644	Sample Size: 25 mL	Final Volume: 25 mL
	Prepared: 03/25/2024		Extract ID: 24C0326-07 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/12/2024 13:15 Analyzed: 04/02/2024 13:00
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-07 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	58.7	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	0.565	mg/L	
Magnesium	7439-95-4	1	0.500	26.7	mg/L	
Manganese	7439-96-5	1	0.0100	0.167	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	2.03	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	22.7	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-11-0324
24C0326-07 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/12/2024 13:15
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:29
Sample Preparation: Preparation Method: TWM EPA 7470A	Extract ID: 24C0326-07 M
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-8-0324
24C0326-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/13/2024 09:00

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 11:59

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-08 O

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-8-0324
24C0326-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/13/2024 09:00

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 11:59

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 102 %



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LMW-8-0324
24C0326-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/13/2024 09:00
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 11:59

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	101	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	113	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	95.9	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-8-0324
24C0326-08 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/13/2024 09:00
Instrument: NT6 Analyst: JZ Analyzed: 04/08/2024 15:08

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-08 L 01
Preparation Batch: BMC0472 Sample Size: 500 mL
Prepared: 03/20/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-8-0324
24C0326-08 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/13/2024 09:00

Instrument: NT6 Analyst: JZ

Analyzed: 04/08/2024 15:08

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	97.0	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	98.6	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	103	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	93.3	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	103	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	101	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-8-0324
24C0326-08 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/13/2024 09:00
Instrument: NT6 Analyst: JZ Analyzed: 04/08/2024 15:08

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	103	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	105	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-8-0324
24C0326-08 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/13/2024 09:00
Instrument: NT6 Analyst: JZ	Analyzed: 04/09/2024 13:04
Sample Preparation:	Preparation Method: EPA 3520C (Liq Liq)
	Preparation Batch: BMC0487
	Prepared: 03/20/2024
	Sample Size: 500 mL
	Final Volume: 1 mL
	Extract ID: 24C0326-08 G 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>67.1</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-8-0324
24C0326-08 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID	Instrument: FID4 Analyst: JGR	Sampled: 03/13/2024 09:00 Analyzed: 03/22/2024 19:07
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0459 Prepared: 03/18/2024	Sample Size: 500 mL Final Volume: 1 mL Extract ID: 24C0326-08 H 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	77.5	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	104	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-8-0324
24C0326-08 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/13/2024 09:00
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 14:27

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-08 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>50.0</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>53.1</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>65.2</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>63.9</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-8-0324
24C0326-08 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/13/2024 09:00
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 12:44
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-08 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-08 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-08 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	66.8	%	
Surrogate: Tetrachlorometaxylene			32-120 %	93.3	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	58.5	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	54.0	%	P1



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LMW-8-0324
24C0326-08 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/13/2024 09:00
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 22:42
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-08 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	0.00331	mg/L	
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-8-0324
24C0326-08 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Preparation Method: REN - EPA 3010A M	Sample Size: 25 mL	Sampled: 03/13/2024 09:00
Instrument: ICPMS1 Analyst: MCB	Preparation Batch: BMC0644	Final Volume: 25 mL	Analyzed: 03/28/2024 22:42
Sample Preparation:	Prepared: 03/25/2024	Extract ID: 24C0326-08 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



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LMW-8-0324
24C0326-08 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/13/2024 09:00 Analyzed: 04/02/2024 13:03
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-08 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	63.9	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	13.6	mg/L	
Magnesium	7439-95-4	1	0.500	34.4	mg/L	
Manganese	7439-96-5	1	0.0100	0.571	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	1.77	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	10.8	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



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LMW-8-0324
24C0326-08 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/13/2024 09:00
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:32
Sample Preparation: Preparation Method: TWM EPA 7470A	Extract ID: 24C0326-08 M
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



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18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-3-0324
24C0326-09 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/13/2024 10:10

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 12:22

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-09 O

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-3-0324
24C0326-09 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/13/2024 10:10

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 12:22

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 103 %



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LMW-3-0324
24C0326-09 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/13/2024 10:10
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 12:22

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	99.8	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	95.0	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	104	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-3-0324
24C0326-09 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/13/2024 10:10
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 02:43

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-09 L 01
Preparation Batch: BMC0472 Sample Size: 500 mL
Prepared: 03/20/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-3-0324
24C0326-09 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/13/2024 10:10

Instrument: NT6 Analyst: JZ

Analyzed: 04/03/2024 02:43

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	93.8	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	93.7	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	98.5	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	88.7	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	102	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	96.0	%	



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LMW-3-0324
24C0326-09 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/13/2024 10:10
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 02:43

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	90.7	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	107	%	



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LMW-3-0324
24C0326-09 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/13/2024 10:10
Instrument: NT6 Analyst: JZ	Analyzed: 04/09/2024 13:29
Sample Preparation:	Preparation Method: EPA 3520C (Liq Liq)
	Preparation Batch: BMC0487
	Prepared: 03/20/2024
	Sample Size: 500 mL
	Final Volume: 1 mL
	Extract ID: 24C0326-09 G 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>66.4</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-3-0324
24C0326-09 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/13/2024 10:10
Instrument: FID4 Analyst: JGR Analyzed: 03/22/2024 19:28

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-09 H 01
Preparation Batch: BMC0459 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	104	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	145	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-3-0324
24C0326-09 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/13/2024 10:10
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 14:45

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-09 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>58.0</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>59.2</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>73.1</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>76.8</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-3-0324
24C0326-09 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/13/2024 10:10
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 13:05
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-09 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-09 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-09 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	60.4	%	
Surrogate: Tetrachlorometaxylene			32-120 %	84.4	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	53.3	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	48.6	%	P1



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LMW-3-0324
24C0326-09 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/13/2024 10:10
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 22:46
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-09 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



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LMW-3-0324
24C0326-09 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Sampled: 03/13/2024 10:10
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 22:46
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-09 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



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LMW-3-0324
24C0326-09 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/13/2024 10:10 Analyzed: 04/02/2024 13:06
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-09 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	35.2	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	ND	mg/L	U
Magnesium	7439-95-4	1	0.500	15.1	mg/L	
Manganese	7439-96-5	1	0.0100	0.0142	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	1.61	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	9.37	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



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LMW-3-0324
24C0326-09 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/13/2024 10:10
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:34
Sample Preparation:	Extract ID: 24C0326-09 M
Preparation Method: TWM EPA 7470A	
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



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22-Apr-2024 14:38

LMW-5-0324
24C0326-10 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/13/2024 11:25

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 12:45

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-10 N

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



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22-Apr-2024 14:38

LMW-5-0324
24C0326-10 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/13/2024 11:25

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 12:45

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 106 %



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LMW-5-0324
24C0326-10 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/13/2024 11:25
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 12:45

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	98.7	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	99.6	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	103	%	



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22-Apr-2024 14:38

LMW-5-0324
24C0326-10 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/13/2024 11:25
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 03:16

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-10 L 01
Preparation Batch: BMC0472 Sample Size: 500 mL
Prepared: 03/20/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



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LMW-5-0324
24C0326-10 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/13/2024 11:25

Instrument: NT6 Analyst: JZ

Analyzed: 04/03/2024 03:16

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	96.1	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	95.9	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	102	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	91.0	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	105	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	100	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/13/2024 11:25
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 03:16

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	93.9	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	109	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/13/2024 11:25
Instrument: NT6 Analyst: JZ	Analyzed: 04/09/2024 13:55
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-10 G 01
Preparation Batch: BMC0487	Sample Size: 500 mL
Prepared: 03/20/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>67.7</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/13/2024 11:25
Instrument: FID4 Analyst: JGR Analyzed: 03/22/2024 19:48

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-10 H 01
Preparation Batch: BMC0459 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	58.3	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	83.7	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/13/2024 11:25
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 15:04

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-10 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>71.1</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>76.1</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>76.1</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>74.7</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/13/2024 11:25
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 14:07
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-10 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-10 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-10 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	62.5	%	
Surrogate: Tetrachlorometaxylene			32-120 %	76.6	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	54.3	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	47.6	%	P1



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/13/2024 11:25
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 22:54
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-10 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Sampled: 03/13/2024 11:25
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 22:54
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-10 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Preparation Method: TWC EPA 3010A	Sampled: 03/13/2024 11:25
Instrument: ICP3 Analyst: SH	Preparation Batch: BMC0716	Analyzed: 04/02/2024 13:09
Sample Preparation:	Sample Size: 25 mL	Extract ID: 24C0326-10 M 02
	Final Volume: 25 mL	
	Prepared: 03/27/2024	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	78.2	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	0.301	mg/L	
Magnesium	7439-95-4	1	0.500	42.7	mg/L	
Manganese	7439-96-5	1	0.0100	0.191	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	2.33	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	13.2	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-5-0324
24C0326-10 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Instrument: HYDRA Analyst: ML	Sampled: 03/13/2024 11:25 Analyzed: 03/29/2024 13:36
Sample Preparation:	Preparation Method: TWM EPA 7470A Preparation Batch: BMC0681 Prepared: 03/26/2024	Sample Size: 20 mL Final Volume: 20 mL Extract ID: 24C0326-10 M

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-9-0324
24C0326-11 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/13/2024 12:40

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 13:08

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-11 P

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-9-0324
24C0326-11 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/13/2024 12:40

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 13:08

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 107 %



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-9-0324
24C0326-11 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/13/2024 12:40
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 13:08

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	108	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	97.7	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	102	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-9-0324
24C0326-11 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/13/2024 12:40
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 03:49

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-11 L 01
Preparation Batch: BMC0472 Sample Size: 500 mL
Prepared: 03/20/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-9-0324
24C0326-11 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/13/2024 12:40

Instrument: NT6 Analyst: JZ

Analyzed: 04/03/2024 03:49

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	98.5	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	100	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	105	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	95.6	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	107	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	103	%	



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Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-9-0324
24C0326-11 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/13/2024 12:40

Instrument: NT6 Analyst: JZ

Analyzed: 04/03/2024 03:49

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	98.7	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	117	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-9-0324
24C0326-11 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/13/2024 12:40
Instrument: NT6 Analyst: JZ	Analyzed: 04/09/2024 14:21
Sample Preparation:	Preparation Method: EPA 3520C (Liq Liq)
	Preparation Batch: BMC0487
	Prepared: 03/20/2024
	Sample Size: 500 mL
	Final Volume: 1 mL
	Extract ID: 24C0326-11 G 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>60.5</i>	<i>%</i>	



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LMW-9-0324
24C0326-11 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID	Instrument: FID4 Analyst: JGR	Sampled: 03/13/2024 12:40 Analyzed: 03/22/2024 20:08
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0459 Prepared: 03/18/2024	Sample Size: 500 mL Final Volume: 1 mL Extract ID: 24C0326-11 H 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	97.5	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	137	%	



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LMW-9-0324
24C0326-11 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/13/2024 12:40
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 15:22

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-11 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>71.2</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>74.7</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>76.0</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>76.9</i>	<i>%</i>	



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LMW-9-0324
24C0326-11 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/13/2024 12:40
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 14:28
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-11 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-11 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-11 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	74.2	%	
Surrogate: Tetrachlorometaxylene			32-120 %	99.8	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	67.7	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	55.4	%	P1



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-9-0324
24C0326-11 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/13/2024 12:40
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 22:58
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-11 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-9-0324
24C0326-11 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1 Analyst: MCB	Sampled: 03/13/2024 12:40 Analyzed: 03/28/2024 22:58
Sample Preparation:	Preparation Method: REN - EPA 3010A M Preparation Batch: BMC0644 Prepared: 03/25/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-11 M 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-9-0324
24C0326-11 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/13/2024 12:40 Analyzed: 04/02/2024 13:13
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-11 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	77.0	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	1.53	mg/L	
Magnesium	7439-95-4	1	0.500	41.6	mg/L	
Manganese	7439-96-5	1	0.0100	0.165	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	2.29	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	13.1	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-9-0324
24C0326-11 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Instrument: HYDRA Analyst: ML	Sampled: 03/13/2024 12:40 Analyzed: 03/29/2024 13:39
Sample Preparation:	Preparation Method: TWM EPA 7470A Preparation Batch: BMC0681 Prepared: 03/26/2024	Extract ID: 24C0326-11 M
	Sample Size: 20 mL Final Volume: 20 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
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Reported:
22-Apr-2024 14:38

LMW-12-0324
24C0326-12 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/14/2024 09:20

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 13:31

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)
Preparation Batch: BMC0515
Prepared: 03/20/2024

Sample Size: 10 mL
Final Volume: 10 mL

Extract ID: 24C0326-12 P

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.21	ug/L	
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



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18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

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Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-12-0324
24C0326-12 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/14/2024 09:20

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 13:31

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 110 %



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-12-0324
24C0326-12 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/14/2024 09:20
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 13:31

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	98.5	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	96.9	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	105	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-12-0324
24C0326-12 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/14/2024 09:20
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 04:22

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-12 L 01
Preparation Batch: BMC0472 Sample Size: 500 mL
Prepared: 03/20/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



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18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-12-0324
24C0326-12 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/14/2024 09:20

Instrument: NT6 Analyst: JZ

Analyzed: 04/03/2024 04:22

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	95.9	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	97.6	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	101	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	93.0	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	104	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	101	%	



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LMW-12-0324
24C0326-12 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/14/2024 09:20
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 04:22

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	97.0	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	109	%	



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LMW-12-0324
24C0326-12 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/14/2024 09:20
Instrument: NT6 Analyst: JZ	Analyzed: 04/04/2024 12:12
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-12 G 01
Preparation Batch: BMC0529	Sample Size: 500 mL
Prepared: 03/21/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			33.6-120 %	62.6	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-12-0324
24C0326-12 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/14/2024 09:20
Instrument: FID4 Analyst: JGR Analyzed: 03/22/2024 20:28

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-12 H 01
Preparation Batch: BMC0459 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	102	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	143	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-12-0324
24C0326-12 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/14/2024 09:20
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 15:41

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-12 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>62.6</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>65.1</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>73.2</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>73.4</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-12-0324
24C0326-12 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/14/2024 09:20
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 14:49
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-12 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-12 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-12 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	62.5	%	
Surrogate: Tetrachlorometaxylene			32-120 %	77.8	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	56.5	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	50.3	%	P1



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-12-0324
24C0326-12 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/14/2024 09:20
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 23:02
Sample Preparation: Preparation Method: REN - EPA 3010A M Preparation Batch: BMC0644 Prepared: 03/25/2024	Extract ID: 24C0326-12 M 01
Sample Size: 25 mL Final Volume: 25 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-12-0324
24C0326-12 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1	Analyst: MCB	Sampled: 03/14/2024 09:20	Analyzed: 03/28/2024 23:02
Sample Preparation:	Preparation Method: REN - EPA 3010A M	Preparation Batch: BMC0644	Sample Size: 25 mL	Final Volume: 25 mL
	Prepared: 03/25/2024		Extract ID: 24C0326-12 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-12-0324
24C0326-12 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/14/2024 09:20 Analyzed: 04/02/2024 13:16
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-12 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	53.8	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	8.81	mg/L	
Magnesium	7439-95-4	1	0.500	33.5	mg/L	
Manganese	7439-96-5	1	0.0100	0.617	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	2.38	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	5.81	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-12-0324
24C0326-12 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/14/2024 09:20
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:41
Sample Preparation: Preparation Method: TWM EPA 7470A	Extract ID: 24C0326-12 M
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-13R-0324
24C0326-13 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/14/2024 10:45

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 13:54

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)
Preparation Batch: BMC0515
Prepared: 03/20/2024

Sample Size: 10 mL
Final Volume: 10 mL

Extract ID: 24C0326-13 P

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-13R-0324
24C0326-13 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/14/2024 10:45

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 13:54

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 100 %



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Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-13R-0324
24C0326-13 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/14/2024 10:45

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 13:54

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	98.9	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	86.1	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	101	%	



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-13R-0324
24C0326-13 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/14/2024 10:45

Instrument: NT6 Analyst: JZ

Analyzed: 04/03/2024 04:55

Sample Preparation:

Preparation Method: EPA 3520C (Liq Liq)

Extract ID: 24C0326-13 L 01

Preparation Batch: BMC0472

Sample Size: 500 mL

Prepared: 03/20/2024

Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-13R-0324
24C0326-13 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/14/2024 10:45

Instrument: NT6 Analyst: JZ

Analyzed: 04/03/2024 04:55

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	94.9	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	95.3	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	100	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	94.6	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	104	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	103	%	



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LMW-13R-0324
24C0326-13 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/14/2024 10:45
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 04:55

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	92.0	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	108	%	



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LMW-13R-0324
24C0326-13 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/14/2024 10:45
Instrument: NT6 Analyst: JZ	Analyzed: 04/04/2024 12:37
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-13 G 01
Preparation Batch: BMC0529	Sample Size: 500 mL
Prepared: 03/21/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			33.6-120 %	63.4	%	



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LMW-13R-0324
24C0326-13 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/14/2024 10:45
Instrument: FID4 Analyst: JGR Analyzed: 03/22/2024 20:48

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-13 H 01
Preparation Batch: BMC0459 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	94.5	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	131	%	



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LMW-13R-0324
24C0326-13 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/14/2024 10:45
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 15:59

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-13 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>69.3</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>73.4</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>74.0</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>59.2</i>	<i>%</i>	



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LMW-13R-0324
24C0326-13 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/14/2024 10:45
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 15:10
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-13 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-13 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-13 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	60.3	%	
Surrogate: Tetrachlorometaxylene			32-120 %	64.5	%	
Surrogate: Decachlorobiphenyl [2C]			29-120 %	55.3	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	46.3	%	



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LMW-13R-0324
24C0326-13 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/14/2024 10:45
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 23:05
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-13 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



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LMW-13R-0324
24C0326-13 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1	Analyst: MCB	Sampled: 03/14/2024 10:45	Analyzed: 03/28/2024 23:05
Sample Preparation:	Preparation Method: REN - EPA 3010A M	Preparation Batch: BMC0644	Sample Size: 25 mL	Final Volume: 25 mL
	Prepared: 03/25/2024		Extract ID: 24C0326-13 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



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LMW-13R-0324
24C0326-13 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Preparation Method: TWC EPA 3010A	Sampled: 03/14/2024 10:45
Instrument: ICP3 Analyst: SH	Preparation Batch: BMC0716	Analyzed: 04/02/2024 13:19
Sample Preparation:	Sample Size: 25 mL	Extract ID: 24C0326-13 M 02
	Final Volume: 25 mL	
	Prepared: 03/27/2024	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	85.9	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	1.01	mg/L	
Magnesium	7439-95-4	1	0.500	40.7	mg/L	
Manganese	7439-96-5	1	0.0100	0.0261	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	3.10	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	50.0	77.8	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



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LMW-13R-0324
24C0326-13 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/14/2024 10:45
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:43
Sample Preparation: Preparation Method: TWM EPA 7470A	Extract ID: 24C0326-13 M
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-10-0324
24C0326-14 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/14/2024 12:40

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 14:17

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-14 Q

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



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18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-10-0324
24C0326-14 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/14/2024 12:40

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 14:17

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 113 %



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LMW-10-0324
24C0326-14 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/14/2024 12:40
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 14:17

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	98.8	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	94.7	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	105	%	



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-10-0324
24C0326-14 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/14/2024 12:40
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 05:29

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-14 L 01
Preparation Batch: BMC0472 Sample Size: 500 mL
Prepared: 03/20/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



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Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-10-0324
24C0326-14 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/14/2024 12:40

Instrument: NT6 Analyst: JZ

Analyzed: 04/03/2024 05:29

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	100	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	102	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	108	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	98.1	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	111	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	106	%	



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LMW-10-0324
24C0326-14 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/14/2024 12:40
Instrument: NT6 Analyst: JZ Analyzed: 04/03/2024 05:29

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	102	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	117	%	



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LMW-10-0324
24C0326-14 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/14/2024 12:40
Instrument: NT6 Analyst: JZ	Analyzed: 04/04/2024 13:02
Sample Preparation:	Preparation Method: EPA 3520C (Liq Liq)
	Preparation Batch: BMC0529
	Prepared: 03/21/2024
	Sample Size: 500 mL
	Final Volume: 1 mL
	Extract ID: 24C0326-14 G 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			33.6-120 %	66.6	%	



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LMW-10-0324
24C0326-14 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/14/2024 12:40
Instrument: FID4 Analyst: JGR Analyzed: 03/22/2024 21:08

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-14 H 01
Preparation Batch: BMC0459 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	101	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	141	%	



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LMW-10-0324
24C0326-14 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/14/2024 12:40
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 16:17

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-14 I 01
Preparation Batch: BMC0460 Sample Size: 500 mL
Prepared: 03/19/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>56.9</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>58.7</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>73.7</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>72.7</i>	<i>%</i>	



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LMW-10-0324
24C0326-14 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/14/2024 12:40
Instrument: ECD7 Analyst: RJL		Analyzed: 04/10/2024 15:31
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0461 Prepared: 03/19/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-14 K 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0052 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-14 K 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0051 Cleaned: 09-Apr-2024	Initial Volume: 0.5 uL Final Volume: 0.5 uL Extract ID: 24C0326-14 K 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	61.1	%	
Surrogate: Tetrachlorometaxylene			32-120 %	75.7	%	P1
Surrogate: Decachlorobiphenyl [2C]			29-120 %	58.9	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	51.6	%	P1



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LMW-10-0324
24C0326-14 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Instrument: ICPMS1 Analyst: MCB	Sampled: 03/14/2024 12:40 Analyzed: 03/28/2024 23:24
Sample Preparation:	Preparation Method: REN - EPA 3010A M Preparation Batch: BMC0644 Prepared: 03/25/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-14 M 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-10-0324
24C0326-14 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1	Analyst: MCB	Sampled: 03/14/2024 12:40	Analyzed: 03/28/2024 23:24
Sample Preparation:	Preparation Method: REN - EPA 3010A M	Preparation Batch: BMC0644	Sample Size: 25 mL	Final Volume: 25 mL
	Prepared: 03/25/2024		Extract ID: 24C0326-14 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-10-0324
24C0326-14 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Preparation Method: TWC EPA 3010A	Sampled: 03/14/2024 12:40
Instrument: ICP3 Analyst: SH	Preparation Batch: BMC0716	Analyzed: 04/02/2024 13:22
Sample Preparation:	Sample Size: 25 mL	Extract ID: 24C0326-14 M 02
	Final Volume: 25 mL	
	Prepared: 03/27/2024	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	6.30	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	ND	mg/L	U
Magnesium	7439-95-4	1	0.500	2.84	mg/L	
Manganese	7439-96-5	1	0.0100	ND	mg/L	U
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	1.15	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	50.0	83.2	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



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LMW-10-0324
24C0326-14 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/14/2024 12:40
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:46
Sample Preparation: Preparation Method: TWM EPA 7470A	Extract ID: 24C0326-14 M
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-FB-0324
24C0326-15 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 14:50

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 14:40

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-15 R

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-FB-0324
24C0326-15 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 14:50

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 14:40

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 112 %



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LMW-FB-0324
24C0326-15 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/11/2024 14:50
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 14:40

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	94.3	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	88.2	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	102	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-FB-0324
24C0326-15 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/11/2024 14:50
Instrument: NT6 Analyst: JZ Analyzed: 03/21/2024 21:46

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-15 G 01
Preparation Batch: BMC0433 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-FB-0324
24C0326-15 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 14:50

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 21:46

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	81.3	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	72.7	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	80.3	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	75.9	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	93.3	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	81.1	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-FB-0324
24C0326-15 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/11/2024 14:50
Instrument: NT6 Analyst: JZ Analyzed: 03/21/2024 21:46

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	87.9	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	86.5	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-FB-0324
24C0326-15 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/11/2024 14:50
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 17:20
Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)	Extract ID: 24C0326-15 J 01
Preparation Batch: BMC0442	Sample Size: 500 mL
Prepared: 03/18/2024	Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>58.7</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-FB-0324
24C0326-15 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/11/2024 14:50
Instrument: FID4 Analyst: JGR Analyzed: 03/20/2024 16:45

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-15 H 01
Preparation Batch: BMC0438 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	83.0	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	129	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-FB-0324
24C0326-15 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/11/2024 14:50
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 04:20

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-15 I 01
Preparation Batch: BMC0441 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>45.0</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>46.5</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>82.1</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>80.3</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-FB-0324
24C0326-15 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/11/2024 14:50
Instrument: ECD7 Analyst: JGR		Analyzed: 04/15/2024 17:41
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0439 Prepared: 03/18/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-15 A 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0109 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-15 A 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0111 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-15 A 01
Sample Cleanup:	Cleanup Method: Sulfur Cleanup Batch: CMD0110 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-15 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	51.3	%	
Surrogate: Tetrachlorometaxylene			32-120 %	61.8	%	
Surrogate: Decachlorobiphenyl [2C]			29-120 %	54.5	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	49.8	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-FB-0324
24C0326-15 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/11/2024 14:50
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 23:28
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-15 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-FB-0324
24C0326-15 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1	Analyst: MCB	Sampled: 03/11/2024 14:50	Analyzed: 03/28/2024 23:28
Sample Preparation:	Preparation Method: REN - EPA 3010A M	Preparation Batch: BMC0644	Sample Size: 25 mL	Final Volume: 25 mL
	Prepared: 03/25/2024		Extract ID: 24C0326-15 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-FB-0324
24C0326-15 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/11/2024 14:50 Analyzed: 04/02/2024 13:24
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL Extract ID: 24C0326-15 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	ND	mg/L	U
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	ND	mg/L	U
Magnesium	7439-95-4	1	0.500	ND	mg/L	U
Manganese	7439-96-5	1	0.0100	ND	mg/L	U
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	ND	mg/L	U
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	ND	mg/L	U
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



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LMW-FB-0324
24C0326-15 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Sampled: 03/11/2024 14:50
Instrument: HYDRA Analyst: ML	Analyzed: 03/29/2024 13:53
Sample Preparation: Preparation Method: TWM EPA 7470A	Extract ID: 24C0326-15 M
Preparation Batch: BMC0681	Sample Size: 20 mL
Prepared: 03/26/2024	Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Trip Blank
24C0326-16 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/11/2024 09:55
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 08:54

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) Extract ID: 24C0326-16 L
Preparation Batch: BMC0515 Sample Size: 10 mL
Prepared: 03/20/2024 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Trip Blank
24C0326-16 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 09:55

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 08:54

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 108 %



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Trip Blank
24C0326-16 (Water)

Volatile Organic Compounds

Method: EPA 8260D Sampled: 03/11/2024 09:55
Instrument: NT20 Analyst: LH Analyzed: 03/20/2024 08:54

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	99.3	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	99.4	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	106	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-6-0324
24C0326-17 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 14:20

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 15:04

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 24C0326-17 Q

Preparation Batch: BMC0515

Sample Size: 10 mL

Prepared: 03/20/2024

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U



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18300 NE Union Hill Road Suite 200
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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-6-0324
24C0326-17 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 14:20

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 15:04

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

Surrogate: 1,2-Dichloroethane-d4

80-129 % 109 %



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-6-0324
24C0326-17 (Water)

Volatile Organic Compounds

Method: EPA 8260D

Sampled: 03/11/2024 14:20

Instrument: NT20 Analyst: LH

Analyzed: 03/20/2024 15:04

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: Toluene-d8</i>		80-120 %	88.0	%	
<i>Surrogate: 4-Bromofluorobenzene</i>		80-120 %	95.9	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>		80-120 %	102	%	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-6-0324
24C0326-17 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/11/2024 14:20
Instrument: NT6 Analyst: JZ Analyzed: 03/21/2024 22:20

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq) Extract ID: 24C0326-17 G 01
Preparation Batch: BMC0433 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

LMW-6-0324
24C0326-17 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E

Sampled: 03/11/2024 14:20

Instrument: NT6 Analyst: JZ

Analyzed: 03/21/2024 22:20

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzo(a)fluoranthene, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
<i>Surrogate: 2-Fluorophenol</i>			33-120 %	76.0	%	
<i>Surrogate: Phenol-d5</i>			38-120 %	75.8	%	
<i>Surrogate: 2-Chlorophenol-d4</i>			41-120 %	76.4	%	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>			20-120 %	71.1	%	
<i>Surrogate: Nitrobenzene-d5</i>			27-120 %	89.0	%	
<i>Surrogate: 2-Fluorobiphenyl</i>			33-120 %	75.0	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-6-0324
24C0326-17 (Water)

Semivolatile Organic Compounds

Method: EPA 8270E Sampled: 03/11/2024 14:20
Instrument: NT6 Analyst: JZ Analyzed: 03/21/2024 22:20

Analyte	CAS Number	Recovery		Units	Notes
		Limits	Recovery		
<i>Surrogate: 2,4,6-Tribromophenol</i>		52-120 %	79.0	%	
<i>Surrogate: p-Terphenyl-d14</i>		28-120 %	79.9	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-6-0324
24C0326-17 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM	Sampled: 03/11/2024 14:20
Instrument: NT6 Analyst: JZ	Analyzed: 03/22/2024 17:46
Sample Preparation:	Preparation Method: EPA 3520C (Liq Liq)
	Preparation Batch: BMC0442
	Prepared: 03/18/2024
	Sample Size: 500 mL
	Final Volume: 1 mL
	Extract ID: 24C0326-17 J 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dioxane	123-91-1	1	0.4	ND	ug/L	U
<i>Surrogate: 1,4-Dioxane-d8</i>			<i>33.6-120 %</i>	<i>56.9</i>	<i>%</i>	



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LMW-6-0324
24C0326-17 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID Sampled: 03/11/2024 14:20
Instrument: FID4 Analyst: JGR Analyzed: 03/20/2024 17:05

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-17 H 01
Preparation Batch: BMC0438 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)	GRO	1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)	DRO	1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	1.00	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			50-150 %	91.0	%	
<i>Surrogate: n-Triacontane</i>			50-150 %	135	%	



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LMW-6-0324
24C0326-17 (Water)

Chlorinated Pesticides

Method: EPA 8081B Sampled: 03/11/2024 14:20
Instrument: ECD6 Analyst: RT Analyzed: 04/13/2024 04:38

Sample Preparation: Preparation Method: EPA 3510C SepF Extract ID: 24C0326-17 I 01
Preparation Batch: BMC0441 Sample Size: 500 mL
Prepared: 03/18/2024 Final Volume: 5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.025	ND	ug/L	U
beta-BHC	319-85-7	1	0.025	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.025	ND	ug/L	U
delta-BHC	319-86-8	1	0.025	ND	ug/L	U
Heptachlor	76-44-8	1	0.025	ND	ug/L	U
Aldrin	309-00-2	1	0.025	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.050	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.025	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.025	ND	ug/L	U
Endosulfan I	959-98-8	1	0.025	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.050	ND	ug/L	U
Dieldrin	60-57-1	1	0.050	ND	ug/L	U
Endrin	72-20-8	1	0.050	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.050	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.050	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.050	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.050	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.050	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.050	ND	ug/L	U
Methoxychlor	72-43-5	1	0.250	ND	ug/L	U
Toxaphene	8001-35-2	1	1.25	ND	ug/L	U
<i>Surrogate: Decachlorobiphenyl</i>			<i>11-144 %</i>	<i>62.3</i>	<i>%</i>	
<i>Surrogate: Decachlorobiphenyl [2C]</i>			<i>11-144 %</i>	<i>66.0</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene</i>			<i>30-120 %</i>	<i>76.3</i>	<i>%</i>	
<i>Surrogate: Tetrachlorometaxylene [2C]</i>			<i>30-120 %</i>	<i>78.7</i>	<i>%</i>	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-6-0324
24C0326-17 (Water)

Aroclor PCB

Method: EPA 8082A		Sampled: 03/11/2024 14:20
Instrument: ECD7 Analyst: JGR		Analyzed: 04/15/2024 18:02
Sample Preparation:	Preparation Method: EPA 3510C SepF Preparation Batch: BMC0439 Prepared: 03/18/2024	Sample Size: 1000 mL Final Volume: 0.5 mL Extract ID: 24C0326-17 A 01
Sample Cleanup:	Cleanup Method: Silica Gel Cleanup Batch: CMD0109 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-17 A 01
Sample Cleanup:	Cleanup Method: Sulfuric Acid Cleanup Batch: CMD0111 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-17 A 01
Sample Cleanup:	Cleanup Method: Sulfur Cleanup Batch: CMD0110 Cleaned: 15-Apr-2024	Initial Volume: 500 uL Final Volume: 500 uL Extract ID: 24C0326-17 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	0.010	ND	ug/L	U
Aroclor 1221	11104-28-2	1	0.010	ND	ug/L	U
Aroclor 1232	11141-16-5	1	0.010	ND	ug/L	U
Aroclor 1242	53469-21-9	1	0.010	ND	ug/L	U
Aroclor 1248	12672-29-6	1	0.010	ND	ug/L	U
Aroclor 1254	11097-69-1	1	0.010	ND	ug/L	U
Aroclor 1260	11096-82-5	1	0.010	ND	ug/L	U
Surrogate: Decachlorobiphenyl			29-120 %	60.3	%	
Surrogate: Tetrachlorometaxylene			32-120 %	78.6	%	
Surrogate: Decachlorobiphenyl [2C]			29-120 %	60.7	%	
Surrogate: Tetrachlorometaxylene [2C]			32-120 %	54.2	%	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-6-0324
24C0326-17 (Water)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED	Sampled: 03/11/2024 14:20
Instrument: ICPMS1 Analyst: MCB	Analyzed: 03/28/2024 23:31
Sample Preparation: Preparation Method: REN - EPA 3010A M	Extract ID: 24C0326-17 M 01
Preparation Batch: BMC0644	Sample Size: 25 mL
Prepared: 03/25/2024	Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	1	0.00300	ND	mg/L	U
Selenium	7782-49-2	1	0.0250	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-6-0324
24C0326-17 (Water)

Metals and Metallic Compounds

Method: EPA 200.8	Instrument: ICPMS1	Analyst: MCB	Sampled: 03/11/2024 14:20	Analyzed: 03/28/2024 23:31
Sample Preparation:	Preparation Method: REN - EPA 3010A M	Preparation Batch: BMC0644	Sample Size: 25 mL	Final Volume: 25 mL
	Prepared: 03/25/2024		Extract ID: 24C0326-17 M 01	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	1	0.00300	ND	mg/L	U
Lead	7439-92-1	1	0.0100	ND	mg/L	U
Thallium	7440-28-0	1	0.00200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-6-0324
24C0326-17 (Water)

Metals and Metallic Compounds

Method: EPA 6010D	Instrument: ICP3 Analyst: SH	Sampled: 03/11/2024 14:20	Analyzed: 04/02/2024 13:38
Sample Preparation:	Preparation Method: TWC EPA 3010A Preparation Batch: BMC0716 Prepared: 03/27/2024	Sample Size: 25 mL Final Volume: 25 mL	Extract ID: 24C0326-17 M 02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aluminum	7429-90-5	1	1.00	ND	mg/L	U
Barium	7440-39-3	1	0.500	ND	mg/L	U
Beryllium	7440-41-7	1	0.0100	ND	mg/L	U
Cadmium	7440-43-9	1	0.0020	ND	mg/L	U
Calcium	7440-70-2	1	0.500	26.2	mg/L	
Chromium	7440-47-3	1	0.0100	ND	mg/L	U
Cobalt	7440-48-4	1	0.0100	ND	mg/L	U
Copper	7440-50-8	1	0.0030	ND	mg/L	U
Iron	7439-89-6	1	0.200	2.44	mg/L	
Magnesium	7439-95-4	1	0.500	13.6	mg/L	
Manganese	7439-96-5	1	0.0100	0.0302	mg/L	
Nickel	7440-02-0	1	0.0100	ND	mg/L	U
Potassium	7440-09-7	1	0.500	0.644	mg/L	
Silver	7440-22-4	1	0.0050	ND	mg/L	U
Sodium	7440-23-5	1	0.500	6.53	mg/L	
Vanadium	7440-62-2	1	0.0030	ND	mg/L	U
Zinc	7440-66-6	1	0.0200	ND	mg/L	U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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LMW-6-0324
24C0326-17 (Water)

Metals and Metallic Compounds

Method: EPA 7470A	Preparation Method: TWM EPA 7470A	Sampled: 03/11/2024 14:20
Instrument: HYDRA Analyst: ML	Preparation Batch: BMC0681	Analyzed: 03/29/2024 13:55
Sample Preparation:	Prepared: 03/26/2024	Extract ID: 24C0326-17 M
	Sample Size: 20 mL	
	Final Volume: 20 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00100	ND	mg/L	U



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0515-BLK1)		Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 08:31								
Chloromethane	ND	0.50	ug/L							U
Vinyl Chloride	ND	0.10	ug/L							U
Bromomethane	ND	1.00	ug/L							U
Chloroethane	ND	0.20	ug/L							U
Trichlorofluoromethane	ND	0.20	ug/L							U
Acrolein	ND	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.20	ug/L							U
Acetone	ND	5.00	ug/L							U
1,1-Dichloroethene	ND	0.20	ug/L							U
Iodomethane	ND	1.00	ug/L							U
Methylene Chloride	ND	1.00	ug/L							U
Acrylonitrile	ND	1.00	ug/L							U
Carbon Disulfide	ND	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.20	ug/L							U
Vinyl Acetate	ND	0.20	ug/L							U
1,1-Dichloroethane	ND	0.20	ug/L							U
2-Butanone	ND	5.00	ug/L							U
2,2-Dichloropropane	ND	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.20	ug/L							U
Chloroform	ND	0.20	ug/L							U
Bromochloromethane	ND	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.20	ug/L							U
1,1-Dichloropropene	ND	0.10	ug/L							U
Carbon tetrachloride	ND	0.20	ug/L							U
1,2-Dichloroethane	ND	0.20	ug/L							U
Benzene	ND	0.20	ug/L							U
Trichloroethene	ND	0.20	ug/L							U
1,2-Dichloropropane	ND	0.20	ug/L							U
Bromodichloromethane	ND	0.20	ug/L							U
Dibromomethane	ND	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	2.50	ug/L							U
cis-1,3-Dichloropropene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
trans-1,3-Dichloropropene	ND	0.20	ug/L							U



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0515-BLK1)		Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 08:31								
2-Hexanone	ND	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.20	ug/L							U
1,3-Dichloropropane	ND	0.10	ug/L							U
Tetrachloroethene	ND	0.20	ug/L							U
Dibromochloromethane	ND	0.20	ug/L							U
1,2-Dibromoethane	ND	0.10	ug/L							U
Chlorobenzene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Xylenes, total	ND	0.60	ug/L							U
Styrene	ND	0.20	ug/L							U
Bromoform	ND	0.20	ug/L							U
1,1,1,2,2-Tetrachloroethane	ND	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.25	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	1.00	ug/L							U
n-Propylbenzene	ND	0.20	ug/L							U
Bromobenzene	ND	0.20	ug/L							U
Isopropyl Benzene	ND	0.20	ug/L							U
2-Chlorotoluene	ND	0.10	ug/L							U
4-Chlorotoluene	ND	0.20	ug/L							U
t-Butylbenzene	ND	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.20	ug/L							U
s-Butylbenzene	ND	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.20	ug/L							U
n-Butylbenzene	ND	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	0.50	ug/L							U
Naphthalene	ND	0.50	ug/L							U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0515-BLK1)		Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 08:31								
1,2,3-Trichlorobenzene	ND	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.20	ug/L							U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.06		ug/L	5.00		101	80-129			
<i>Surrogate: Toluene-d8</i>	4.89		ug/L	5.00		97.9	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.36		ug/L	5.00		87.3	80-120			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	5.26		ug/L	5.00		105	80-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0515-BS1)		Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 07:22								
Chloromethane	9.85	0.50	ug/L	10.0		98.5	60-138			
Vinyl Chloride	10.9	0.10	ug/L	10.0		109	66-133			
Bromomethane	10.1	1.00	ug/L	10.0		101	72-131			
Chloroethane	9.66	0.20	ug/L	10.0		96.6	60-155			
Trichlorofluoromethane	10.4	0.20	ug/L	10.0		104	62-141			
Acrolein	44.7	5.00	ug/L	50.0		89.3	52-190			
1,1,2-Trichloro-1,2,2-Trifluoroethane	10.2	0.20	ug/L	10.0		102	76-129			
Acetone	40.5	5.00	ug/L	50.0		81.1	58-142			
1,1-Dichloroethene	10.1	0.20	ug/L	10.0		101	69-135			
Iodomethane	10.1	1.00	ug/L	10.0		101	56-147			
Methylene Chloride	9.41	1.00	ug/L	10.0		94.1	65-135			
Acrylonitrile	9.09	1.00	ug/L	10.0		90.9	64-134			
Carbon Disulfide	10.2	0.20	ug/L	10.0		102	78-125			
trans-1,2-Dichloroethene	9.60	0.20	ug/L	10.0		96.0	78-128			
Vinyl Acetate	9.91	0.20	ug/L	10.0		99.1	55-138			
1,1-Dichloroethane	10.5	0.20	ug/L	10.0		105	76-124			
2-Butanone	42.1	5.00	ug/L	50.0		84.2	61-140			
2,2-Dichloropropane	10.8	0.20	ug/L	10.0		108	66-147			
cis-1,2-Dichloroethene	9.93	0.20	ug/L	10.0		99.3	80-121			
Chloroform	10.4	0.20	ug/L	10.0		104	80-122			
Bromochloromethane	9.48	0.20	ug/L	10.0		94.8	80-121			
1,1,1-Trichloroethane	10.6	0.20	ug/L	10.0		106	79-123			
1,1-Dichloropropene	10.2	0.10	ug/L	10.0		102	80-127			
Carbon tetrachloride	10.2	0.20	ug/L	10.0		102	53-137			
1,2-Dichloroethane	9.67	0.20	ug/L	10.0		96.7	75-123			
Benzene	10.5	0.20	ug/L	10.0		105	80-120			
Trichloroethene	10.3	0.20	ug/L	10.0		103	80-120			
1,2-Dichloropropane	10.4	0.20	ug/L	10.0		104	80-120			
Bromodichloromethane	10.4	0.20	ug/L	10.0		104	80-121			
Dibromomethane	9.74	0.20	ug/L	10.0		97.4	80-120			
2-Chloroethyl vinyl ether	9.31	1.00	ug/L	10.0		93.1	64-120			
4-Methyl-2-Pentanone	45.7	2.50	ug/L	50.0		91.4	67-133			
cis-1,3-Dichloropropene	11.2	0.20	ug/L	10.0		112	80-124			
Toluene	10.6	0.20	ug/L	10.0		106	80-120			
trans-1,3-Dichloropropene	10.1	0.20	ug/L	10.0		101	71-127			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0515-BS1)		Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 07:22								
2-Hexanone	46.0	5.00	ug/L	50.0		92.0	69-133			
1,1,2-Trichloroethane	9.46	0.20	ug/L	10.0		94.6	80-121			
1,3-Dichloropropane	10.9	0.10	ug/L	10.0		109	80-120			
Tetrachloroethene	11.2	0.20	ug/L	10.0		112	80-120			
Dibromochloromethane	10.3	0.20	ug/L	10.0		103	65-135			
1,2-Dibromoethane	9.76	0.10	ug/L	10.0		97.6	80-121			
Chlorobenzene	10.5	0.20	ug/L	10.0		105	80-120			
Ethylbenzene	11.2	0.20	ug/L	10.0		112	80-120			
1,1,1,2-Tetrachloroethane	11.3	0.20	ug/L	10.0		113	80-120			
m,p-Xylene	23.3	0.40	ug/L	20.0		116	80-121			
o-Xylene	11.9	0.20	ug/L	10.0		119	80-121			
Xylenes, total	35.1	0.60	ug/L	30.0		117	76-127			
Styrene	12.3	0.20	ug/L	10.0		123	80-124			Q
Bromoform	9.71	0.20	ug/L	10.0		97.1	51-134			
1,1,2,2-Tetrachloroethane	9.48	0.20	ug/L	10.0		94.8	77-123			
1,2,3-Trichloropropane	9.02	0.25	ug/L	10.0		90.2	76-125			
trans-1,4-Dichloro 2-Butene	10.2	1.00	ug/L	10.0		102	55-129			
n-Propylbenzene	12.4	0.20	ug/L	10.0		124	78-130			Q
Bromobenzene	11.1	0.20	ug/L	10.0		111	80-120			
Isopropyl Benzene	10.8	0.20	ug/L	10.0		108	80-128			
2-Chlorotoluene	12.1	0.10	ug/L	10.0		121	78-122			Q
4-Chlorotoluene	12.0	0.20	ug/L	10.0		120	80-121			
t-Butylbenzene	12.5	0.20	ug/L	10.0		125	78-125			Q
1,3,5-Trimethylbenzene	12.5	0.20	ug/L	10.0		125	80-129			Q
1,2,4-Trimethylbenzene	11.7	0.20	ug/L	10.0		117	80-127			
s-Butylbenzene	12.7	0.20	ug/L	10.0		127	78-129			Q
4-Isopropyl Toluene	11.8	0.20	ug/L	10.0		118	79-130			
1,3-Dichlorobenzene	11.7	0.20	ug/L	10.0		117	80-120			
1,4-Dichlorobenzene	11.2	0.20	ug/L	10.0		112	80-120			
n-Butylbenzene	13.7	0.20	ug/L	10.0		137	74-129			Q, *
1,2-Dichlorobenzene	11.5	0.20	ug/L	10.0		115	80-120			
1,2-Dibromo-3-chloropropane	8.28	0.50	ug/L	10.0		82.8	62-123			
1,2,4-Trichlorobenzene	9.82	0.50	ug/L	10.0		98.2	64-124			
Hexachloro-1,3-Butadiene	11.7	0.50	ug/L	10.0		117	65-145			
Naphthalene	8.53	0.50	ug/L	10.0		85.3	50-134			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0515-BS1)				Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 07:22						
1,2,3-Trichlorobenzene	10.6	0.50	ug/L	10.0		106	49-133			
Dichlorodifluoromethane	10.2	0.20	ug/L	10.0		102	48-147			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	4.93		ug/L	5.00		98.6	80-129			
<i>Surrogate: Toluene-d8</i>	5.27		ug/L	5.00		105	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	5.41		ug/L	5.00		108	80-120			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	5.04		ug/L	5.00		101	80-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0515-BSD1)										
Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 07:45										
Chloromethane	10.0	0.50	ug/L	10.0		100	60-138	1.89	30	
Vinyl Chloride	11.2	0.10	ug/L	10.0		112	66-133	2.86	30	
Bromomethane	10.8	1.00	ug/L	10.0		108	72-131	6.03	30	
Chloroethane	10.3	0.20	ug/L	10.0		103	60-155	6.01	30	
Trichlorofluoromethane	11.4	0.20	ug/L	10.0		114	62-141	9.56	30	
Acrolein	48.2	5.00	ug/L	50.0		96.4	52-190	7.65	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	10.0	0.20	ug/L	10.0		100	76-129	1.95	30	
Acetone	44.2	5.00	ug/L	50.0		88.5	58-142	8.68	30	
1,1-Dichloroethene	9.83	0.20	ug/L	10.0		98.3	69-135	2.54	30	
Iodomethane	10.3	1.00	ug/L	10.0		103	56-147	1.88	30	
Methylene Chloride	9.51	1.00	ug/L	10.0		95.1	65-135	1.10	30	
Acrylonitrile	8.95	1.00	ug/L	10.0		89.5	64-134	1.59	30	
Carbon Disulfide	10.1	0.20	ug/L	10.0		101	78-125	1.09	30	
trans-1,2-Dichloroethene	9.89	0.20	ug/L	10.0		98.9	78-128	2.96	30	
Vinyl Acetate	9.18	0.20	ug/L	10.0		91.8	55-138	7.69	30	
1,1-Dichloroethane	9.90	0.20	ug/L	10.0		99.0	76-124	6.13	30	
2-Butanone	43.4	5.00	ug/L	50.0		86.9	61-140	3.15	30	
2,2-Dichloropropane	10.3	0.20	ug/L	10.0		103	66-147	4.16	30	
cis-1,2-Dichloroethene	9.35	0.20	ug/L	10.0		93.5	80-121	6.03	30	
Chloroform	9.77	0.20	ug/L	10.0		97.7	80-122	6.03	30	
Bromochloromethane	9.67	0.20	ug/L	10.0		96.7	80-121	2.03	30	
1,1,1-Trichloroethane	10.3	0.20	ug/L	10.0		103	79-123	2.32	30	
1,1-Dichloropropene	9.26	0.10	ug/L	10.0		92.6	80-127	10.10	30	
Carbon tetrachloride	9.49	0.20	ug/L	10.0		94.9	53-137	7.58	30	
1,2-Dichloroethane	9.95	0.20	ug/L	10.0		99.5	75-123	2.84	30	
Benzene	9.16	0.20	ug/L	10.0		91.6	80-120	13.70	30	
Trichloroethene	10.3	0.20	ug/L	10.0		103	80-120	0.32	30	
1,2-Dichloropropane	10.0	0.20	ug/L	10.0		100	80-120	4.03	30	
Bromodichloromethane	10.0	0.20	ug/L	10.0		100	80-121	3.60	30	
Dibromomethane	9.85	0.20	ug/L	10.0		98.5	80-120	1.10	30	
2-Chloroethyl vinyl ether	9.58	1.00	ug/L	10.0		95.8	64-120	2.85	30	
4-Methyl-2-Pentanone	50.9	2.50	ug/L	50.0		102	67-133	10.70	30	
cis-1,3-Dichloropropene	10.9	0.20	ug/L	10.0		109	80-124	3.21	30	
Toluene	10.1	0.20	ug/L	10.0		101	80-120	4.77	30	
trans-1,3-Dichloropropene	10.4	0.20	ug/L	10.0		104	71-127	2.41	30	



Golder Associates
18300 NE Union Hill Road Suite 200
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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0515-BSD1)		Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 07:45								
2-Hexanone	47.8	5.00	ug/L	50.0		95.5	69-133	3.81	30	
1,1,2-Trichloroethane	9.61	0.20	ug/L	10.0		96.1	80-121	1.55	30	
1,3-Dichloropropane	10.5	0.10	ug/L	10.0		105	80-120	4.25	30	
Tetrachloroethene	11.6	0.20	ug/L	10.0		116	80-120	3.86	30	
Dibromochloromethane	9.86	0.20	ug/L	10.0		98.6	65-135	4.76	30	
1,2-Dibromoethane	9.69	0.10	ug/L	10.0		96.9	80-121	0.81	30	
Chlorobenzene	10.6	0.20	ug/L	10.0		106	80-120	1.43	30	
Ethylbenzene	11.1	0.20	ug/L	10.0		111	80-120	1.30	30	
1,1,1,2-Tetrachloroethane	10.7	0.20	ug/L	10.0		107	80-120	5.13	30	
m,p-Xylene	22.2	0.40	ug/L	20.0		111	80-121	4.73	30	
o-Xylene	11.7	0.20	ug/L	10.0		117	80-121	1.17	30	
Xylenes, total	33.9	0.60	ug/L	30.0		113	76-127	3.51	30	
Styrene	12.6	0.20	ug/L	10.0		126	80-124	2.47	30	Q, *
Bromoform	10.8	0.20	ug/L	10.0		108	51-134	10.40	30	
1,1,2,2-Tetrachloroethane	10.8	0.20	ug/L	10.0		108	77-123	12.80	30	
1,2,3-Trichloropropane	10.2	0.25	ug/L	10.0		102	76-125	12.20	30	
trans-1,4-Dichloro 2-Butene	10.6	1.00	ug/L	10.0		106	55-129	3.35	30	
n-Propylbenzene	13.2	0.20	ug/L	10.0		132	78-130	6.02	30	*, Q
Bromobenzene	11.8	0.20	ug/L	10.0		118	80-120	6.29	30	
Isopropyl Benzene	12.6	0.20	ug/L	10.0		126	80-128	15.30	30	
2-Chlorotoluene	12.7	0.10	ug/L	10.0		127	78-122	4.43	30	*, Q
4-Chlorotoluene	12.2	0.20	ug/L	10.0		122	80-121	1.71	30	*
t-Butylbenzene	12.3	0.20	ug/L	10.0		123	78-125	1.32	30	Q
1,3,5-Trimethylbenzene	12.9	0.20	ug/L	10.0		129	80-129	3.10	30	Q
1,2,4-Trimethylbenzene	11.3	0.20	ug/L	10.0		113	80-127	3.87	30	
s-Butylbenzene	12.2	0.20	ug/L	10.0		122	78-129	3.83	30	Q
4-Isopropyl Toluene	11.5	0.20	ug/L	10.0		115	79-130	2.91	30	
1,3-Dichlorobenzene	11.3	0.20	ug/L	10.0		113	80-120	3.41	30	
1,4-Dichlorobenzene	11.1	0.20	ug/L	10.0		111	80-120	0.16	30	
n-Butylbenzene	12.7	0.20	ug/L	10.0		127	74-129	7.05	30	Q
1,2-Dichlorobenzene	11.0	0.20	ug/L	10.0		110	80-120	4.32	30	
1,2-Dibromo-3-chloropropane	10.3	0.50	ug/L	10.0		103	62-123	22.10	30	
1,2,4-Trichlorobenzene	12.3	0.50	ug/L	10.0		123	64-124	22.40	30	
Hexachloro-1,3-Butadiene	14.1	0.50	ug/L	10.0		141	65-145	18.30	30	
Naphthalene	11.4	0.50	ug/L	10.0		114	50-134	29.20	30	



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18300 NE Union Hill Road Suite 200
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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0515-BSD1)				Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 07:45						
1,2,3-Trichlorobenzene	13.3	0.50	ug/L	10.0		133	49-133	22.90	30	
Dichlorodifluoromethane	10.3	0.20	ug/L	10.0		103	48-147	0.39	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.08		ug/L	5.00		102	80-129			
<i>Surrogate: Toluene-d8</i>	5.03		ug/L	5.00		101	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	5.48		ug/L	5.00		110	80-120			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	4.89		ug/L	5.00		97.8	80-120			



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Project: Landsburg
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Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0515-MS1)										
		Source: 24C0326-03			Prepared: 20-Mar-2024		Analyzed: 20-Mar-2024 16:39			
Chloromethane	8.49	0.50	ug/L	10.0	ND	84.9	60-138			
Vinyl Chloride	9.47	0.10	ug/L	10.0	ND	94.7	66-133			
Bromomethane	9.09	1.00	ug/L	10.0	ND	90.9	72-131			
Chloroethane	9.20	0.20	ug/L	10.0	ND	92.0	60-155			
Trichlorofluoromethane	10.3	0.20	ug/L	10.0	ND	103	62-141			
Acrolein	7.07	5.00	ug/L	50.0	ND	14.1	52-190			*
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.56	0.20	ug/L	10.0	ND	95.6	76-129			
Acetone	48.0	5.00	ug/L	50.0	ND	95.9	58-142			
1,1-Dichloroethene	9.78	0.20	ug/L	10.0	ND	97.8	69-135			
Iodomethane	9.89	1.00	ug/L	10.0	ND	98.9	56-147			
Methylene Chloride	9.68	1.00	ug/L	10.0	ND	96.8	65-135			
Acrylonitrile	9.64	1.00	ug/L	10.0	ND	96.4	64-134			
Carbon Disulfide	9.72	0.20	ug/L	10.0	ND	97.2	78-125			
trans-1,2-Dichloroethene	9.80	0.20	ug/L	10.0	ND	98.0	78-128			
Vinyl Acetate	8.15	0.20	ug/L	10.0	ND	81.5	55-138			
1,1-Dichloroethane	10.4	0.20	ug/L	10.0	ND	104	76-124			
2-Butanone	49.5	5.00	ug/L	50.0	ND	99.0	61-140			
2,2-Dichloropropane	9.30	0.20	ug/L	10.0	ND	93.0	66-147			
cis-1,2-Dichloroethene	9.63	0.20	ug/L	10.0	ND	96.3	80-121			
Chloroform	10.6	0.20	ug/L	10.0	ND	106	80-122			
Bromochloromethane	9.90	0.20	ug/L	10.0	ND	99.0	80-121			
1,1,1-Trichloroethane	10.7	0.20	ug/L	10.0	ND	107	79-123			
1,1-Dichloropropene	10.2	0.10	ug/L	10.0	ND	102	80-127			
Carbon tetrachloride	10.3	0.20	ug/L	10.0	ND	103	53-137			
1,2-Dichloroethane	10.5	0.20	ug/L	10.0	ND	105	75-123			
Benzene	10.2	0.20	ug/L	10.0	ND	102	80-120			
Trichloroethene	9.69	0.20	ug/L	10.0	ND	96.9	80-120			
1,2-Dichloropropane	10.4	0.20	ug/L	10.0	ND	104	80-120			
Bromodichloromethane	10.7	0.20	ug/L	10.0	ND	107	80-121			
Dibromomethane	10.4	0.20	ug/L	10.0	ND	104	80-120			
2-Chloroethyl vinyl ether	ND	1.00	ug/L	10.0	ND		64-120			*, U
4-Methyl-2-Pentanone	52.7	2.50	ug/L	50.0	ND	105	67-133			
cis-1,3-Dichloropropene	10.6	0.20	ug/L	10.0	ND	106	80-124			
Toluene	10.5	0.20	ug/L	10.0	ND	105	80-120			
trans-1,3-Dichloropropene	10.4	0.20	ug/L	10.0	ND	104	71-127			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0515-MS1)										
		Source: 24C0326-03			Prepared: 20-Mar-2024		Analyzed: 20-Mar-2024 16:39			
2-Hexanone	49.5	5.00	ug/L	50.0	ND	98.9	69-133			
1,1,2-Trichloroethane	10.3	0.20	ug/L	10.0	ND	103	80-121			
1,3-Dichloropropane	10.6	0.10	ug/L	10.0	ND	106	80-120			
Tetrachloroethene	10.3	0.20	ug/L	10.0	ND	103	80-120			
Dibromochloromethane	10.2	0.20	ug/L	10.0	ND	102	65-135			
1,2-Dibromoethane	10.3	0.10	ug/L	10.0	ND	103	80-121			
Chlorobenzene	10.4	0.20	ug/L	10.0	ND	104	80-120			
Ethylbenzene	10.6	0.20	ug/L	10.0	ND	106	80-120			
1,1,1,2-Tetrachloroethane	10.4	0.20	ug/L	10.0	ND	104	80-120			
m,p-Xylene	21.5	0.40	ug/L	20.0	ND	107	80-121			
o-Xylene	10.9	0.20	ug/L	10.0	ND	109	80-121			
Xylenes, total	32.4	0.60	ug/L	30.0	ND	108	76-127			
Styrene	11.5	0.20	ug/L	10.0	ND	115	80-124			Q
Bromoform	10.2	0.20	ug/L	10.0	ND	102	51-134			
1,1,2,2-Tetrachloroethane	10.5	0.20	ug/L	10.0	ND	105	77-123			
1,2,3-Trichloropropane	9.57	0.25	ug/L	10.0	ND	95.7	76-125			
trans-1,4-Dichloro 2-Butene	10.3	1.00	ug/L	10.0	ND	103	55-129			
n-Propylbenzene	12.1	0.20	ug/L	10.0	ND	121	78-130			Q
Bromobenzene	11.1	0.20	ug/L	10.0	ND	111	80-120			
Isopropyl Benzene	11.7	0.20	ug/L	10.0	ND	117	80-128			
2-Chlorotoluene	11.5	0.10	ug/L	10.0	ND	115	78-122			Q
4-Chlorotoluene	11.5	0.20	ug/L	10.0	ND	115	80-121			
t-Butylbenzene	12.2	0.20	ug/L	10.0	ND	122	78-125			Q
1,3,5-Trimethylbenzene	12.3	0.20	ug/L	10.0	ND	123	80-129			Q
1,2,4-Trimethylbenzene	11.6	0.20	ug/L	10.0	ND	116	80-127			
s-Butylbenzene	12.5	0.20	ug/L	10.0	ND	125	78-129			Q
4-Isopropyl Toluene	11.6	0.20	ug/L	10.0	ND	116	79-130			
1,3-Dichlorobenzene	11.5	0.20	ug/L	10.0	ND	115	80-120			
1,4-Dichlorobenzene	11.5	0.20	ug/L	10.0	ND	115	80-120			
n-Butylbenzene	13.4	0.20	ug/L	10.0	ND	134	74-129			*, Q
1,2-Dichlorobenzene	11.4	0.20	ug/L	10.0	ND	114	80-120			
1,2-Dibromo-3-chloropropane	9.88	0.50	ug/L	10.0	ND	98.8	62-123			
1,2,4-Trichlorobenzene	11.0	0.50	ug/L	10.0	ND	110	64-124			
Hexachloro-1,3-Butadiene	12.9	0.50	ug/L	10.0	ND	129	65-145			
Naphthalene	10.4	0.50	ug/L	10.0	ND	104	50-134			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0515-MS1)		Source: 24C0326-03		Prepared: 20-Mar-2024		Analyzed: 20-Mar-2024 16:39				
1,2,3-Trichlorobenzene	13.0	0.50	ug/L	10.0	ND	130	49-133			
Dichlorodifluoromethane	8.96	0.20	ug/L	10.0	ND	89.6	48-147			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.15		ug/L	5.00	5.29	103	80-129			
<i>Surrogate: Toluene-d8</i>	5.17		ug/L	5.00	5.02	103	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.97		ug/L	5.00	4.84	99.3	80-120			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	5.36		ug/L	5.00	5.40	107	80-120			

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



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0515-MSD1)										
Source: 24C0326-03			Prepared: 20-Mar-2024 Analyzed: 20-Mar-2024 17:02							
Chloromethane	9.63	0.50	ug/L	10.0	ND	96.3	60-138	12.60	30	
Vinyl Chloride	10.6	0.10	ug/L	10.0	ND	106	66-133	11.30	30	
Bromomethane	9.82	1.00	ug/L	10.0	ND	98.2	72-131	7.70	30	
Chloroethane	9.82	0.20	ug/L	10.0	ND	98.2	60-155	6.49	30	
Trichlorofluoromethane	9.67	0.20	ug/L	10.0	ND	96.7	62-141	6.21	30	
Acrolein	6.29	5.00	ug/L	50.0	ND	12.6	52-190	11.70	30	*
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.65	0.20	ug/L	10.0	ND	96.5	76-129	0.93	30	
Acetone	48.6	5.00	ug/L	50.0	ND	97.2	58-142	1.26	30	
1,1-Dichloroethene	9.92	0.20	ug/L	10.0	ND	99.2	69-135	1.43	30	
Iodomethane	10.1	1.00	ug/L	10.0	ND	101	56-147	2.41	30	
Methylene Chloride	9.65	1.00	ug/L	10.0	ND	96.5	65-135	0.28	30	
Acrylonitrile	10.9	1.00	ug/L	10.0	ND	109	64-134	12.20	30	
Carbon Disulfide	10.1	0.20	ug/L	10.0	ND	101	78-125	3.53	30	
trans-1,2-Dichloroethene	9.84	0.20	ug/L	10.0	ND	98.4	78-128	0.37	30	
Vinyl Acetate	8.12	0.20	ug/L	10.0	ND	81.2	55-138	0.34	30	
1,1-Dichloroethane	10.8	0.20	ug/L	10.0	ND	108	76-124	3.94	30	
2-Butanone	49.8	5.00	ug/L	50.0	ND	99.5	61-140	0.52	30	
2,2-Dichloropropane	9.18	0.20	ug/L	10.0	ND	91.8	66-147	1.25	30	
cis-1,2-Dichloroethene	10.0	0.20	ug/L	10.0	ND	100	80-121	3.94	30	
Chloroform	10.7	0.20	ug/L	10.0	ND	107	80-122	0.91	30	
Bromochloromethane	10.4	0.20	ug/L	10.0	ND	104	80-121	4.87	30	
1,1,1-Trichloroethane	10.6	0.20	ug/L	10.0	ND	106	79-123	1.69	30	
1,1-Dichloropropene	10.3	0.10	ug/L	10.0	ND	103	80-127	1.15	30	
Carbon tetrachloride	10.6	0.20	ug/L	10.0	ND	106	53-137	2.55	30	
1,2-Dichloroethane	10.9	0.20	ug/L	10.0	ND	109	75-123	3.72	30	
Benzene	10.4	0.20	ug/L	10.0	ND	104	80-120	1.37	30	
Trichloroethene	9.91	0.20	ug/L	10.0	ND	99.1	80-120	2.23	30	
1,2-Dichloropropane	10.3	0.20	ug/L	10.0	ND	103	80-120	0.34	30	
Bromodichloromethane	10.9	0.20	ug/L	10.0	ND	109	80-121	2.16	30	
Dibromomethane	10.4	0.20	ug/L	10.0	ND	104	80-120	0.63	30	
2-Chloroethyl vinyl ether	ND	1.00	ug/L	10.0	ND		64-120			*, U
4-Methyl-2-Pentanone	53.7	2.50	ug/L	50.0	ND	107	67-133	1.83	30	
cis-1,3-Dichloropropene	10.5	0.20	ug/L	10.0	ND	105	80-124	0.80	30	
Toluene	10.5	0.20	ug/L	10.0	ND	105	80-120	0.01	30	
trans-1,3-Dichloropropene	10.7	0.20	ug/L	10.0	ND	107	71-127	2.89	30	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0515-MSD1)										
		Source: 24C0326-03			Prepared: 20-Mar-2024		Analyzed: 20-Mar-2024 17:02			
2-Hexanone	51.6	5.00	ug/L	50.0	ND	103	69-133	4.17	30	
1,1,2-Trichloroethane	10.5	0.20	ug/L	10.0	ND	105	80-121	1.91	30	
1,3-Dichloropropane	10.8	0.10	ug/L	10.0	ND	108	80-120	1.81	30	
Tetrachloroethene	10.4	0.20	ug/L	10.0	ND	104	80-120	0.73	30	
Dibromochloromethane	10.3	0.20	ug/L	10.0	ND	103	65-135	1.36	30	
1,2-Dibromoethane	10.7	0.10	ug/L	10.0	ND	107	80-121	3.32	30	
Chlorobenzene	10.6	0.20	ug/L	10.0	ND	106	80-120	1.25	30	
Ethylbenzene	10.9	0.20	ug/L	10.0	ND	109	80-120	2.88	30	
1,1,1,2-Tetrachloroethane	10.8	0.20	ug/L	10.0	ND	108	80-120	3.44	30	
m,p-Xylene	22.0	0.40	ug/L	20.0	ND	110	80-121	2.18	30	
o-Xylene	10.9	0.20	ug/L	10.0	ND	109	80-121	0.17	30	
Xylenes, total	32.8	0.60	ug/L	30.0	ND	109	76-127	1.40	30	
Styrene	11.7	0.20	ug/L	10.0	ND	117	80-124	1.81	30	Q
Bromoform	10.7	0.20	ug/L	10.0	ND	107	51-134	5.12	30	
1,1,2,2-Tetrachloroethane	10.5	0.20	ug/L	10.0	ND	105	77-123	0.89	30	
1,2,3-Trichloropropane	9.90	0.25	ug/L	10.0	ND	99.0	76-125	3.40	30	
trans-1,4-Dichloro 2-Butene	9.81	1.00	ug/L	10.0	ND	98.1	55-129	4.75	30	
n-Propylbenzene	12.3	0.20	ug/L	10.0	ND	123	78-130	1.68	30	Q
Bromobenzene	11.0	0.20	ug/L	10.0	ND	110	80-120	1.36	30	
Isopropyl Benzene	11.8	0.20	ug/L	10.0	ND	118	80-128	0.93	30	
2-Chlorotoluene	11.9	0.10	ug/L	10.0	ND	119	78-122	3.77	30	Q
4-Chlorotoluene	11.6	0.20	ug/L	10.0	ND	116	80-121	0.48	30	
t-Butylbenzene	12.6	0.20	ug/L	10.0	ND	126	78-125	3.57	30	*, Q
1,3,5-Trimethylbenzene	12.4	0.20	ug/L	10.0	ND	124	80-129	0.92	30	Q
1,2,4-Trimethylbenzene	11.8	0.20	ug/L	10.0	ND	118	80-127	1.77	30	
s-Butylbenzene	12.7	0.20	ug/L	10.0	ND	127	78-129	1.84	30	Q
4-Isopropyl Toluene	11.8	0.20	ug/L	10.0	ND	118	79-130	1.50	30	
1,3-Dichlorobenzene	11.6	0.20	ug/L	10.0	ND	116	80-120	0.65	30	
1,4-Dichlorobenzene	11.6	0.20	ug/L	10.0	ND	116	80-120	0.36	30	
n-Butylbenzene	13.3	0.20	ug/L	10.0	ND	133	74-129	0.21	30	*, Q
1,2-Dichlorobenzene	11.4	0.20	ug/L	10.0	ND	114	80-120	0.73	30	
1,2-Dibromo-3-chloropropane	10.2	0.50	ug/L	10.0	ND	102	62-123	3.45	30	
1,2,4-Trichlorobenzene	11.3	0.50	ug/L	10.0	ND	113	64-124	3.05	30	
Hexachloro-1,3-Butadiene	13.1	0.50	ug/L	10.0	ND	131	65-145	1.47	30	
Naphthalene	10.4	0.50	ug/L	10.0	ND	104	50-134	0.25	30	



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Instrument: NT20 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0515-MSD1)		Source: 24C0326-03		Prepared: 20-Mar-2024		Analyzed: 20-Mar-2024 17:02				
1,2,3-Trichlorobenzene	12.3	0.50	ug/L	10.0	ND	123	49-133	5.06	30	
Dichlorodifluoromethane	9.55	0.20	ug/L	10.0	ND	95.5	48-147	6.39	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	5.23		ug/L	5.00	5.29	105	80-129			
<i>Surrogate: Toluene-d8</i>	5.22		ug/L	5.00	5.02	104	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	4.97		ug/L	5.00	4.84	99.3	80-120			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	5.22		ug/L	5.00	5.40	104	80-120			

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMC0515 - EPA 8260D

Analysis by: Analytical Resources, LLC

Semivolatiles Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0433-BLK1)		Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 16:39								
Phenol	ND	1.0	ug/L							U
bis(2-chloroethyl) ether	ND	1.0	ug/L							U
2-Chlorophenol	ND	1.0	ug/L							U
1,3-Dichlorobenzene	ND	1.0	ug/L							U
1,4-Dichlorobenzene	ND	1.0	ug/L							U
Benzyl Alcohol	ND	2.0	ug/L							U
1,2-Dichlorobenzene	ND	1.0	ug/L							U
2-Methylphenol	ND	1.0	ug/L							U
2,2'-Oxybis(1-chloropropane)	ND	1.0	ug/L							U
4-Methylphenol	ND	2.0	ug/L							U
N-Nitroso-di-n-Propylamine	ND	1.0	ug/L							U
Hexachloroethane	ND	2.0	ug/L							U
Nitrobenzene	ND	1.0	ug/L							U
Isophorone	ND	1.0	ug/L							U
2-Nitrophenol	ND	3.0	ug/L							U
2,4-Dimethylphenol	ND	3.0	ug/L							U
Bis(2-Chloroethoxy)methane	ND	1.0	ug/L							U
Benzoic acid	ND	20.0	ug/L							U
2,4-Dichlorophenol	ND	3.0	ug/L							U
1,2,4-Trichlorobenzene	ND	1.0	ug/L							U
Naphthalene	ND	1.0	ug/L							U
4-Chloroaniline	ND	5.0	ug/L							U
Hexachlorobutadiene	ND	3.0	ug/L							U
4-Chloro-3-Methylphenol	ND	3.0	ug/L							U
2-Methylnaphthalene	ND	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	5.0	ug/L							U
2,4,6-Trichlorophenol	ND	3.0	ug/L							U
2,4,5-Trichlorophenol	ND	5.0	ug/L							U
2-Chloronaphthalene	ND	1.0	ug/L							U



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Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0433-BLK1)		Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 16:39								
2-Nitroaniline	ND	3.0	ug/L							U
Dimethylphthalate	ND	1.0	ug/L							U
Acenaphthylene	ND	1.0	ug/L							U
2,6-Dinitrotoluene	ND	3.0	ug/L							U
3-Nitroaniline	ND	3.0	ug/L							U
Acenaphthene	ND	1.0	ug/L							U
2,4-Dinitrophenol	ND	20.0	ug/L							U
Dibenzofuran	ND	1.0	ug/L							U
4-Nitrophenol	ND	10.0	ug/L							U
2,4-Dinitrotoluene	ND	3.0	ug/L							U
Fluorene	ND	1.0	ug/L							U
Diethyl phthalate	ND	1.0	ug/L							U
4-Chlorophenylphenyl ether	ND	1.0	ug/L							U
4-Nitroaniline	ND	3.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	10.0	ug/L							U
N-Nitrosodiphenylamine	ND	1.0	ug/L							U
4-Bromophenyl phenyl ether	ND	1.0	ug/L							U
Hexachlorobenzene	ND	1.0	ug/L							U
Pentachlorophenol	ND	10.0	ug/L							U
Phenanthrene	ND	1.0	ug/L							U
Anthracene	ND	1.0	ug/L							U
Carbazole	ND	1.0	ug/L							U
Di-n-Butylphthalate	ND	1.0	ug/L							U
Fluoranthene	ND	1.0	ug/L							U
Pyrene	ND	1.0	ug/L							U
Butylbenzylphthalate	ND	1.0	ug/L							U
Benzo(a)anthracene	ND	1.0	ug/L							U
3,3'-Dichlorobenzidine	ND	5.0	ug/L							U
Chrysene	ND	1.0	ug/L							U
bis(2-Ethylhexyl)phthalate	ND	3.0	ug/L							U
Di-n-Octylphthalate	ND	1.0	ug/L							U
Benzo(a)pyrene	ND	1.0	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	1.0	ug/L							U
Dibenzo(a,h)anthracene	ND	1.0	ug/L							U
Benzo(g,h,i)perylene	ND	1.0	ug/L							U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0433-BLK1)		Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 16:39								
Benzofluoranthenes, Total	ND	2.0	ug/L							U
1-Methylnaphthalene	ND	1.0	ug/L							U
<i>Surrogate: 2-Fluorophenol</i>	29.3		ug/L	37.5		78.1	33-120			
<i>Surrogate: Phenol-d5</i>	30.1		ug/L	37.5		80.2	38-120			
<i>Surrogate: 2-Chlorophenol-d4</i>	30.7		ug/L	37.5		82.0	41-120			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	18.3		ug/L	25.0		73.1	20-120			
<i>Surrogate: Nitrobenzene-d5</i>	23.5		ug/L	25.0		94.0	27-120			
<i>Surrogate: 2-Fluorobiphenyl</i>	20.0		ug/L	25.0		80.2	33-120			
<i>Surrogate: 2,4,6-Tribromophenol</i>	33.7		ug/L	37.5		89.8	52-120			
<i>Surrogate: p-Terphenyl-d14</i>	21.5		ug/L	25.0		86.1	28-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0433-BS1)		Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 17:14								
Phenol	15.2	1.0	ug/L	20.0		75.8	35-120			
bis(2-chloroethyl) ether	16.5	1.0	ug/L	20.0		82.4	46.5-120			
2-Chlorophenol	14.6	1.0	ug/L	20.0		73.0	48-120			
1,3-Dichlorobenzene	10.5	1.0	ug/L	20.0		52.7	34.2-120			
1,4-Dichlorobenzene	12.4	1.0	ug/L	20.0		61.9	36-120			
Benzyl Alcohol	15.5	2.0	ug/L	20.0		77.7	27.4-120			
1,2-Dichlorobenzene	11.7	1.0	ug/L	20.0		58.5	38.4-120			
2-Methylphenol	14.5	1.0	ug/L	20.0		72.7	47.8-120			
2,2'-Oxybis(1-chloropropane)	20.3	1.0	ug/L	20.0		102	40.4-120			
4-Methylphenol	14.2	2.0	ug/L	20.0		71.2	52.3-120			
N-Nitroso-di-n-Propylamine	17.1	1.0	ug/L	20.0		85.6	51.4-120			
Hexachloroethane	11.4	2.0	ug/L	20.0		57.0	29.5-120			
Nitrobenzene	18.4	1.0	ug/L	20.0		92.0	51.5-120			
Isophorone	23.4	1.0	ug/L	20.0		117	62.3-128			
2-Nitrophenol	16.3	3.0	ug/L	20.0		81.7	58.6-124			
2,4-Dimethylphenol	34.5	3.0	ug/L	60.0		57.6	38.5-120			
Bis(2-Chloroethoxy)methane	19.9	1.0	ug/L	20.0		99.5	52.9-120			
Benzoic acid	71.2	20.0	ug/L	90.0		79.1	38.2-120			
2,4-Dichlorophenol	41.0	3.0	ug/L	60.0		68.4	43.6-120			
1,2,4-Trichlorobenzene	12.0	1.0	ug/L	20.0		59.9	38.6-120			
Naphthalene	14.0	1.0	ug/L	20.0		69.8	40.5-120			
4-Chloroaniline	37.4	5.0	ug/L	60.0		62.4	42.7-120			
Hexachlorobutadiene	10.4	3.0	ug/L	20.0		52.0	32.3-120			
4-Chloro-3-Methylphenol	46.4	3.0	ug/L	60.0		77.3	51.9-120			
2-Methylnaphthalene	14.4	1.0	ug/L	20.0		71.8	47.3-120			
Hexachlorocyclopentadiene	30.0	5.0	ug/L	60.0		49.9	23.3-120			
2,4,6-Trichlorophenol	44.7	3.0	ug/L	60.0		74.5	47-120			
2,4,5-Trichlorophenol	42.0	5.0	ug/L	60.0		70.0	48.4-120			
2-Chloronaphthalene	16.2	1.0	ug/L	20.0		80.8	47.7-123			
2-Nitroaniline	52.7	3.0	ug/L	60.0		87.9	56.8-120			
Dimethylphthalate	17.1	1.0	ug/L	20.0		85.3	65.2-125			
Acenaphthylene	14.9	1.0	ug/L	20.0		74.5	44.1-120			
2,6-Dinitrotoluene	53.3	3.0	ug/L	60.0		88.8	69.3-140			
3-Nitroaniline	44.1	3.0	ug/L	60.0		73.5	60.9-120			
Acenaphthene	15.9	1.0	ug/L	20.0		79.3	50.4-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0433-BS1)				Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 17:14						
2,4-Dinitrophenol	85.0	20.0	ug/L	110		77.2	33.7-183			
Dibenzofuran	16.2	1.0	ug/L	20.0		80.8	49.9-120			
4-Nitrophenol	45.3	10.0	ug/L	60.0		75.6	50.2-136			
2,4-Dinitrotoluene	46.2	3.0	ug/L	60.0		76.9	66.8-132			
Fluorene	15.6	1.0	ug/L	20.0		78.1	57.8-120			
Diethyl phthalate	17.8	1.0	ug/L	20.0		89.1	68.1-120			
4-Chlorophenylphenyl ether	16.3	1.0	ug/L	20.0		81.5	59.1-127			
4-Nitroaniline	45.1	3.0	ug/L	60.0		75.1	56-122			
4,6-Dinitro-2-methylphenol	92.0	10.0	ug/L	110		83.7	37.9-162			
N-Nitrosodiphenylamine	15.7	1.0	ug/L	20.0		78.6	59.6-120			
4-Bromophenyl phenyl ether	17.9	1.0	ug/L	20.0		89.3	59.6-120			
Hexachlorobenzene	19.2	1.0	ug/L	20.0		95.8	53.7-120			
Pentachlorophenol	45.6	10.0	ug/L	60.0		76.1	40.3-128			
Phenanthrene	16.0	1.0	ug/L	20.0		80.0	58.8-120			
Anthracene	14.9	1.0	ug/L	20.0		74.5	60.5-120			
Carbazole	15.6	1.0	ug/L	20.0		78.2	59.7-120			
Di-n-Butylphthalate	17.5	1.0	ug/L	20.0		87.6	71-120			
Fluoranthene	15.4	1.0	ug/L	20.0		77.1	66.7-120			
Pyrene	17.1	1.0	ug/L	20.0		85.7	62.7-127			
Butylbenzylphthalate	18.0	1.0	ug/L	20.0		90.2	67.4-128			
Benzo(a)anthracene	19.2	1.0	ug/L	20.0		96.2	58.3-128			
3,3'-Dichlorobenzidine	18.9	5.0	ug/L	40.0		47.3	34.1-120			
Chrysene	16.3	1.0	ug/L	20.0		81.7	58.9-120			
bis(2-Ethylhexyl)phthalate	18.2	3.0	ug/L	20.0		91.1	68.3-123			
Di-n-Octylphthalate	17.2	1.0	ug/L	20.0		85.9	61.5-120			
Benzo(a)pyrene	16.1	1.0	ug/L	20.0		80.3	70.6-120			
Indeno(1,2,3-cd)pyrene	19.2	1.0	ug/L	20.0		96.2	46.5-120			
Dibenzo(a,h)anthracene	19.6	1.0	ug/L	20.0		97.9	49.6-120			
Benzo(g,h,i)perylene	20.1	1.0	ug/L	20.0		101	37-120			
Benzo(a)fluoranthene, Total	31.8	2.0	ug/L	40.0		79.4	66.5-120			
1-Methylnaphthalene	15.8	1.0	ug/L	20.0		79.0	46.9-120			
Surrogate: 2-Fluorophenol	31.8		ug/L	37.5		84.8	33-120			
Surrogate: Phenol-d5	32.4		ug/L	37.5		86.5	38-120			
Surrogate: 2-Chlorophenol-d4	31.9		ug/L	37.5		85.1	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	19.5		ug/L	25.0		77.9	20-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0433-BS1)				Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 17:14						
Surrogate: Nitrobenzene-d5	25.0		ug/L	25.0		100	27-120			
Surrogate: 2-Fluorobiphenyl	22.2		ug/L	25.0		88.6	33-120			
Surrogate: 2,4,6-Tribromophenol	37.1		ug/L	37.5		98.9	52-120			
Surrogate: p-Terphenyl-d14	23.1		ug/L	25.0		92.4	28-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0433-BSD1)										
					Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 17:48					
Phenol	16.5	1.0	ug/L	20.0		82.4	35-120	8.37	30	
bis(2-chloroethyl) ether	18.1	1.0	ug/L	20.0		90.4	46.5-120	9.31	30	
2-Chlorophenol	16.0	1.0	ug/L	20.0		79.8	48-120	8.91	30	
1,3-Dichlorobenzene	12.1	1.0	ug/L	20.0		60.4	34.2-120	13.60	30	
1,4-Dichlorobenzene	13.9	1.0	ug/L	20.0		69.7	36-120	11.80	30	
Benzyl Alcohol	16.8	2.0	ug/L	20.0		83.9	27.4-120	7.57	30	
1,2-Dichlorobenzene	13.2	1.0	ug/L	20.0		66.1	38.4-120	12.20	30	
2-Methylphenol	15.8	1.0	ug/L	20.0		79.0	47.8-120	8.29	30	
2,2'-Oxybis(1-chloropropane)	22.3	1.0	ug/L	20.0		111	40.4-120	9.04	30	
4-Methylphenol	15.6	2.0	ug/L	20.0		77.8	52.3-120	8.83	30	
N-Nitroso-di-n-Propylamine	18.6	1.0	ug/L	20.0		93.2	51.4-120	8.51	30	
Hexachloroethane	12.9	2.0	ug/L	20.0		64.5	29.5-120	12.20	30	
Nitrobenzene	20.9	1.0	ug/L	20.0		105	51.5-120	12.80	30	
Isophorone	25.7	1.0	ug/L	20.0		128	62.3-128	9.28	30	
2-Nitrophenol	18.4	3.0	ug/L	20.0		91.8	58.6-124	11.60	30	
2,4-Dimethylphenol	36.4	3.0	ug/L	60.0		60.7	38.5-120	5.33	30	
Bis(2-Chloroethoxy)methane	22.2	1.0	ug/L	20.0		111	52.9-120	10.80	30	
Benzoic acid	80.8	20.0	ug/L	90.0		89.7	38.2-120	12.60	30	
2,4-Dichlorophenol	46.1	3.0	ug/L	60.0		76.8	43.6-120	11.70	30	
1,2,4-Trichlorobenzene	13.4	1.0	ug/L	20.0		67.1	38.6-120	11.40	30	
Naphthalene	16.0	1.0	ug/L	20.0		79.8	40.5-120	13.30	30	
4-Chloroaniline	40.6	5.0	ug/L	60.0		67.7	42.7-120	8.17	30	
Hexachlorobutadiene	11.5	3.0	ug/L	20.0		57.5	32.3-120	9.97	30	
4-Chloro-3-Methylphenol	51.5	3.0	ug/L	60.0		85.9	51.9-120	10.60	30	
2-Methylnaphthalene	15.6	1.0	ug/L	20.0		78.0	47.3-120	8.35	30	
Hexachlorocyclopentadiene	33.3	5.0	ug/L	60.0		55.6	23.3-120	10.60	30	
2,4,6-Trichlorophenol	49.2	3.0	ug/L	60.0		82.0	47-120	9.56	30	
2,4,5-Trichlorophenol	46.4	5.0	ug/L	60.0		77.3	48.4-120	9.89	30	
2-Chloronaphthalene	18.0	1.0	ug/L	20.0		90.2	47.7-123	11.00	30	
2-Nitroaniline	59.1	3.0	ug/L	60.0		98.6	56.8-120	11.50	30	
Dimethylphthalate	19.1	1.0	ug/L	20.0		95.7	65.2-125	11.50	30	
Acenaphthylene	16.5	1.0	ug/L	20.0		82.5	44.1-120	10.10	30	
2,6-Dinitrotoluene	59.0	3.0	ug/L	60.0		98.4	69.3-140	10.20	30	
3-Nitroaniline	49.6	3.0	ug/L	60.0		82.6	60.9-120	11.70	30	
Acenaphthene	17.5	1.0	ug/L	20.0		87.7	50.4-120	10.10	30	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0433-BSD1)										
Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 17:48										
2,4-Dinitrophenol	96.7	20.0	ug/L	110		87.9	33.7-183	12.90	30	
Dibenzofuran	17.7	1.0	ug/L	20.0		88.7	49.9-120	9.38	30	
4-Nitrophenol	52.0	10.0	ug/L	60.0		86.6	50.2-136	13.60	30	
2,4-Dinitrotoluene	51.2	3.0	ug/L	60.0		85.4	66.8-132	10.40	30	
Fluorene	17.3	1.0	ug/L	20.0		86.3	57.8-120	9.93	30	
Diethyl phthalate	19.9	1.0	ug/L	20.0		99.4	68.1-120	10.90	30	
4-Chlorophenylphenyl ether	18.3	1.0	ug/L	20.0		91.5	59.1-127	11.60	30	
4-Nitroaniline	52.3	3.0	ug/L	60.0		87.2	56-122	14.90	30	
4,6-Dinitro-2-methylphenol	99.5	10.0	ug/L	110		90.5	37.9-162	7.82	30	
N-Nitrosodiphenylamine	17.9	1.0	ug/L	20.0		89.5	59.6-120	13.00	30	
4-Bromophenyl phenyl ether	19.0	1.0	ug/L	20.0		94.8	59.6-120	6.01	30	
Hexachlorobenzene	20.4	1.0	ug/L	20.0		102	53.7-120	6.38	30	
Pentachlorophenol	48.2	10.0	ug/L	60.0		80.3	40.3-128	5.46	30	
Phenanthrene	17.3	1.0	ug/L	20.0		86.4	58.8-120	7.64	30	
Anthracene	16.0	1.0	ug/L	20.0		80.2	60.5-120	7.44	30	
Carbazole	17.5	1.0	ug/L	20.0		87.3	59.7-120	10.90	30	
Di-n-Butylphthalate	19.2	1.0	ug/L	20.0		96.1	71-120	9.29	30	
Fluoranthene	16.6	1.0	ug/L	20.0		83.0	66.7-120	7.41	30	
Pyrene	18.6	1.0	ug/L	20.0		93.0	62.7-127	8.20	30	
Butylbenzylphthalate	19.4	1.0	ug/L	20.0		97.1	67.4-128	7.38	30	
Benzo(a)anthracene	20.7	1.0	ug/L	20.0		103	58.3-128	7.25	30	
3,3'-Dichlorobenzidine	20.4	5.0	ug/L	40.0		51.1	34.1-120	7.62	30	
Chrysene	17.8	1.0	ug/L	20.0		89.0	58.9-120	8.58	30	
bis(2-Ethylhexyl)phthalate	20.0	3.0	ug/L	20.0		100	68.3-123	9.45	30	
Di-n-Octylphthalate	18.3	1.0	ug/L	20.0		91.4	61.5-120	6.14	30	
Benzo(a)pyrene	17.3	1.0	ug/L	20.0		86.3	70.6-120	7.19	30	
Indeno(1,2,3-cd)pyrene	20.4	1.0	ug/L	20.0		102	46.5-120	5.65	30	
Dibenzo(a,h)anthracene	21.2	1.0	ug/L	20.0		106	49.6-120	7.94	30	
Benzo(g,h,i)perylene	21.4	1.0	ug/L	20.0		107	37-120	6.25	30	
Benzo(a)fluoranthene, Total	34.2	2.0	ug/L	40.0		85.5	66.5-120	7.29	30	
1-Methylnaphthalene	17.3	1.0	ug/L	20.0		86.5	46.9-120	9.09	30	
Surrogate: 2-Fluorophenol	31.1		ug/L	37.5		82.8	33-120			
Surrogate: Phenol-d5	33.3		ug/L	37.5		88.7	38-120			
Surrogate: 2-Chlorophenol-d4	32.8		ug/L	37.5		87.5	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	20.0		ug/L	25.0		80.2	20-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0433-BSD1)				Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 17:48						
Surrogate: Nitrobenzene-d5	26.2		ug/L	25.0		105	27-120			
Surrogate: 2-Fluorobiphenyl	22.6		ug/L	25.0		90.5	33-120			
Surrogate: 2,4,6-Tribromophenol	37.9		ug/L	37.5		101	52-120			
Surrogate: p-Terphenyl-d14	23.4		ug/L	25.0		93.8	28-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0433-MS1)		Source: 24C0326-03		Prepared: 18-Mar-2024		Analyzed: 21-Mar-2024 20:04				
Phenol	15.6	1.0	ug/L	20.0	ND	78.1	35-120			
bis(2-chloroethyl) ether	17.1	1.0	ug/L	20.0	ND	85.3	46.5-120			
2-Chlorophenol	15.1	1.0	ug/L	20.0	ND	75.5	48-120			
1,3-Dichlorobenzene	11.2	1.0	ug/L	20.0	ND	56.0	34.2-120			
1,4-Dichlorobenzene	13.2	1.0	ug/L	20.0	ND	65.9	36-120			
Benzyl Alcohol	16.0	2.0	ug/L	20.0	ND	79.9	27.4-120			
1,2-Dichlorobenzene	12.4	1.0	ug/L	20.0	ND	61.9	38.4-120			
2-Methylphenol	14.7	1.0	ug/L	20.0	ND	73.7	47.8-120			
2,2'-Oxybis(1-chloropropane)	21.2	1.0	ug/L	20.0	ND	106	40.4-120			
4-Methylphenol	14.9	2.0	ug/L	20.0	ND	74.6	52.3-120			
N-Nitroso-di-n-Propylamine	18.0	1.0	ug/L	20.0	ND	90.2	51.4-120			
Hexachloroethane	11.8	2.0	ug/L	20.0	ND	58.8	29.5-120			
Nitrobenzene	19.0	1.0	ug/L	20.0	ND	95.0	51.5-120			
Isophorone	24.3	1.0	ug/L	20.0	ND	121	62.3-120			*
2-Nitrophenol	17.2	3.0	ug/L	20.0	ND	86.1	58.6-124			
2,4-Dimethylphenol	35.7	3.0	ug/L	60.0	ND	59.6	38.5-120			
Bis(2-Chloroethoxy)methane	20.4	1.0	ug/L	20.0	ND	102	52.9-120			
Benzoic acid	75.4	20.0	ug/L	90.0	ND	83.7	38.2-120			
2,4-Dichlorophenol	42.7	3.0	ug/L	60.0	ND	71.2	43.6-120			
1,2,4-Trichlorobenzene	12.6	1.0	ug/L	20.0	ND	63.2	28.6-120			
Naphthalene	15.0	1.0	ug/L	20.0	ND	74.8	40.5-120			
4-Chloroaniline	38.8	5.0	ug/L	60.0	ND	64.7	42.7-132			
Hexachlorobutadiene	10.6	3.0	ug/L	20.0	ND	53.1	32.3-120			
4-Chloro-3-Methylphenol	48.6	3.0	ug/L	60.0	ND	80.9	51.9-120			
2-Methylnaphthalene	15.1	1.0	ug/L	20.0	ND	75.7	47.3-120			
Hexachlorocyclopentadiene	33.1	5.0	ug/L	60.0	ND	55.1	23.3-120			
2,4,6-Trichlorophenol	46.9	3.0	ug/L	60.0	ND	78.2	47-120			
2,4,5-Trichlorophenol	44.8	5.0	ug/L	60.0	ND	74.6	48.4-120			
2-Chloronaphthalene	17.1	1.0	ug/L	20.0	ND	85.3	47.7-123			
2-Nitroaniline	56.6	3.0	ug/L	60.0	ND	94.3	56.8-120			
Dimethylphthalate	18.2	1.0	ug/L	20.0	ND	91.0	65.2-125			
Acenaphthylene	15.9	1.0	ug/L	20.0	ND	79.3	44.1-120			
2,6-Dinitrotoluene	55.9	3.0	ug/L	60.0	ND	93.1	69.3-140			
3-Nitroaniline	46.9	3.0	ug/L	60.0	ND	78.2	60.9-120			
Acenaphthene	16.6	1.0	ug/L	20.0	ND	83.1	50.4-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0433-MS1)		Source: 24C0326-03		Prepared: 18-Mar-2024		Analyzed: 21-Mar-2024 20:04				
2,4-Dinitrophenol	92.7	20.0	ug/L	110	ND	84.3	33.7-183			
Dibenzofuran	16.9	1.0	ug/L	20.0	ND	84.5	49.9-120			
4-Nitrophenol	51.1	10.0	ug/L	60.0	ND	85.2	50.2-136			
2,4-Dinitrotoluene	48.5	3.0	ug/L	60.0	ND	80.8	66.8-132			
Fluorene	16.6	1.0	ug/L	20.0	ND	83.2	57.8-120			
Diethyl phthalate	18.8	1.0	ug/L	20.0	ND	94.2	68.1-120			
4-Chlorophenylphenyl ether	17.2	1.0	ug/L	20.0	ND	85.8	59.1-127			
4-Nitroaniline	48.8	3.0	ug/L	60.0	ND	81.3	56-122			
4,6-Dinitro-2-methylphenol	97.7	10.0	ug/L	110	ND	88.8	37.9-162			
N-Nitrosodiphenylamine	17.2	1.0	ug/L	20.0	ND	85.8	59.6-120			
4-Bromophenyl phenyl ether	18.3	1.0	ug/L	20.0	ND	91.6	59.6-120			
Hexachlorobenzene	19.9	1.0	ug/L	20.0	ND	99.5	53.7-120			
Pentachlorophenol	49.0	10.0	ug/L	60.0	ND	81.7	40.3-128			
Phenanthrene	17.0	1.0	ug/L	20.0	ND	85.2	58.8-120			
Anthracene	15.8	1.0	ug/L	20.0	ND	78.9	60.5-120			
Carbazole	16.4	1.0	ug/L	20.0	ND	81.8	59.7-120			
Di-n-Butylphthalate	18.8	1.0	ug/L	20.0	ND	94.0	71-120			
Fluoranthene	16.2	1.0	ug/L	20.0	ND	81.2	66.7-120			
Pyrene	18.0	1.0	ug/L	20.0	ND	89.9	62.7-127			
Butylbenzylphthalate	18.9	1.0	ug/L	20.0	ND	94.4	67.4-128			
Benzo(a)anthracene	20.0	1.0	ug/L	20.0	ND	100	58.3-128			
3,3'-Dichlorobenzidine	14.9	5.0	ug/L	40.0	ND	37.2	34.1-120			
Chrysene	16.9	1.0	ug/L	20.0	ND	84.5	58.9-120			
bis(2-Ethylhexyl)phthalate	19.6	3.0	ug/L	20.0	ND	98.2	68.3-120			
Di-n-Octylphthalate	17.8	1.0	ug/L	20.0	ND	88.8	61.5-120			
Benzo(a)pyrene	16.9	1.0	ug/L	20.0	ND	84.6	70.6-120			
Indeno(1,2,3-cd)pyrene	19.9	1.0	ug/L	20.0	ND	99.6	46.5-120			
Dibenzo(a,h)anthracene	20.4	1.0	ug/L	20.0	ND	102	49.6-120			
Benzo(g,h,i)perylene	20.9	1.0	ug/L	20.0	ND	104	37-120			
Benzo(a)fluoranthene, Total	33.2	2.0	ug/L	40.0	ND	83.0	66.5-120			
1-Methylnaphthalene	16.5	1.0	ug/L	20.0	ND	82.7	46.9-120			
Surrogate: 2-Fluorophenol	30.6		ug/L	37.5	27.2	81.5	33-120			
Surrogate: Phenol-d5	30.9		ug/L	37.5	28.1	82.5	38-120			
Surrogate: 2-Chlorophenol-d4	31.0		ug/L	37.5	28.0	82.6	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	18.7		ug/L	25.0	17.6	74.9	20-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0433-MS1)		Source: 24C0326-03		Prepared: 18-Mar-2024		Analyzed: 21-Mar-2024 20:04				
Surrogate: Nitrobenzene-d5	24.3		ug/L	25.0	21.5	97.3	27-120			
Surrogate: 2-Fluorobiphenyl	21.5		ug/L	25.0	19.5	86.1	33-120			
Surrogate: 2,4,6-Tribromophenol	36.5		ug/L	37.5	29.8	97.3	52-120			
Surrogate: p-Terphenyl-d14	22.4		ug/L	25.0	20.9	89.4	28-120			

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



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0433-MSD1)										
		Source: 24C0326-03			Prepared: 18-Mar-2024		Analyzed: 21-Mar-2024 20:38			
Phenol	16.3	1.0	ug/L	20.0	ND	81.3	35-120	4.02	30	
bis(2-chloroethyl) ether	18.1	1.0	ug/L	20.0	ND	90.7	46.5-120	6.10	30	
2-Chlorophenol	16.0	1.0	ug/L	20.0	ND	80.0	48-120	5.74	30	
1,3-Dichlorobenzene	12.2	1.0	ug/L	20.0	ND	60.8	34.2-120	8.28	30	
1,4-Dichlorobenzene	14.1	1.0	ug/L	20.0	ND	70.6	36-120	6.97	30	
Benzyl Alcohol	16.9	2.0	ug/L	20.0	ND	84.7	27.4-120	5.74	30	
1,2-Dichlorobenzene	13.3	1.0	ug/L	20.0	ND	66.4	38.4-120	6.94	30	
2-Methylphenol	15.9	1.0	ug/L	20.0	ND	79.3	47.8-120	7.33	30	
2,2'-Oxybis(1-chloropropane)	22.6	1.0	ug/L	20.0	ND	113	40.4-120	6.60	30	
4-Methylphenol	15.4	2.0	ug/L	20.0	ND	76.8	52.3-120	2.94	30	
N-Nitroso-di-n-Propylamine	19.1	1.0	ug/L	20.0	ND	95.6	51.4-120	5.83	30	
Hexachloroethane	13.2	2.0	ug/L	20.0	ND	66.1	29.5-120	11.70	30	
Nitrobenzene	20.5	1.0	ug/L	20.0	ND	102	51.5-120	7.60	30	
Isophorone	25.8	1.0	ug/L	20.0	ND	129	62.3-120	6.09	30	*
2-Nitrophenol	18.0	3.0	ug/L	20.0	ND	89.9	58.6-124	4.30	30	
2,4-Dimethylphenol	38.2	3.0	ug/L	60.0	ND	63.6	38.5-120	6.55	30	
Bis(2-Chloroethoxy)methane	21.4	1.0	ug/L	20.0	ND	107	52.9-120	4.87	30	
Benzoic acid	81.3	20.0	ug/L	90.0	ND	90.3	38.2-120	7.52	30	
2,4-Dichlorophenol	45.2	3.0	ug/L	60.0	ND	75.4	43.6-120	5.68	30	
1,2,4-Trichlorobenzene	14.1	1.0	ug/L	20.0	ND	70.3	28.6-120	10.70	30	
Naphthalene	16.2	1.0	ug/L	20.0	ND	80.8	40.5-120	7.71	30	
4-Chloroaniline	42.1	5.0	ug/L	60.0	ND	70.1	42.7-132	8.03	30	
Hexachlorobutadiene	12.4	3.0	ug/L	20.0	ND	62.2	32.3-120	15.60	30	
4-Chloro-3-Methylphenol	52.0	3.0	ug/L	60.0	ND	86.7	51.9-120	6.90	30	
2-Methylnaphthalene	16.3	1.0	ug/L	20.0	ND	81.3	47.3-120	7.10	30	
Hexachlorocyclopentadiene	37.1	5.0	ug/L	60.0	ND	61.9	23.3-120	11.60	30	
2,4,6-Trichlorophenol	49.5	3.0	ug/L	60.0	ND	82.5	47-120	5.41	30	
2,4,5-Trichlorophenol	46.2	5.0	ug/L	60.0	ND	77.0	48.4-120	3.09	30	
2-Chloronaphthalene	18.4	1.0	ug/L	20.0	ND	92.0	47.7-123	7.62	30	
2-Nitroaniline	58.9	3.0	ug/L	60.0	ND	98.1	56.8-120	3.98	30	
Dimethylphthalate	19.0	1.0	ug/L	20.0	ND	95.1	65.2-125	4.39	30	
Acenaphthylene	16.8	1.0	ug/L	20.0	ND	83.8	44.1-120	5.51	30	
2,6-Dinitrotoluene	59.2	3.0	ug/L	60.0	ND	98.6	69.3-140	5.70	30	
3-Nitroaniline	50.1	3.0	ug/L	60.0	ND	83.4	60.9-120	6.43	30	
Acenaphthene	17.7	1.0	ug/L	20.0	ND	88.7	50.4-120	6.48	30	



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0433-MSD1)										
Source: 24C0326-03			Prepared: 18-Mar-2024 Analyzed: 21-Mar-2024 20:38							
2,4-Dinitrophenol	99.2	20.0	ug/L	110	ND	90.2	33.7-183	6.73	30	
Dibenzofuran	18.1	1.0	ug/L	20.0	ND	90.3	49.9-120	6.61	30	
4-Nitrophenol	55.7	10.0	ug/L	60.0	ND	92.9	50.2-136	8.56	30	
2,4-Dinitrotoluene	51.6	3.0	ug/L	60.0	ND	86.0	66.8-132	6.20	30	
Fluorene	17.6	1.0	ug/L	20.0	ND	88.0	57.8-120	5.64	30	
Diethyl phthalate	19.8	1.0	ug/L	20.0	ND	99.2	68.1-120	5.14	30	
4-Chlorophenylphenyl ether	18.7	1.0	ug/L	20.0	ND	93.5	59.1-127	8.61	30	
4-Nitroaniline	53.4	3.0	ug/L	60.0	ND	89.0	56-122	9.06	30	
4,6-Dinitro-2-methylphenol	103	10.0	ug/L	110	ND	93.9	37.9-162	5.48	30	
N-Nitrosodiphenylamine	17.9	1.0	ug/L	20.0	ND	89.4	59.6-120	4.04	30	
4-Bromophenyl phenyl ether	19.2	1.0	ug/L	20.0	ND	95.8	59.6-120	4.49	30	
Hexachlorobenzene	20.8	1.0	ug/L	20.0	ND	104	53.7-120	4.52	30	
Pentachlorophenol	52.8	10.0	ug/L	60.0	ND	87.9	40.3-128	7.29	30	
Phenanthrene	17.9	1.0	ug/L	20.0	ND	89.7	58.8-120	5.16	30	
Anthracene	16.8	1.0	ug/L	20.0	ND	84.1	60.5-120	6.37	30	
Carbazole	18.3	1.0	ug/L	20.0	ND	91.5	59.7-120	11.20	30	
Di-n-Butylphthalate	20.1	1.0	ug/L	20.0	ND	100	71-120	6.64	30	
Fluoranthene	17.3	1.0	ug/L	20.0	ND	86.4	66.7-120	6.20	30	
Pyrene	19.4	1.0	ug/L	20.0	ND	96.8	62.7-127	7.31	30	
Butylbenzylphthalate	19.1	1.0	ug/L	20.0	ND	95.4	67.4-128	1.03	30	
Benzo(a)anthracene	21.2	1.0	ug/L	20.0	ND	106	58.3-128	5.80	30	
3,3'-Dichlorobenzidine	16.1	5.0	ug/L	40.0	ND	40.2	34.1-120	7.71	30	
Chrysene	18.0	1.0	ug/L	20.0	ND	90.1	58.9-120	6.39	30	
bis(2-Ethylhexyl)phthalate	20.7	3.0	ug/L	20.0	ND	103	68.3-120	5.17	30	
Di-n-Octylphthalate	18.9	1.0	ug/L	20.0	ND	94.3	61.5-120	5.97	30	
Benzo(a)pyrene	17.7	1.0	ug/L	20.0	ND	88.3	70.6-120	4.34	30	
Indeno(1,2,3-cd)pyrene	21.0	1.0	ug/L	20.0	ND	105	46.5-120	5.30	30	
Dibenzo(a,h)anthracene	21.5	1.0	ug/L	20.0	ND	108	49.6-120	5.46	30	
Benzo(g,h,i)perylene	22.0	1.0	ug/L	20.0	ND	110	37-120	5.29	30	
Benzo(a)fluoranthene, Total	34.9	2.0	ug/L	40.0	ND	87.2	66.5-120	4.95	30	
1-Methylnaphthalene	17.9	1.0	ug/L	20.0	ND	89.4	46.9-120	7.78	30	
Surrogate: 2-Fluorophenol	31.6		ug/L	37.5	27.2	84.2	33-120			
Surrogate: Phenol-d5	32.3		ug/L	37.5	28.1	86.1	38-120			
Surrogate: 2-Chlorophenol-d4	31.9		ug/L	37.5	28.0	85.2	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	18.6		ug/L	25.0	17.6	74.2	20-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0433-MSD1)		Source: 24C0326-03		Prepared: 18-Mar-2024	Analyzed: 21-Mar-2024 20:38					
<i>Surrogate: Nitrobenzene-d5</i>	25.1		ug/L	25.0	21.5	100	27-120			
<i>Surrogate: 2-Fluorobiphenyl</i>	22.2		ug/L	25.0	19.5	88.8	33-120			
<i>Surrogate: 2,4,6-Tribromophenol</i>	38.1		ug/L	37.5	29.8	102	52-120			
<i>Surrogate: p-Terphenyl-d14</i>	23.0		ug/L	25.0	20.9	92.0	28-120			

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



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatle Organic Compounds - Quality Control

Batch BMC0433 - EPA 8270E

Semivolatle Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0462-BLK1)										
				Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 14:17						
Phenol	ND	1.0	ug/L							U
bis(2-chloroethyl) ether	ND	1.0	ug/L							U
2-Chlorophenol	ND	1.0	ug/L							U
1,3-Dichlorobenzene	ND	1.0	ug/L							U
1,4-Dichlorobenzene	ND	1.0	ug/L							U
Benzyl Alcohol	ND	2.0	ug/L							U
1,2-Dichlorobenzene	ND	1.0	ug/L							U
2-Methylphenol	ND	1.0	ug/L							U
2,2'-Oxybis(1-chloropropane)	ND	1.0	ug/L							U
4-Methylphenol	ND	2.0	ug/L							U
N-Nitroso-di-n-Propylamine	ND	1.0	ug/L							U
Hexachloroethane	ND	2.0	ug/L							U
Nitrobenzene	ND	1.0	ug/L							U
Isophorone	ND	1.0	ug/L							U
2-Nitrophenol	ND	3.0	ug/L							U
2,4-Dimethylphenol	ND	3.0	ug/L							U
Bis(2-Chloroethoxy)methane	ND	1.0	ug/L							U
Benzoic acid	ND	20.0	ug/L							U
2,4-Dichlorophenol	ND	3.0	ug/L							U
1,2,4-Trichlorobenzene	ND	1.0	ug/L							U
Naphthalene	ND	1.0	ug/L							U
4-Chloroaniline	ND	5.0	ug/L							U
Hexachlorobutadiene	ND	3.0	ug/L							U
4-Chloro-3-Methylphenol	ND	3.0	ug/L							U
2-Methylnaphthalene	ND	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	5.0	ug/L							U
2,4,6-Trichlorophenol	ND	3.0	ug/L							U
2,4,5-Trichlorophenol	ND	5.0	ug/L							U
2-Chloronaphthalene	ND	1.0	ug/L							U
2-Nitroaniline	ND	3.0	ug/L							U
Dimethylphthalate	ND	1.0	ug/L							U
Acenaphthylene	ND	1.0	ug/L							U



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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0462-BLK1)		Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 14:17								
2,6-Dinitrotoluene	ND	3.0	ug/L							U
3-Nitroaniline	ND	3.0	ug/L							U
Acenaphthene	ND	1.0	ug/L							U
2,4-Dinitrophenol	ND	20.0	ug/L							U
Dibenzofuran	ND	1.0	ug/L							U
4-Nitrophenol	ND	10.0	ug/L							U
2,4-Dinitrotoluene	ND	3.0	ug/L							U
Fluorene	ND	1.0	ug/L							U
Diethyl phthalate	ND	1.0	ug/L							U
4-Chlorophenylphenyl ether	ND	1.0	ug/L							U
4-Nitroaniline	ND	3.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	10.0	ug/L							U
N-Nitrosodiphenylamine	ND	1.0	ug/L							U
4-Bromophenyl phenyl ether	ND	1.0	ug/L							U
Hexachlorobenzene	ND	1.0	ug/L							U
Pentachlorophenol	ND	10.0	ug/L							U
Phenanthrene	ND	1.0	ug/L							U
Anthracene	ND	1.0	ug/L							U
Carbazole	ND	1.0	ug/L							U
Di-n-Butylphthalate	ND	1.0	ug/L							U
Fluoranthene	ND	1.0	ug/L							U
Pyrene	ND	1.0	ug/L							U
Butylbenzylphthalate	ND	1.0	ug/L							U
Benzo(a)anthracene	ND	1.0	ug/L							U
3,3'-Dichlorobenzidine	ND	5.0	ug/L							U
Chrysene	ND	1.0	ug/L							U
bis(2-Ethylhexyl)phthalate	ND	3.0	ug/L							U
Di-n-Octylphthalate	ND	1.0	ug/L							U
Benzo(a)pyrene	ND	1.0	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	1.0	ug/L							U
Dibenzo(a,h)anthracene	ND	1.0	ug/L							U
Benzo(g,h,i)perylene	ND	1.0	ug/L							U
Benzo(a)fluoranthene, Total	ND	2.0	ug/L							U
1-Methylnaphthalene	ND	1.0	ug/L							U
<i>Surrogate: 2-Fluorophenol</i>	33.6		ug/L	37.5		89.6	33-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0462-BLK1)				Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 14:17						
Surrogate: Phenol-d5	32.9		ug/L	37.5		87.8	38-120			
Surrogate: 2-Chlorophenol-d4	34.0		ug/L	37.5		90.6	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	21.2		ug/L	25.0		85.0	20-120			
Surrogate: Nitrobenzene-d5	25.2		ug/L	25.0		101	27-120			
Surrogate: 2-Fluorobiphenyl	22.0		ug/L	25.0		87.8	33-120			
Surrogate: 2,4,6-Tribromophenol	35.4		ug/L	37.5		94.4	52-120			
Surrogate: p-Terphenyl-d14	26.2		ug/L	25.0		105	28-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0462-BS1)		Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 14:51								
Phenol	16.2	1.0	ug/L	20.0		80.8	35-120			
bis(2-chloroethyl) ether	17.9	1.0	ug/L	20.0		89.7	46.5-120			
2-Chlorophenol	15.7	1.0	ug/L	20.0		78.7	48-120			
1,3-Dichlorobenzene	11.9	1.0	ug/L	20.0		59.7	34.2-120			
1,4-Dichlorobenzene	14.0	1.0	ug/L	20.0		69.8	36-120			
Benzyl Alcohol	17.4	2.0	ug/L	20.0		87.0	27.4-120			
1,2-Dichlorobenzene	13.4	1.0	ug/L	20.0		66.8	38.4-120			
2-Methylphenol	16.3	1.0	ug/L	20.0		81.5	47.8-120			
2,2'-Oxybis(1-chloropropane)	21.9	1.0	ug/L	20.0		109	40.4-120			
4-Methylphenol	16.0	2.0	ug/L	20.0		80.2	52.3-120			
N-Nitroso-di-n-Propylamine	19.8	1.0	ug/L	20.0		98.9	51.4-120			
Hexachloroethane	12.4	2.0	ug/L	20.0		62.2	29.5-120			
Nitrobenzene	20.0	1.0	ug/L	20.0		100	51.5-120			
Isophorone	26.4	1.0	ug/L	20.0		132	62.3-128			*
2-Nitrophenol	17.6	3.0	ug/L	20.0		88.1	58.6-124			
2,4-Dimethylphenol	41.8	3.0	ug/L	60.0		69.7	38.5-120			
Bis(2-Chloroethoxy)methane	20.2	1.0	ug/L	20.0		101	52.9-120			
Benzoic acid	80.5	20.0	ug/L	90.0		89.5	38.2-120			
2,4-Dichlorophenol	45.6	3.0	ug/L	60.0		76.0	43.6-120			
1,2,4-Trichlorobenzene	13.0	1.0	ug/L	20.0		64.8	38.6-120			
Naphthalene	15.9	1.0	ug/L	20.0		79.6	40.5-120			
4-Chloroaniline	35.1	5.0	ug/L	60.0		58.5	42.7-120			
Hexachlorobutadiene	11.0	3.0	ug/L	20.0		54.8	32.3-120			
4-Chloro-3-Methylphenol	54.3	3.0	ug/L	60.0		90.5	51.9-120			
2-Methylnaphthalene	15.8	1.0	ug/L	20.0		79.2	47.3-120			
Hexachlorocyclopentadiene	31.0	5.0	ug/L	60.0		51.7	23.3-120			
2,4,6-Trichlorophenol	49.8	3.0	ug/L	60.0		83.0	47-120			
2,4,5-Trichlorophenol	49.4	5.0	ug/L	60.0		82.3	48.4-120			
2-Chloronaphthalene	17.7	1.0	ug/L	20.0		88.3	47.7-123			
2-Nitroaniline	59.5	3.0	ug/L	60.0		99.2	56.8-120			Q
Dimethylphthalate	19.4	1.0	ug/L	20.0		97.0	65.2-125			
Acenaphthylene	16.5	1.0	ug/L	20.0		82.4	44.1-120			
2,6-Dinitrotoluene	60.8	3.0	ug/L	60.0		101	69.3-140			
3-Nitroaniline	48.3	3.0	ug/L	60.0		80.5	60.9-120			
Acenaphthene	17.3	1.0	ug/L	20.0		86.7	50.4-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0462-BS1)				Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 14:51						
2,4-Dinitrophenol	99.6	20.0	ug/L	110		90.5	33.7-183			
Dibenzofuran	17.7	1.0	ug/L	20.0		88.6	49.9-120			
4-Nitrophenol	56.7	10.0	ug/L	60.0		94.6	50.2-136			
2,4-Dinitrotoluene	51.8	3.0	ug/L	60.0		86.4	66.8-132			
Fluorene	17.7	1.0	ug/L	20.0		88.4	57.8-120			
Diethyl phthalate	20.5	1.0	ug/L	20.0		103	68.1-120			
4-Chlorophenylphenyl ether	18.6	1.0	ug/L	20.0		92.8	59.1-127			
4-Nitroaniline	47.6	3.0	ug/L	60.0		79.3	56-122			
4,6-Dinitro-2-methylphenol	104	10.0	ug/L	110		94.5	37.9-162			
N-Nitrosodiphenylamine	16.5	1.0	ug/L	20.0		82.4	59.6-120			
4-Bromophenyl phenyl ether	18.9	1.0	ug/L	20.0		94.4	59.6-120			
Hexachlorobenzene	20.9	1.0	ug/L	20.0		104	53.7-120			
Pentachlorophenol	51.3	10.0	ug/L	60.0		85.4	40.3-128			
Phenanthrene	18.0	1.0	ug/L	20.0		90.1	58.8-120			
Anthracene	16.3	1.0	ug/L	20.0		81.6	60.5-120			
Carbazole	16.6	1.0	ug/L	20.0		82.9	59.7-120			
Di-n-Butylphthalate	20.0	1.0	ug/L	20.0		100	71-120			
Fluoranthene	17.0	1.0	ug/L	20.0		85.0	66.7-120			
Pyrene	20.8	1.0	ug/L	20.0		104	62.7-127			
Butylbenzylphthalate	20.9	1.0	ug/L	20.0		105	67.4-128			
Benzo(a)anthracene	21.5	1.0	ug/L	20.0		107	58.3-128			
3,3'-Dichlorobenzidine	12.7	5.0	ug/L	40.0		31.7	34.1-120			*
Chrysene	17.8	1.0	ug/L	20.0		89.2	58.9-120			
bis(2-Ethylhexyl)phthalate	20.9	3.0	ug/L	20.0		105	68.3-123			
Di-n-Octylphthalate	18.8	1.0	ug/L	20.0		94.0	61.5-120			
Benzo(a)pyrene	17.3	1.0	ug/L	20.0		86.5	70.6-120			
Indeno(1,2,3-cd)pyrene	22.0	1.0	ug/L	20.0		110	46.5-120			
Dibenzo(a,h)anthracene	22.7	1.0	ug/L	20.0		114	49.6-120			
Benzo(g,h,i)perylene	24.2	1.0	ug/L	20.0		121	37-120			*, Q
Benzo(a)fluoranthene, Total	35.0	2.0	ug/L	40.0		87.5	66.5-120			
1-Methylnaphthalene	17.6	1.0	ug/L	20.0		88.0	46.9-120			
Surrogate: 2-Fluorophenol	31.2		ug/L	37.5		83.3	33-120			
Surrogate: Phenol-d5	31.7		ug/L	37.5		84.6	38-120			
Surrogate: 2-Chlorophenol-d4	32.7		ug/L	37.5		87.3	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	19.7		ug/L	25.0		78.9	20-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0462-BS1)				Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 14:51						
Surrogate: Nitrobenzene-d5	25.1		ug/L	25.0		100	27-120			
Surrogate: 2-Fluorobiphenyl	22.6		ug/L	25.0		90.6	33-120			
Surrogate: 2,4,6-Tribromophenol	39.6		ug/L	37.5		105	52-120			
Surrogate: p-Terphenyl-d14	25.3		ug/L	25.0		101	28-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
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22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0462-BSD1)										
Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 15:25										
Phenol	15.3	1.0	ug/L	20.0		76.7	35-120	5.16	30	
bis(2-chloroethyl) ether	17.0	1.0	ug/L	20.0		85.1	46.5-120	5.25	30	
2-Chlorophenol	15.0	1.0	ug/L	20.0		74.9	48-120	4.97	30	
1,3-Dichlorobenzene	10.5	1.0	ug/L	20.0		52.5	34.2-120	12.80	30	
1,4-Dichlorobenzene	12.0	1.0	ug/L	20.0		60.1	36-120	14.90	30	
Benzyl Alcohol	16.5	2.0	ug/L	20.0		82.3	27.4-120	5.48	30	
1,2-Dichlorobenzene	11.7	1.0	ug/L	20.0		58.5	38.4-120	13.30	30	
2-Methylphenol	15.3	1.0	ug/L	20.0		76.3	47.8-120	6.55	30	
2,2'-Oxybis(1-chloropropane)	21.2	1.0	ug/L	20.0		106	40.4-120	3.29	30	
4-Methylphenol	15.5	2.0	ug/L	20.0		77.4	52.3-120	3.59	30	
N-Nitroso-di-n-Propylamine	18.5	1.0	ug/L	20.0		92.3	51.4-120	6.84	30	
Hexachloroethane	10.5	2.0	ug/L	20.0		52.3	29.5-120	17.30	30	
Nitrobenzene	18.5	1.0	ug/L	20.0		92.4	51.5-120	7.94	30	
Isophorone	24.4	1.0	ug/L	20.0		122	62.3-128	7.93	30	
2-Nitrophenol	16.6	3.0	ug/L	20.0		82.8	58.6-124	6.26	30	
2,4-Dimethylphenol	36.1	3.0	ug/L	60.0		60.2	38.5-120	14.60	30	
Bis(2-Chloroethoxy)methane	20.4	1.0	ug/L	20.0		102	52.9-120	0.92	30	
Benzoic acid	72.2	20.0	ug/L	90.0		80.3	38.2-120	10.80	30	
2,4-Dichlorophenol	42.9	3.0	ug/L	60.0		71.5	43.6-120	6.10	30	
1,2,4-Trichlorobenzene	11.3	1.0	ug/L	20.0		56.6	38.6-120	13.50	30	
Naphthalene	14.3	1.0	ug/L	20.0		71.5	40.5-120	10.70	30	
4-Chloroaniline	38.8	5.0	ug/L	60.0		64.7	42.7-120	10.00	30	
Hexachlorobutadiene	8.7	3.0	ug/L	20.0		43.3	32.3-120	23.30	30	
4-Chloro-3-Methylphenol	49.1	3.0	ug/L	60.0		81.8	51.9-120	10.10	30	
2-Methylnaphthalene	14.4	1.0	ug/L	20.0		71.8	47.3-120	9.82	30	
Hexachlorocyclopentadiene	24.1	5.0	ug/L	60.0		40.1	23.3-120	25.20	30	
2,4,6-Trichlorophenol	46.2	3.0	ug/L	60.0		76.9	47-120	7.54	30	
2,4,5-Trichlorophenol	44.3	5.0	ug/L	60.0		73.9	48.4-120	10.70	30	
2-Chloronaphthalene	16.0	1.0	ug/L	20.0		79.9	47.7-123	10.00	30	
2-Nitroaniline	53.9	3.0	ug/L	60.0		89.8	56.8-120	9.92	30	Q
Dimethylphthalate	18.1	1.0	ug/L	20.0		90.3	65.2-125	7.17	30	
Acenaphthylene	15.5	1.0	ug/L	20.0		77.3	44.1-120	6.39	30	
2,6-Dinitrotoluene	56.1	3.0	ug/L	60.0		93.5	69.3-140	8.01	30	
3-Nitroaniline	43.6	3.0	ug/L	60.0		72.7	60.9-120	10.20	30	
Acenaphthene	16.3	1.0	ug/L	20.0		81.7	50.4-120	5.92	30	



Golder Associates
18300 NE Union Hill Road Suite 200
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Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0462-BSD1)				Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 15:25						
2,4-Dinitrophenol	91.2	20.0	ug/L	110		82.9	33.7-183	8.74	30	
Dibenzofuran	16.4	1.0	ug/L	20.0		81.8	49.9-120	8.05	30	
4-Nitrophenol	49.6	10.0	ug/L	60.0		82.6	50.2-136	13.40	30	
2,4-Dinitrotoluene	47.8	3.0	ug/L	60.0		79.7	66.8-132	8.13	30	
Fluorene	16.2	1.0	ug/L	20.0		81.1	57.8-120	8.54	30	
Diethyl phthalate	19.0	1.0	ug/L	20.0		95.1	68.1-120	7.66	30	
4-Chlorophenylphenyl ether	16.9	1.0	ug/L	20.0		84.5	59.1-127	9.36	30	
4-Nitroaniline	42.9	3.0	ug/L	60.0		71.5	56-122	10.40	30	
4,6-Dinitro-2-methylphenol	93.3	10.0	ug/L	110		84.8	37.9-162	10.80	30	
N-Nitrosodiphenylamine	16.1	1.0	ug/L	20.0		80.3	59.6-120	2.54	30	
4-Bromophenyl phenyl ether	17.7	1.0	ug/L	20.0		88.4	59.6-120	6.58	30	
Hexachlorobenzene	19.4	1.0	ug/L	20.0		97.0	53.7-120	7.25	30	
Pentachlorophenol	46.9	10.0	ug/L	60.0		78.2	40.3-128	8.86	30	
Phenanthrene	16.1	1.0	ug/L	20.0		80.7	58.8-120	11.00	30	
Anthracene	15.0	1.0	ug/L	20.0		75.2	60.5-120	8.16	30	
Carbazole	16.4	1.0	ug/L	20.0		81.9	59.7-120	1.21	30	
Di-n-Butylphthalate	18.8	1.0	ug/L	20.0		94.0	71-120	6.39	30	
Fluoranthene	15.8	1.0	ug/L	20.0		79.2	66.7-120	7.09	30	
Pyrene	19.0	1.0	ug/L	20.0		95.2	62.7-127	8.85	30	
Butylbenzylphthalate	19.4	1.0	ug/L	20.0		97.0	67.4-128	7.61	30	
Benzo(a)anthracene	19.5	1.0	ug/L	20.0		97.6	58.3-128	9.63	30	
3,3'-Dichlorobenzidine	15.7	5.0	ug/L	40.0		39.3	34.1-120	21.40	30	
Chrysene	16.3	1.0	ug/L	20.0		81.4	58.9-120	9.08	30	
bis(2-Ethylhexyl)phthalate	19.2	3.0	ug/L	20.0		96.1	68.3-123	8.61	30	
Di-n-Octylphthalate	16.9	1.0	ug/L	20.0		84.7	61.5-120	10.40	30	
Benzo(a)pyrene	16.5	1.0	ug/L	20.0		82.6	70.6-120	4.60	30	
Indeno(1,2,3-cd)pyrene	20.7	1.0	ug/L	20.0		103	46.5-120	6.29	30	
Dibenzo(a,h)anthracene	21.1	1.0	ug/L	20.0		106	49.6-120	7.32	30	
Benzo(g,h,i)perylene	22.7	1.0	ug/L	20.0		113	37-120	6.70	30	Q
Benzo(a)fluoranthene, Total	32.2	2.0	ug/L	40.0		80.6	66.5-120	8.20	30	
1-Methylnaphthalene	15.8	1.0	ug/L	20.0		78.9	46.9-120	10.80	30	
Surrogate: 2-Fluorophenol	32.2		ug/L	37.5		85.9	33-120			
Surrogate: Phenol-d5	32.5		ug/L	37.5		86.6	38-120			
Surrogate: 2-Chlorophenol-d4	33.3		ug/L	37.5		88.7	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	19.4		ug/L	25.0		77.7	20-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0462-BSD1)				Prepared: 19-Mar-2024 Analyzed: 23-Mar-2024 15:25						
<i>Surrogate: Nitrobenzene-d5</i>	25.1		ug/L	25.0		100	27-120			
<i>Surrogate: 2-Fluorobiphenyl</i>	21.9		ug/L	25.0		87.6	33-120			
<i>Surrogate: 2,4,6-Tribromophenol</i>	38.4		ug/L	37.5		102	52-120			
<i>Surrogate: p-Terphenyl-d14</i>	25.0		ug/L	25.0		100	28-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0462 - EPA 8270E

Semivolatile Organic Compounds - Quality Control

Batch BMC0472 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0472-BLK1)						Prepared: 20-Mar-2024 Analyzed: 03-Apr-2024 01:03				
Phenol	ND	1.0	ug/L							U
bis(2-chloroethyl) ether	ND	1.0	ug/L							U
2-Chlorophenol	ND	1.0	ug/L							U
1,3-Dichlorobenzene	ND	1.0	ug/L							U
1,4-Dichlorobenzene	ND	1.0	ug/L							U
Benzyl Alcohol	ND	2.0	ug/L							U
1,2-Dichlorobenzene	ND	1.0	ug/L							U
2-Methylphenol	ND	1.0	ug/L							U
2,2'-Oxybis(1-chloropropane)	ND	1.0	ug/L							U
4-Methylphenol	ND	2.0	ug/L							U
N-Nitroso-di-n-Propylamine	ND	1.0	ug/L							U
Hexachloroethane	ND	2.0	ug/L							U
Nitrobenzene	ND	1.0	ug/L							U
Isophorone	ND	1.0	ug/L							U
2-Nitrophenol	ND	3.0	ug/L							U
2,4-Dimethylphenol	ND	3.0	ug/L							U
Bis(2-Chloroethoxy)methane	ND	1.0	ug/L							U
Benzoic acid	ND	20.0	ug/L							U
2,4-Dichlorophenol	ND	3.0	ug/L							U
1,2,4-Trichlorobenzene	ND	1.0	ug/L							U
Naphthalene	ND	1.0	ug/L							U
4-Chloroaniline	ND	5.0	ug/L							U
Hexachlorobutadiene	ND	3.0	ug/L							U
4-Chloro-3-Methylphenol	ND	3.0	ug/L							U
2-Methylnaphthalene	ND	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	5.0	ug/L							U
2,4,6-Trichlorophenol	ND	3.0	ug/L							U
2,4,5-Trichlorophenol	ND	5.0	ug/L							U
2-Chloronaphthalene	ND	1.0	ug/L							U
2-Nitroaniline	ND	3.0	ug/L							U
Dimethylphthalate	ND	1.0	ug/L							U
Acenaphthylene	ND	1.0	ug/L							U



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0472 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0472-BLK1)										
Prepared: 20-Mar-2024 Analyzed: 03-Apr-2024 01:03										
2,6-Dinitrotoluene	ND	3.0	ug/L							U
3-Nitroaniline	ND	3.0	ug/L							U
Acenaphthene	ND	1.0	ug/L							U
2,4-Dinitrophenol	ND	20.0	ug/L							U
Dibenzofuran	ND	1.0	ug/L							U
4-Nitrophenol	ND	10.0	ug/L							U
2,4-Dinitrotoluene	ND	3.0	ug/L							U
Fluorene	ND	1.0	ug/L							U
Diethyl phthalate	ND	1.0	ug/L							U
4-Chlorophenylphenyl ether	ND	1.0	ug/L							U
4-Nitroaniline	ND	3.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	10.0	ug/L							U
N-Nitrosodiphenylamine	ND	1.0	ug/L							U
4-Bromophenyl phenyl ether	ND	1.0	ug/L							U
Hexachlorobenzene	ND	1.0	ug/L							U
Pentachlorophenol	ND	10.0	ug/L							U
Phenanthrene	ND	1.0	ug/L							U
Anthracene	ND	1.0	ug/L							U
Carbazole	ND	1.0	ug/L							U
Di-n-Butylphthalate	ND	1.0	ug/L							U
Fluoranthene	ND	1.0	ug/L							U
Pyrene	ND	1.0	ug/L							U
Butylbenzylphthalate	ND	1.0	ug/L							U
Benzo(a)anthracene	ND	1.0	ug/L							U
3,3'-Dichlorobenzidine	ND	5.0	ug/L							U
Chrysene	ND	1.0	ug/L							U
bis(2-Ethylhexyl)phthalate	ND	3.0	ug/L							U
Di-n-Octylphthalate	ND	1.0	ug/L							U
Benzo(a)pyrene	ND	1.0	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	1.0	ug/L							U
Dibenzo(a,h)anthracene	ND	1.0	ug/L							U
Benzo(g,h,i)perylene	ND	1.0	ug/L							U
Benzo(a)fluoranthene, Total	ND	2.0	ug/L							U
1-Methylnaphthalene	ND	1.0	ug/L							U
Surrogate: 2-Fluorophenol	41.7		ug/L	37.5		111	33-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0472 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0472-BLK1)				Prepared: 20-Mar-2024 Analyzed: 03-Apr-2024 01:03						
Surrogate: Phenol-d5	42.6		ug/L	37.5		113	38-120			
Surrogate: 2-Chlorophenol-d4	43.9		ug/L	37.5		117	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	25.0		ug/L	25.0		100	20-120			
Surrogate: Nitrobenzene-d5	29.8		ug/L	25.0		119	27-120			
Surrogate: 2-Fluorobiphenyl	28.9		ug/L	25.0		115	33-120			
Surrogate: 2,4,6-Tribromophenol	42.0		ug/L	37.5		112	52-120			
Surrogate: p-Terphenyl-d14	31.5		ug/L	25.0		126	28-120			*



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0472 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0472-BS1)		Prepared: 20-Mar-2024 Analyzed: 03-Apr-2024 01:36								
Phenol	16.9	1.0	ug/L	20.0		84.5	35-120			
bis(2-chloroethyl) ether	17.6	1.0	ug/L	20.0		88.1	46.5-120			
2-Chlorophenol	17.3	1.0	ug/L	20.0		86.5	48-120			
1,3-Dichlorobenzene	10.5	1.0	ug/L	20.0		52.3	34.2-120			
1,4-Dichlorobenzene	11.0	1.0	ug/L	20.0		55.0	36-120			
Benzyl Alcohol	18.9	2.0	ug/L	20.0		94.5	27.4-120			
1,2-Dichlorobenzene	11.6	1.0	ug/L	20.0		58.2	38.4-120			
2-Methylphenol	17.9	1.0	ug/L	20.0		89.6	47.8-120			
2,2'-Oxybis(1-chloropropane)	20.8	1.0	ug/L	20.0		104	40.4-120			
4-Methylphenol	17.6	2.0	ug/L	20.0		88.2	52.3-120			
N-Nitroso-di-n-Propylamine	17.1	1.0	ug/L	20.0		85.6	51.4-120			
Hexachloroethane	8.9	2.0	ug/L	20.0		44.7	29.5-120			
Nitrobenzene	17.5	1.0	ug/L	20.0		87.6	51.5-120			
Isophorone	25.2	1.0	ug/L	20.0		126	62.3-128			
2-Nitrophenol	20.1	3.0	ug/L	20.0		100	58.6-124			
2,4-Dimethylphenol	40.9	3.0	ug/L	60.0		68.2	38.5-120			
Bis(2-Chloroethoxy)methane	20.6	1.0	ug/L	20.0		103	52.9-120			
Benzoic acid	81.5	20.0	ug/L	90.0		90.6	38.2-120			
2,4-Dichlorophenol	53.9	3.0	ug/L	60.0		89.8	43.6-120			
1,2,4-Trichlorobenzene	11.9	1.0	ug/L	20.0		59.7	38.6-120			
Naphthalene	15.8	1.0	ug/L	20.0		79.1	40.5-120			
4-Chloroaniline	44.2	5.0	ug/L	60.0		73.7	42.7-120			
Hexachlorobutadiene	10.5	3.0	ug/L	20.0		52.5	32.3-120			
4-Chloro-3-Methylphenol	53.3	3.0	ug/L	60.0		88.9	51.9-120			
2-Methylnaphthalene	16.2	1.0	ug/L	20.0		81.0	47.3-120			
Hexachlorocyclopentadiene	38.4	5.0	ug/L	60.0		64.1	23.3-120			
2,4,6-Trichlorophenol	57.3	3.0	ug/L	60.0		95.5	47-120			
2,4,5-Trichlorophenol	56.6	5.0	ug/L	60.0		94.3	48.4-120			
2-Chloronaphthalene	15.3	1.0	ug/L	20.0		76.7	47.7-123			
2-Nitroaniline	56.8	3.0	ug/L	60.0		94.7	56.8-120			
Dimethylphthalate	18.4	1.0	ug/L	20.0		91.9	65.2-125			
Acenaphthylene	17.1	1.0	ug/L	20.0		85.4	44.1-120			
2,6-Dinitrotoluene	51.0	3.0	ug/L	60.0		85.1	69.3-140			
3-Nitroaniline	48.9	3.0	ug/L	60.0		81.6	60.9-120			
Acenaphthene	18.2	1.0	ug/L	20.0		91.0	50.4-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0472 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0472-BS1)		Prepared: 20-Mar-2024 Analyzed: 03-Apr-2024 01:36								
2,4-Dinitrophenol	81.9	20.0	ug/L	110		74.4	33.7-183			Q
Dibenzofuran	18.0	1.0	ug/L	20.0		89.9	49.9-120			
4-Nitrophenol	52.1	10.0	ug/L	60.0		86.9	50.2-136			
2,4-Dinitrotoluene	50.5	3.0	ug/L	60.0		84.1	66.8-132			
Fluorene	18.0	1.0	ug/L	20.0		89.8	57.8-120			
Diethyl phthalate	18.4	1.0	ug/L	20.0		92.1	68.1-120			
4-Chlorophenylphenyl ether	17.6	1.0	ug/L	20.0		87.9	59.1-127			
4-Nitroaniline	50.2	3.0	ug/L	60.0		83.6	56-122			
4,6-Dinitro-2-methylphenol	115	10.0	ug/L	110		105	37.9-162			
N-Nitrosodiphenylamine	16.6	1.0	ug/L	20.0		82.8	59.6-120			
4-Bromophenyl phenyl ether	17.6	1.0	ug/L	20.0		87.8	59.6-120			
Hexachlorobenzene	17.0	1.0	ug/L	20.0		85.1	53.7-120			
Pentachlorophenol	54.3	10.0	ug/L	60.0		90.5	40.3-128			
Phenanthrene	18.1	1.0	ug/L	20.0		90.6	58.8-120			
Anthracene	17.7	1.0	ug/L	20.0		88.4	60.5-120			
Carbazole	17.4	1.0	ug/L	20.0		86.9	59.7-120			
Di-n-Butylphthalate	18.3	1.0	ug/L	20.0		91.3	71-120			
Fluoranthene	18.9	1.0	ug/L	20.0		94.5	66.7-120			
Pyrene	18.5	1.0	ug/L	20.0		92.3	62.7-127			
Butylbenzylphthalate	17.5	1.0	ug/L	20.0		87.7	67.4-128			
Benzo(a)anthracene	17.3	1.0	ug/L	20.0		86.5	58.3-128			
3,3'-Dichlorobenzidine	14.3	5.0	ug/L	40.0		35.8	34.1-120			
Chrysene	17.4	1.0	ug/L	20.0		87.1	58.9-120			
bis(2-Ethylhexyl)phthalate	18.8	3.0	ug/L	20.0		93.9	68.3-123			
Di-n-Octylphthalate	18.3	1.0	ug/L	20.0		91.7	61.5-120			
Benzo(a)pyrene	17.3	1.0	ug/L	20.0		86.7	70.6-120			
Indeno(1,2,3-cd)pyrene	18.8	1.0	ug/L	20.0		94.0	46.5-120			
Dibenzo(a,h)anthracene	19.1	1.0	ug/L	20.0		95.3	49.6-120			
Benzo(g,h,i)perylene	17.0	1.0	ug/L	20.0		84.8	37-120			
Benzo(a)fluoranthene, Total	34.0	2.0	ug/L	40.0		85.0	66.5-120			
1-Methylnaphthalene	17.1	1.0	ug/L	20.0		85.6	46.9-120			
Surrogate: 2-Fluorophenol	40.8		ug/L	37.5		109	33-120			
Surrogate: Phenol-d5	42.1		ug/L	37.5		112	38-120			
Surrogate: 2-Chlorophenol-d4	42.6		ug/L	37.5		114	41-120			
Surrogate: 1,2-Dichlorobenzene-d4	24.9		ug/L	25.0		99.4	20-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0472 - EPA 8270E

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0472-BS1)				Prepared: 20-Mar-2024 Analyzed: 03-Apr-2024 01:36						
Surrogate: Nitrobenzene-d5	29.7		ug/L	25.0		119	27-120			
Surrogate: 2-Fluorobiphenyl	28.0		ug/L	25.0		112	33-120			
Surrogate: 2,4,6-Tribromophenol	43.9		ug/L	37.5		117	52-120			
Surrogate: p-Terphenyl-d14	31.9		ug/L	25.0		128	28-120			*



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMC0472 - EPA 8270E

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0442 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0442-BLK1)				Prepared: 18-Mar-2024 Analyzed: 22-Mar-2024 13:29						
1,4-Dioxane	ND	0.4	ug/L							U
Surrogate: 1,4-Dioxane-d8	5.33		ug/L	10.0		53.3	33.6-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0442 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0442-BS1)				Prepared: 18-Mar-2024 Analyzed: 22-Mar-2024 13:55						
1,4-Dioxane	4.8	0.4	ug/L	10.0		48.1	39.9-120			
<i>Surrogate: 1,4-Dioxane-d8</i>	5.71		ug/L	10.0		57.1	33.6-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0442 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0442-BSD1)				Prepared: 18-Mar-2024 Analyzed: 22-Mar-2024 14:20						
1,4-Dioxane	5.5	0.4	ug/L	10.0		55.4	39.9-120	14.10	30	
<i>Surrogate: 1,4-Dioxane-d8</i>	5.90		ug/L	10.0		59.0	33.6-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0442 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0442-MS1)		Source: 24C0326-03			Prepared: 18-Mar-2024	Analyzed: 22-Mar-2024 16:03				
1,4-Dioxane	7.0	0.4	ug/L	10.0	1.5	55.1	35.1-120			
Surrogate: 1,4-Dioxane-d8	6.36		ug/L	10.0	5.74	63.6	33.6-120			

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



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0442 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0442-MSD1)		Source: 24C0326-03		Prepared: 18-Mar-2024		Analyzed: 22-Mar-2024 16:29				
1,4-Dioxane	6.9	0.4	ug/L	10.0	1.5	54.6	35.1-120	0.72	30	
<i>Surrogate: 1,4-Dioxane-d8</i>	6.13		ug/L	10.0	5.74	61.3	33.6-120			

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0442 - EPA 8270E-SIM

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0463 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0463-BLK1)				Prepared: 19-Mar-2024 Analyzed: 22-Mar-2024 18:12						
1,4-Dioxane	ND	0.4	ug/L							U
Surrogate: 1,4-Dioxane-d8	5.70		ug/L	10.0		57.0	33.6-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0463 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0463-BS1)				Prepared: 19-Mar-2024 Analyzed: 22-Mar-2024 18:38						
1,4-Dioxane	5.8	0.4	ug/L	10.0		58.5	39.9-120			
<i>Surrogate: 1,4-Dioxane-d8</i>	6.55		ug/L	10.0		65.5	33.6-120			



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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0463 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0463-BSD1)				Prepared: 19-Mar-2024 Analyzed: 22-Mar-2024 19:03						
1,4-Dioxane	5.7	0.4	ug/L	10.0		57.0	39.9-120	2.60	30	
<i>Surrogate: 1,4-Dioxane-d8</i>	5.93		ug/L	10.0		59.3	33.6-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0463 - EPA 8270E-SIM

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0487 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0487-BLK1)				Prepared: 20-Mar-2024 Analyzed: 09-Apr-2024 11:22						
1,4-Dioxane	ND	0.4	ug/L							U
Surrogate: 1,4-Dioxane-d8	6.38		ug/L	10.0		63.8	33.6-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0487 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0487-BS1)				Prepared: 20-Mar-2024 Analyzed: 09-Apr-2024 11:48						
1,4-Dioxane	7.2	0.4	ug/L	10.0		71.6	39.9-120			
<i>Surrogate: 1,4-Dioxane-d8</i>	6.66		ug/L	10.0		66.6	33.6-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0487 - EPA 8270E-SIM

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0529 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0529-BLK1)				Prepared: 21-Mar-2024 Analyzed: 04-Apr-2024 10:57						
1,4-Dioxane	ND	0.4	ug/L							U
Surrogate: 1,4-Dioxane-d8	12.4		ug/L	20.0		62.1	33.6-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0529 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0529-BS1)					Prepared: 21-Mar-2024 Analyzed: 04-Apr-2024 11:22					
1,4-Dioxane	7.8	0.4	ug/L	10.0	78.4	39.9-120				
<i>Surrogate: 1,4-Dioxane-d8</i>	13.1		ug/L	20.0	65.7	33.6-120				



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0529 - EPA 8270E-SIM

Instrument: NT6 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0529-BSD1)					Prepared: 21-Mar-2024 Analyzed: 04-Apr-2024 11:47					
1,4-Dioxane	8.0	0.4	ug/L	10.0	80.3	39.9-120	2.39	30		
<i>Surrogate: 1,4-Dioxane-d8</i>	13.2		ug/L	20.0	65.8	33.6-120				



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMC0529 - EPA 8270E-SIM

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMC0438 - NWTPH-HCID

Instrument: FID4 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0438-BLK1)		Prepared: 18-Mar-2024 Analyzed: 20-Mar-2024 13:44								
Gasoline Range Organics (Tol-C12)	ND	0.25	mg/L							U
Diesel Range Organics (C12-C24)	ND	0.50	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	1.00	mg/L							U
Surrogate: <i>o</i> -Terphenyl	0.201		mg/L	0.225		89.2	50-150			
Surrogate: <i>n</i> -Triacontane	0.302		mg/L	0.225		134	50-150			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMC0438 - NWTPH-HCID

Petroleum Hydrocarbons - Quality Control

Batch BMC0459 - NWTPH-HCID

Instrument: FID4 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0459-BLK1)										
				Prepared: 18-Mar-2024 Analyzed: 22-Mar-2024 17:06						
Gasoline Range Organics (Tol-C12)	ND	0.25	mg/L							U
Diesel Range Organics (C12-C24)	ND	0.50	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	1.00	mg/L							U
Surrogate: <i>o</i> -Terphenyl	0.227		mg/L	0.225		101	50-150			
Surrogate: <i>n</i> -Triacontane	0.316		mg/L	0.225		141	50-150			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMC0459 - NWTPH-HCID

Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0441 - EPA 8081B

Instrument: ECD6 Analyst: RT/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0441-BLK1)										
					Prepared: 18-Mar-2024 Analyzed: 13-Apr-2024 01:35					
alpha-BHC	ND	0.025	ug/L							U
beta-BHC	ND	0.025	ug/L							U
gamma-BHC (Lindane)	ND	0.025	ug/L							U
delta-BHC	ND	0.025	ug/L							U
Heptachlor	ND	0.025	ug/L							U
Aldrin	ND	0.025	ug/L							U
Heptachlor Epoxide	ND	0.050	ug/L							U
trans-Chlordane (beta-Chlordane)	ND	0.025	ug/L							U
cis-Chlordane (alpha-chlordane)	ND	0.025	ug/L							U
Endosulfan I	ND	0.025	ug/L							U
4,4'-DDE	ND	0.050	ug/L							U
Dieldrin	ND	0.050	ug/L							U
Endrin	ND	0.050	ug/L							U
Endosulfan II	ND	0.050	ug/L							U
4,4'-DDD	ND	0.050	ug/L							U
Endrin Aldehyde	ND	0.050	ug/L							U
4,4'-DDT	ND	0.050	ug/L							U
Endosulfan Sulfate	ND	0.050	ug/L							U
Endrin Ketone	ND	0.050	ug/L							U
Methoxychlor	ND	0.250	ug/L							U
Toxaphene	ND	1.25	ug/L							U
Surrogate: Decachlorobiphenyl	0.310		ug/L	0.400		77.6	11-144			
Surrogate: Decachlorobiphenyl [2C]	0.322		ug/L	0.400		80.6	11-144			
Surrogate: Tetrachlorometaxylene	0.345		ug/L	0.400		86.3	30-120			
Surrogate: Tetrachlorometaxylene [2C]	0.346		ug/L	0.400		86.4	30-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0441 - EPA 8081B

Instrument: ECD6 Analyst: RT/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0441-BS1)		Prepared: 18-Mar-2024 Analyzed: 13-Apr-2024 01:54								
alpha-BHC [2C]	0.182	0.025	ug/L	0.200		90.8	54-124			
beta-BHC [2C]	0.177	0.025	ug/L	0.200		88.5	53-123			
gamma-BHC (Lindane) [2C]	0.182	0.025	ug/L	0.200		91.1	53-127			
delta-BHC [2C]	0.183	0.025	ug/L	0.200		91.5	53-122			
Heptachlor [2C]	0.182	0.025	ug/L	0.200		90.9	50-120			
Aldrin	0.179	0.025	ug/L	0.200		89.7	47-120			
Heptachlor Epoxide [2C]	0.177	0.050	ug/L	0.200		88.7	50-127			
trans-Chlordane (beta-Chlordane)	0.177	0.025	ug/L	0.200		88.3	47-127			
cis-Chlordane (alpha-chlordane)	0.176	0.025	ug/L	0.200		88.0	51-132			
Endosulfan I	0.178	0.025	ug/L	0.200		88.9	48-137			
4,4'-DDE	0.356	0.050	ug/L	0.400		89.0	47-133			
Dieldrin	0.356	0.050	ug/L	0.400		89.1	55-130			
Endrin	0.357	0.050	ug/L	0.400		89.2	52-121			
Endosulfan II	0.352	0.050	ug/L	0.400		87.9	60-120			
4,4'-DDD	0.366	0.050	ug/L	0.400		91.4	60-120			
Endrin Aldehyde	0.341	0.050	ug/L	0.400		85.3	53-120			
4,4'-DDT	0.365	0.050	ug/L	0.400		91.2	57-122			
Endosulfan Sulfate [2C]	0.349	0.050	ug/L	0.400		87.3	56-120			
Endrin Ketone	0.351	0.050	ug/L	0.400		87.8	61-120			
Methoxychlor [2C]	1.73	0.250	ug/L	2.00		86.6	55-120			
Surrogate: Decachlorobiphenyl	0.237		ug/L	0.400		59.2	11-144			
Surrogate: Decachlorobiphenyl [2C]	0.245		ug/L	0.400		61.3	11-144			
Surrogate: Tetrachlorometaxylene	0.329		ug/L	0.400		82.2	30-120			
Surrogate: Tetrachlorometaxylene [2C]	0.331		ug/L	0.400		82.6	30-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0441 - EPA 8081B

Instrument: ECD6 Analyst: RT/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0441-BSD1)		Prepared: 18-Mar-2024 Analyzed: 13-Apr-2024 02:12								
alpha-BHC	0.169	0.025	ug/L	0.200		84.5	54-124	4.55	30	
beta-BHC [2C]	0.167	0.025	ug/L	0.200		83.4	53-123	5.89	30	
gamma-BHC (Lindane)	0.171	0.025	ug/L	0.200		85.4	53-127	4.07	30	
delta-BHC	0.174	0.025	ug/L	0.200		87.1	53-122	3.99	30	
Heptachlor	0.173	0.025	ug/L	0.200		86.6	50-120	3.90	30	
Aldrin	0.173	0.025	ug/L	0.200		86.5	47-120	3.54	30	
Heptachlor Epoxide	0.171	0.050	ug/L	0.200		85.4	50-127	2.90	30	
trans-Chlordane (beta-Chlordane)	0.171	0.025	ug/L	0.200		85.4	47-127	3.41	30	
cis-Chlordane (alpha-chlordane)	0.171	0.025	ug/L	0.200		85.3	51-132	3.09	30	
Endosulfan I	0.173	0.025	ug/L	0.200		86.6	48-137	2.60	30	
4,4'-DDE	0.347	0.050	ug/L	0.400		86.9	47-133	2.41	30	
Dieldrin	0.348	0.050	ug/L	0.400		87.1	55-130	2.25	30	
Endrin [2C]	0.332	0.050	ug/L	0.400		82.9	52-121	7.20	30	
Endosulfan II [2C]	0.329	0.050	ug/L	0.400		82.3	60-120	6.08	30	
4,4'-DDD [2C]	0.335	0.050	ug/L	0.400		83.7	60-120	6.65	30	
Endrin Aldehyde	0.318	0.050	ug/L	0.400		79.5	53-120	7.00	30	
4,4'-DDT	0.335	0.050	ug/L	0.400		83.7	57-122	8.64	30	
Endosulfan Sulfate [2C]	0.333	0.050	ug/L	0.400		83.2	56-120	4.77	30	
Endrin Ketone	0.330	0.050	ug/L	0.400		82.5	61-120	6.22	30	
Methoxychlor [2C]	1.61	0.250	ug/L	2.00		80.7	55-120	7.08	30	
Surrogate: Decachlorobiphenyl	0.218		ug/L	0.400		54.5	11-144			
Surrogate: Decachlorobiphenyl [2C]	0.223		ug/L	0.400		55.7	11-144			
Surrogate: Tetrachlorometaxylene	0.316		ug/L	0.400		79.0	30-120			
Surrogate: Tetrachlorometaxylene [2C]	0.308		ug/L	0.400		77.1	30-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0441 - EPA 8081B

Instrument: ECD6 Analyst: RT/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0441-MS1)		Source: 24C0326-03		Prepared: 18-Mar-2024		Analyzed: 13-Apr-2024 03:25				
alpha-BHC	0.173	0.025	ug/L	0.200	ND	86.7	54-124			
beta-BHC	0.169	0.025	ug/L	0.200	ND	84.6	53-123			
gamma-BHC (Lindane)	0.177	0.025	ug/L	0.200	ND	88.6	53-127			
delta-BHC	0.189	0.025	ug/L	0.200	ND	94.5	53-122			
Heptachlor	0.219	0.025	ug/L	0.200	ND	110	50-120			
Aldrin	0.191	0.025	ug/L	0.200	ND	95.5	47-120			
Heptachlor Epoxide	0.173	0.050	ug/L	0.200	ND	86.5	50-127			
trans-Chlordane (beta-Chlordane)	0.173	0.025	ug/L	0.200	ND	86.5	47-127			
cis-Chlordane (alpha-chlordane)	0.172	0.025	ug/L	0.200	ND	86.0	51-132			
Endosulfan I	0.175	0.025	ug/L	0.200	ND	87.5	48-137			
4,4'-DDE	0.350	0.050	ug/L	0.400	ND	87.5	47-133			
Dieldrin	0.353	0.050	ug/L	0.400	ND	88.3	55-130			
Endrin	0.345	0.050	ug/L	0.400	ND	86.2	52-121			
Endosulfan II	0.336	0.050	ug/L	0.400	ND	84.1	60-120			
4,4'-DDD	0.344	0.050	ug/L	0.400	ND	86.0	60-120			
Endrin Aldehyde	0.330	0.050	ug/L	0.400	ND	82.5	53-120			
4,4'-DDT	0.347	0.050	ug/L	0.400	ND	86.7	57-122			
Endosulfan Sulfate	0.345	0.050	ug/L	0.400	ND	86.3	56-120			
Endrin Ketone	0.341	0.050	ug/L	0.400	ND	85.2	61-120			
Methoxychlor	1.64	0.250	ug/L	2.00	ND	81.9	55-120			
Surrogate: Decachlorobiphenyl	0.308		ug/L	0.400		77.0	11-144			
Surrogate: Decachlorobiphenyl [2C]	0.320		ug/L	0.400		80.0	11-144			
Surrogate: Tetrachlorometaxylene	0.328		ug/L	0.400		82.0	30-120			
Surrogate: Tetrachlorometaxylene [2C]	0.316		ug/L	0.400		79.1	30-120			

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0441 - EPA 8081B

Instrument: ECD6 Analyst: RT/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0441-MSD1)										
		Source: 24C0326-03			Prepared: 18-Mar-2024		Analyzed: 13-Apr-2024 03:43			
alpha-BHC	0.172	0.025	ug/L	0.200	ND	86.0	54-124	1.08	30	
beta-BHC	0.165	0.025	ug/L	0.200	ND	82.5	53-123	2.54	30	
gamma-BHC (Lindane)	0.173	0.025	ug/L	0.200	ND	86.5	53-127	2.47	30	
delta-BHC	0.173	0.025	ug/L	0.200	ND	86.3	53-122	9.13	30	
Heptachlor	0.212	0.025	ug/L	0.200	ND	106	50-120	3.48	30	
Aldrin	0.168	0.025	ug/L	0.200	ND	84.0	47-120	12.70	30	
Heptachlor Epoxide	0.172	0.050	ug/L	0.200	ND	86.0	50-127	0.58	30	
trans-Chlordane (beta-Chlordane)	0.171	0.025	ug/L	0.200	ND	85.5	47-127	0.95	30	
cis-Chlordane (alpha-chlordane)	0.165	0.025	ug/L	0.200	ND	82.5	51-132	4.49	30	
Endosulfan I	0.167	0.025	ug/L	0.200	ND	83.5	48-137	4.71	30	
4,4'-DDE	0.334	0.050	ug/L	0.400	ND	83.5	47-133	4.74	30	
Dieldrin	0.335	0.050	ug/L	0.400	ND	83.8	55-130	5.23	30	
Endrin	0.320	0.050	ug/L	0.400	ND	79.9	52-121	7.59	30	
Endosulfan II	0.319	0.050	ug/L	0.400	ND	79.7	60-120	5.33	30	
4,4'-DDD	0.327	0.050	ug/L	0.400	ND	81.7	60-120	5.25	30	
Endrin Aldehyde	0.316	0.050	ug/L	0.400	ND	79.0	53-120	4.57	30	
4,4'-DDT	0.327	0.050	ug/L	0.400	ND	81.9	57-122	5.76	30	
Endosulfan Sulfate	0.327	0.050	ug/L	0.400	ND	81.7	56-120	5.42	30	
Endrin Ketone	0.327	0.050	ug/L	0.400	ND	81.9	61-120	3.96	30	
Methoxychlor	1.56	0.250	ug/L	2.00	ND	78.1	55-120	4.75	30	
Surrogate: Decachlorobiphenyl	0.321		ug/L	0.400		80.1	11-144			
Surrogate: Decachlorobiphenyl [2C]	0.330		ug/L	0.400		82.6	11-144			
Surrogate: Tetrachlorometaxylene	0.317		ug/L	0.400		79.4	30-120			
Surrogate: Tetrachlorometaxylene [2C]	0.314		ug/L	0.400		78.4	30-120			

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0441 - EPA 8081B

Chlorinated Pesticides - Quality Control

Batch BMC0460 - EPA 8081B

Instrument: ECD6 Analyst: RT/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0460-BLK1)										
Prepared: 19-Mar-2024 Analyzed: 13-Apr-2024 12:36										
alpha-BHC	ND	0.025	ug/L							U
beta-BHC	ND	0.025	ug/L							U
gamma-BHC (Lindane)	ND	0.025	ug/L							U
delta-BHC	ND	0.025	ug/L							U
Heptachlor	ND	0.025	ug/L							U
Aldrin	ND	0.025	ug/L							U
Heptachlor Epoxide	ND	0.050	ug/L							U
trans-Chlordane (beta-Chlordane)	ND	0.025	ug/L							U
cis-Chlordane (alpha-chlordane)	ND	0.025	ug/L							U
Endosulfan I	ND	0.025	ug/L							U
4,4'-DDE	ND	0.050	ug/L							U
Dieldrin	ND	0.050	ug/L							U
Endrin	ND	0.050	ug/L							U
Endosulfan II	ND	0.050	ug/L							U
4,4'-DDD	ND	0.050	ug/L							U
Endrin Aldehyde	ND	0.050	ug/L							U
4,4'-DDT	ND	0.050	ug/L							U
Endosulfan Sulfate	ND	0.050	ug/L							U
Endrin Ketone	ND	0.050	ug/L							U
Methoxychlor	ND	0.250	ug/L							U
Toxaphene	ND	1.25	ug/L							U
Surrogate: Decachlorobiphenyl	0.288		ug/L	0.400		72.0	11-144			
Surrogate: Decachlorobiphenyl [2C]	0.279		ug/L	0.400		69.7	11-144			
Surrogate: Tetrachlorometaxylene	0.252		ug/L	0.400		63.0	30-120			
Surrogate: Tetrachlorometaxylene [2C]	0.254		ug/L	0.400		63.5	30-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0460 - EPA 8081B

Instrument: ECD6 Analyst: RT/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0460-BS1)						Prepared: 19-Mar-2024 Analyzed: 13-Apr-2024 12:55				
alpha-BHC [2C]	0.126	0.025	ug/L	0.200		63.2	54-124			
beta-BHC	0.125	0.025	ug/L	0.200		62.3	53-123			
gamma-BHC (Lindane) [2C]	0.125	0.025	ug/L	0.200		62.6	53-127			
delta-BHC [2C]	0.146	0.025	ug/L	0.200		73.2	53-122			
Heptachlor [2C]	0.135	0.025	ug/L	0.200		67.4	50-120			
Aldrin [2C]	0.126	0.025	ug/L	0.200		63.2	47-120			
Heptachlor Epoxide [2C]	0.135	0.050	ug/L	0.200		67.5	50-127			
trans-Chlordane (beta-Chlordane) [2C]	0.136	0.025	ug/L	0.200		67.8	47-127			
cis-Chlordane (alpha-chlordane) [2C]	0.133	0.025	ug/L	0.200		66.5	51-132			
Endosulfan I [2C]	0.139	0.025	ug/L	0.200		69.6	48-137			
4,4'-DDE [2C]	0.283	0.050	ug/L	0.400		70.9	47-133			
Dieldrin [2C]	0.279	0.050	ug/L	0.400		69.7	55-130			
Endrin [2C]	0.260	0.050	ug/L	0.400		64.9	52-121			
Endosulfan II [2C]	0.265	0.050	ug/L	0.400		66.3	60-120			
4,4'-DDD [2C]	0.270	0.050	ug/L	0.400		67.5	60-120			
Endrin Aldehyde [2C]	0.213	0.050	ug/L	0.400		53.3	53-120			
4,4'-DDT [2C]	0.280	0.050	ug/L	0.400		70.0	57-122			
Endosulfan Sulfate [2C]	0.289	0.050	ug/L	0.400		72.3	56-120			
Endrin Ketone [2C]	0.280	0.050	ug/L	0.400		70.0	61-120			
Methoxychlor [2C]	1.33	0.250	ug/L	2.00		66.4	55-120			
Surrogate: Decachlorobiphenyl	0.204		ug/L	0.400		50.9	11-144			
Surrogate: Decachlorobiphenyl [2C]	0.199		ug/L	0.400		49.7	11-144			
Surrogate: Tetrachlorometaxylene	0.242		ug/L	0.400		60.5	30-120			
Surrogate: Tetrachlorometaxylene [2C]	0.246		ug/L	0.400		61.5	30-120			



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0460 - EPA 8081B

Instrument: ECD6 Analyst: RT/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0460-BSD1)		Prepared: 19-Mar-2024 Analyzed: 13-Apr-2024 13:13								
alpha-BHC [2C]	0.133	0.025	ug/L	0.200		66.7	54-124	5.47	30	
beta-BHC	0.137	0.025	ug/L	0.200		68.3	53-123	9.11	30	
gamma-BHC (Lindane) [2C]	0.133	0.025	ug/L	0.200		66.3	53-127	5.72	30	
delta-BHC [2C]	0.155	0.025	ug/L	0.200		77.5	53-122	5.72	30	
Heptachlor [2C]	0.144	0.025	ug/L	0.200		71.9	50-120	6.40	30	
Aldrin [2C]	0.134	0.025	ug/L	0.200		67.0	47-120	5.77	30	
Heptachlor Epoxide [2C]	0.140	0.050	ug/L	0.200		70.1	50-127	3.82	30	
trans-Chlordane (beta-Chlordane) [2C]	0.144	0.025	ug/L	0.200		72.2	47-127	6.24	30	
cis-Chlordane (alpha-chlordane) [2C]	0.143	0.025	ug/L	0.200		71.4	51-132	7.09	30	
Endosulfan I [2C]	0.152	0.025	ug/L	0.200		75.8	48-137	8.51	30	
4,4'-DDE [2C]	0.308	0.050	ug/L	0.400		76.9	47-133	8.20	30	
Dieldrin [2C]	0.303	0.050	ug/L	0.400		75.8	55-130	8.36	30	
Endrin [2C]	0.277	0.050	ug/L	0.400		69.3	52-121	6.50	30	
Endosulfan II [2C]	0.281	0.050	ug/L	0.400		70.2	60-120	5.69	30	
4,4'-DDD [2C]	0.276	0.050	ug/L	0.400		69.0	60-120	2.21	30	
Endrin Aldehyde [2C]	0.258	0.050	ug/L	0.400		64.4	53-120	18.90	30	
4,4'-DDT [2C]	0.287	0.050	ug/L	0.400		71.7	57-122	2.42	30	
Endosulfan Sulfate [2C]	0.309	0.050	ug/L	0.400		77.2	56-120	6.55	30	
Endrin Ketone [2C]	0.295	0.050	ug/L	0.400		73.7	61-120	5.13	30	
Methoxychlor [2C]	1.44	0.250	ug/L	2.00		72.2	55-120	8.27	30	
Surrogate: Decachlorobiphenyl	0.175		ug/L	0.400		43.6	11-144			
Surrogate: Decachlorobiphenyl [2C]	0.183		ug/L	0.400		45.7	11-144			
Surrogate: Tetrachlorometaxylene	0.259		ug/L	0.400		64.8	30-120			
Surrogate: Tetrachlorometaxylene [2C]	0.259		ug/L	0.400		64.8	30-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BMC0460 - EPA 8081B

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0439 - EPA 8082A

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0439-BLK1)				Prepared: 18-Mar-2024 Analyzed: 15-Apr-2024 14:32						
Aroclor 1016	ND	0.010	ug/L							U
Aroclor 1221	ND	0.010	ug/L							U
Aroclor 1232	ND	0.010	ug/L							U
Aroclor 1242	ND	0.010	ug/L							U
Aroclor 1248	ND	0.010	ug/L							U
Aroclor 1254	ND	0.010	ug/L							U
Aroclor 1260	ND	0.010	ug/L							U
Surrogate: Decachlorobiphenyl	0.0128		ug/L	0.0200		64.2	29-120			
Surrogate: Tetrachlorometaxylene	0.0122		ug/L	0.0200		61.2	32-120			
Surrogate: Decachlorobiphenyl [2C]	0.0127		ug/L	0.0200		63.3	29-120			
Surrogate: Tetrachlorometaxylene [2C]	0.0108		ug/L	0.0200		54.1	32-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0439 - EPA 8082A

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0439-BS1)				Prepared: 18-Mar-2024 Analyzed: 15-Apr-2024 15:14						
Aroclor 1016 [2C]	0.038	0.010	ug/L	0.0500		76.9	54-120			
Aroclor 1260 [2C]	0.029	0.010	ug/L	0.0500		57.7	51-128			
Surrogate: Decachlorobiphenyl	0.0117		ug/L	0.0200		58.3	29-120			
Surrogate: Tetrachlorometaxylene	0.0131		ug/L	0.0200		65.6	32-120			
Surrogate: Decachlorobiphenyl [2C]	0.0115		ug/L	0.0200		57.3	29-120			
Surrogate: Tetrachlorometaxylene [2C]	0.0109		ug/L	0.0200		54.4	32-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0439 - EPA 8082A

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0439-BSD1)				Prepared: 18-Mar-2024 Analyzed: 15-Apr-2024 15:35						
Aroclor 1016 [2C]	0.042	0.010	ug/L	0.0500		84.0	54-120	8.76	30	
Aroclor 1260 [2C]	0.035	0.010	ug/L	0.0500		69.5	51-128	18.60	30	
Surrogate: Decachlorobiphenyl	0.0121		ug/L	0.0200		60.3	29-120			
Surrogate: Tetrachlorometaxylene	0.0132		ug/L	0.0200		65.8	32-120			
Surrogate: Decachlorobiphenyl [2C]	0.0122		ug/L	0.0200		61.0	29-120			
Surrogate: Tetrachlorometaxylene [2C]	0.0102		ug/L	0.0200		51.1	32-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0439 - EPA 8082A

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0439-MS1)		Source: 24C0326-03		Prepared: 18-Mar-2024		Analyzed: 15-Apr-2024 16:38				
Aroclor 1016	0.044	0.010	ug/L	0.0500	ND	88.0	54-120			
Aroclor 1260	0.027	0.010	ug/L	0.0500	ND	53.7	51-128			
Surrogate: Decachlorobiphenyl	0.0111		ug/L	0.0200		55.3	29-120			
Surrogate: Tetrachlorometaxylene	0.0122		ug/L	0.0200		60.8	32-120			
Surrogate: Decachlorobiphenyl [2C]	0.0111		ug/L	0.0200		55.6	29-120			
Surrogate: Tetrachlorometaxylene [2C]	0.00898		ug/L	0.0200		44.9	32-120			

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0439 - EPA 8082A

Instrument: ECD7 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMC0439-MSD1)		Source: 24C0326-03		Prepared: 18-Mar-2024		Analyzed: 15-Apr-2024 16:59				
Aroclor 1016	0.037	0.010	ug/L	0.0500	ND	74.0	54-120	17.00	30	
Aroclor 1260	0.024	0.010	ug/L	0.0500	ND	48.3	51-128	10.60	30	*
<i>Surrogate: Decachlorobiphenyl</i>	0.0112		ug/L	0.0200		56.1	29-120			
<i>Surrogate: Tetrachlorometaxylene</i>	0.0111		ug/L	0.0200		55.7	32-120			
<i>Surrogate: Decachlorobiphenyl [2C]</i>	0.0112		ug/L	0.0200		56.0	29-120			
<i>Surrogate: Tetrachlorometaxylene [2C]</i>	0.00889		ug/L	0.0200		44.5	32-120			

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0439 - EPA 8082A

Aroclor PCB - Quality Control

Batch BMC0461 - EPA 8082A

Instrument: ECD7 Analyst: RJL

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0461-BLK1)										
				Prepared: 19-Mar-2024 Analyzed: 10-Apr-2024 09:57						
Aroclor 1016	ND	0.010	ug/L							U
Aroclor 1221	ND	0.010	ug/L							U
Aroclor 1232	ND	0.010	ug/L							U
Aroclor 1242	ND	0.010	ug/L							U
Aroclor 1248	ND	0.010	ug/L							U
Aroclor 1254	ND	0.010	ug/L							U
Aroclor 1260	ND	0.010	ug/L							U
Surrogate: Decachlorobiphenyl	0.0124		ug/L	0.0200		61.9	29-120			
Surrogate: Tetrachlorometaxylene	0.0144		ug/L	0.0200		71.8	32-120			
Surrogate: Decachlorobiphenyl [2C]	0.0116		ug/L	0.0200		58.1	29-120			
Surrogate: Tetrachlorometaxylene [2C]	0.0104		ug/L	0.0200		52.2	32-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0461 - EPA 8082A

Instrument: ECD7 Analyst: RJL

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0461-BS1)				Prepared: 19-Mar-2024 Analyzed: 10-Apr-2024 10:17						
Aroclor 1016 [2C]	0.040	0.010	ug/L	0.0500		80.0	54-120			P1
Aroclor 1260 [2C]	0.037	0.010	ug/L	0.0500		74.0	51-128			P1, E
Surrogate: Decachlorobiphenyl	0.0138		ug/L	0.0200		69.0	29-120			
Surrogate: Tetrachlorometaxylene	0.0140		ug/L	0.0200		70.0	32-120			
Surrogate: Decachlorobiphenyl [2C]	0.0125		ug/L	0.0200		62.6	29-120			
Surrogate: Tetrachlorometaxylene [2C]	0.0117		ug/L	0.0200		58.3	32-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0461 - EPA 8082A

Instrument: ECD7 Analyst: RJL

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMC0461-BSD1)				Prepared: 19-Mar-2024 Analyzed: 10-Apr-2024 10:38						
Aroclor 1016 [2C]	0.042	0.010	ug/L	0.0500		84.6	54-120	5.65	30	P1
Aroclor 1260 [2C]	0.037	0.010	ug/L	0.0500		74.1	51-128	0.14	30	P1
Surrogate: Decachlorobiphenyl	0.0155		ug/L	0.0200		77.3	29-120			
Surrogate: Tetrachlorometaxylene	0.0161		ug/L	0.0200		80.4	32-120			
Surrogate: Decachlorobiphenyl [2C]	0.0141		ug/L	0.0200		70.7	29-120			
Surrogate: Tetrachlorometaxylene [2C]	0.0124		ug/L	0.0200		62.0	32-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMC0461 - EPA 8082A

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMC0644 - EPA 200.8

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0644-BLK1)			Prepared: 25-Mar-2024 Analyzed: 28-Mar-2024 19:16								
Antimony	121	ND	0.00300	mg/L							U
Lead	208	ND	0.0100	mg/L							U
Thallium	205	ND	0.00200	mg/L							U
Arsenic	75a	ND	0.00300	mg/L							U
Blank (BMC0644-BLK2)			Prepared: 25-Mar-2024 Analyzed: 04-Apr-2024 17:19								
Selenium	78	ND	0.0250	mg/L							U
LCS (BMC0644-BS1)			Prepared: 25-Mar-2024 Analyzed: 28-Mar-2024 19:21								
Antimony	121	0.0264	0.00300	mg/L	0.0250		106	80-120			
Lead	208	0.0272	0.0100	mg/L	0.0250		109	80-120			
Thallium	205	0.0270	0.00200	mg/L	0.0250		108	80-120			
Arsenic	75a	0.0277	0.00300	mg/L	0.0250		111	80-120			
LCS (BMC0644-BS2)			Prepared: 25-Mar-2024 Analyzed: 04-Apr-2024 17:24								
Selenium	78	0.0929	0.0250	mg/L	0.0800		116	80-120			
Duplicate (BMC0644-DUP1)			Source: 24C0326-03			Prepared: 25-Mar-2024 Analyzed: 28-Mar-2024 22:02					
Antimony	121	ND	0.00300	mg/L		ND					U
Lead	208	ND	0.0100	mg/L		ND					U
Thallium	205	ND	0.00200	mg/L		ND					U
Arsenic	75a	ND	0.00300	mg/L		ND					U
Duplicate (BMC0644-DUP2)			Source: 24C0326-03			Prepared: 25-Mar-2024 Analyzed: 04-Apr-2024 18:59					
Selenium	78	ND	0.0250	mg/L		ND					U
Matrix Spike (BMC0644-MS1)			Source: 24C0326-03			Prepared: 25-Mar-2024 Analyzed: 28-Mar-2024 22:07					
Antimony	121	0.0260	0.00300	mg/L	0.0250	ND	104	75-125			
Lead	208	0.0252	0.0100	mg/L	0.0250	ND	100	75-125			
Thallium	205	0.0256	0.00200	mg/L	0.0250	ND	103	75-125			
Arsenic	75a	0.0266	0.00300	mg/L	0.0250	ND	107	75-125			

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMC0644 - EPA 200.8 UCT-KED

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0644-MS2)			Source: 24C0326-03			Prepared: 25-Mar-2024 Analyzed: 04-Apr-2024 19:04					
Selenium	78	0.0862	0.0250	mg/L	0.0800	ND	108	75-125			

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

Matrix Spike Dup (BMC0644-MSD1)			Source: 24C0326-03			Prepared: 25-Mar-2024 Analyzed: 28-Mar-2024 22:11					
QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	121	0.0257	0.00300	mg/L	0.0250	ND	103	75-125	0.92	20	
Lead	208	0.0243	0.0100	mg/L	0.0250	ND	97.0	75-125	3.57	20	
Thallium	205	0.0247	0.00200	mg/L	0.0250	ND	98.7	75-125	3.84	20	
Arsenic	75a	0.0272	0.00300	mg/L	0.0250	ND	109	75-125	2.08	20	

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

Matrix Spike Dup (BMC0644-MSD2)			Source: 24C0326-03			Prepared: 25-Mar-2024 Analyzed: 04-Apr-2024 19:09					
QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Selenium	78	0.0854	0.0250	mg/L	0.0800	ND	107	75-125	0.91	20	

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMC0681 - EPA 7470A

Instrument: HYDRA Analyst: ML

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0681-BLK1)					Prepared: 26-Mar-2024 Analyzed: 29-Mar-2024 12:57					
Mercury	ND	0.00100	mg/L							U
LCS (BMC0681-BS1)					Prepared: 26-Mar-2024 Analyzed: 29-Mar-2024 12:59					
Mercury	0.00183	0.00100	mg/L	0.00200		91.6	80-120			
Duplicate (BMC0681-DUP1)					Source: 24C0326-03 Prepared: 26-Mar-2024 Analyzed: 29-Mar-2024 13:04					
Mercury	ND	0.00100	mg/L		ND					U
Matrix Spike (BMC0681-MS1)					Source: 24C0326-03 Prepared: 26-Mar-2024 Analyzed: 29-Mar-2024 13:06					
Mercury	ND	0.00100	mg/L	0.00100	ND	92.3	75-125			U

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

Matrix Spike Dup (BMC0681-MSD1)					Source: 24C0326-03 Prepared: 26-Mar-2024 Analyzed: 29-Mar-2024 13:08					
Mercury	ND	0.00100	mg/L	0.00100	ND	91.9	75-125			U

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



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMC0716 - EPA 6010D

Instrument: ICP3 Analyst: SH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMC0716-BLK1)										
Prepared: 27-Mar-2024 Analyzed: 29-Mar-2024 14:49										
Barium	ND	0.500	mg/L							U
Beryllium	ND	0.0100	mg/L							U
Cadmium	ND	0.0020	mg/L							U
Calcium	ND	0.500	mg/L							U
Chromium	ND	0.0100	mg/L							U
Copper	ND	0.0030	mg/L							U
Iron	ND	0.200	mg/L							U
Magnesium	ND	0.500	mg/L							U
Manganese	ND	0.0100	mg/L							U
Nickel	ND	0.0100	mg/L							U
Potassium	ND	0.500	mg/L							U
Silver	ND	0.0050	mg/L							U
Sodium	ND	0.500	mg/L							U
Vanadium	ND	0.0030	mg/L							U
Zinc	ND	0.0200	mg/L							U
Blank (BMC0716-BLK2)										
Prepared: 27-Mar-2024 Analyzed: 02-Apr-2024 12:21										
Aluminum	ND	1.00	mg/L							U
Cobalt	ND	0.0100	mg/L							U
LCS (BMC0716-BS1)										
Prepared: 27-Mar-2024 Analyzed: 29-Mar-2024 14:55										
Barium	1.97	0.500	mg/L	2.00		98.4	80-120			
Beryllium	0.503	0.0100	mg/L	0.500		101	80-120			
Cadmium	0.506	0.0020	mg/L	0.500		101	80-120			
Calcium	10.2	0.500	mg/L	10.0		102	80-120			
Chromium	0.500	0.0100	mg/L	0.500		100	80-120			
Copper	0.494	0.0030	mg/L	0.500		98.7	80-120			
Iron	2.13	0.200	mg/L	2.00		107	80-120			
Magnesium	10.1	0.500	mg/L	10.0		101	80-120			
Manganese	0.491	0.0100	mg/L	0.500		98.2	80-120			
Nickel	0.499	0.0100	mg/L	0.500		99.8	80-120			
Potassium	10.1	0.500	mg/L	10.0		101	80-120			
Silver	0.505	0.0050	mg/L	0.500		101	80-120			
Sodium	9.91	0.500	mg/L	10.0		99.1	80-120			
Vanadium	0.504	0.0030	mg/L	0.500		101	80-120			
Zinc	0.490	0.0200	mg/L	0.500		97.9	80-120			



Golder Associates 18300 NE Union Hill Road Suite 200 Redmond WA, 98052-3333	Project: Landsburg Project Number: GL9231000007.2023 Project Manager: Gary Zimmerman	Reported: 22-Apr-2024 14:38
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Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMC0716 - EPA 6010D

Instrument: ICP3 Analyst: SH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMC0716-BS2)		Prepared: 27-Mar-2024 Analyzed: 02-Apr-2024 12:24								
Aluminum	2.09	1.00	mg/L	2.00		105	80-120			
Cobalt	0.502	0.0100	mg/L	0.500		100	80-120			
Duplicate (BMC0716-DUP1)		Source: 24C0326-03		Prepared: 27-Mar-2024 Analyzed: 29-Mar-2024 17:26						
Barium	ND	0.500	mg/L		ND					U
Beryllium	ND	0.0100	mg/L		ND					U
Cadmium	ND	0.0020	mg/L		ND					U
Calcium	109	0.500	mg/L		106			3.14	20	
Chromium	ND	0.0100	mg/L		ND					U
Copper	ND	0.0030	mg/L		ND					U
Iron	0.587	0.200	mg/L		0.572			2.50	20	
Magnesium	67.3	0.500	mg/L		65.2			3.13	20	
Manganese	0.171	0.0100	mg/L		0.166			2.90	20	
Nickel	ND	0.0100	mg/L		ND					U
Potassium	3.63	0.500	mg/L		3.58			1.35	20	
Silver	ND	0.0050	mg/L		ND					U
Sodium	24.3	0.500	mg/L		23.5			3.34	20	
Sodium	ND	50.0	mg/L		ND					U
Vanadium	ND	0.0030	mg/L		ND					U
Zinc	ND	0.0200	mg/L		ND					U
Duplicate (BMC0716-DUP2)		Source: 24C0326-03		Prepared: 27-Mar-2024 Analyzed: 02-Apr-2024 13:45						
Aluminum	ND	1.00	mg/L		ND					U
Cobalt	ND	0.0100	mg/L		ND					U
Matrix Spike (BMC0716-MS1)		Source: 24C0326-03		Prepared: 27-Mar-2024 Analyzed: 29-Mar-2024 17:29						
Barium	2.38	0.500	mg/L	2.00	ND	101	75-125			
Beryllium	0.518	0.0100	mg/L	0.500	ND	104	75-125			
Cadmium	0.504	0.0020	mg/L	0.500	ND	101	75-125			
Calcium	117	0.500	mg/L	10.0	106	110	75-125			
Chromium	0.507	0.0100	mg/L	0.500	ND	101	75-125			
Copper	0.516	0.0030	mg/L	0.500	ND	103	75-125			
Iron	2.76	0.200	mg/L	2.00	0.572	109	75-125			
Magnesium	76.0	0.500	mg/L	10.0	65.2	108	75-125			
Manganese	0.656	0.0100	mg/L	0.500	0.166	97.9	75-125			
Nickel	0.496	0.0100	mg/L	0.500	ND	99.3	75-125			



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Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMC0716 - EPA 6010D

Instrument: ICP3 Analyst: SH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMC0716-MS1)		Source: 24C0326-03		Prepared: 27-Mar-2024		Analyzed: 29-Mar-2024 17:29				
Potassium	14.0	0.500	mg/L	10.0	3.58	104	75-125			
Silver	0.522	0.0050	mg/L	0.500	ND	104	75-125			
Sodium	33.8	0.500	mg/L	10.0	23.5	102	75-125			
Sodium	ND	50.0	mg/L	10.0	ND	107	75-125			U
Vanadium	0.519	0.0030	mg/L	0.500	ND	104	75-125			

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

Matrix Spike (BMC0716-MS2)		Source: 24C0326-03		Prepared: 27-Mar-2024		Analyzed: 02-Apr-2024 13:48				
Aluminum	2.15	1.00	mg/L	2.00	ND	108	75-125			
Cobalt	0.506	0.0100	mg/L	0.500	ND	101	75-125			

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

Matrix Spike Dup (BMC0716-MSD1)		Source: 24C0326-03		Prepared: 27-Mar-2024		Analyzed: 29-Mar-2024 17:33				
Barium	2.49	0.500	mg/L	2.00	ND	106	75-125	4.17	20	
Beryllium	0.538	0.0100	mg/L	0.500	ND	108	75-125	3.69	20	
Cadmium	0.522	0.0020	mg/L	0.500	ND	104	75-125	3.45	20	
Calcium	123	0.500	mg/L	10.0	106	174	75-125	5.35	20	HC
Chromium	0.525	0.0100	mg/L	0.500	ND	105	75-125	3.61	20	
Copper	0.536	0.0030	mg/L	0.500	ND	107	75-125	3.73	20	
Iron	2.84	0.200	mg/L	2.00	0.572	113	75-125	2.78	20	
Magnesium	80.4	0.500	mg/L	10.0	65.2	152	75-125	5.56	20	HC
Manganese	0.681	0.0100	mg/L	0.500	0.166	103	75-125	3.77	20	
Nickel	0.514	0.0100	mg/L	0.500	ND	103	75-125	3.43	20	
Potassium	14.6	0.500	mg/L	10.0	3.58	110	75-125	3.91	20	
Silver	0.542	0.0050	mg/L	0.500	ND	108	75-125	3.70	20	
Sodium	35.6	0.500	mg/L	10.0	23.5	121	75-125	5.35	20	
Sodium	ND	50.0	mg/L	10.0	ND	124	75-125			U
Vanadium	0.539	0.0030	mg/L	0.500	ND	108	75-125	3.75	20	
Zinc	0.482	0.0200	mg/L	0.500	ND	96.3	75-125			

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

Matrix Spike Dup (BMC0716-MSD2)		Source: 24C0326-03		Prepared: 27-Mar-2024		Analyzed: 02-Apr-2024 13:51				
Aluminum	2.24	1.00	mg/L	2.00	ND	112	75-125	4.12	20	
Cobalt	0.525	0.0100	mg/L	0.500	ND	105	75-125	3.73	20	

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



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 in Water	
Lead-208	NELAP,WADOE,WA-DW,DoD-ELAP
Antimony-121	NELAP,WADOE,WA-DW,DoD-ELAP
Thallium-205	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 200.8 UCT-KED in Water	
Arsenic-75a	NELAP,WADOE,WA-DW,DoD-ELAP
Selenium-78	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 6010D in Water	
Silver	WADOE,NELAP,DoD-ELAP
Aluminum	WADOE,NELAP,DoD-ELAP
Barium	WADOE,NELAP,DoD-ELAP,ADEC
Beryllium	WADOE,NELAP,DoD-ELAP
Calcium	WADOE,NELAP,DoD-ELAP
Cadmium	WADOE,NELAP,DoD-ELAP,ADEC
Cobalt	WADOE,NELAP,DoD-ELAP
Chromium	WADOE,NELAP,DoD-ELAP,ADEC
Copper	WADOE,NELAP,DoD-ELAP
Iron	WADOE,NELAP,DoD-ELAP
Potassium	WADOE,NELAP,DoD-ELAP
Magnesium	WADOE,NELAP,DoD-ELAP
Manganese	WADOE,NELAP,DoD-ELAP
Sodium	DoD-ELAP,WADOE,NELAP
Sodium-1	DoD-ELAP
Nickel	WADOE,NELAP,DoD-ELAP,ADEC
Vanadium	WADOE,NELAP,DoD-ELAP,ADEC
Zinc	WADOE,NELAP,DoD-ELAP
EPA 7470A in Water	
Mercury	WADOE,NELAP,DoD-ELAP
EPA 8081B in Water	
alpha-BHC	DoD-ELAP,NELAP,WADOE



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

alpha-BHC [2C]	DoD-ELAP,NELAP,WADOE
beta-BHC	DoD-ELAP,NELAP,WADOE
beta-BHC [2C]	DoD-ELAP,NELAP,WADOE
gamma-BHC (Lindane)	DoD-ELAP,NELAP,WADOE
gamma-BHC (Lindane) [2C]	DoD-ELAP,NELAP,WADOE
delta-BHC	DoD-ELAP,NELAP,WADOE
delta-BHC [2C]	DoD-ELAP,NELAP,WADOE
Heptachlor	DoD-ELAP,NELAP,WADOE
Heptachlor [2C]	DoD-ELAP,NELAP,WADOE
Aldrin	DoD-ELAP,NELAP,WADOE
Aldrin [2C]	DoD-ELAP,NELAP,WADOE
Heptachlor Epoxide	DoD-ELAP,NELAP,WADOE
Heptachlor Epoxide [2C]	DoD-ELAP,NELAP,WADOE
trans-Chlordane (beta-Chlordane)	DoD-ELAP,NELAP,WADOE
trans-Chlordane (beta-Chlordane)	DoD-ELAP,NELAP,WADOE
cis-Chlordane (alpha-chlordane)	DoD-ELAP,NELAP,WADOE
cis-Chlordane (alpha-chlordane)	DoD-ELAP,NELAP,WADOE
Endosulfan I	DoD-ELAP,NELAP,WADOE
Endosulfan I [2C]	DoD-ELAP,NELAP,WADOE
4,4'-DDE	DoD-ELAP,NELAP,WADOE
4,4'-DDE [2C]	DoD-ELAP,NELAP,WADOE
Dieldrin	DoD-ELAP,NELAP,WADOE
Dieldrin [2C]	DoD-ELAP,NELAP,WADOE
Endrin	DoD-ELAP,NELAP,WADOE
Endrin [2C]	DoD-ELAP,NELAP,WADOE
Endosulfan II	DoD-ELAP,NELAP,WADOE
Endosulfan II [2C]	DoD-ELAP,NELAP,WADOE
4,4'-DDD	DoD-ELAP,NELAP,WADOE
4,4'-DDD [2C]	DoD-ELAP,NELAP,WADOE
Endrin Aldehyde	DoD-ELAP,NELAP,WADOE
Endrin Aldehyde [2C]	DoD-ELAP,NELAP,WADOE
4,4'-DDT	DoD-ELAP,NELAP,WADOE
4,4'-DDT [2C]	DoD-ELAP,NELAP,WADOE



Golder Associates
18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Endosulfan Sulfate	DoD-ELAP,NELAP,WADOE
Endosulfan Sulfate [2C]	DoD-ELAP,NELAP,WADOE
Endrin Ketone	DoD-ELAP,NELAP,WADOE
Endrin Ketone [2C]	DoD-ELAP,NELAP,WADOE
Methoxychlor	DoD-ELAP,NELAP,WADOE
Methoxychlor [2C]	DoD-ELAP,NELAP,WADOE
Toxaphene	DoD-ELAP,NELAP,WADOE
Toxaphene [2C]	DoD-ELAP,NELAP,WADOE

EPA 8082A in Water

Aroclor 1016	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,ADEC

EPA 8260D in Water

Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroeth	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE



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18300 NE Union Hill Road Suite 200
Redmond WA, 98052-3333

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Project Number: GL9231000007.2023
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Reported:
22-Apr-2024 14:38

Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE



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22-Apr-2024 14:38

Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE

EPA 8270E in Water

Phenol	DoD-ELAP,WADOE,NELAP
bis(2-chloroethyl) ether	DoD-ELAP,WADOE,NELAP
2-Chlorophenol	DoD-ELAP,WADOE,NELAP



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Reported:
22-Apr-2024 14:38

1,3-Dichlorobenzene	DoD-ELAP,WADOE,NELAP
1,4-Dichlorobenzene	DoD-ELAP,WADOE,NELAP
Benzyl Alcohol	DoD-ELAP,WADOE,NELAP
1,2-Dichlorobenzene	DoD-ELAP,WADOE,NELAP
2-Methylphenol	DoD-ELAP,WADOE,NELAP
2,2'-Oxybis(1-chloropropane)	DoD-ELAP
4-Methylphenol	DoD-ELAP,WADOE,NELAP
N-Nitroso-di-n-Propylamine	DoD-ELAP,WADOE,NELAP
Hexachloroethane	DoD-ELAP,WADOE,NELAP
Nitrobenzene	DoD-ELAP,WADOE,NELAP
Isophorone	DoD-ELAP,WADOE,NELAP
2-Nitrophenol	DoD-ELAP,WADOE,NELAP
2,4-Dimethylphenol	DoD-ELAP,WADOE,NELAP
Bis(2-Chloroethoxy)methane	DoD-ELAP,WADOE,NELAP
Benzoic acid	DoD-ELAP,WADOE,NELAP
2,4-Dichlorophenol	DoD-ELAP,WADOE,NELAP
1,2,4-Trichlorobenzene	DoD-ELAP,WADOE,NELAP
Naphthalene	DoD-ELAP,WADOE,ADEC,NELAP
4-Chloroaniline	DoD-ELAP,WADOE,NELAP
Hexachlorobutadiene	DoD-ELAP,WADOE,NELAP
4-Chloro-3-Methylphenol	DoD-ELAP,WADOE,NELAP
2-Methylnaphthalene	DoD-ELAP,WADOE,ADEC,NELAP
Hexachlorocyclopentadiene	DoD-ELAP,WADOE,NELAP
2,4,6-Trichlorophenol	DoD-ELAP,WADOE,NELAP
2,4,5-Trichlorophenol	DoD-ELAP,WADOE,NELAP
2-Chloronaphthalene	DoD-ELAP,WADOE,NELAP
2-Nitroaniline	DoD-ELAP,WADOE,NELAP
Dimethylphthalate	DoD-ELAP,WADOE,NELAP
Acenaphthylene	DoD-ELAP,WADOE,ADEC,NELAP
2,6-Dinitrotoluene	DoD-ELAP,WADOE,NELAP
3-Nitroaniline	DoD-ELAP,WADOE,NELAP
Acenaphthene	DoD-ELAP,WADOE,ADEC,NELAP
2,4-Dinitrophenol	DoD-ELAP,WADOE,NELAP



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Redmond WA, 98052-3333

Project: Landsburg
Project Number: GL9231000007.2023
Project Manager: Gary Zimmerman

Reported:
22-Apr-2024 14:38

Dibenzofuran	DoD-ELAP,WADOE,ADEC,NELAP
4-Nitrophenol	DoD-ELAP,WADOE,NELAP
2,4-Dinitrotoluene	DoD-ELAP,WADOE,NELAP
Fluorene	DoD-ELAP,WADOE,ADEC,NELAP
Diethyl phthalate	DoD-ELAP,WADOE,NELAP
4-Chlorophenylphenyl ether	DoD-ELAP,WADOE,NELAP
4-Nitroaniline	DoD-ELAP,WADOE,NELAP
4,6-Dinitro-2-methylphenol	DoD-ELAP,WADOE,NELAP
N-Nitrosodiphenylamine	DoD-ELAP
4-Bromophenyl phenyl ether	DoD-ELAP,WADOE,NELAP
Hexachlorobenzene	DoD-ELAP,WADOE,NELAP
Pentachlorophenol	DoD-ELAP,WADOE,NELAP
Phenanthrene	DoD-ELAP,WADOE,ADEC,NELAP
Anthracene	DoD-ELAP,WADOE,ADEC,NELAP
Carbazole	DoD-ELAP,WADOE,ADEC,NELAP
Di-n-Butylphthalate	DoD-ELAP,WADOE,NELAP
Fluoranthene	DoD-ELAP,WADOE,ADEC,NELAP
Pyrene	DoD-ELAP,WADOE,ADEC,NELAP
Butylbenzylphthalate	DoD-ELAP,WADOE,NELAP
Benzo(a)anthracene	DoD-ELAP,WADOE,ADEC,NELAP
3,3'-Dichlorobenzidine	DoD-ELAP
Chrysene	DoD-ELAP,WADOE,ADEC,NELAP
bis(2-Ethylhexyl)phthalate	DoD-ELAP,WADOE,NELAP
Di-n-Octylphthalate	DoD-ELAP,WADOE,NELAP
Benzo(a)pyrene	DoD-ELAP,WADOE,ADEC,NELAP
Indeno(1,2,3-cd)pyrene	DoD-ELAP,WADOE,ADEC,NELAP
Dibenzo(a,h)anthracene	DoD-ELAP,WADOE,ADEC,NELAP
Benzo(g,h,i)perylene	DoD-ELAP,WADOE,ADEC,NELAP
Benzofluoranthenes, Total	DoD-ELAP,WADOE,ADEC,NELAP
1-Methylnaphthalene	DoD-ELAP,WADOE,ADEC,NELAP

EPA 8270E-SIM in Water

1,4-Dioxane	WADOE,NELAP,DoD-ELAP
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NWTPH-HCID in Water



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Gasoline Range Organics (Tol-C	NELAP,DoD-ELAP,WADOE
Diesel Range Organics (C12-C2	NELAP,DoD-ELAP,WADOE
Motor Oil Range Organics (C24-	NELAP,DoD-ELAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2024
WADOE	WA Dept of Ecology	C558	06/30/2024
WA-DW	Ecology - Drinking Water	C558	06/30/2024



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Reported:
22-Apr-2024 14:38

Notes and Definitions

- * Flagged value is not within established control limits.
- D The reported value is from a dilution
- D1 Surrogate was not detected due to sample extract dilution
- E The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
- H Hold time violation - Hold time was exceeded.
- HC The natural concentration of the spiked analyte is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- J Estimated concentration value detected below the reporting limit.
- L Analyte concentration is ≤ 5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
- M Estimated value for a GC/MS analyte detected and confirmed by an analyst but with low spectral match parameters.
- P1 The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
- U This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- [2C] Indicates this result was quantified on the second column on a dual column analysis.

APPENDIX C

**Sample Integrity Data Sheets
(SIDS)**

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-2

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated Pump Grundfos

Date March 11, 2024 **Time** 09:55

Media Water **Station** LMW-2

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 6.04 ft BTOC

Screened Interval: 27.9' - 38.1' BGS

Sand Pack Interval: 24.8' - 38.1' BGS

Packer Depth: N/A

Sample Description Clear, slight sulfur odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-2

Date 03/11/2024

Time Begin Purge 09:05

Time Collect Sample 09:55

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
6.04	09:35	6.62	1,061	10.3	7.99	73.3	0.63
6.04	09:35	6.64	1,008	10.3	6.99	28.7	1.93
6.04	09:40	6.67	944	10.4	6.02	-10.8	0.84
6.04	09:45	6.67	918	10.4	5.7	-22.7	0.82
6.04	09:50	6.68	883	10.4	5.33	-35.2	0.62
6.04	09:50	6.69	859	10.4	5.09	-43.2	1.03
6.04	09:50	6.7	848	10.4	4.97	-47.1	2.13
6.04	09:50	6.7	830	10.4	4.77	-53.1	0.54

Comments:

Duplicate collected at 10:05

Grundfos: ~80 Hz

Packer: N/A

Tank: N/A

Throttle: N/A

CPM: N/A

CID: N/A

Flow Rate: 2400 mL/min

Sampler *ADL*

Date March 11, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-3

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated Pump Grundfos

Date March 13, 2024 **Time** 10:10

Media Water **Station** LMW-3

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 11.09 ft BTOC

Screened Interval: 49.8' - 64.8' BGS

Sand Pack Interval: 47.1' - 64.8' BGS

Packer Depth: 39.33' BGS

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-3

Date 03/13/2024

Time Begin Purge 09:37

Time Collect Sample 10:10

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
14.85	09:40	7.78	305.1	10.4	8.38	85.4	0.47
14.65	09:45	7.71	308.3	10.7	7.41	81.8	0.18
13.81	09:50	7.7	306.6	10.4	6.74	79.3	0.2
14.65	09:55	7.7	304.9	10.7	6.31	77.7	0.21
14.89	10:00	7.72	305.6	10.7	5.82	76.4	0.16
14.93	10:05	7.72	304.4	10.7	5.58	74.5	0.2
14.94	10:10	7.73	304.5	10.7	5.3	72.3	0.18

Comments:

Slowed to 85 Hz

Grundfos: ~135 Hz

Packer: 130 psi

Tank: N/A

Throttle: N/A

CPM: N/A

CID: N/A

Flow Rate: mL/min

Sampler 

Date March 13, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-4

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated Pump Grundfos

Date March 11, 2024 **Time** 12:00

Media Water **Station** LMW-4

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 8.63 ft BTOC

Screened Interval: 195' - 209.7' BGS

Sand Pack Interval: 189' - 209.7' BGS

Packer Depth: 187.3' BGS

Sample Description Clear, slight sulfur odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
9-40 mL	VOA	VOA vial	HCl
3-500 mL	Total Metals	HDPE	HNO3
8-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
6-1000 mL	PCBs	Glass amber	None
6-1000 mL	Pesticides	Glass amber	None
6-1000 mL	SVOCs	Glass amber	None
6-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-4

Date 03/11/2024

Time Begin Purge 11:13

Time Collect Sample 12:00

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
8.63	11:15	7.03	677	9.6	8.63	27.5	0.20
8.63	11:35	6.84	692	9.8	7.88	0.8	0.27
6.83	11:35	6.8	700	9.9	7.01	-14.7	0.93
8.63	11:55	6.79	699	9.9	6.41	-24.4	0.28
8.63	11:55	6.79	694	9.9	5.88	-33.4	0.49
8.63	11:55	6.78	689	10	5.52	-42.8	0.58
8.63	11:55	6.78	684	10	5.22	-52.0	0.48
8.63	11:55	6.78	679	10	4.99	-58.9	0.81
8.63	11:55	6.78	677	10	4.83	-63.8	0.21

Comments:
MS/MSD collected

Grundfos: 80 Hz
Packer: 110 psi
Tank: N/A
Throttle: N/A
CPM: N/A
CID: N/A
Flow Rate: 1050 mL/min

Sampler 

Date March 11, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-5

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated Pump Grundfos

Date March 13, 2024 **Time** 11:25

Media Water **Station** LMW-5

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 12.56 ft BTOC

Screened Interval: 231.8' - 241.8' BGS

Sand Pack Interval: 231.8' - 241.8' BGS

Packer Depth: 222.11' BGS

Sample Description Clear, slight sulfur odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-5

Date 03/13/2024

Time Begin Purge 10:36

Time Collect Sample 11:25

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
12.53	10:40	6.98	588	9.9	7.45	8.7	1.7
12.54	10:45	6.96	587	10	6.51	-40	0.68
12.55	10:50	6.97	585	10.1	6.02	-58.9	0.55
12.53	10:55	5.57	580	10.2	5.52	-76	0.74
12.53	11:00	6.98	577	10.2	5.23	-85.3	0.38
12.54	11:05	6.98	574	10.2	4.96	-93.7	0.36
12.54	11:15	6.99	570	10.3	4.73	-100.3	0.23
12.54	11:15	6.99	568	10.3	4.58	-104.4	0.22
12.54	11:20	6.99	568	10.4	4.39	-108.9	0.24

Comments:

Lowered to 80 Hz

Grundfos: ~135 Hz

Packer: 110 psi

Tank: N/A

Throttle: N/A

CPM: N/A

CID: N/A

Flow Rate: 1300 mL/min

Sampler 

Date March 13, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-6

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated Pump Grundfos

Date March 12, 2024 **Time** 09:15

Media Water **Station** LMW-6

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 22.6 ft BTOC

Screened Interval: 90.9' - 105.9' BGS

Sand Pack Interval: 82.5' - 105.9' BGS

Packer Depth: 81.22' BGS

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-6

Date 03/12/2024

Time Begin Purge 08:31

Time Collect Sample 09:15

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
30.83	08:35	6.49	287.6	9.1	8.28	81.4	13.6
31.21	08:40	6.54	286.8	9.3	7.61	50.2	8.16
31.82	08:45	6.62	283.2	9.4	6.9	19.7	4.01
32.13	08:50	6.65	280.2	9.4	6.51	7.0	2.60
32.39	08:55	6.67	276.9	9.4	6.12	-4.1	1.59
32.57	09:00	6.69	274.3	9.5	5.8	-12.2	1.59
32.71	09:05	6.71	271.3	9.5	5.48	-19.4	0.92
32.82	09:10	6.72	268.4	9.5	5.23	-24.3	0.53
32.89	09:15	6.73	266.9	9.5	5.09	-27.1	0.47

Comments:

Slowed to 120 Hz

Grundfos: 180 Hz

Packer: 110 psi

Tank: N/A

Throttle: N/A

CPM: N/A

CID: N/A

Flow Rate: 1666 mL/min

Sampler 

Date March 12, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-7

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated Pump Grundfos

Date March 11, 2024 **Time** 14:20

Media Water **Station** LMW-7

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 25.38 ft BTOC

Screened Interval: 239.6' - 253.7' BGS

Sand Pack Interval: N/A

Packer Depth: N/A

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-7

Date 03/11/2024

Time Begin Purge 13:35

Time Collect Sample 14:20

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
225.43	13:55	7.37	392.5	10.3	8.39	55.0	1.62
225.41	13:55	7.32	416.3	12.2	7.49	49.6	1.98
225.41	14:05	7.29	424.1	12.8	6.66	37.7	1.64
225.43	14:15	7.28	425.6	12.9	6.1	16.5	1.52
225.44	14:15	7.25	427	12.9	5.61	-31.8	0.92
225.45	14:15	7.21	435.4	13	5.18	-45.2	1.16
225.45	14:20	7.16	445.3	13.1	4.97	-53.2	0.59
225.44	14:20	7.13	450.1	13.1	4.74	-57.8	0.52
225.45	14:20	7.11	456.6	13.1	4.55	-59.9	0.62

Comments:

Grundfos increased to 335 Hz.

Grundfos: 320 Hz

Packer: N/A

Tank: N/A

Throttle: N/A

CPM: N/A

CID: N/A

Flow Rate: 1875 mL/min

Sampler Suez

Date March 11, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-8

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler New Tubing and Peristaltic Pump

Date March 13, 2024 **Time** 09:00

Media Water **Station** LMW-8

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 3.35 ft BTOC

Screened Interval: 8' - 13' BGS

Sand Pack Interval: 6' - 13' BGS

Packer Depth: N/A

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-8

Date 03/13/2024


Time Begin Purge 08:28

Time Collect Sample 09:00

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
7.22	08:35	6.64	611	9.3	8.8	-47.6	71.9
7.92	08:40	6.62	602	9.3	8.05	-64.4	34.2
8.22	08:45	6.63	596	9.4	7.26	-75.2	12.6
8.39	08:50	6.65	592	9.4	6.76	-81.5	7.13
8.45	08:55	6.67	586	9.4	6.37	-85.7	5.52
8.57	09:00	6.68	580	9.4	6.04	-88.8	3.42

Comments:

Grundfos: N/A
 Packer: N/A
 Tank: N/A
 Throttle: N/A
 CPM: N/A
 CID: N/A
 Flow Rate: 500 mL/min

Sampler 

Date March 13, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-9

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated QED Bladder

Date March 13, 2024 **Time** 00:40

Media Water **Station** LMW-9

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 97.65 ft BTOC

Screened Interval: 149' - 159' BGS

Sand Pack Interval: 143.5' - 159' BGS

Packer Depth: N/A

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-9

Date 03/13/2024

Time Begin Purge 11:58

Time Collect Sample 00:40

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
97.65	12:00	7.73	510	9.4	8.69	75.4	0.8
97.65	12:05	6.98	532	10.1	7.39	-7	7.65
97.65	12:10	7	532	10.2	6.53	-46.3	0.54
97.65	12:15	7.01	529	10.2	5.98	-58	1
97.65	12:20	7.01	527	10.2	5.58	-63.7	0.30
97.65	12:25	7.02	523	10.1	5.24	-68	0.72
97.65	12:30	7.02	521	10.1	4.99	-70.3	0.32
97.65	12:35	7.02	518	10	4.79	-72	0.27

Comments:

Grundfos: N/A

Packer: N/A


Tank: 130

Throttle: 95

CPM: 2

CID: 51

Flow Rate: 500 mL/min

Sampler 

Date March 13, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-10

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated QED Bladder

Date March 14, 2024 **Time** 12:40

Media Water **Station** LMW-10

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 0.2 ft BTOC

Screened Interval: 267' - 289' BGS

Sand Pack Interval: 258' - 289' BGS

Packer Depth: N/A

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-10

Date 03/14/2024

Time Begin Purge 11:41

Time Collect Sample 12:40

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
1.08	11:45	8.69	340.9	8.6	6.98	11.6	0.75
1.83	11:50	8.68	343.5	9	5.94	-6.1	0.65
2.54	11:55	8.66	347.2	9.1	5.22	-24.1	0.65
3.36	12:00	8.66	348.2	9.1	5	-32.0	0.77
3.87	12:05	8.66	349.7	9.1	4.75	-43.8	1.40
4.6	12:10	8.66	351.1	9.1	4.51	-58.4	1.00
5.08	12:15	8.65	352.5	9.2	4.36	-69.6	1.55
5.61	12:20	8.65	353.8	9.2	4.21	-82.6	0.91
5.97	12:25	8.66	354.7	9.3	4.1	-94.4	1.34
6.64	12:30	8.66	355.2	9.2	3.97	-108.5	0.86
7.03	12:35	8.66	355	9.2	3.88	-120.4	0.92

Comments:

Grundfos: N/A
 Packer: N/A
 Tank: 110
 Throttle: 40
 CPM: 2
 CID: 50
 Flow Rate: 300 mL/min

Sampler 

Date March 14, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-11

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated QED Bladder

Date March 12, 2024 **Time** 13:15

Media Water **Station** LMW-11

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 155.71 ft BTOC

Screened Interval: 696' - 707' BGS

Sand Pack Interval: 688' - 707' BGS

Packer Depth: N/A

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-11

Date 03/12/2024

Time Begin Purge 12:36

Time Collect Sample 13:15

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
155.7	12:40	7.6	387	10	8.67	66.4	1.50
155.7	12:45	7.24	405.6	9.9	7.74	33.2	.75
155.68	12:50	7.22	409.4	9.8	6.77	-5.9	0.98
155.7	12:55	7.22	412.4	9.7	6.26	-26.0	0.37
155.7	13:00	7.22	413.7	9.7	5.67	-44.2	0.33
155.7	13:05	7.23	414.1	9.7	5.44	-50.8	0.25
155.7	13:10	7.23	414.8	9.7	5.16	-55.8	0.62
155.7	13:15	7.22	415.1	9.8	4.91	-60.8	0.57

Comments:

Grundfos: N/A

Packer: N/A

Tank: 130

Throttle: 110

CPM: 1

CID: 15

Flow Rate: 400 mL/min

Sampler 

Date March 12, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-12

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated QED Bladder

Date March 14, 2024 **Time** 09:20

Media Water **Station** LMW-12

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 6.12 ft BTOC

Screened Interval: 15' - 25' BGS

Sand Pack Interval: 11' - 25' BGS

Packer Depth: N/A

Sample Description Clear, slight sulfur odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-12

Date 03/14/2024

Time Begin Purge 08:31

Time Collect Sample 09:20

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
6.16	08:35	6.43	436.4	7.7	9.56	65.4	6.82
6.13	08:40	6.33	381.9	7.9	8.26	27.3	2.92
16.14	08:45	6.36	378	7.9	7.69	11.8	2.56
6.14	08:50	6.38	376.8	7.9	7.17	1.4	5.15
6.15	08:55	6.41	438.6	8.1	6.73	-12.3	6.66
6.16	09:00	6.46	497.7	8.2	6.43	-27	5.74
6.14	09:05	6.49	520	8.4	6.15	-38	3.35
6.15	09:10	6.51	518	8.3	5.81	-47.8	4.60
6.15	09:15	6.52	517	8.3	5.64	-51.2	3.84
6.13	09:20	6.53	513	8.4	5.45	-55.3	1.91

Comments:

Grundfos: N/A
 Packer: N/A
 Tank: 110
 Throttle: 20
 CPM: 2
 CID: 47
 Flow Rate: 400 mL/min

Sampler 

Date March 14, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-13R

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated QED Bladder

Date March 14, 2024 **Time** 10:45

Media Water **Station** LMW-13R

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 6.69 ft BTOC

Screened Interval: 115' - 140' BGS

Sand Pack Interval: 110' - 150' BGS

Packer Depth: N/A

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-13R

Date 03/14/2024

Time Begin Purge 10:09

Time Collect Sample 10:45

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
6.92	10:15	7.27	648	8.6	6.98	34.4	1.13
6.91	10:20	7.26	661	8.7	6.23	-35.0	1.5
6.89	10:25	7.28	664	8.8	5.71	-68.2	0.89
6.88	10:30	7.29	663	8.8	5.38	-82.5	0.72
6.93	10:35	7.29	661	8.7	5.11	-91.3	1.14
6.91	10:40	7.3	657	8.8	4.86	-97.0	0.85
6.92	10:45	7.3	655	8.7	4.74	-100.2	0.56

Comments:

Dedicated air fittings rusted/broken. Need to replace lock also.

Grundfos: N/A

Packer: N/A

Tank: 110

Throttle: 35

CPM: 2

CID: 48

Flow Rate: 300 mL/min

Sampler *ku*

Date March 14, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-14

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated QED Bladder

Date March 12, 2024 **Time** 10:30

Media Water **Station** LMW-14

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 163.55 ft BTOC

Screened Interval: 156.5' - 172.3' BGS

Sand Pack Interval: 152.5' - 175.8' BGS

Packer Depth: N/A

Sample Description Clear, no odor, no sheen.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-14

Date 03/12/2024


Time Begin Purge 09:54

Time Collect Sample 10:30

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
163.7	10:00	6.47	876	9.9	7.52	34.8	5.73
163.82	10:05	6.5	897	9.8	6.5	-10.2	3.53
163.7	10:10	6.5	893	9.8	6.14	-18.4	2.98
163.92	10:15	6.51	873	9.8	5.64	-25.2	2.10
163.86	10:20	6.52	858	9.8	5.4	-27.2	2.55
163.89	10:25	6.52	846	9.8	5.13	-29.3	2.06

Comments:

Grundfos: N/A
 Packer: N/A
 Tank: 140
 Throttle: 115
 CPM: 2
 CID: 49
 Flow Rate: 400 mL/min

Sampler 

Date March 12, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-15

Sampling Location Groundwater Monitoring Well - end dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Dedicated QED Bladder

Date March 12, 2024 **Time** 11:50

Media Water **Station** LMW-15

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 149.59 ft BTOC

Screened Interval: 235' - 245' BGS

Sand Pack Interval: 231' - 245' BGS

Packer Depth: N/A

Sample Description Clear, no odor, no sheen

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-15

Date 03/12/2024

Time Begin Purge 11:16

Time Collect Sample 11:50

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
149.78	11:20	7.25	397.2	9.2	8.91	8.8	3.29
149.55	11:25	7.25	397.5	9.1	7	-85.1	3.07
149.57	11:30	7.28	397.9	9.1	6.47	-95.5	1.55
149.58	11:35	7.31	396.9	9.1	5.54	-107	1.81
149.54	11:40	7.32	396.7	9.1	5.36	-109.5	1.97
149.59	11:45	7.33	395.6	9.1	5.08	-112.5	1.85

Comments:

Grundfos: N/A
 Packer: N/A
 Tank: 130
 Throttle: 95
 CPM: 2
 CID: 53
 Flow Rate: 400 mL/min

Sampler AKB

Date March 12, 2024

Supervisor _____

Date _____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** GL923-1000-007

Site Location Ravensdale, WA **Sample ID** LMW-FB-0324

Sampling Location Direct pour/end of dedicated sampling tube

Technical Procedure Reference(s) Landsburg Mine Site Compliance Monitoring Plan (2017)

Type of Sampler Direct Pour/Peristaltic Pump with New Tubing

Date March 11, 2024 **Time** 14:50

Media Lab-provided DI **Station** N/A

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: N/A

Screened Interval: N/A

Sand Pack Interval: N/A

Packer Depth: N/A

Sample Description Lab-provided DI water poured directly into sample containers.

Field Measurements on Sample (pH, conductivity, etc.) SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3-40 mL	VOA	VOA vial	HCl
1-500 mL	Total Metals	HDPE	HNO3
4-500 mL	TPH-HCID, -Dx (HOLD)	Glass amber	None
2-40 mL	TPH-Gx (HOLD)	VOA vial	HCl
2-1000 mL	PCBs	Glass amber	None
2-1000 mL	Pesticides	Glass amber	None
2-1000 mL	SVOCs	Glass amber	None
2-500 mL	1,4-dioxane	500 mL amber bottles	None

SAMPLE INTEGRITY DATA SHEET

Well ID LMW-FB

Date 03/11/2024

Time Begin Purge N/A

Time Collect Sample 14:50

Water Level (ft bmp)	Time	pH	Cond. (uS/cm)	Temp (°C)	DO (mg/L)	ORP (rel mV)	Turbidity (NTU)
Parameters not applicable.							

Comments:

Grundfos: N/A
Packer: N/A
Tank: N/A
Throttle: N/A
CPM: N/A
CID: N/A
Flow Rate: N/A mL/min

Sampler 

Date March 11, 2024

Supervisor _____

Date _____



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