

Interim Action Completion Report

2021 Boulevard Road SE
Olympia, Washington

Prepared for:

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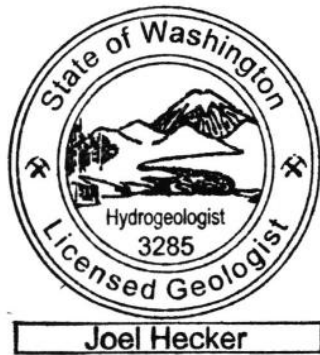


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May 2023

Professional Certification

This document was prepared under my direction. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that I was in responsible charge of the work performed for this document.



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May 8, 2023

Date

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List of Acronyms

Acronym	Explanation
BMPs	Best Management Practices
CFR	Code of Federal Regulations
City	City of Olympia
DHE	DH Environmental Incorporated
Ecology	Washington Department of Ecology
ESA	Environmental Site Assessment
HASP	Health and Safety Plan
IA	Interim Action
Kd	Distribution Coefficient
MTCA	Model Toxics Control Act
NFA	No Further Action
PIONEER	PIONEER Technologies Corporation
QA/QC	Quality Assurance/Quality Control
SHA	Site Hazard Assessment
Site	2021 Boulevard Road SE, Olympia, Washington
SLs	Model Toxics Control Act Method B Screening Levels for Unrestricted Land Use
TEE	Terrestrial Ecological Evaluation
WA DFW	Washington Department of Fish and Wildlife
Work Plan	Interim Action Work Plan

SECTION 1: INTRODUCTION

PIONEER Technologies Corporation (PIONEER) has prepared this Interim Action (IA) Completion Report for the site located at 2021 Boulevard Road SE, Olympia, Thurston County, Washington (Site). The purpose of this report is to present the results from activities that were conducted at the Site in February and March of 2023. IA activities were performed in accordance with the Washington Department of Ecology (Ecology)-approved IA Work Plan (Work Plan) (PIONEER 2021c).

1.1 Site Background

The Site consists of 0.90 acres of vacant grass- and gravel-covered land. The Site is located in a residential area in the eastern portion of Olympia (see Figure 1). PIONEER completed a Phase I Environmental Site Assessment (ESA) of the Site and prepared a Phase I ESA report in July 2021 (PIONEER 2021a). Prior to 1941, the Site was vacant, partially wooded land. By 1949, a residence was constructed on the south-central portion of the Site. By 1956, three greenhouses and an office associated with Smith's Greenhouse (i.e., a plant nursery) were built around the residence. In 1966, a fire destroyed the office and it was replaced with a retail store and outdoor sales area. By 1978, Smith's Greenhouse business became Boulevard Nursery and continued operating as a nursery into the mid-2000s at which time the Site was abandoned. Several iterations of building demolition and soil grading occurred between 2012 and 2017. By 2020, no structures were present and a soil berm was present along the Site's western edge (see Figure 2). The origin of the soil berm was reportedly scraped topsoil from throughout the Site (PIONEER 2021a).

1.2 Previous Investigations and Environmental Conditions

Previous soil sampling for pesticides associated with former nursery operations occurred in 2009 and 2020. Based on the lack of pesticides exceeding Model Toxics Control Act (MTCA) Method B Screening Levels for Unrestricted Land Use (SLs), Ecology granted a No Further Action (NFA) opinion for the Site in 2020 (Ecology 2020; see Appendix A). Ecology's Facility ID for the Site is 3749 and the Cleanup Site ID is 223. Subsequent soil sampling occurred in April 2021 and one soil sample collected from the soil berm contained dieldrin, a pesticide, at concentrations exceeding MTCA SLs. As a result, Ecology rescinded the NFA opinion (Ecology 2021; see Appendix A). PIONEER collected additional soil samples from the soil berm in July 2021 as part of a Phase II ESA completed for a prospective purchaser. A total of nine different pesticides were detected in soil samples; however, only dieldrin exceeded the SL. Dieldrin concentrations exceeded the SL at seven of the 13 locations sampled, including six of the seven soil borings. A summary of the soil samples collected on the Site to date are included in Table 1.

The Phase II ESA recommended that prior to redeveloping the Site, the contaminated portion of the soil berm should be excavated and disposed of at a licensed disposal facility. The disposal should be followed by confirmation sampling at the limits of the excavation to confirm remaining soil does not exceed the dieldrin SL (PIONEER 2021b).

1.3 Objective of the Interim Action

The objectives of this IA were to:

- Remove the dieldrin-contaminated soil berm on the western edge of the Site in order to facilitate future development of the Site for unrestricted (e.g., residential) land use.
- Obtain an NFA opinion from Ecology for the Site.

SECTION 2: SUMMARY OF IA ACTIVITIES

This section describes the procedures that were used to implement the IA as outlined in the Work Plan (PIONEER 2021). The following IA activities were performed by DH Environmental Incorporated (DHE) in 2023, with oversight provided by PIONEER on behalf of the City of Olympia (City): Site preparation, berm removal, restoration, and waste disposal. Fieldwork documentation is presented in Appendix B and a photographic log of fieldwork activities is presented in Appendix C.

2.1 Site Preparation

As part of the IA mobilization, an on-site pre-construction meeting and site-walk was conducted on February 20, 2023. Parties present included representatives of PIONEER, DHE, and the City. Topics of discussion included schedule, logistics of operations, pollution prevention, overhead utilities, and final site stabilization.

A private utility locate was completed in July 2021 and no subsurface utilities were identified in the vicinity of the planned excavation. The height of the overhead utility lines along Boulevard Road SE was assessed and verified to be sufficient for equipment in the field by the contractor, prior to bringing equipment on-site. Prior to mobilization, DHE completed a public utility locate through Washington State Utilities Underground Location Center.

On February 20, 2023, DHE placed straw waddles around the work area, rumble strips along the haul route, and mobilized all equipment to the Site.

2.2 Excavation and Confirmation Sampling of Soil Berm

Excavation activities commenced on February 20, 2023. DHE excavated the entire soil berm and placed the soil in a temporary stockpile on a layer of Visqueen immediately east of the berm. The temporary stockpile was covered with a layer of Visqueen. After creation of the temporary stockpile, confirmation sample locations were staked in accordance with Figure 3 of the Work Plan, and samples were collected from 13 locations at the base of the berm, with one duplicate sample collected from the north end of the excavated berm (see Figure 3 and Table 1).

Four trucks with trailers, each with a capacity of 32-tons, arrived on-site on February 21, 2023. All trucks and trailers were loaded by the excavator operator to near capacity before departure to the approved disposal facility (Wasco County Landfill in The Dunes, Oregon). At the conclusion of loading, the excavator operator consolidated the stock-pile in preparation for the next day, and the stock-pile was covered with a layer of Visqueen. Similar activity was again conducted on February 22 and 24, 2023. Due to inclement weather conditions, (i.e., snow), the trucks were not able to arrive to the Site and excavation activities were cancelled on February 23, 2023.

2.2.1 Confirmation Sampling and Additional Excavation

As stated above, 13 confirmation samples and one duplicate were initially collected from the base of the berm, six to 12 inches below surrounding grade, on February 20, 2023. The samples were taken to Libby

Environmental and analyzed by Fremont Analytical for organochlorine pesticides via USEPA Method 8081. Sample results for ten of the 13 samples were below the SL for dieldrin, while three of the samples (i.e., SS-06, SS-09, and SS-13) had exceedances of the dieldrin SL (see Figure 3; Table-1).

These three areas with dieldrin exceedances were over-excavated to six to 12 inches below the surrounding grade on February 24, 2023 and 10 additional confirmation samples were collected from over-excavated area (i.e., SS-14 to SS-23). Three small trees that had grown on the berm (with trunks approximately three-inches or less in diameter) were removed to facilitate the over-excavation. At the conclusion of loading and over-excavating the additional material, the excavator operator consolidated the remaining stockpile and the stockpile was covered with a layer of Visqueen.

On February 27, 2023, four trucks with trailers were loaded by excavator with the remaining stock-piled contaminated-soil followed by the Visqueen and temporary best management practices (BMPs; i.e., straw wattles and silt socks). The Site was demobilized in accordance with the Work Plan.

2.2.2 Additional Confirmation Sampling

Sample results for nine of the ten additional confirmation samples were below the dieldrin SL, while a single sample (i.e., SS-22) had an exceedance of dieldrin, just over twice the SL (see Figure 3 and Table 1).

Additional excavation by hand was performed at the south end of the former berm area, immediately surrounding the sample location with the exceedance of dieldrin SL. The excavated soil was placed into three, 55-gallon drums and disposed of at the approved waste disposal facility. Two additional confirmation samples were collected at the extents of the additional over-excavation (i.e., SS-24 and SS-25; see Figure 3). The results for both confirmation samples were below SLs (see Table 1). Based on the results of the confirmation sampling, all in-place soil is less than SLs. Laboratory analytical reports are provided in Appendix D.

2.3 Equipment Decontamination

Equipment was decontaminated to prevent transport of impacted sediment and debris to unaffected areas. All equipment was cleaned before arriving and was inspected prior to use. All equipment parts in contact with excavated sediment or OWS components (e.g., excavator and skid-steer buckets) were decontaminated by dry-brushing prior to restoration and demobilization.

2.4 Grading and Restoration

Following the completion of removal activities, restoration including grading the edges of the excavation perimeter to eliminate straight edges, followed by seeding and strawing the excavated area.

2.4.1 Grading

Due to the shallow nature of the excavation, no backfill was brought in to the Site. The edges of the excavation were graded for a smooth transition to the excavated elevation and to eliminate straight edges.

2.4.2 Seeding and Final Restoration

The following activities were performed on February 27, 2023, after grading:

1. Straw wattles that were previously placed across the base of the berm during excavation were removed and disposed of off-site; and
2. Disturbed areas were hydroseeded with native grass seed and covered with straw.

2.5 Waste Management and Disposal

Dieldrin-contaminated soil waste was generated during the IA, as discussed below. Waste disposal documentation for the solid waste, including initial landfill approval documentation and final disposal tickets, is presented in Appendix E.

Impacted solids, including excavated contaminated soils, landscape cloth, reinforcement bar, vegetations, and miscellaneous buried debris recovered during excavation were directly loaded into truck and trailer for off-site disposal. In total, 488 tons of impacted solids, distributed between 16, 32-ton capacity trucks and trailers and three 55-gallon drums, were transported and disposed-of at the Wasco County Landfill in The Dalles, Oregon.

No impacted water was generated during IA.

2.6 Quality Assurance/Quality Control

Construction quality assurance/quality control (QA/QC) measures were implemented to ensure that the construction activities were completed safely, effectively, and successfully in accordance with the Work Plan and Quality Assurance Project Plan (PIONEER 2020). All IA activities were performed by a licensed contractor, and PIONEER representatives provided QA/QC oversight of the IA to ensure compliance with the Work Plan. No QA/QC issues that affected the implementation of the Work Plan were identified.

In accordance with the WP to collect a duplicate sample for every 20 samples, duplicate samples/additional aliquots were collected at samples SS-01 and SS-22 (see Figure 3). The lab results were within 50% of each other for duplicates.

2.7 Health and Safety

All fieldwork was conducted in a safe manner consistent with the project-specific Health and Safety Plan (HASP; PIONEER 2023). The HASP was developed prior to the start of field activities and met the requirements in Occupational Safety and Health Administration's Hazardous Waste Operations and Emergency Response Standard, 29 Code of Federal Regulations (CFR) 1910.120 or 29 CFR 1926.65, paragraph (b)(4). All fieldwork was conducted consistent with the project-specific HASP and fieldworkers were required to understand and abide by the requirements of the HASP.

2.8 Deviations from the Work Plan

The following deviations from the Work Plan were noted:

- The Work Plan stated that excavation activities were expected to take two days. Excavation activities began on February 20, 2023, and were concluded on February 27, 2023, followed by demobilization. No excavation activities were performed on February 23, 2023 because disposal trucks were not able to arrive due to inclement weather conditions (i.e., snowfall). Additional unanticipated excavation was performed on the south end of the berm on March 30, 2023 due to a dieldrin exceedance in soil sample SS-22. This additional excavation activity was approved by the City prior to commencement. This resulted in the excavation of an additional three, 55-gallon drums of solid waste that were collected and disposed of on April 17, 2023 in accordance with the Work Plan. In total, excavation was performed on the site on six calendar days, rather than two.
- In order to remove the impacted soil to the extent necessary, three small trees that had grown on the berm (with trunks approximately three-inches or less in diameter) were removed along the western Site boundary.

SECTION 3: DATA EVALUATION AND CONCLUSIONS

This section presents the data evaluations, conclusions, accomplishments, and effectiveness of the IA.

3.1 Terrestrial Ecological Evaluation

Conditions remain the same as during the filing of the previous NFA for the Site in 2020. In the previous NFA, regarding a Terrestrial Ecological Evaluation (TEE), Ecology stated:

“The Simplified TEE was found to apply at the Site. None of the detected analytes exceeded the respective simplified TEE soil concentrations for unrestricted land use found in Table 749-2 of MTCA. Based on the Washington Department of Fish & Wildlife (WA DFW) priority habitat map (<https://geodataservices.wdfw.wa.gov/hp/phs/>), no priority habitats are located on or adjacent to the Property or the Site” (Ecology 2020).

3.2 Soil-to-Groundwater Evaluation

Conditions remain the same as during the filing of the previous NFA for the Site in 2020. In the previous NFA, Ecology stated:

“No groundwater sampling has been conducted at the Site; however, no soil contamination has been found to suggest a groundwater concern. The water table is reported within the SHA [Site Hazard Assessment] on file for the Site to be at a depth of approximately 27 feet below ground surface. The detected chlorinated pesticides all have high distribution coefficients (Kd) and relatively low solubility such that migration to groundwater is unlikely” (Ecology 2020).

3.3 Accomplishments

Specific accomplishments of this IA included:

- Removing and properly disposing of 488 tons of dieldrin-contaminated soil comprising the soil berm;
- Removing and properly disposing of the temporary erosion control measures; and
- Grading the edges of excavation and restoring disturbed areas with seed and straw.

3.4 Effectiveness

The removal of dieldrin-contaminated soil at concentrations greater than the SL is a permanent remedy. This satisfies the objective of the IA, and therefore, remediation is considered complete at the Site.

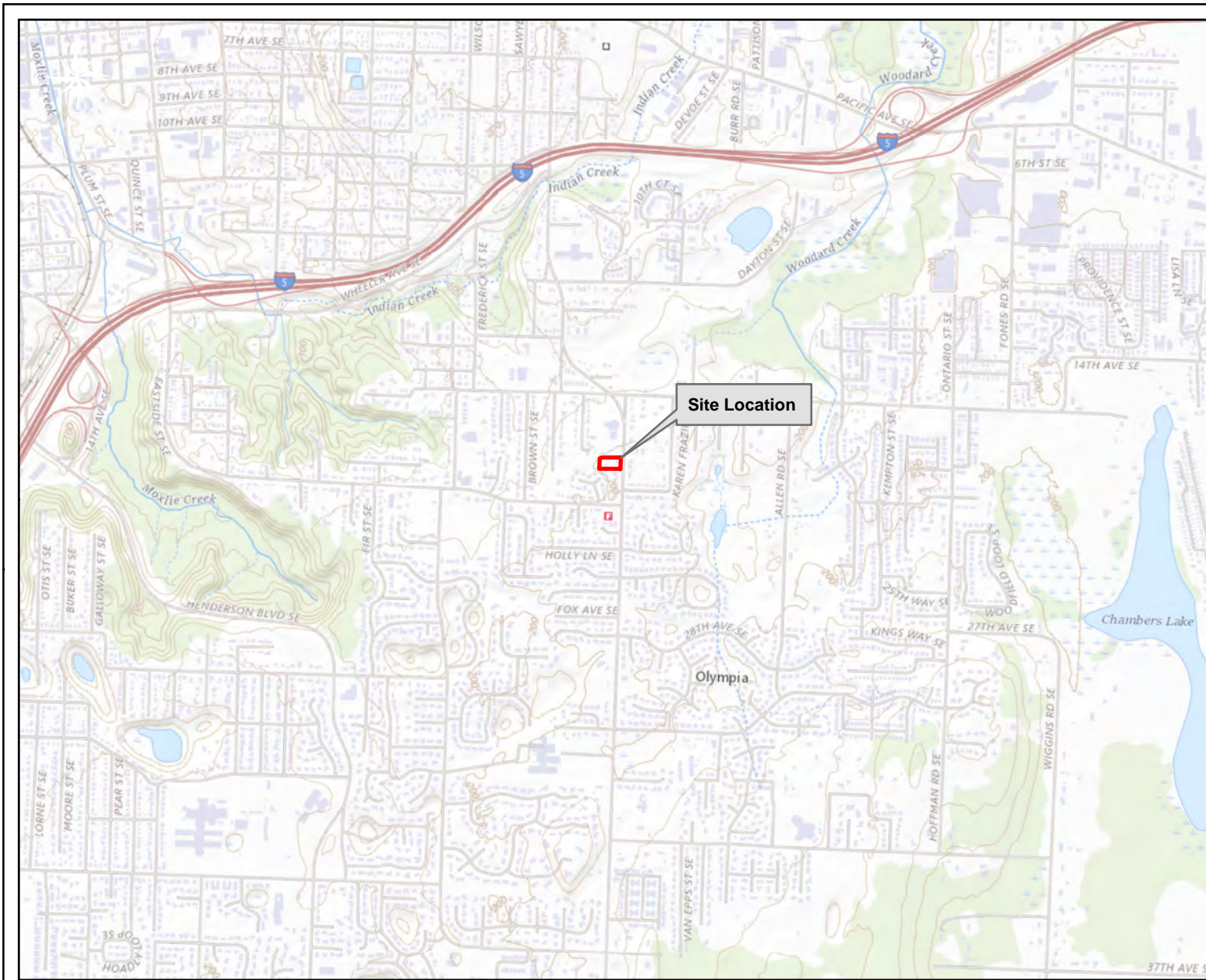
3.5 Conclusion

The Site has been successfully remediated. Given the removal of soil containing dieldrin at concentrations greater than the SL, a No Further Action status should be reinstated for the Site lifting all restrictions on future Site usage.

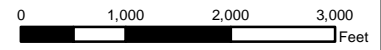
SECTION 4: REFERENCES

- Ecology. 2020. No Further Action Letter, Boulevard Nursery, 2021 Boulevard Road SE, Olympia, Washington. October.
- Ecology. 2021. Rescission of No Further Action (NFA) Status for the following Site: Boulevard Nursery, 2021 Boulevard Road SE, Olympia, Washington. June.
- PIONEER. 2020. Quality Assurance Project Plan for the City of Olympia's Brownfield Assessment Grant. March.
- PIONEER. 2021a. Phase I Environmental Site Assessment. 2021 Boulevard Road SE, Olympia, Washington. July.
- PIONEER. 2021b. Phase II Environmental Site Assessment. 2021 Boulevard Road SE, Olympia, Washington. August.
- PIONEER. 2021c. Interim Action Work Plan. 2021 Boulevard Road SE, Olympia, Washington. August. Revised. February 2023.
- PIONEER. 2023. Health and Safety Plan-Rev1. 2021 Boulevard Road SE, Olympia, Washington. February.

Figures



Legend
[Red Square] Site Location






Site Location Map
2021 Boulevard Road SE
Olympia, Washington

Figure 1



Legend

Site Features

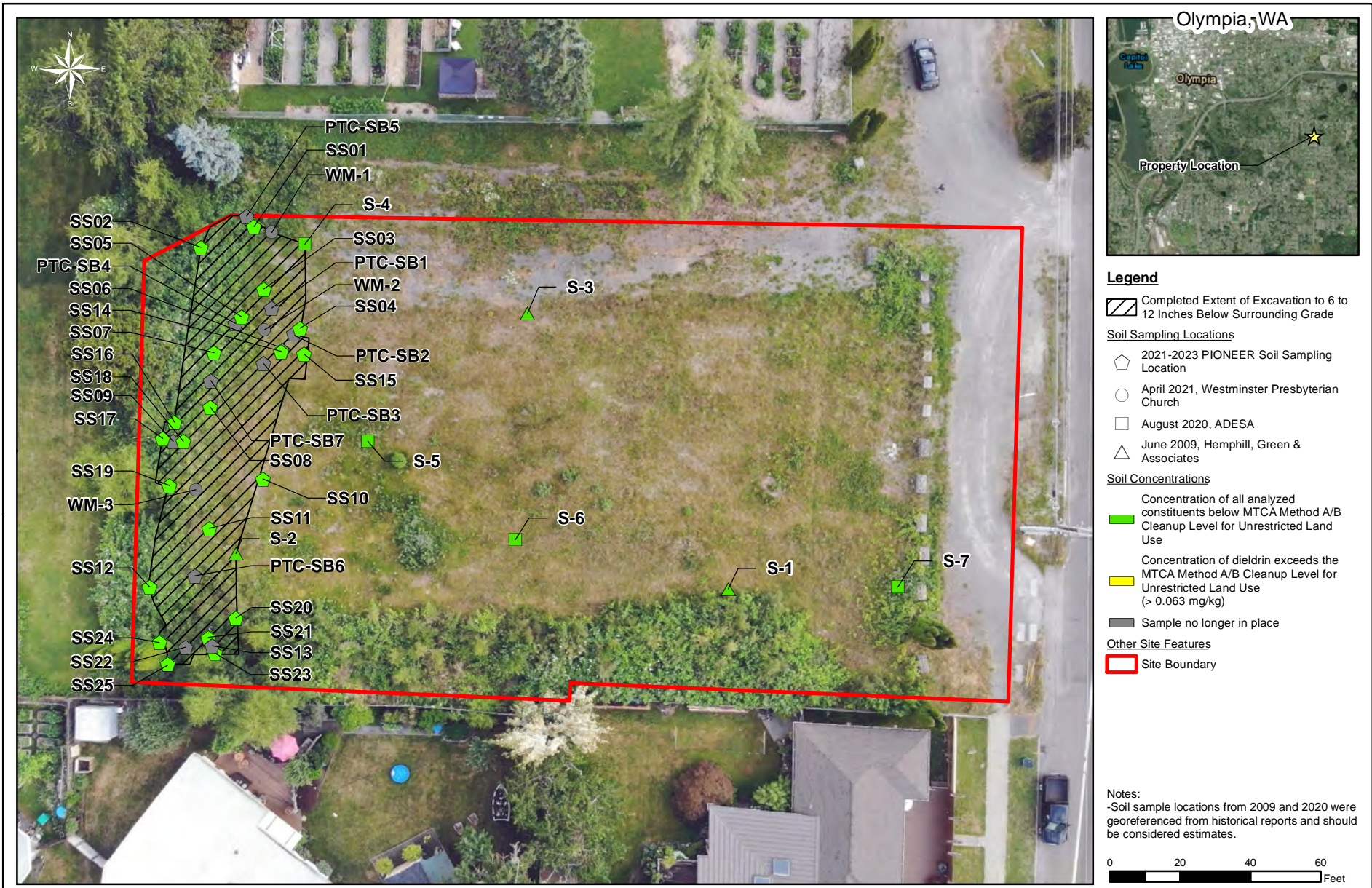
-  Former Structures
-  Soil Berm (Removed)
-  Site Boundary

Notes:
-The locations of former structures were georeferenced from historical reports and should be considered estimates.



Current and Historical Features Diagram
2021 Boulevard Road SE
Olympia, Washington

Figure 2



Sample Locations and Results Diagram
2021 Boulevard Road SE
Olympia, Washington

Figure 3

Tables

Table 1: Summary of 2009 through 2023 Soil Analytical Results

Constituent	Soil Screening Levels ¹		Sample Location, Depth Interval (in Feet bgs), and Sample Date																							
	Method B Cleanup Level (CLARC Database) (mg/kg)	Simplified TEE Concentration (Table 749-2) (mg/kg)	S-1	S-2	S-3	S-4	S-5	S-6	S-7	WM#1	WM#2	WM#3	PTC-SB1	PTC-SB1	PTC-SB2	PTC-SB2 Dups	PTC-SB3	PTC-SB3	PTC-SB4	PTC-SB4	PTC-SB5	PTC-SB5	PTC-SB6	PTC-SB6	PTC-SB7	PTC-SB7
			1'	1'	1'	1'	1'	1'	1'	1'	1'	1'	1'	1'	0-1'	2-4'	0-1'	0-1'	0-1'	2-4'	0-1'	3-5'	0-1'	3-5'	0-1'	3-5'
4/23/09	4/23/09	4/23/09	8/24/20	8/24/20	8/24/20	8/24/20	8/24/20	8/24/20	4/22/21	4/22/21	4/22/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21	7/27/21
4,4'-DDD	2.4	1.0 ⁽⁵⁾	0.064	0.034	ND	0.012	0.0093 U	0.010 U	0.011 U	0.076	0.014 U	0.017 U	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.11	0.014 U	0.016 U	0.015 U	0.017 U	0.018	0.051
4,4'-DDE	2.9	1.0 ⁽⁵⁾	0.14	0.12	ND	0.030	0.0093 U	0.010 U	0.011 U	0.050	0.032	0.052	0.023	0.031	0.0099 U	0.0095 U	0.043	0.12	0.032	0.16	0.0094 U	0.024	0.024	0.030	0.062	0.069
4,4'-DDT	2.9	1.0 ⁽⁵⁾	0.036	0.014	ND	0.034	0.0093 U	0.010 U	0.011 U	0.20	0.074	0.15	0.034	0.026	0.015 U	0.014 U	0.073	0.019	0.043	0.32	0.14 U	0.16 U	0.15 U	0.17 U	0.15 U	0.17 U
Aldrin	0.059	0.17	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.011 U	0.0095 U	0.011 U	0.0099 U	0.011 U	0.0099 U	0.0095 U	0.010 U	0.011 U	0.0096 U	0.0099 U	0.0094 U	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U
Alpha BHC	0.16	10 ⁽²⁾	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.017 U	0.014 U	0.017 U	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.015 U	0.014 U	0.016 U	0.015 U	0.017 U	0.015 U	0.017 U
Beta BHC	0.56	10 ⁽²⁾	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.017 U	0.014 U	0.017 U	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.015 U	0.014 U	0.016 U	0.015 U	0.017 U	0.015 U	0.017 U
Cis-Chlordane	2.9	1.0 ⁽⁴⁾	ND	ND	ND	0.0095 U	0.0093 U	0.018	0.011 U	0.018	0.019	0.020	0.015 U	0.016 U	0.015 U	0.014 U	0.017	0.016 U	0.017	0.015 U	0.014 U	0.016 U	0.015 U	0.017 U	0.018	0.017 U
Delta BHC	No Value	10 ⁽²⁾	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.017 U	0.014 U	0.017 U	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.015 U	0.014 U	0.016 U	0.015 U	0.017 U	0.015 U	0.017 U
Dieldrin	0.063	0.17	ND	0.038	ND	0.034	0.054	0.010 U	0.011 U	0.046	0.29	0.049	0.88	0.049	0.070	0.0095	0.33	0.075	0.062	0.070	0.020	0.011 U	0.037	0.067	0.13	0.021
Endosulfan I	No Value	No Value	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.011 U	0.035	0.011 U	0.024	0.011 U	0.0099 U	0.0095 U	0.010 U	0.011 U	0.0096 U	0.0099 U	0.0094 U	0.025	0.010 U	0.011 U	0.010 U	0.011 U
Endosulfan II	No Value	No Value	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.025	0.014 U	0.017 U	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.024	0.014 U	0.016 U	0.015 U	0.017 U	0.015 U	0.017 U
Endosulfan sulfate	480	No Value	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.017 U	0.014 U	0.017 U	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.015 U	0.014 U	0.016 U	0.015 U	0.017 U	0.015 U	0.017 U
Endrin	24	0.40	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.021	0.014 U	0.061	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.20	0.014 U	0.016 U	0.017	0.017 U	0.015 U	0.062
Endrin aldehyde	No Value	No Value	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.017 U	0.014 U	0.017 U	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.015 U	0.014 U	0.016 U	0.015 U	0.017 U	0.015 U	0.017 U
Endrin ketone	No Value	No Value	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.038	0.014 U	0.017 U	0.023	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.050	0.014 U	0.016 U	0.015 U	0.017 U	0.015 U	0.017 U
gamma-Chlordane	2.9	1.0 ⁽⁴⁾	ND	ND	ND	0.0095 U	0.0093 U	0.010	0.011 U	0.017 U	0.014 U	0.017 U	0.015 U	0.016 U	0.015 U	0.014 U	0.015 U	0.016 U	0.014 U	0.015 U	0.014 U	0.016 U	0.015 U	0.017 U	0.015 U	0.017 U
Heptachlor	0.22	0.60 ⁽³⁾	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.011 U	0.0095 U	0.011 U	0.0099 U	0.011 U	0.0099 U	0.0095 U	0.010 U	0.011 U	0.0096 U	0.0099 U	0.0094 U	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U
Heptachlor epoxide	0.11	0.60 ⁽³⁾	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.011 U	0.0095 U	0.011 U	0.0099 U	0.011 U	0.0099 U	0.0095 U	0.010 U	0.011 U	0.0096 U	0.0099 U	0.0094 U	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U
Lindane	0.91	10 ⁽²⁾	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.011 U	0.0095 U	0.011 U	0.0099 U	0.011 U	0.0099 U	0.0095 U	0.010 U	0.011 U	0.0096 U	0.0099 U	0.0094 U	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U
Methoxychlor	400	No Value	NA	NA	NA	0.0095 U	0.0093 U	0.010 U	0.011 U	0.13	0.019 U	0.022 U	0.020 U	0.022 U	0.020 U	0.019 U	0.020 U	0.022 U	0.019 U	0.20 U	0.19 U	0.22 U	0.20 U	0.22 U	0.20 U	0.22 U
Toxaphene	0.91	No Value	NA	NA	NA	0.095 U	0.093 U	0.10 U	0.11 U	0.077 U	0.067 U	0.077 U	0.069 U	0.076 U	0.069 U	0.067 U	0.071 U	0.076 U	0.067 U	0.069 U	0.066 U	0.076 U	0.072 U	0.077 U	0.072 U	0.078 U

Notes:
 RCRA Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) were also analyzed at locations S-1 through S-3. All analyzed metals concentrations were below MTCA soil screening levels.
 Feet bgs: feet below ground surface, No Value: a screening level cannot be calculated because no values exist in CLARC (Ecology 2021) or Table 749-2, mg/kg: milligrams per kilogram, U: constituent not detected at listed reporting limit.
 Results shown for PTC-SB2 and SS-1 are the average of the duplicate samples. Results shown for SS-22 are the average of the three analyzed aliquots. Refer to laboratory analytical reports in Appendix D for individual results.
 NA: it is unclear if constituent was analyzed during 2009 sampling event. "Other pesticides" are not described in the associated laboratory report.
 ND: not detected above the laboratory reporting limit, which not provided in historical environmental reports.
Bold compounds were detected at the shown concentration.
 Grayed out samples are those that have been excavated, and are no longer in-place.
 The highlighted concentration exceeds MTCA Method B Cleanup Level

¹ Screening levels shown are the more restrictive of the Method B direct contact non-cancer (Equation 740-1) or cancer (Equation 740-2) cleanup level. Simplified TEE concentrations for unrestricted land use are those shown in MTCA Table 749-2.
² TEE Concentration for sum of BHCs.
³ TEE Concentration for sum of heptachlor and heptachlor epoxide.
⁴ TEE Concentration for sum of chlordanes
⁵ TEE Concentration for sum of DDT, DDE, and DDD.

Table 1: Summary of 2009 through 2023 Soil Analytical Results

Constituent	Soil Screening Levels ¹		Sample Location, Depth Interval (in Feet bgs), and Sample Date																									
	Method B Cleanup Level (CLARC Database) (mg/kg)	Simplified TEE Concentration (Table 749-2) (mg/kg)	SS-1 Dups	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	SS-22 Dups	SS-23	SS-24	SS-25	
			0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'	0.5-1'
2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/20/23	2/24/23	2/24/23	2/24/23	2/24/23	2/24/23	2/24/23	2/24/23	2/24/23	2/24/23	2/24/23	2/24/23	3/30/23	3/30/23
4,4'-DDD	2.4	1.0 ⁽⁵⁾	0.016 U	0.017 U	0.0154 U	0.0146 U	0.061 J	0.0871 U	0.0803 U	0.051 J	0.0855 U	0.0848 U	0.0861 U	0.0845 U	0.0863 U	0.0181 U	0.0171 U	0.0176 U	0.0183 U	0.0165 U	0.0182 U	0.0176 U	0.0173 U	0.018 U	0.0179 U	0.0177 U	0.0178 U	
4,4'-DDE	2.9	1.0 ⁽⁵⁾	0.0024 J	0.0081 J	0.0041 J	0.017	0.077	0.03 J	0.048 J	0.16	0.024 J	0.0565 U	0.03 J	0.028 J	0.014 J	0.0073 J	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0071 J	0.0343	0.047	0.13	0.0119 U	0.0118 U	0.0119 U	
4,4'-DDT	2.9	1.0 ⁽⁵⁾	0.017 U	0.0064 J	0.0070 J	0.0086 J	0.062 J	0.0929 U	0.076 J	0.048 J	0.0912 U	0.0905 U	0.036 J	0.031 J	0.092 U	0.0193 U	0.0183 U	0.0187 U	0.0196 U	0.0176 U	0.0194 U	0.0098 J	0.027	0.045	0.0191 U	0.0189 U	0.0190 U	
Aldrin	0.059	0.17	0.011 U	0.0114 U	0.0103 U	0.00977 U	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Alpha BHC	0.16	10 ⁽²⁾	0.011 U	0.0114 U	0.0103 U	0.00977 U	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Beta BHC	0.56	10 ⁽²⁾	0.011 U	0.0114 U	0.0103 U	0.00977 U	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Cis-Chlordane	2.9	1.0 ⁽⁴⁾	0.0041 J	0.0114 U	0.0103 U	0.012	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.019 J	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Delta BHC	No Value	10 ⁽²⁾	0.011 U	0.0114 U	0.0103 U	0.00977 U	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Dieldrin	0.063	0.17	0.011 J	0.0087 J	0.0048 J	0.052	0.028 J	0.069	0.060	0.031 J	0.11	0.055 J	0.057 U	0.024 J	0.11	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0084 J	0.0117 U	0.0075 J	0.12	0.0119 U	0.0118 U	0.0119 U	
Endosulfan I	No Value	No Value	0.011 U	0.0114 U	0.0103 U	0.00977 U	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Endosulfan II	No Value	No Value	0.016 U	0.017 U	0.0154 U	0.0146 U	0.0906 U	0.0871 U	0.0803 U	0.0844 U	0.0855 U	0.0848 U	0.0861 U	0.0845 U	0.0863 U	0.0181 U	0.0171 U	0.0176 U	0.0183 U	0.0165 U	0.0182 U	0.0176 U	0.0173 U	0.018 U	0.0179 U	0.0177 U	0.0178 U	
Endosulfan sulfate	480	No Value	0.016 U	0.017 U	0.0154 U	0.0146 U	0.0906 U	0.0871 U	0.0803 U	0.0844 U	0.0855 U	0.0848 U	0.0861 U	0.0845 U	0.0863 U	0.0181 U	0.0171 U	0.0176 U	0.0183 U	0.0165 U	0.0182 U	0.0176 U	0.0173 U	0.018 U	0.0179 U	0.0177 U	0.0178 U	
Endrin	24	0.40	0.016 U	0.017 U	0.0154 U	0.0146 U	0.11	0.0871 U	0.045 J	0.032 J	0.0855 U	0.0848 U	0.0861 U	0.0845 U	0.0863 U	0.0181 U	0.0171 U	0.0176 U	0.0183 U	0.0165 U	0.0182 U	0.0176 U	0.0173 U	0.018 U	0.0179 U	0.0177 U	0.0178 U	
Endrin aldehyde	No Value	No Value	0.013 J	0.0182 U	0.0164 U	0.0156 U	0.0966 U	0.0929 U	0.0856 U	0.0901 U	0.0912 U	0.0905 U	0.0918 U	0.0902 U	0.092 U	0.0193 U	0.0183 U	0.0187 U	0.0196 U	0.0176 U	0.0194 U	0.0187 U	0.0185 U	0.019 U	0.0191 U	0.0189 U	0.0190 U	
Endrin ketone	No Value	No Value	0.021 U	0.0227 U	0.0205 U	0.0195 U	0.121 U	0.116 U	0.107 U	0.113 U	0.114 U	0.113 U	0.115 U	0.113 U	0.115 U	0.0241 U	0.0229 U	0.0234 U	0.0244 U	0.0221 U	0.0242 U	0.0234 U	0.0231 U	0.024 U	0.0238 U	0.0236 U	0.0237 U	
gamma-Chlordane	2.9	1.0 ⁽⁴⁾	0.011 U	0.0114 U	0.0103 U	0.0039 J	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Heptachlor	0.22	0.60 ⁽³⁾	0.011 U	0.0114 U	0.0103 U	0.00977 U	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Heptachlor epoxide	0.11	0.60 ⁽³⁾	0.011 U	0.0114 U	0.0103 U	0.00977 U	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Lindane	0.91	10 ⁽²⁾	0.011 U	0.0114 U	0.0103 U	0.00977 U	0.0604 U	0.0581 U	0.0535 U	0.0563 U	0.057 U	0.0565 U	0.0574 U	0.0564 U	0.0575 U	0.012 U	0.0114 U	0.0117 U	0.0122 U	0.011 U	0.0121 U	0.0117 U	0.0116 U	0.012 U	0.0119 U	0.0118 U	0.0119 U	
Methoxychlor	400	No Value	0.021 U	0.0227 U	0.0205 U	0.0195 U	0.121 U	0.116 U	0.107 U	0.113 U	0.114 U	0.113 U	0.115 U	0.113 U	0.115 U	0.0241 U	0.0229 U	0.0234 U	0.0244 U	0.0221 U	0.0242 U	0.0234 U	0.0231 U	0.024 U	0.0238 U	0.0236 U	0.0237 U	
Toxaphene	0.91	No Value	0.074 U	0.0795 U	0.0718 U	0.0684 U	0.423 U	0.406 U	0.375 U	0.394 U	0.399 U	0.396 U	0.402 U	0.395 U	0.403 U	0.0843 U	0.08 U	0.082 U	0.0856 U	0.0772 U	0.0849 U	0.0819 U	2.7	0.083 U	0.0834 U	0.0827 U	0.0830 U	

Notes:
 RCRA Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) were also analyzed at locations S-1 through S-3. All analyzed metals concentrations were below MTCA soil screening levels.
 Feet bgs: feet below ground surface, No Value: a screening level cannot be calculated because no values exist in CLARC (Ecology 2021) or Table 749-2, mg/kg: milligrams per kilogram, U: constituent not detected at listed reporting limit.
 Results shown for PTC-SB2 and SS-1 are the average of the duplicate samples. Results shown for SS-22 are the average of the three analyzed aliquots. Refer to laboratory analytical reports in Appendix D for individual results.
 NA: it is unclear if constituent was analyzed during 2009 sampling event. "Other pesticides" are not described in the associated laboratory report.
 ND: not detected above the laboratory reporting limit, which not provided in historical environmental reports.
Bold compounds were detected at the shown concentration.
 Grayed out samples are those that have been excavated, and are no longer in-place.
 The highlighted concentration exceeds MTCA Method B Cleanup Level

¹ Screening levels shown are the more restrictive of the Method B direct contact non-cancer (Equation 740-1) or cancer (Equation 740-2) cleanup level. Simplified TEE concentrations for unrestricted land use are those shown in MTCA Table 749-2.
² TEE Concentration for sum of BHCs.
³ TEE Concentration for sum of heptachlor and heptachlor epoxide.
⁴ TEE Concentration for sum of chlordanes
⁵ TEE Concentration for sum of DDT, DDE, and DDD.

Appendix A



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
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October 30, 2020

Brian Barlow
12833 Vail Cut Off Road SW
Rainier, WA 98576

Re: No Further Action at the following Site:

- **Site Name:** Boulevard Nursery
- **Site Address:** 2021 Boulevard Rd SE, Olympia
- **Facility Site ID No.:** 3749
- **Cleanup Site ID No.:** 223
- **VCP Project No.:** XS0001

Dear Brian Barlow:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Boulevard Nursery site (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively “substantive requirements of MTCA”). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Chlorinated pesticides (e.g. DDT and Dieldrin) into the Soil and potentially Groundwater.
- Metals (arsenic and lead) into the Soil and potentially Groundwater.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology. Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Ecology notes that the Site Hazard Assessment, conducted at the Site in 2012 listed site contaminants as DDT, Dieldrin, Arsenic, and Lead. However, the SHA stated:

The metals and pesticides detected in soil did not exceed applicable cleanup levels defined by the Washington State Department of Ecology Model Toxics Control Act (MTCA). However, since only a screening level assessment was conducted, the limited number of soil samples did not fully characterize potential impacts to subsurface soil and groundwater at the site. Additional analysis would be required to fully assess the site in accordance with MTCA standards.

Further investigations have verified the presence of chlorinated pesticides in soils, albeit below MTCA cleanup levels. After further review, and further discussed below, Ecology has concluded that no further investigation is warranted with respect to pesticides or metals in soil or groundwater. The Site is outside the boundary of the Tacoma Smelter Plume site.

The Site is located at 2021 Boulevard Rd SE, in Olympia WA and is located entirely within Thurston County Parcel Number 12824411300. The property consists of a vacant lot that was formerly a plant nursery. The property is surrounded by farm and residential properties. To the west and north is a small farm property, and to the south and east (across Boulevard Road) are residences.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. *Limited Phase II Environmental Site Assessment, Target Property: Boulevard Nursery.* Hemphill, Green and Associates LLC. June 10, 2009.
2. *Early Notice Letter Regarding Release of Hazardous Substances at the Boulevard Nursery.* Department of Ecology to Jeffrey Niven. January 13, 2010.

3. *Site Hazard Assessment Worksheet, Boulevard Nursery*. Thurston County Public Health & Social Services Department. August 28, 2012.
4. *Phase II Site Characterization Report, The Former Boulevard Nursery Site*. ADESA LLC. September 6, 2020.

A number of these documents are accessible in electronic form from the Site webpage <https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=223>. The complete records are stored in the Central Files of the Headquarters Office of Ecology, for review by appointment only.

Visit our Public Records Request page <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>, to submit a public records request or get more information about the process. If you require assistance with this process, you may contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or 360-407-6040.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site.

That conclusion that no further remedial action is necessary is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action for the identified release. The Site is described above and in **Enclosure A**.

Three shallow soil samples were collected and analyzed in 2009 during a limited Phase II Environmental Site Assessment (ESA). The soil samples were analyzed for heavy metals and chlorinated pesticides. Five heavy metals were detected in the soil samples (As, Ba, Cr, Pb, and Hg) but at concentrations less than their respective cleanup levels.

Four pesticides (Dieldrin, DDT, DDD, and DDE) were also detected at concentrations less than MTCA cleanup levels. Dieldrin was the pesticide with the highest concentration relative to its cleanup level (detected in one sample at 0.038 mg/kg compared to the Method B (direct contact cancer) cleanup level of 0.063 mg/kg).

The limited Phase II concluded:

“The pesticides detected in site soils were below applicable Washington State Model Toxic Control Act (MTCA) pesticide cleanup standards. However, only a screening level assessment was conducted, and the number of samples collected was not sufficient to define the magnitude or extent of the pesticide impacts. The fact that several pesticides... were detected is of concern considering the property could be redeveloped for residential use.”

This conclusion was mirrored in the both Ecology’s Early Notice Letter (2010) and the Site Hazard Assessment (2012). Shallow soil sampling was conducted at an additional four locations in 2020. The soil samples were analyzed for chlorinated pesticides by EPA Method 8081. Five chlorinated pesticides (Dieldrin, DDT, DDD, DDE, gamma chlordane, and alpha chlordane) were detected in at least one soil sample. However, all of these detections were below Method B (direct contact, cancer) cleanup levels.

The highest concentration of a chlorinated pesticide detected (relative to its respective cleanup level) was 0.0536 mg/kg Dieldrin at location S-5, below the Method B cleanup level of 0.063 mg/kg.

No groundwater sampling has been conducted at the Site; however, no soil contamination has been found to suggest a groundwater concern. The water table is reported within the SHA to be at a depth of approximately 27 feet below ground surface (ft bgs). The detected chlorinated pesticides all have high distribution coefficients (Kd) and relatively low solubility such that migration to groundwater is unlikely.

2. Establishment of cleanup standards.

Cleanup Levels

The following Method A Cleanup Levels for unrestricted land use and simplified Terrestrial Ecological Evaluation (TEE) soil concentrations have been used at the Site:

Contaminant	Maximum Concentration in Site Soils (mg/kg)	Statewide Background Concentration (mg/kg)	MTCA Cleanup Level (mg/kg)	Simplified TEE Concentration (Table 749-2) (mg/kg)
Arsenic	9.77	7	20 ¹	20
Barium	205	NA	16,000 ²	1,250
Chromium	39.4	42	2000 ¹	42
Lead	145	17	250 ¹	220
Mercury	0.167	0.07	2 ¹	9

NA = Not available.

1 – Method A cleanup level.

2 – Method B (direct contact, non-cancer) cleanup level.

Contaminant	Maximum Concentration in Site Soils (mg/kg)	MTCA Cleanup Level (mg/kg)	Simplified TEE Concentration (Table 749-2) (mg/kg)
Dieldrin	0.0536	0.063 ²	0.17
DDT	0.036	2.9 ²	1.0 ⁵
DDE	0.14	2.9 ²	1.0 ⁵
DDD	0.064	2.4 ³	1.0 ⁵
Alpha chlordane	0.0176	2.9 ^{2,4}	1.0 ⁴
Gamma chlordane	0.0101	2.9 ^{2,4}	1.0 ⁴

2 – Method B (direct contact cancer) cleanup level.

3 – Method B (direct contact non-cancer) cleanup level.

4 – Cleanup level/concentration for total chlordane.

5 – Concentration for total DDT + DDE + DDD.

Point of Compliance (POC): Standard, throughout the Site, for soil extending from the surface to 15 feet below ground surface (ft bgs) (direct contact pathway).

Terrestrial Ecological Evaluation (TEE): A TEE form was submitted to Ecology. The Simplified TEE was found to apply at the Site. None of the detected analytes exceeded the respective simplified TEE soil concentrations for unrestricted land use found in Table 749-2 of MTCA. Based on the Washington Department of Fish & Wildlife (WA DFW) priority habitat map (<https://geodataservices.wdfw.wa.gov/hp/phs/>), no priority habitats are located on or adjacent to the Property or the Site.

3. Cleanup.

No cleanup level exceedances have been found at the Site which would require further action. Per WAC 173-340-360(2), it is our professional judgment that no further action is required for this cleanup.

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Hazardous Sites List.
- Confirmed and Suspected Contaminated Sites List.

That process includes public notice and opportunity to comment. Based on the comments received, Ecology will either remove the Site from the applicable lists or withdraw this opinion.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#XS0001).

For more information about the VCP and the cleanup process, please visit our web site: [www.
https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-process/Cleanup-
options/Voluntary-cleanup-program](https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-process/Cleanup-options/Voluntary-cleanup-program).

If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at (509) 454-7835 or e-mail at frank.winslow@ecy.wa.gov.

Sincerely,



Frank P. Winslow, LHG
Toxics Cleanup Program
Central Regional Office

FPW: anf

Enclosures: A – Site Description and Diagram

cc: William Rutherford, ADESA

Enclosure A

Site Description and Diagram

Site and Property Description

The subject property is a vacant lot at 2021 Boulevard Rd SE, in Olympia WA that was a former plant nursery. The Site, as defined in MTCA, is “...*any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located*”. The Site is located entirely within Thurston County Parcel Number 12824411300.

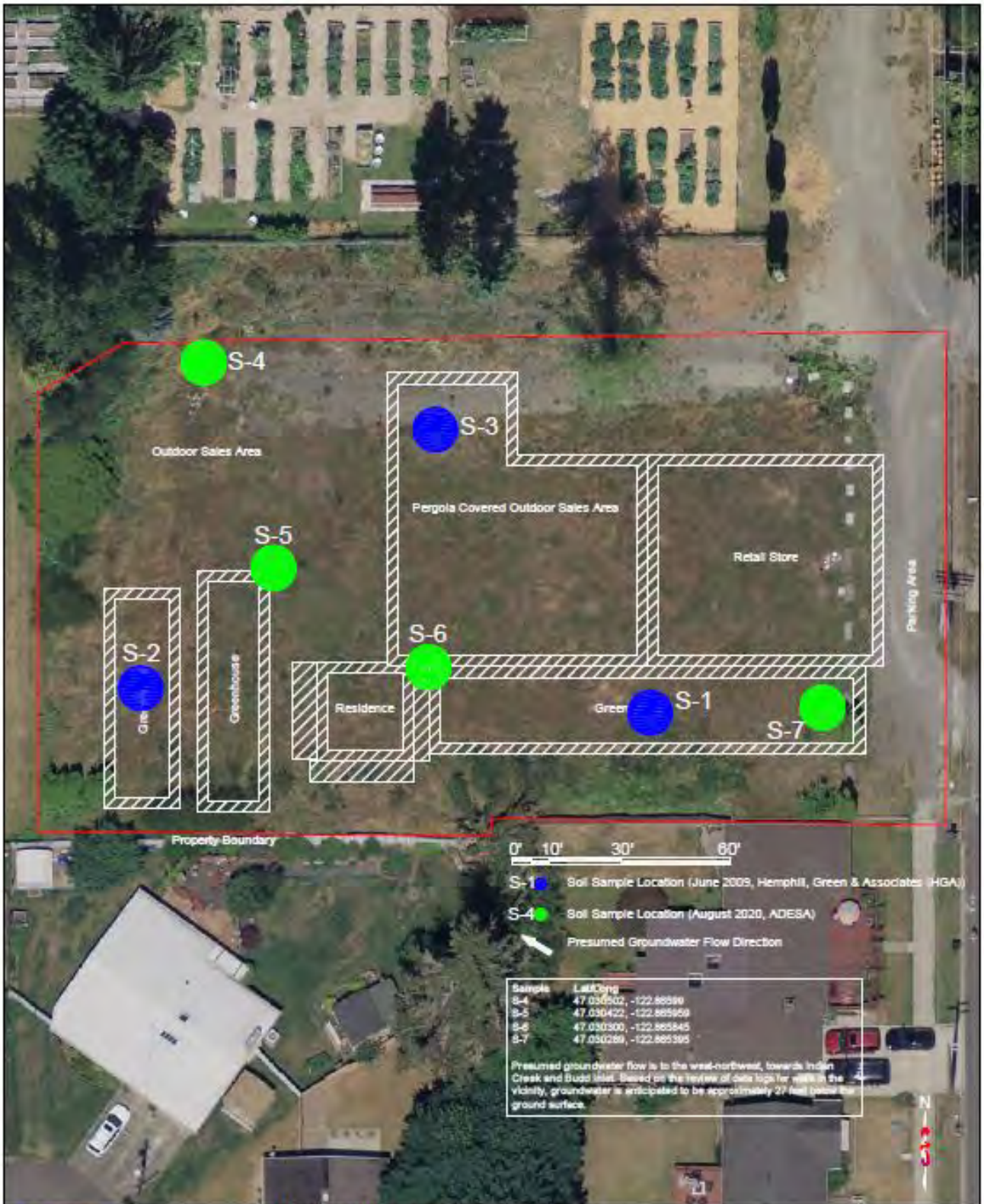
The property consists of a 0.9 acre vacant lot that was formerly a plant nursery. The property is surrounded by farm and residential properties. To the west and north is a small farm property, and to the south and east (across Boulevard Road) are residences. The Site is in an area of low topographic relief, roughly two miles southeast of downtown Olympia. Soils are reported to be sandy loam.

Sources and Extent of Soil Contamination

As discussed above, heavy metals and chlorinated pesticides were detected in soils at the Site in 2009. Additional soil sampling for chlorinated pesticides were conducted in 2020. None of the analytes were detected above MTCA cleanup levels during either investigation. The chlorinated pesticides are believed to likely be attributable to historical pesticide applications, associated with the plant nursery, or potentially, pre-nursery activities at the property.

Groundwater

No groundwater sampling has been conducted at the Site; however, no soil contamination has been found to suggest a groundwater contamination concern. The water table is reported within the SHA to be at a depth of approximately 27 feet below ground surface (ft bgs). The chlorinated pesticides all have high distribution coefficients (Kd) and low solubility such that migration to groundwater is unlikely.



Former Boulevard Nursery
 Cleanup Site ID: 223 Facility/Site ID: 3749
 2021 Boulevard Road Southeast
 Olympia, Washington 98501

August 2020
 ADESA Environmental
 167 Central Avenue SE
 Tacoma, Washington 98501

Soil Sample
 Location Map



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • 360-407-6300
Call 711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

June 7, 2021

Brian Barlow
12833 Vail Cut Off Road SW
Rainier, WA 98576
barlowauto@hotmail.com

Re: Rescission of No Further Action (NFA) Status for the following Site:

- **Site Name:** Boulevard Nursery
- **Site Address:** 2021 Boulevard Road SE, Olympia, WA 98501
- **Facility/Site ID:** 3749
- **Cleanup Site ID:** 223
- **VCP Project No.:** XS0001

Dear Brian Barlow:

The Department of Ecology (Ecology) issued a No Further Action (NFA) determination for the Boulevard Nursery site (Site) on October 30, 2020. Additional data was received by Ecology on May 3, 2021, including laboratory analytical data and a site plan map showing those additional soil sampling locations. The site plan map and a summary table presenting analytical results from soil samples collected on April 22, 2021, are provided in Enclosure A.

One of the soil samples collected on April 22, 2021 had a concentration of Dieldrin at 0.289 milligrams per kilogram (mg/kg). This Dieldrin concentration exceeds the Model Toxics Cleanup Act (MTCA) Method B cleanup level of 0.063 mg/kg. The soil samples were reportedly collected on or adjacent to a pile of soil near the rear of the property.

Based on this information, Ecology rescinds the October 20, 2020 NFA determination under expedited Voluntary Cleanup Program (VCP) project XS0001. The effective date of the rescission is the date of this letter.

Next Steps

Ecology will update its records to reflect that Ecology has rescinded the NFA determination for this Site. The Site will be listed in future publications of the [Confirmed and Suspected Contaminated Sites List](#).¹

If you have any questions about the rescission or next steps, please contact me at (360) 407-7226 or at barry.rogowski@ecy.wa.gov.

Sincerely,



Barry Rogowski
Section Manager
Toxics Cleanup Program

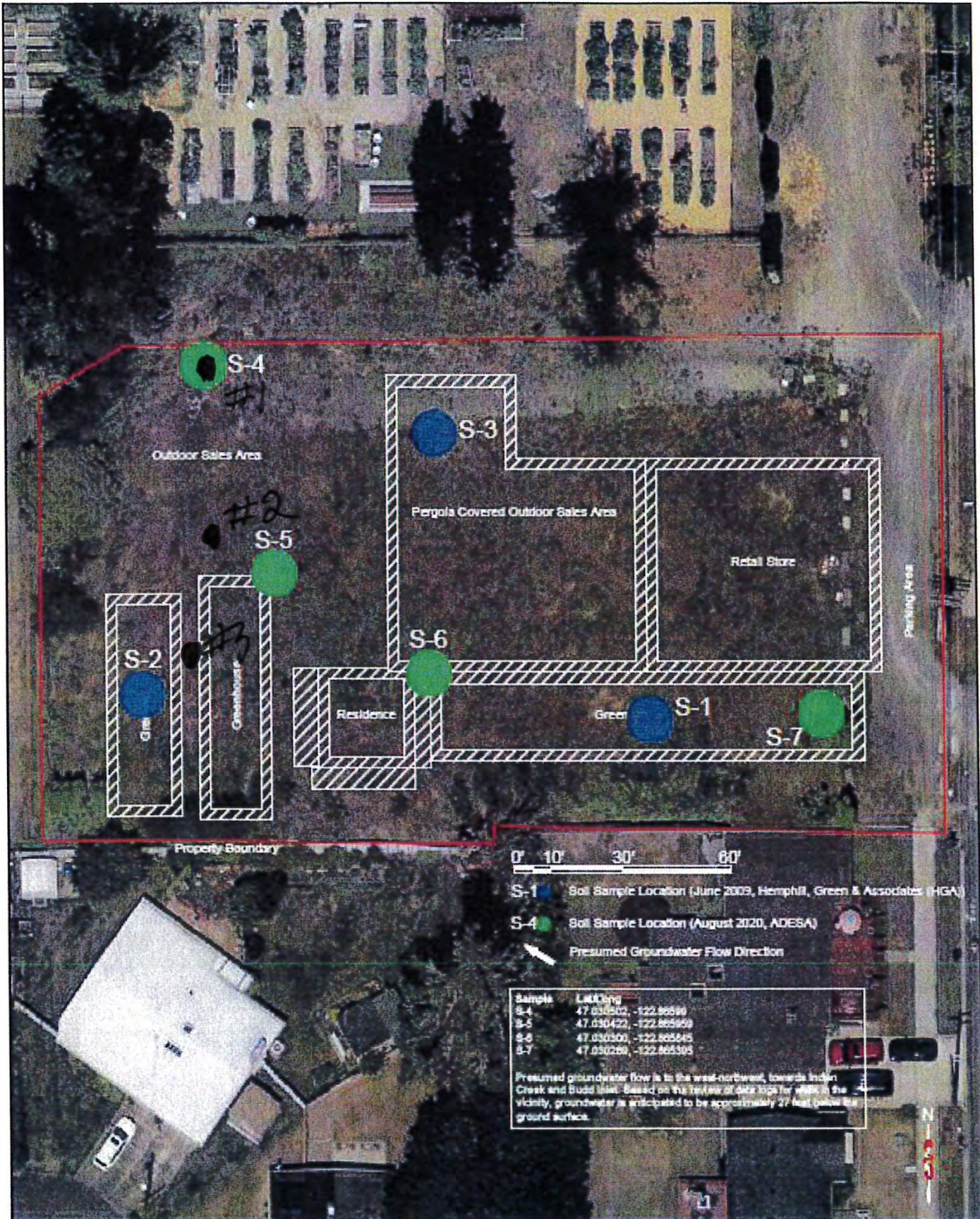
Enclosure

cc: William Rutherford, ADESA Environmental
Nick Acklam, Ecology
Frank Winslow, Ecology

¹ <https://apps.ecology.wa.gov/tcpwebreporting/reports/cleanup/contaminated>

ENCLOSURE A

Boulevard Nursery Soil Sampling Results						
Samples collect April 22, 2021						
Investigation Year	Sample Location	Sample Depth (inches)	DDT (mg/kg)	DDD (mg/kg)	DDE (mg/kg)	Dieldrin (mg/kg)
Method A Cleanup Level			3	NA	NA	NA
Method B Cleanup Level (cancer)			2.9	4.2	2.9	0.063
2009	S-1	12	0.036	0.064	0.14	ND
	S-2	12	0.014	0.034	0.12	0.038
	S-3	12	ND	ND	ND	ND
2020	S-4	12	0.0337	0.0116	0.0296	0.0344
	S-5	12	ND	ND	ND	0.0536
	S-6	12	ND	ND	ND	ND
	S-7	12	ND	ND	ND	ND
2021	1	10	0.202	0.0764	0.0499	0.0460
	2	10	0.0743	ND	0.0319	0.289
	3	14	0.148	ND	0.0516	0.0492



- S-1 ● Soil Sample Location (June 2009, Hemphill, Green & Associates (HGA))
- S-4 ● Soil Sample Location (August 2020, ADESA)
- ↖ Presumed Groundwater Flow Direction

Sample	Latitude	Longitude
S-4	47.030502	-122.86599
S-5	47.030422	-122.86599
S-6	47.030500	-122.865845
S-7	47.030268	-122.865395

Presumed groundwater flow is to the west-northwest, towards Indian Creek and Budd Inlet. Based on the historical data logs for wells in the vicinity, groundwater is anticipated to be approximately 27 feet below the ground surface.



Former Boulevard Nursery
 Cleanup Site ID: 223 Facility/Site ID: 3749
 2021 Boulevard Road Southeast
 Olympia, Washington 98501

August 2020
 ADESA Environmental
 167 Central Avenue East
 Tennesse, Washington 98501

Soil Sample
 Location Map

Appendix B

PIONEER TECHNOLOGIES CORPORATION (PTC) FIELD CHECKLIST

Project/Task Name: 2021 Blvd Berm Removal Site Location: 2021 Blvd Rd SE, Olympia
 Requested By / Date: 2/16/23 JH Work Deadline: 2/24/23

SERVICES REQUESTED	COMPLETED
- Oversee removal of soil berm to 6ft ² below grade	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
- photograph + note daily progress on field forms	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
- Complete daily tallgate meetings w/ contractors	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
- Remove <u>ENTIRE</u> berm including portion on north beyond shown on figure	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<u>13 + 1 duplicate</u> ← see location of samples on figure	<input type="checkbox"/> YES <input type="checkbox"/> NO
- Collect ~15 samples from base of completed excavation (2 jars per sample)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
- Document location using GPS or measuring wheel	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
- Drop off samples on ice to Libby	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
- call Joel if any questions/concerns	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
- collected additional 10 samples on 2/24/23	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

***collect & duplicate**

ADDITIONAL STANDARD INSTRUCTIONS	COMPLETED	COMPLETED
<input checked="" type="checkbox"/> Review Docs: <u>Field Figure</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> Health & Safety Meeting <input type="checkbox"/> YES <input type="checkbox"/> NO
<input checked="" type="checkbox"/> Agency NOI / <u>Utility Locate</u> / Concrete Coring	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> Call PM from Site <input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/> Coordinate Access: _____	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> Draw Site Map <u>mark the sample location</u> <input type="checkbox"/> YES <input type="checkbox"/> NO
<input checked="" type="checkbox"/> Coordinate Sub / Equip: <u>NO</u>	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> Cuttings / Purge Water Characterization & Disposal
<input checked="" type="checkbox"/> Purchase / Rent Equip: <u>NO</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> Potential HW _____ <input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/> Client/Agency Coordination: _____	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> Non-Haz _____ <input type="checkbox"/> YES <input type="checkbox"/> NO
<input checked="" type="checkbox"/> Calibrate Equipment: <u>NO</u>	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> Background _____ <input type="checkbox"/> YES <input type="checkbox"/> NO

SAMPLING REQUIREMENTS		
<input type="checkbox"/> Field Testing: _____		
<input checked="" type="checkbox"/> Lab Testing: <u>Orgochlorine pesticides via 8081</u>	Laboratory: <u>Libby</u>	
<input type="checkbox"/> Lab Testing: <u>standard 5-10 day turnaround time</u>	Laboratory: _____	
<input type="checkbox"/> Lab Testing: _____	Laboratory: _____	

FIELD SUPPLIES NEEDED	
<input checked="" type="checkbox"/> Site Map <input checked="" type="checkbox"/> Camera <input checked="" type="checkbox"/> Survey Equip / GPS <input checked="" type="checkbox"/> Vehicle <u>wheel</u>	<input type="checkbox"/> Water Level Indicator / Interface Probe
<input checked="" type="checkbox"/> Std Field Equip (keys, forms, SAP, HASP, PPE, decon, tools)	<input type="checkbox"/> Water Quality Meter _____ <input type="checkbox"/> Field Test Kits _____
<input type="checkbox"/> Drilling Equip (PID, references, knife, baggies, tape)	<input checked="" type="checkbox"/> Sample Kit / <u>Cooler</u> / <u>COC</u> / <u>Ice</u> _____
<input checked="" type="checkbox"/> Soil Equip (SS bowls, <u>spoons</u> /shovel, hand auger, pick, sieves)	<input type="checkbox"/> IDW: <input type="checkbox"/> Drums _____ <input checked="" type="checkbox"/> 5-gal buckets _____
<input type="checkbox"/> GWM (pump, tubing, gen., compres., bailers, rope/string, PDB)	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Pump / Slug Test Equip (GWM Equip, slug, stopwatch)	<input type="checkbox"/> Other: _____

PIONEER TECHNOLOGIES CORPORATION (PTC) DAILY FIELD REPORT

Date: 02/20/2023 Site Location: 2021 Boulevard Rd SE Site Arrival Time: 6:55 am Site Departure Time: 14:45

WEATHER
TEMPERATURE
WIND

Clear Sun	<u>Overcast</u>	<u>Drizzle</u>	Rain	Snow
To 32	<u>32-50</u>	50-70	70-85	85 Up
Calm	<u>Med.</u>	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
Michael Kurkov	PIONEER	6:55 - 14:45
shellea Patte	DHE	7:00 - 15:15
Nathan Kruse	DHE	6:30 6:00 - 14:30

NOTES ON WORK COMPLETED

6:55 Arrived on site
 7:20 Excavator delivered on-site (Batteries dead, mechanic was called)
 8:07 Mechanic arrived on-site
 8:28 BMPS delivered on-site & visquine laid out for temp stack-pile
 8:50 Began excavating berm onto visquine
 12:30 staked locations for sampling
 13:05 began collecting soil samples
 13:35 Finished collecting samples.
 13:50 departed to deliver samples to lab & came back to site
 14:45 departed from site

SIGNATURE: MD Kurkov

DATE: 02/20/2023

PIONEER TECHNOLOGIES CORPORATION (PTC) DAILY FIELD REPORT

Date: 02/21/2023 Site Location: 2021 Boulevard Rd SE Site Arrival Time: 6:00 Site Departure Time: 8:25

WEATHER
TEMPERATURE
WIND

Clear Sun	<u>Overcast</u>	<u>Drizzle</u>	<u>Rain</u>	Snow
To 32	<u>32-50</u>	50-70	70-85	85 Up
Calm	<u>Med.</u>	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
Michael Kurkov	PIONEER	6:00 - 8:25
Nathan Kruse	DHE	6:00 - 8:25
Shellea Patte	DHE	6:00 - 8:25

NOTES ON WORK COMPLETED

6:00 Arrival to site

6:10 6:10 safety bulge

6:30 First truck arrived, excavation began (4 trucks w/ trailers total)

All trucks finished loading by 7-7:15

Excavator operator consolidated stockpile, then tarped at conclusion

SIGNATURE: 

DATE: 02/21/2023

PIONEER TECHNOLOGIES CORPORATION (PTC) DAILY FIELD REPORT

Date: 02/22/2023 Site Location: 2021 Boulevard Rd SE Site Arrival Time: 6:00 Site Departure Time: 8:40

WEATHER
TEMPERATURE
WIND

Clear Sun	<u>Overcast</u>	<u>Drizzle</u>	Rain	Snow
To 32	<u>32-50</u>	50-70	70-85	85 Up
<u>Calm</u>	Med.	Strong	Severe	

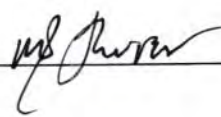
PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
Michael Kurkov	PTC	6:00 - 8:40
Nathan Kruse	DHE	6:00 - 8:40
Shelley Patte	DHE	6:00 - 8:40

NOTES ON WORK COMPLETED

6:00 arrival on-site & remove tarps from dump for pile
 6:10 safety tailgate
 6:40 TRUCKS arrive & begin loading
 7:15 (approx) last truck finished loading
 7:15 excavator operator begins restocking pile, & pile is tarped
 8:40 depart from site

SIGNATURE: _____



DATE: 02/22/2023

PIONEER TECHNOLOGIES CORPORATION (PTC) DAILY FIELD REPORT

Date: 2/23/2023 Site Location: 2021 Boulevard Rd SE Site Arrival Time: 6:00 Site Departure Time: 6:20

WEATHER
TEMPERATURE
WIND

Clear Sun	<u>Overcast</u>	Drizzle	Rain	<u>Snow</u> <u>on ground</u>
<u>To 32</u>	32-50	50-70	70-85	85 Up
<u>Calm</u>	Med.	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
Michael Kurkov	PTC	6:00 - 6:20
Nathan Kruse	DHE	6:00 -

NOTES ON WORK COMPLETED

6:00 Arrived on-site
 was notified by Nathan that trucks were cancelled for the day,
 discussed plan going forward
 6:20 departed from site

SIGNATURE: 

DATE: 02/23/2023

PIONEER TECHNOLOGIES CORPORATION (PTC) DAILY FIELD REPORT

Date: 02/24/2023 Site Location: 2021 Blvd Rd SE Site Arrival Time: 6:00 Site Departure Time: 9:45

WEATHER
TEMPERATURE
WIND

Clear Sun	Overcast	Drizzle	Rain	Snow
To 32	32-50	50-70	70-85	85 Up
Calm	Med.	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
Michael Kurkov	PTC	6:00 - 9:45
Joel Hecker	PTC	6:00 - 9:45
Nathan Kruse	DHE	6:00 - 9:45
Shellea Patte	DHE	6:00 - 9:45
Jeremy Graham	City of Olympia	6:00 - 6:25

NOTES ON WORK COMPLETED

6:00 arrived on-site
 6:05 safety tailgate
 7:05 Trucks arrived
 samples collected as excavation was done (7-9:00)
 9:45 departed from site

SIGNATURE: 

DATE: 02/24/2023

PIONEER DAILY FIELD REPORT

Date: 03/30/2023 Site Location: 2021 BOULEVARD RD Site Arrival Time: 08:30 Site Departure Time: 09:40

WEATHER
TEMPERATURE
WIND

Clear Sun	Overcast	Drizzle	Rain	Snow
18-32	32-50	50-70	70-85	85 Up
Calm	Med.	Strong	Severe	

PEOPLE PRESENT ON SITE

NAME	ASSOCIATION	TIME ON SITE AND OFF SITE
Joel Hecker	PIONEER	08:30 - 09:40
Michael Kurkov	PIONEER	08:30 - 09:40


NOTES ON WORK COMPLETED

08:30 - Arrived on-site

08:40 - Removed drums from truck & prepped work area
 - dug out 6-12" below surrounding grade in southern most portion
 - of the removed berm area, in accordance with agreement with City of Olympia

9:20 - Completed removal of soil into the 3 drums.
 - sampled 2 locations (SS24 & SS25) at extents of additional excavation
 - de-runned equipment, sealed & labelled drums

9:40 - departed from site, samples were taken to Libby Environmental Lab.

SIGNATURE: 

DATE: 03/30/2023

ATTACHMENT B-5.1-3

Daily Excavation Inspection Report

Site 2021 Boulevard Rd SE
 Location of Excavation West side of parcel
 Depth berm (approx 5' in height) excavated to -0.5 to -1.0 feet below grade
 Soil Type Contaminated with Dieldrin (topsoil)

ITEMS	CONDITION			REMARKS
	good	rejected	n/a	
Slope Ratio	✓			Steep, 1:1 approx, was compacted & tarped for removed on following days.
Shoring			✗	
Shielding			✗	
Barricades			✗	
Water Removal			✗	
Traffic Control	✓			Field crew maintained distance
Spoil Pile	✓			Temporary, was tarped

Atmosphere	O ₂	Time	Explosimeter
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%
	%	_____	%

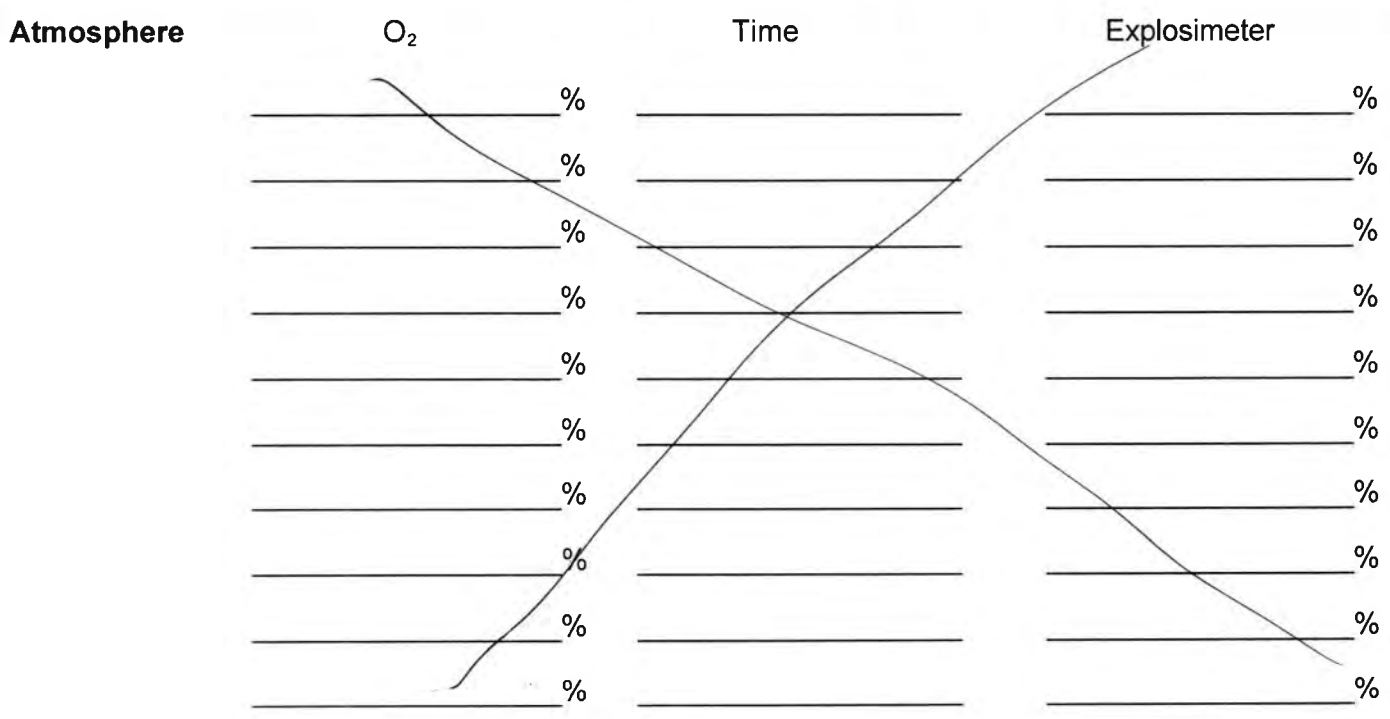
Competent Person: Michael Kurzer *[Signature]*
 Date: 02/20/2023 Time: _____

ATTACHMENT B-5.1-3

Daily Excavation Inspection Report

Site 2021 Boulevard Rd SE
 Location of Excavation west side of parcel
 Depth approx 8' height berm Spoil pile
 Soil Type contaminated with dieldrin (top soil)

ITEMS	CONDITION			REMARKS
	good	rejected	n/a	
Slope Ratio	✓			approx 1:1 ratio
Shoring			X	
Shielding			X	
Barricades			X	
Water Removal			X	
Traffic Control	✓			Trucks followed same route, safe distance maintained
Spoil Pile	✓			consolidated & tarped



Competent Person: Michael Kurzer
 Date: 02/21/2023 Time: 8:00 AM

ATTACHMENT B-5.1-3

Daily Excavation Inspection Report

Site 2021 Boulevard Rd SE
 Location of Excavation West side of property
 Depth approx 6.5 remaining stake-pile
 Soil Type (contaminated with diesel/din (top soil))

ITEMS	CONDITION			REMARKS
	good	rejected	n/a	
Slope Ratio	✓			
Shoring			X	
Shielding			X	
Barricades			X	
Water Removal			X	
Traffic Control	✓			
Spoil Pile	✓			

Atmosphere	O ₂	Time	Explosimeter
	%		%
	%		%
	%		%
	%		%
	%		%
	%		%
	%		%
	%		%
	%		%
	%		%
	%		%
	%		%

Competent Person: Michael Kurkov
 Date: 02/22/2023 Time: 8:40 am

ATTACHMENT B-5.1-3

Daily Excavation Inspection Report

Site 2021 Boulevard Rd SE Lacey WA

Location of Excavation West side of parcel, additional 0.5-1.0' excavation due to

Depth 0.5-1.0' additional excavation in 3 areas dieldrin exceedances.

Soil Type Topsoil contaminated with dieldrin

ITEMS	CONDITION			REMARKS
	good	rejected	n/a	
Slope Ratio	✓			excavated soil added to stock-pile
Shoring			X	
Shielding			X	
Barricades			X	
Water Removal			X	
Traffic Control	✓			
Spoil Pile	✓			Pile re-stocked & tarped

Atmosphere

O ₂	Time	Explosimeter
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %
_____ %	_____	_____ %

Competent Person: Michael Kurkov

Date: 02/24/2023

Time: 9:45 am

Appendix C

Appendix B - Photographic Log

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Photo No. 9.....	6
Photo No. 10.....	6
Photo No. 11.....	7
Photo No. 12.....	7

Appendix B - Photographic Log

Photo No. 1	
Date: March 2023 (Google)	
Direction Photo Taken: Vertical	
Description: Plan view of parcel prior to berm excavation.	

Photo No. 2	
Date: July 25, 2021	
Direction Photo Taken: West	
Description: View of the berm area prior to excavation.	

Appendix B - Photographic Log

Photo No. 3	
Date: 02/20/2023	
Direction Photo Taken: South	
Description: View of berm excavated to 6 to 12 inches below surrounding grade and temporarily stockpiled immediately East of berm location.	

Photo No. 4	
Date: 02/20/2023	
Direction Photo Taken: South	
Description: View of existing berm location and temporary wattle at completion of berm excavation, and temporary stockpile covered in Visqueen.	

Appendix B - Photographic Log



Appendix B - Photographic Log

Photo No. 7
Date: 02/22/2023
Direction Photo Taken: Northwest
Description: View of temporary stockpile of dieldrin-contaminated soil after consolidation and covering with Visqueen.



Photo No. 8
Date: 02/24/2023
Direction Photo Taken: East
Description: View of area of additional excavation to 6 to 12 inches below surrounding grade around sample SS06, which had an exceedance of dieldrin screening level.



Appendix B - Photographic Log



Appendix B - Photographic Log

Photo No. 11	
Date: 02/27/2023	
Direction Photo Taken: South	
Description: View of existing berm location after excavation, seeding, and strawing.	

Photo No. 12	
Date: 03/30/2023	
Direction Photo Taken: South	
Description: View of area of additional excavation to 6 to 12 inches below surrounding grade beyond sample SS22, which had an exceedance of dieldrin screening level. The additional excavation was hand dug around tree roots.	

Appendix D



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

February 23, 2023

Joel Hecker
Pioneer Technologies Corporation
5205 Corporate Center Ct SE, Suite C
Lacey, WA 98503

Dear Joel Hecker:

Please find enclosed the analytical data report for the 2021 Blvd Interim Action project located in Olympia, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

Chain of Custody Record

3322 South Bay Road NE
Olympia, WA 98506

Ph: 360-352-2110
Fax: 360-352-4154

Date: February 20, 2023

Page: 1 of 1

Client: Pioneer

Project Manager: Joel Hecker

Address: 205 Corporate Center Ct. SE

Project Name: 2021 Blvd Intern Action

City: Lacey State: WA Zip: 98503

Location: Olympia City, State: WA

Phone: 360-828-3739

Fax:

Collector: Michael Kurkov

Date of Collection:

Client Project # 2021 Blvd

Email: Heckerj@wpioneer.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Pesticides (8082)	Field Notes			
1 50-SS1-0.5-1-0223	0.5-1		G	2 Jars													X				
2 50-SS2-0.5-1-0223	↓		↓	↓																	
3 50-SS3-0.5-1-0223																					
4 50-SS4-0.5-1-0223																					
5 50-SS5-0.5-1-0223																					
6 50-SS6-0.5-1-0223																					
7 50-SS7-0.5-1-0223																					
8 50-SS8-0.5-1-0223																					
9 50-SS9-0.5-1-0223																					
10 50-SS10-0.5-1-0223																					
11 50-SS11-0.5-1-0223																					
12 50-SS12-0.5-1-0223																					
13 50-SS13-0.5-1-0223																					
14 50-SS14-0.5-1-0223																					
15 50-SS1-0.5-1-0223-01																				X	
16																					
17																					

Relinquished by: Michael Kurkov MKR	14:14	Date / Time	Received by: <i>[Signature]</i>	2-20-23 1414	Date / Time	Sample Receipt	Remarks: need results by Thursday @ noon per previous discussion
Good Condition?	Y	N	Cooler Temp.	°C			
Sample Temp.	°C						
Relinquished by:	Date / Time	Received by:	Date / Time	Total Number of Containers	TAT: 24HR 48HR 5-DAY		

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

2021 BLVD INTERIM ACTION PROJECT

Pioneer Technologies Corporation

Libby Project # L23B082

Date Received 2/20/2023

Time Received 2:14 PM

Received By RJK

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is complete? Yes No
2. How was the sample delivered? Hand Delivered Picked Up Shipped

Log In

3. Cooler or Shipping Container is present. Yes No N/A
4. Cooler or Shipping Container is in good condition. Yes No N/A
5. Cooler or Shipping Container has Custody Seals present. Yes No N/A
6. Was an attempt made to cool the samples? Yes No N/A
7. Temperature of cooler (0°C to 8°C recommended) -8.1 °C
8. Temperature of sample(s) (0°C to 8°C recommended) -4.3 °C
9. Did all containers arrive in good condition (unbroken)? Yes No
10. Is it clear what analyses were requested? Yes No
11. Did container labels match Chain of Custody? Yes No
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Are correct containers used for the analysis indicated? Yes No
14. Is there sufficient sample volume for indicated analysis? Yes No
15. Were all containers properly preserved per each analysis? Yes No
16. Were VOA vials collected correctly (no headspace)? Yes No N/A
17. Were all holding times able to be met? Yes No

Discrepancies/ Notes

18. Was client notified of all discrepancies? Yes No N/A

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 2021 Blvd Interim Action
Work Order Number: 2302366

February 23, 2023

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 14 sample(s) on 2/21/2023 for the analyses presented in the following report.

Organochlorine Pesticides by EPA Method 8081
Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original



CLIENT: Libby Environmental
Project: 2021 Blvd Interim Action
Work Order: 2302366

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2302366-001	SO-SS1-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-002	SO-SS2-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-003	SO-SS3-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-004	SO-SS4-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-005	SO-SS5-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-006	SO-SS6-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-007	SO-SS7-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-008	SO-SS8-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-009	SO-SS9-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-010	SO-SS10-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-011	SO-SS11-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-012	SO-SS12-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-013	SO-SS13-0.5-1-0223	02/20/2023 12:00 PM	02/21/2023 12:02 PM
2302366-014	SO-SS1-0.5-1-0223-01	02/20/2023 12:00 PM	02/21/2023 12:02 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Libby Environmental
Project: 2021 Blvd Interim Action

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Libby Environmental

Collection Date: 2/20/2023 12:00:00 PM

Project: 2021 Blvd Interim Action

Lab ID: 2302366-001

Matrix: Soil

Client Sample ID: SO-SS1-0.5-1-0223

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504

Analyst: KJ

Toxaphene	ND	0.0747		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Alpha BHC	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Beta BHC	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Gamma BHC (Lindane)	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Delta BHC	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Heptachlor	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Aldrin	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Heptachlor epoxide	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
gamma-Chlordane	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Endosulfan I	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
alpha-Chlordane	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Dieldrin	0.00729	0.0107	J	mg/Kg-dry	1	2/22/2023 5:37:18 PM
4,4'-DDE	ND	0.0107		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Endrin	ND	0.0160		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Endosulfan II	ND	0.0160		mg/Kg-dry	1	2/22/2023 5:37:18 PM
4,4'-DDD	ND	0.0160		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Endrin aldehyde	ND	0.0171		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Endosulfan sulfate	ND	0.0160		mg/Kg-dry	1	2/22/2023 5:37:18 PM
4,4'-DDT	ND	0.0171	Q	mg/Kg-dry	1	2/22/2023 5:37:18 PM
Endrin ketone	ND	0.0213		mg/Kg-dry	1	2/22/2023 5:37:18 PM
Methoxychlor	ND	0.0213	Q	mg/Kg-dry	1	2/22/2023 5:37:18 PM
Surr: Decachlorobiphenyl	96.5	12.7 - 168		%Rec	1	2/22/2023 5:37:18 PM
Surr: Tetrachloro-m-xylene	103	66.6 - 140		%Rec	1	2/22/2023 5:37:18 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991

Analyst: MP

Percent Moisture	10.8	0.500		wt%	1	2/21/2023 1:39:08 PM
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Analytical Report

Work Order: 2302366
Date Reported: 2/23/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302366-002
Client Sample ID: SO-SS2-0.5-1-0223

Collection Date: 2/20/2023 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504 Analyst: KJ

Toxaphene	ND	0.0795		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Alpha BHC	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Beta BHC	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Gamma BHC (Lindane)	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Delta BHC	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Heptachlor	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Aldrin	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Heptachlor epoxide	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
gamma-Chlordane	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Endosulfan I	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
alpha-Chlordane	ND	0.0114		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Dieldrin	0.00873	0.0114	J	mg/Kg-dry	1	2/22/2023 6:06:32 PM
4,4'-DDE	0.00807	0.0114	J	mg/Kg-dry	1	2/22/2023 6:06:32 PM
Endrin	ND	0.0170		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Endosulfan II	ND	0.0170		mg/Kg-dry	1	2/22/2023 6:06:32 PM
4,4'-DDD	ND	0.0170		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Endrin aldehyde	ND	0.0182		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Endosulfan sulfate	ND	0.0170		mg/Kg-dry	1	2/22/2023 6:06:32 PM
4,4'-DDT	0.00641	0.0182	JQ	mg/Kg-dry	1	2/22/2023 6:06:32 PM
Endrin ketone	ND	0.0227		mg/Kg-dry	1	2/22/2023 6:06:32 PM
Methoxychlor	ND	0.0227	Q	mg/Kg-dry	1	2/22/2023 6:06:32 PM
Surr: Decachlorobiphenyl	109	12.7 - 168		%Rec	1	2/22/2023 6:06:32 PM
Surr: Tetrachloro-m-xylene	106	66.6 - 140		%Rec	1	2/22/2023 6:06:32 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991 Analyst: MP

Percent Moisture	20.1	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental

Collection Date: 2/20/2023 12:00:00 PM

Project: 2021 Blvd Interim Action

Lab ID: 2302366-003

Matrix: Soil

Client Sample ID: SO-SS3-0.5-1-0223

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504

Analyst: KJ

Toxaphene	ND	0.0718		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Alpha BHC	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Beta BHC	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Gamma BHC (Lindane)	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Delta BHC	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Heptachlor	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Aldrin	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Heptachlor epoxide	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
gamma-Chlordane	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Endosulfan I	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
alpha-Chlordane	ND	0.0103		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Dieldrin	0.00483	0.0103	J	mg/Kg-dry	1	2/22/2023 6:16:15 PM
4,4'-DDE	0.00408	0.0103	J	mg/Kg-dry	1	2/22/2023 6:16:15 PM
Endrin	ND	0.0154		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Endosulfan II	ND	0.0154		mg/Kg-dry	1	2/22/2023 6:16:15 PM
4,4'-DDD	ND	0.0154		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Endrin aldehyde	ND	0.0164		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Endosulfan sulfate	ND	0.0154		mg/Kg-dry	1	2/22/2023 6:16:15 PM
4,4'-DDT	0.00702	0.0164	JQ	mg/Kg-dry	1	2/22/2023 6:16:15 PM
Endrin ketone	ND	0.0205		mg/Kg-dry	1	2/22/2023 6:16:15 PM
Methoxychlor	ND	0.0205	Q	mg/Kg-dry	1	2/22/2023 6:16:15 PM
Surr: Decachlorobiphenyl	109	12.7 - 168		%Rec	1	2/22/2023 6:16:15 PM
Surr: Tetrachloro-m-xylene	111	66.6 - 140		%Rec	1	2/22/2023 6:16:15 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991

Analyst: MP

Percent Moisture	14.8	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental

Collection Date: 2/20/2023 12:00:00 PM

Project: 2021 Blvd Interim Action

Lab ID: 2302366-004

Matrix: Soil

Client Sample ID: SO-SS4-0.5-1-0223

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504

Analyst: KJ

Toxaphene	ND	0.0684		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Alpha BHC	ND	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Beta BHC	ND	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Gamma BHC (Lindane)	ND	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Delta BHC	ND	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Heptachlor	ND	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Aldrin	ND	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Heptachlor epoxide	ND	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
gamma-Chlordane	0.00387	0.00977	J	mg/Kg-dry	1	2/22/2023 6:25:58 PM
Endosulfan I	ND	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
alpha-Chlordane	0.0118	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Dieldrin	0.0518	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
4,4'-DDE	0.0166	0.00977		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Endrin	ND	0.0146		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Endosulfan II	ND	0.0146		mg/Kg-dry	1	2/22/2023 6:25:58 PM
4,4'-DDD	ND	0.0146		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Endrin aldehyde	ND	0.0156		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Endosulfan sulfate	ND	0.0146		mg/Kg-dry	1	2/22/2023 6:25:58 PM
4,4'-DDT	0.00863	0.0156	JQ	mg/Kg-dry	1	2/22/2023 6:25:58 PM
Endrin ketone	ND	0.0195		mg/Kg-dry	1	2/22/2023 6:25:58 PM
Methoxychlor	ND	0.0195	Q	mg/Kg-dry	1	2/22/2023 6:25:58 PM
Surr: Decachlorobiphenyl	101	12.7 - 168		%Rec	1	2/22/2023 6:25:58 PM
Surr: Tetrachloro-m-xylene	114	66.6 - 140		%Rec	1	2/22/2023 6:25:58 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991

Analyst: MP

Percent Moisture	12.2	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302366-005
Client Sample ID: SO-SS5-0.5-1-0223

Collection Date: 2/20/2023 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504 Analyst: KJ

Toxaphene	ND	0.423	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Alpha BHC	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Beta BHC	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Gamma BHC (Lindane)	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Delta BHC	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Heptachlor	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Aldrin	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Heptachlor epoxide	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
gamma-Chlordane	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Endosulfan I	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
alpha-Chlordane	ND	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Dieldrin	0.0278	0.0604	DJ	mg/Kg-dry	5	2/22/2023 6:35:44 PM
4,4'-DDE	0.0767	0.0604	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Endrin	0.105	0.0906	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Endosulfan II	ND	0.0906	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
4,4'-DDD	0.0606	0.0906	DJ	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Endrin aldehyde	ND	0.0966	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Endosulfan sulfate	ND	0.0906	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
4,4'-DDT	0.0616	0.0966	DJQ	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Endrin ketone	ND	0.121	D	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Methoxychlor	ND	0.121	DQ	mg/Kg-dry	5	2/22/2023 6:35:44 PM
Surr: Decachlorobiphenyl	84.2	12.7 - 168	D	%Rec	5	2/22/2023 6:35:44 PM
Surr: Tetrachloro-m-xylene	95.5	66.6 - 140	D	%Rec	5	2/22/2023 6:35:44 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991 Analyst: MP

Percent Moisture	19.0	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental

Collection Date: 2/20/2023 12:00:00 PM

Project: 2021 Blvd Interim Action

Lab ID: 2302366-006

Matrix: Soil

Client Sample ID: SO-SS6-0.5-1-0223

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504

Analyst: KJ

Toxaphene	ND	0.406	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Alpha BHC	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Beta BHC	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Gamma BHC (Lindane)	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Delta BHC	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Heptachlor	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Aldrin	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Heptachlor epoxide	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
gamma-Chlordane	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Endosulfan I	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
alpha-Chlordane	ND	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Dieldrin	0.0689	0.0581	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
4,4'-DDE	0.0300	0.0581	DJ	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Endrin	ND	0.0871	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Endosulfan II	ND	0.0871	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
4,4'-DDD	ND	0.0871	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Endrin aldehyde	ND	0.0929	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Endosulfan sulfate	ND	0.0871	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
4,4'-DDT	ND	0.0929	DQ	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Endrin ketone	ND	0.116	D	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Methoxychlor	ND	0.116	DQ	mg/Kg-dry	5	2/22/2023 6:45:28 PM
Surr: Decachlorobiphenyl	82.7	12.7 - 168	D	%Rec	5	2/22/2023 6:45:28 PM
Surr: Tetrachloro-m-xylene	94.2	66.6 - 140	D	%Rec	5	2/22/2023 6:45:28 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991

Analyst: MP

Percent Moisture	22.9	0.500		wt%	1	2/21/2023 1:39:08 PM
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Analytical Report

Work Order: 2302366
Date Reported: 2/23/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302366-007
Client Sample ID: SO-SS7-0.5-1-0223

Collection Date: 2/20/2023 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504 Analyst: KJ

Toxaphene	ND	0.375	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Alpha BHC	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Beta BHC	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Gamma BHC (Lindane)	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Delta BHC	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Heptachlor	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Aldrin	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Heptachlor epoxide	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
gamma-Chlordane	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Endosulfan I	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
alpha-Chlordane	ND	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Dieldrin	0.0600	0.0535	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
4,4'-DDE	0.0478	0.0535	DJ	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Endrin	0.0453	0.0803	DJ	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Endosulfan II	ND	0.0803	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
4,4'-DDD	ND	0.0803	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Endrin aldehyde	ND	0.0856	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Endosulfan sulfate	ND	0.0803	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
4,4'-DDT	0.0764	0.0856	DJQ	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Endrin ketone	ND	0.107	D	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Methoxychlor	ND	0.107	DQ	mg/Kg-dry	5	2/22/2023 6:55:13 PM
Surr: Decachlorobiphenyl	91.7	12.7 - 168	D	%Rec	5	2/22/2023 6:55:13 PM
Surr: Tetrachloro-m-xylene	91.9	66.6 - 140	D	%Rec	5	2/22/2023 6:55:13 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991 Analyst: MP

Percent Moisture	16.5	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302366-008
Client Sample ID: SO-SS8-0.5-1-0223

Collection Date: 2/20/2023 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504 Analyst: KJ

Toxaphene	ND	0.394	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Alpha BHC	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Beta BHC	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Gamma BHC (Lindane)	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Delta BHC	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Heptachlor	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Aldrin	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Heptachlor epoxide	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
gamma-Chlordane	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Endosulfan I	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
alpha-Chlordane	ND	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Dieldrin	0.0306	0.0563	DJ	mg/Kg-dry	5	2/22/2023 7:04:58 PM
4,4'-DDE	0.155	0.0563	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Endrin	0.0322	0.0844	DJ	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Endosulfan II	ND	0.0844	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
4,4'-DDD	0.0511	0.0844	DJ	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Endrin aldehyde	ND	0.0901	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Endosulfan sulfate	ND	0.0844	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
4,4'-DDT	0.0480	0.0901	DJQ	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Endrin ketone	ND	0.113	D	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Methoxychlor	ND	0.113	DQ	mg/Kg-dry	5	2/22/2023 7:04:58 PM
Surr: Decachlorobiphenyl	92.8	12.7 - 168	D	%Rec	5	2/22/2023 7:04:58 PM
Surr: Tetrachloro-m-xylene	101	66.6 - 140	D	%Rec	5	2/22/2023 7:04:58 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991 Analyst: MP

Percent Moisture	15.1	0.500		wt%	1	2/21/2023 1:39:08 PM
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Analytical Report

Work Order: 2302366
Date Reported: 2/23/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302366-009
Client Sample ID: SO-SS9-0.5-1-0223

Collection Date: 2/20/2023 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504 Analyst: KJ

Toxaphene	ND	0.399	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Alpha BHC	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Beta BHC	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Gamma BHC (Lindane)	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Delta BHC	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Heptachlor	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Aldrin	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Heptachlor epoxide	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
gamma-Chlordane	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Endosulfan I	ND	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
alpha-Chlordane	0.0188	0.0570	DJ	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Dieldrin	0.114	0.0570	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
4,4'-DDE	0.0240	0.0570	DJ	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Endrin	ND	0.0855	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Endosulfan II	ND	0.0855	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
4,4'-DDD	ND	0.0855	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Endrin aldehyde	ND	0.0912	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Endosulfan sulfate	ND	0.0855	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
4,4'-DDT	ND	0.0912	DQ	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Endrin ketone	ND	0.114	D	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Methoxychlor	ND	0.114	DQ	mg/Kg-dry	5	2/22/2023 7:14:42 PM
Surr: Decachlorobiphenyl	89.2	12.7 - 168	D	%Rec	5	2/22/2023 7:14:42 PM
Surr: Tetrachloro-m-xylene	99.5	66.6 - 140	D	%Rec	5	2/22/2023 7:14:42 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991 Analyst: MP

Percent Moisture	19.7	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental

Collection Date: 2/20/2023 12:00:00 PM

Project: 2021 Blvd Interim Action

Lab ID: 2302366-010

Matrix: Soil

Client Sample ID: SO-SS10-0.5-1-0223

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504

Analyst: KJ

Toxaphene	ND	0.396	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Alpha BHC	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Beta BHC	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Gamma BHC (Lindane)	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Delta BHC	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Heptachlor	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Aldrin	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Heptachlor epoxide	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
gamma-Chlordane	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Endosulfan I	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
alpha-Chlordane	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Dieldrin	0.0550	0.0565	DJ	mg/Kg-dry	5	2/22/2023 7:24:24 PM
4,4'-DDE	ND	0.0565	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Endrin	ND	0.0848	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Endosulfan II	ND	0.0848	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
4,4'-DDD	ND	0.0848	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Endrin aldehyde	ND	0.0905	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Endosulfan sulfate	ND	0.0848	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
4,4'-DDT	ND	0.0905	DQ	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Endrin ketone	ND	0.113	D	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Methoxychlor	ND	0.113	DQ	mg/Kg-dry	5	2/22/2023 7:24:24 PM
Surr: Decachlorobiphenyl	85.8	12.7 - 168	D	%Rec	5	2/22/2023 7:24:24 PM
Surr: Tetrachloro-m-xylene	92.8	66.6 - 140	D	%Rec	5	2/22/2023 7:24:24 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991

Analyst: MP

Percent Moisture	18.0	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302366-011
Client Sample ID: SO-SS11-0.5-1-0223

Collection Date: 2/20/2023 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504 Analyst: KJ

Toxaphene	ND	0.402	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Alpha BHC	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Beta BHC	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Gamma BHC (Lindane)	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Delta BHC	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Heptachlor	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Aldrin	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Heptachlor epoxide	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
gamma-Chlordane	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Endosulfan I	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
alpha-Chlordane	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Dieldrin	ND	0.0574	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
4,4'-DDE	0.0300	0.0574	DJ	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Endrin	ND	0.0861	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Endosulfan II	ND	0.0861	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
4,4'-DDD	ND	0.0861	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Endrin aldehyde	ND	0.0918	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Endosulfan sulfate	ND	0.0861	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
4,4'-DDT	0.0356	0.0918	DJQ	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Endrin ketone	ND	0.115	D	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Methoxychlor	ND	0.115	DQ	mg/Kg-dry	5	2/22/2023 7:34:05 PM
Surr: Decachlorobiphenyl	91.6	12.7 - 168	D	%Rec	5	2/22/2023 7:34:05 PM
Surr: Tetrachloro-m-xylene	99.0	66.6 - 140	D	%Rec	5	2/22/2023 7:34:05 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991 Analyst: MP

Percent Moisture	21.8	0.500		wt%	1	2/21/2023 1:39:08 PM
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Analytical Report

Work Order: 2302366
Date Reported: 2/23/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302366-012
Client Sample ID: SO-SS12-0.5-1-0223

Collection Date: 2/20/2023 12:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504 Analyst: KJ

Toxaphene	ND	0.395	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Alpha BHC	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Beta BHC	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Gamma BHC (Lindane)	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Delta BHC	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Heptachlor	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Aldrin	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Heptachlor epoxide	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
gamma-Chlordane	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Endosulfan I	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
alpha-Chlordane	ND	0.0564	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Dieldrin	0.0239	0.0564	DJ	mg/Kg-dry	5	2/22/2023 7:43:48 PM
4,4'-DDE	0.0280	0.0564	DJ	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Endrin	ND	0.0845	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Endosulfan II	ND	0.0845	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
4,4'-DDD	ND	0.0845	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Endrin aldehyde	ND	0.0902	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Endosulfan sulfate	ND	0.0845	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
4,4'-DDT	0.0314	0.0902	DJQ	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Endrin ketone	ND	0.113	D	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Methoxychlor	ND	0.113	DQ	mg/Kg-dry	5	2/22/2023 7:43:48 PM
Surr: Decachlorobiphenyl	87.0	12.7 - 168	D	%Rec	5	2/22/2023 7:43:48 PM
Surr: Tetrachloro-m-xylene	95.8	66.6 - 140	D	%Rec	5	2/22/2023 7:43:48 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991 Analyst: MP

Percent Moisture	24.5	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental

Collection Date: 2/20/2023 12:00:00 PM

Project: 2021 Blvd Interim Action

Lab ID: 2302366-013

Matrix: Soil

Client Sample ID: SO-SS13-0.5-1-0223

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504

Analyst: KJ

Toxaphene	ND	0.403	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Alpha BHC	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Beta BHC	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Gamma BHC (Lindane)	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Delta BHC	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Heptachlor	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Aldrin	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Heptachlor epoxide	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
gamma-Chlordane	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Endosulfan I	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
alpha-Chlordane	ND	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Dieldrin	0.108	0.0575	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
4,4'-DDE	0.0137	0.0575	DJ	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Endrin	ND	0.0863	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Endosulfan II	ND	0.0863	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
4,4'-DDD	ND	0.0863	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Endrin aldehyde	ND	0.0920	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Endosulfan sulfate	ND	0.0863	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
4,4'-DDT	ND	0.0920	DQ	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Endrin ketone	ND	0.115	D	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Methoxychlor	ND	0.115	DQ	mg/Kg-dry	5	2/22/2023 7:53:33 PM
Surr: Decachlorobiphenyl	102	12.7 - 168	D	%Rec	5	2/22/2023 7:53:33 PM
Surr: Tetrachloro-m-xylene	101	66.6 - 140	D	%Rec	5	2/22/2023 7:53:33 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991

Analyst: MP

Percent Moisture	20.7	0.500		wt%	1	2/21/2023 1:39:08 PM
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Client: Libby Environmental

Collection Date: 2/20/2023 12:00:00 PM

Project: 2021 Blvd Interim Action

Lab ID: 2302366-014

Matrix: Soil

Client Sample ID: SO-SS1-0.5-1-0223-01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39504

Analyst: KJ

Toxaphene	ND	0.0734		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Alpha BHC	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Beta BHC	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Gamma BHC (Lindane)	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Delta BHC	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Heptachlor	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Aldrin	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Heptachlor epoxide	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
gamma-Chlordane	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Endosulfan I	ND	0.0105		mg/Kg-dry	1	2/22/2023 8:03:16 PM
alpha-Chlordane	0.00405	0.0105	J	mg/Kg-dry	1	2/22/2023 8:03:16 PM
Dieldrin	0.00965	0.0105	J	mg/Kg-dry	1	2/22/2023 8:03:16 PM
4,4'-DDE	0.00242	0.0105	J	mg/Kg-dry	1	2/22/2023 8:03:16 PM
Endrin	ND	0.0157		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Endosulfan II	ND	0.0157		mg/Kg-dry	1	2/22/2023 8:03:16 PM
4,4'-DDD	ND	0.0157		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Endrin aldehyde	0.0133	0.0168	J	mg/Kg-dry	1	2/22/2023 8:03:16 PM
Endosulfan sulfate	ND	0.0157		mg/Kg-dry	1	2/22/2023 8:03:16 PM
4,4'-DDT	ND	0.0168	Q	mg/Kg-dry	1	2/22/2023 8:03:16 PM
Endrin ketone	ND	0.0210		mg/Kg-dry	1	2/22/2023 8:03:16 PM
Methoxychlor	ND	0.0210	Q	mg/Kg-dry	1	2/22/2023 8:03:16 PM
Surr: Decachlorobiphenyl	104	12.7 - 168		%Rec	1	2/22/2023 8:03:16 PM
Surr: Tetrachloro-m-xylene	113	66.6 - 140		%Rec	1	2/22/2023 8:03:16 PM

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample Moisture (Percent Moisture)

Batch ID: R81991

Analyst: MP

Percent Moisture	13.1	0.500		wt%	1	2/21/2023 1:39:08 PM
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Work Order: 2302366
 CLIENT: Libby Environmental
 Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: PEST-CCV-39504A	SampType: CCV	Units: µg/L				Prep Date: 2/22/2023	RunNo: 82036				
Client ID: CCV	Batch ID: 39504					Analysis Date: 2/22/2023	SeqNo: 1702123				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	204	0.0100	200.0	0	102	80	120				
Beta BHC	205	0.0100	200.0	0	103	80	120				
Gamma BHC (Lindane)	205	0.0100	200.0	0	102	80	120				
Delta BHC	205	0.0100	200.0	0	102	80	120				
Heptachlor	206	0.0100	200.0	0	103	80	120				
Aldrin	206	0.0100	200.0	0	103	80	120				
Heptachlor epoxide	206	0.0100	200.0	0	103	80	120				
gamma-Chlordane	206	0.0100	200.0	0	103	80	120				
Endosulfan I	206	0.0100	200.0	0	103	80	120				
alpha-Chlordane	206	0.0100	200.0	0	103	80	120				
Dieldrin	205	0.0100	200.0	0	103	80	120				
4,4'-DDE	205	0.0100	200.0	0	102	80	120				
Endrin	205	0.0150	200.0	0	103	80	120				
Endosulfan II	206	0.0150	200.0	0	103	80	120				
4,4'-DDD	205	0.0150	200.0	0	102	80	120				
Endrin aldehyde	207	0.0160	200.0	0	104	80	120				
Endosulfan sulfate	211	0.0150	200.0	0	105	80	120				
4,4'-DDT	199	0.0160	200.0	0	99.7	80	120				
Endrin ketone	212	0.0200	200.0	0	106	80	120				
Methoxychlor	209	0.0200	200.0	0	104	80	120				
Surr: Decachlorobiphenyl	238		200.0		119	54.6	157				
Surr: Tetrachloro-m-xylene	199		200.0		99.6	59.3	135				

Sample ID: TOX-CCV-39504A	SampType: CCV	Units: µg/L				Prep Date: 2/22/2023	RunNo: 82036				
Client ID: CCV	Batch ID: 39504					Analysis Date: 2/22/2023	SeqNo: 1702124				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	1,130	0.0700	1,000	0	113	80	120				
Surr: Decachlorobiphenyl	215		200.0		107	54.6	157				
Surr: Tetrachloro-m-xylene	188		200.0		93.9	59.3	135				

Work Order: 2302366
 CLIENT: Libby Environmental
 Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: MB-39504	SampType: MBLK	Units: mg/Kg	Prep Date: 2/21/2023	RunNo: 82036							
Client ID: MBLKS	Batch ID: 39504		Analysis Date: 2/22/2023	SeqNo: 1702125							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.0700									
Alpha BHC	ND	0.0100									
Beta BHC	ND	0.0100									
Gamma BHC (Lindane)	ND	0.0100									
Delta BHC	ND	0.0100									
Heptachlor	ND	0.0100									
Aldrin	ND	0.0100									
Heptachlor epoxide	ND	0.0100									
gamma-Chlordane	ND	0.0100									
Endosulfan I	ND	0.0100									
alpha-Chlordane	ND	0.0100									
Dieldrin	ND	0.0100									
4,4'-DDE	ND	0.0100									
Endrin	ND	0.0150									
Endosulfan II	ND	0.0150									
4,4'-DDD	ND	0.0150									
Endrin aldehyde	ND	0.0160									
Endosulfan sulfate	ND	0.0150									
4,4'-DDT	ND	0.0160									Q
Endrin ketone	ND	0.0200									
Methoxychlor	ND	0.0200									Q
Surr: Decachlorobiphenyl	0.243		0.2000		121	12.7	168				
Surr: Tetrachloro-m-xylene	0.208		0.2000		104	66.6	140				

NOTES:

Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample ID: LCS1-39504	SampType: LCS	Units: mg/Kg	Prep Date: 2/21/2023	RunNo: 82036							
Client ID: LCSS	Batch ID: 39504		Analysis Date: 2/22/2023	SeqNo: 1702126							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.229	0.0100	0.2000	0	115	69	143				
Beta BHC	0.211	0.0100	0.2000	0	105	67.4	133				

Work Order: 2302366
 CLIENT: Libby Environmental
 Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: LCS1-39504	SampType: LCS	Units: mg/Kg				Prep Date: 2/21/2023	RunNo: 82036				
Client ID: LCSS	Batch ID: 39504					Analysis Date: 2/22/2023	SeqNo: 1702126				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gamma BHC (Lindane)	0.232	0.0100	0.2000	0	116	66.8	135				
Delta BHC	0.229	0.0100	0.2000	0	114	67.9	133				
Heptachlor	0.237	0.0100	0.2000	0	118	73.5	149				
Aldrin	0.242	0.0100	0.2000	0	121	68.7	140				
Heptachlor epoxide	0.243	0.0100	0.2000	0	121	69.9	139				
gamma-Chlordane	0.241	0.0100	0.2000	0	121	68.1	136				
Endosulfan I	0.239	0.0100	0.2000	0	120	70.2	137				
alpha-Chlordane	0.234	0.0100	0.2000	0	117	66.4	135				
Dieldrin	0.238	0.0100	0.2000	0	119	65.1	137				
4,4'-DDE	0.238	0.0100	0.2000	0	119	62.7	131				
Endrin	0.243	0.0150	0.2000	0	121	68.1	142				
Endosulfan II	0.240	0.0150	0.2000	0	120	63.8	135				
4,4'-DDD	0.237	0.0150	0.2000	0	119	59.3	139				
Endrin aldehyde	0.240	0.0160	0.2000	0	120	62.9	134				
Endosulfan sulfate	0.236	0.0150	0.2000	0	118	62.5	133				
4,4'-DDT	0.241	0.0160	0.2000	0	121	67.4	135				
Endrin ketone	0.245	0.0200	0.2000	0	122	61	132				
Methoxychlor	0.237	0.0200	0.2000	0	119	65.9	135				
Surr: Decachlorobiphenyl	0.256		0.2000		128	12.7	168				
Surr: Tetrachloro-m-xylene	0.213		0.2000		107	66.6	140				

Sample ID: LCS2-39504	SampType: LCS	Units: mg/Kg				Prep Date: 2/21/2023	RunNo: 82036				
Client ID: LCSS	Batch ID: 39504					Analysis Date: 2/22/2023	SeqNo: 1702127				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	0.998	0.0700	1.000	0	99.8	48.6	147				
Surr: Decachlorobiphenyl	0.231		0.2000		115	12.7	168				
Surr: Tetrachloro-m-xylene	0.204		0.2000		102	66.6	140				

Work Order: 2302366
 CLIENT: Libby Environmental
 Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: **2302366-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/21/2023** RunNo: **82036**
 Client ID: **SO-SS1-0.5-1-0223** Batch ID: **39504** Analysis Date: **2/22/2023** SeqNo: **1702129**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.234	0.0110	0.2198	0	107	73.2	151				
Beta BHC	0.213	0.0110	0.2198	0	97.1	65.1	144				
Gamma BHC (Lindane)	0.234	0.0110	0.2198	0	106	67.5	144				
Delta BHC	0.231	0.0110	0.2198	0	105	67.7	143				
Heptachlor	0.230	0.0110	0.2198	0	105	75.3	159				
Aldrin	0.234	0.0110	0.2198	0	106	68.5	149				
Heptachlor epoxide	0.233	0.0110	0.2198	0	106	70.6	147				
gamma-Chlordane	0.221	0.0110	0.2198	0	100	54.2	149				
Endosulfan I	0.219	0.0110	0.2198	0	99.7	65	147				
alpha-Chlordane	0.210	0.0110	0.2198	0	95.7	61.9	144				
Dieldrin	0.230	0.0110	0.2198	0.009085	101	61.2	146				
4,4'-DDE	0.213	0.0110	0.2198	0	96.9	59.4	143				
Endrin	0.223	0.0165	0.2198	0	102	71.1	147				
Endosulfan II	0.215	0.0165	0.2198	0	97.7	65.3	138				
4,4'-DDD	0.217	0.0165	0.2198	0	98.8	59	146				
Endrin aldehyde	0.171	0.0176	0.2198	0	77.9	49.9	129				
Endosulfan sulfate	0.221	0.0165	0.2198	0	101	53.3	142				
4,4'-DDT	0.188	0.0176	0.2198	0	85.5	57.3	154				
Endrin ketone	0.229	0.0220	0.2198	0	104	61.7	133				
Methoxychlor	0.202	0.0220	0.2198	0	91.7	57.5	145				
Surr: Decachlorobiphenyl	0.255		0.2198		116	12.7	168				
Surr: Tetrachloro-m-xylene	0.219		0.2198		99.5	66.6	140				

Sample ID: **2302366-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **2/21/2023** RunNo: **82036**
 Client ID: **SO-SS1-0.5-1-0223** Batch ID: **39504** Analysis Date: **2/22/2023** SeqNo: **1702130**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.234	0.0110	0.2202	0	106	73.2	151	0.3105	28.1	30	
Beta BHC	0.213	0.0110	0.2202	0	96.6	65.1	144	0.2812	27.7	30	
Gamma BHC (Lindane)	0.231	0.0110	0.2202	0	105	67.5	144	0.3036	27.1	30	
Delta BHC	0.228	0.0110	0.2202	0	104	67.7	143	0.2998	27.2	30	

Work Order: 2302366
 CLIENT: Libby Environmental
 Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: 2302366-001AMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 2/21/2023	RunNo: 82036				
Client ID: SO-SS1-0.5-1-0223	Batch ID: 39504					Analysis Date: 2/22/2023	SeqNo: 1702130				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Heptachlor	0.222	0.0110	0.2202	0	101	75.3	159	0.2944	28.1	30	
Aldrin	0.230	0.0110	0.2202	0	104	68.5	149	0.2981	25.8	30	
Heptachlor epoxide	0.229	0.0110	0.2202	0	104	70.6	147	0.2932	24.8	30	
gamma-Chlordane	0.220	0.0110	0.2202	0	100	54.2	149	0.2800	23.8	30	
Endosulfan I	0.218	0.0110	0.2202	0	99.2	65	147	0.2674	20.2	30	
alpha-Chlordane	0.214	0.0110	0.2202	0	97.0	61.9	144	0.2736	24.6	30	
Dieldrin	0.231	0.0110	0.2202	0.009085	101	61.2	146	0.2892	22.2	30	
4,4'-DDE	0.213	0.0110	0.2202	0	96.8	59.4	143	0.2808	27.4	30	
Endrin	0.219	0.0165	0.2202	0	99.3	71.1	147	0.2954	29.9	30	
Endosulfan II	0.218	0.0165	0.2202	0	99.2	65.3	138	0.2709	21.4	30	
4,4'-DDD	0.234	0.0165	0.2202	0	106	59	146	0.3288	33.9	30	R
Endrin aldehyde	0.171	0.0176	0.2202	0	77.7	49.9	129	0.1688	1.40	30	
Endosulfan sulfate	0.215	0.0165	0.2202	0	97.6	53.3	142	0.2620	19.7	30	
4,4'-DDT	0.163	0.0176	0.2202	0	74.1	57.3	154	0.1831	11.5	30	
Endrin ketone	0.232	0.0220	0.2202	0	106	61.7	133	0.2695	14.8	30	
Methoxychlor	0.181	0.0220	0.2202	0	82.1	57.5	145	0.1854	2.57	30	
Surr: Decachlorobiphenyl	0.241		0.2202		109	12.7	168		0		
Surr: Tetrachloro-m-xylene	0.215		0.2202		97.5	66.6	140		0		

NOTES:
 R - High RPD observed, spike recovery is within range.

Sample ID: PEST-CCV-39504B	SampType: CCV	Units: µg/L				Prep Date: 2/22/2023	RunNo: 82036				
Client ID: CCV	Batch ID: 39504					Analysis Date: 2/22/2023	SeqNo: 1702144				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	207	0.0100	200.0	0	104	80	120				
Beta BHC	202	0.0100	200.0	0	101	80	120				
Gamma BHC (Lindane)	200	0.0100	200.0	0	99.8	80	120				
Delta BHC	203	0.0100	200.0	0	101	80	120				
Heptachlor	175	0.0100	200.0	0	87.6	80	120				
Aldrin	195	0.0100	200.0	0	97.7	80	120				
Heptachlor epoxide	194	0.0100	200.0	0	97.1	80	120				

Work Order: 2302366
 CLIENT: Libby Environmental
 Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: PEST-CCV-39504B	SampType: CCV	Units: µg/L				Prep Date: 2/22/2023	RunNo: 82036				
Client ID: CCV	Batch ID: 39504					Analysis Date: 2/22/2023	SeqNo: 1702144				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
gamma-Chlordane	189	0.0100	200.0	0	94.5	80	120				
Endosulfan I	190	0.0100	200.0	0	95.0	80	120				
alpha-Chlordane	186	0.0100	200.0	0	93.2	80	120				
Dieldrin	192	0.0100	200.0	0	95.9	80	120				
4,4'-DDE	184	0.0100	200.0	0	91.9	80	120				
Endrin	175	0.0150	200.0	0	87.4	80	120				
Endosulfan II	187	0.0150	200.0	0	93.3	80	120				
4,4'-DDD	226	0.0150	200.0	0	113	80	120				
Endrin aldehyde	166	0.0160	200.0	0	82.9	80	120				
Endosulfan sulfate	180	0.0150	200.0	0	89.9	80	120				
4,4'-DDT	93.7	0.0160	200.0	0	46.8	80	120				S
Endrin ketone	167	0.0200	200.0	0	83.6	80	120				
Methoxychlor	108	0.0200	200.0	0	54.2	80	120				S
Surr: Decachlorobiphenyl	196		200.0		97.8	54.6	157				
Surr: Tetrachloro-m-xylene	205		200.0		103	59.3	135				

NOTES:
 S - Outlying spike recovery observed (low bias). Samples will be qualified with a Q.

Sample ID: TOX-CCV-39504B	SampType: CCV	Units: µg/L				Prep Date: 2/22/2023	RunNo: 82036				
Client ID: CCV	Batch ID: 39504					Analysis Date: 2/22/2023	SeqNo: 1702145				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	1,170	0.0700	1,000	0	117	80	120				
Surr: Decachlorobiphenyl	183		200.0		91.6	54.6	157				
Surr: Tetrachloro-m-xylene	207		200.0		103	59.3	135				

Client Name: LIBBY	Work Order Number: 2302366
Logged by: Brianna Barnes	Date Received: 2/21/2023 12:02:00 PM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Present
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	1.7

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

**SUBCONTRACT
ORDER
L23B082**

2302366

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT)

*Due 9AM
2/23*

Project: 2021 Blvd Interim Action

Analysis	Comments
Client Sample ID: SO-SS1-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Lab ID: L23B082-01 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS2-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Lab ID: L23B082-02 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS3-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Lab ID: L23B082-03 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS4-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Lab ID: L23B082-04 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS5-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Lab ID: L23B082-05 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS6-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Lab ID: L23B082-06 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	

Jodie Anderson

Released By

2/21/23 12:02

Date

[Signature]

Received By

02/21/23 12:02

Date

Jonette Anderson

2.20.23



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

**SUBCONTRACT
ORDER
L23B082
(Continued)**

2302366

Project: 2021 Blvd Interim Action

Analysis	Comments
Client Sample ID: SO-SS7-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B082-07 8081 please
Client Sample ID: SO-SS8-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B082-08 8081 please
Client Sample ID: SO-SS9-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B082-09 8081 please
Client Sample ID: SO-SS10-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B082-10 8081 please
Client Sample ID: SO-SS11-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B082-11 8081 please
Client Sample ID: SO-SS12-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B082-12 8081 please
Client Sample ID: SO-SS13-0.5-1-0223 <i>Soil Sampled: 02/20/2023 00:00</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B082-13 8081 please
Client Sample ID: SO-SS1-0.5-1-0223-01 <i>Soil Sampled: 02/20/2023 00:00</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B082-14 8081 please

Andie Chelvers
Released By

2/21/23 12:02
Date

[Signature]
Received By

2/21/23 12:02
Date



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

March 16, 2023

Joel Hecker
Pioneer Technologies Corporation
5205 Corporate Center Ct SE, Suite C
Lacey, WA 98503

Dear Joel Hecker:

Please find enclosed the analytical data report for the 2021 Blvd Interim Action project located in Lacey, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506

Ph: 360-352-2110
Fax: 360-352-4154

Date: 02/24/2023

Page: 1 of 1

Client: PIONEER Technologies

Project Manager: Joel Hecker

Address: 5205 Corporate Center Ct SE

Project Name: 2021 Blvd Interim Action

City: Lacey State: WA Zip: 98503

Location: Olympia City, State: Lacey, WA

Phone: 360-828-3739 Fax: —

Collector: Michael Kurkov Date of Collection: 02/24/2023

Client Project # 2021 Blvd.

Email:

Sample Number	Depth	Time	Sample Type	Container Type	Analytes											Field Notes								
					VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270		Semi Vol 8270	Pesticides (USEPA) (8081)						
1 SO-SS14-0.5-1-0223	0.5-1	7:06	G	2 Jars (4oz)																			X	
2 SO-SS15-0.5-1-0223		7:10																						
3 SO-SS16-0.5-1-0223		8:48																						
4 SO-SS17-0.5-1-0223		8:51																						
5 SO-SS18-0.5-1-0223		8:53																						
6 SO-SS19-0.5-1-0223		8:56																						
7 SO-SS20-0.5-1-0223		8:59																						
8 SO-SS21-0.5-1-0223		9:01																						
9 SO-SS22-0.5-1-0223		9:03																						
10 SO-SS23-0.5-1-0223		9:06																						
11																								
12																								
13																								
14																								
15																								
16																								
17																								

7-7-23 RE-ANALYZE TWICE, ONCE FROM EACH SAMPLE JAR PROVIDED PER JOEL VIA EMAIL.

Relinquished by:	Date / Time: 02/24/23 9:59	Received by:	Date / Time: 2/24/23 9:59	Sample Receipt Good Condition? Y N Cooler Temp. °C Sample Temp. °C Total Number of Containers	Remarks: Standard turn around TAT: 24HR 48HR 5-DAY
Relinquished by:	Date / Time:	Received by:	Date / Time:		
Relinquished by:	Date / Time:	Received by:	Date / Time:		

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

2021 BLVD INTERIM ACTION PROJECT

Pioneer Technologies Corporation

Libby Project # L23B105

Date Received 2/24/2023

Time Received 9:59 AM

Received By AR

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is complete? Yes No
2. How was the sample delivered? Hand Delivered Picked Up Shipped

Log In

3. Cooler or Shipping Container is present. Yes No N/A
4. Cooler or Shipping Container is in good condition. Yes No N/A
5. Cooler or Shipping Container has Custody Seals present. Yes No N/A
6. Was an attempt made to cool the samples? Yes No N/A
7. Temperature of cooler (0°C to 8°C recommended) 3.2 °C
8. Temperature of sample(s) (0°C to 8°C recommended) 3.2 °C
9. Did all containers arrive in good condition (unbroken)? Yes No
10. Is it clear what analyses were requested? Yes No
11. Did container labels match Chain of Custody? Yes No
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Are correct containers used for the analysis indicated? Yes No
14. Is there sufficient sample volume for indicated analysis? Yes No
15. Were all containers properly preserved per each analysis? Yes No
16. Were VOA vials collected correctly (no headspace)? Yes No N/A
17. Were all holding times able to be met? Yes No

Discrepancies/ Notes

18. Was client notified of all discrepancies? Yes No N/A

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments. _____



Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 2021 Blvd Interim Action
Work Order Number: 2302446

March 15, 2023

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 10 sample(s) on 2/24/2023 for the analyses presented in the following report.

Organochlorine Pesticides by EPA Method 8081
Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CLIENT: Libby Environmental
Project: 2021 Blvd Interim Action
Work Order: 2302446

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2302446-001	SO-SS14-0.5-1-0223	02/24/2023 7:06 AM	02/24/2023 11:45 AM
2302446-002	SO-SS15-0.5-1-0223	02/24/2023 7:10 AM	02/24/2023 11:45 AM
2302446-003	SO-SS16-0.5-1-0223	02/24/2023 8:48 AM	02/24/2023 11:45 AM
2302446-004	SO-SS17-0.5-1-0223	02/24/2023 8:51 AM	02/24/2023 11:45 AM
2302446-005	SO-SS18-0.5-1-0223	02/24/2023 8:53 AM	02/24/2023 11:45 AM
2302446-006	SO-SS19-0.5-1-0223	02/24/2023 8:56 AM	02/24/2023 11:45 AM
2302446-007	SO-SS20-0.5-1-0223	02/24/2023 8:59 AM	02/24/2023 11:45 AM
2302446-008	SO-SS21-0.5-1-0223	02/24/2023 9:01 AM	02/24/2023 11:45 AM
2302446-009	SO-SS22-0.5-1-0223	02/24/2023 9:03 AM	02/24/2023 11:45 AM
2302446-010	SO-SS23-0.5-1-0223	02/24/2023 9:06 AM	02/24/2023 11:45 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Libby Environmental
Project: 2021 Blvd Interim Action

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

3/15/2023: Revision 1 includes re-analysis of "SO-SS22-0.5-1-0223" per client request. Two additional aliquots were analyzed, one from each of the sample jars provided.

Qualifiers:

- * - Associated LCS is outside of control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Method Detection Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 2302446
Date Reported: 3/15/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-001
Client Sample ID: SO-SS14-0.5-1-0223

Collection Date: 2/24/2023 7:06:00 AM
Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570 Analyst: KJ

Toxaphene	ND	0.0843	0.0300		mg/Kg-dry	1	03/01/23 15:44:44
Alpha BHC	ND	0.0120	0.00310		mg/Kg-dry	1	03/01/23 15:44:44
Beta BHC	ND	0.0120	0.00314		mg/Kg-dry	1	03/01/23 15:44:44
Gamma BHC (Lindane)	ND	0.0120	0.00346		mg/Kg-dry	1	03/01/23 15:44:44
Delta BHC	ND	0.0120	0.00251		mg/Kg-dry	1	03/01/23 15:44:44
Heptachlor	ND	0.0120	0.00455		mg/Kg-dry	1	03/01/23 15:44:44
Aldrin	ND	0.0120	0.00301		mg/Kg-dry	1	03/01/23 15:44:44
Heptachlor epoxide	ND	0.0120	0.00365		mg/Kg-dry	1	03/01/23 15:44:44
gamma-Chlordane	ND	0.0120	0.00341		mg/Kg-dry	1	03/01/23 15:44:44
Endosulfan I	ND	0.0120	0.00462		mg/Kg-dry	1	03/01/23 15:44:44
alpha-Chlordane	ND	0.0120	0.00371		mg/Kg-dry	1	03/01/23 15:44:44
Dieldrin	ND	0.0120	0.00472		mg/Kg-dry	1	03/01/23 15:44:44
4,4'-DDE	0.00733	0.0120	0.00266	J	mg/Kg-dry	1	03/01/23 15:44:44
Endrin	ND	0.0181	0.00512		mg/Kg-dry	1	03/01/23 15:44:44
Endosulfan II	ND	0.0181	0.00574		mg/Kg-dry	1	03/01/23 15:44:44
4,4'-DDD	ND	0.0181	0.00553		mg/Kg-dry	1	03/01/23 15:44:44
Endrin aldehyde	ND	0.0193	0.00621		mg/Kg-dry	1	03/01/23 15:44:44
Endosulfan sulfate	ND	0.0181	0.00599		mg/Kg-dry	1	03/01/23 15:44:44
4,4'-DDT	ND	0.0193	0.00659		mg/Kg-dry	1	03/01/23 15:44:44
Endrin ketone	ND	0.0241	0.00662		mg/Kg-dry	1	03/01/23 15:44:44
Methoxychlor	ND	0.0241	0.00908		mg/Kg-dry	1	03/01/23 15:44:44
Surr: Decachlorobiphenyl	106	12.7 - 168			%Rec	1	03/01/23 15:44:44
Surr: Tetrachloro-m-xylene	97.2	66.6 - 140			%Rec	1	03/01/23 15:44:44

Sample Moisture (Percent Moisture)

Batch ID: R82092 Analyst: MP

Percent Moisture	19.3	0.500	0.100		wt%	1	02/27/23 9:32:50
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Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-002
Client Sample ID: SO-SS15-0.5-1-0223

Collection Date: 2/24/2023 7:10:00 AM

Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570

Analyst: KJ

Toxaphene	ND	0.0800	0.0285		mg/Kg-dry	1	03/01/23 16:13:47
Alpha BHC	ND	0.0114	0.00294		mg/Kg-dry	1	03/01/23 16:13:47
Beta BHC	ND	0.0114	0.00298		mg/Kg-dry	1	03/01/23 16:13:47
Gamma BHC (Lindane)	ND	0.0114	0.00328		mg/Kg-dry	1	03/01/23 16:13:47
Delta BHC	ND	0.0114	0.00238		mg/Kg-dry	1	03/01/23 16:13:47
Heptachlor	ND	0.0114	0.00432		mg/Kg-dry	1	03/01/23 16:13:47
Aldrin	ND	0.0114	0.00286		mg/Kg-dry	1	03/01/23 16:13:47
Heptachlor epoxide	ND	0.0114	0.00347		mg/Kg-dry	1	03/01/23 16:13:47
gamma-Chlordane	ND	0.0114	0.00324		mg/Kg-dry	1	03/01/23 16:13:47
Endosulfan I	ND	0.0114	0.00439		mg/Kg-dry	1	03/01/23 16:13:47
alpha-Chlordane	ND	0.0114	0.00352		mg/Kg-dry	1	03/01/23 16:13:47
Dieldrin	ND	0.0114	0.00448		mg/Kg-dry	1	03/01/23 16:13:47
4,4'-DDE	ND	0.0114	0.00252		mg/Kg-dry	1	03/01/23 16:13:47
Endrin	ND	0.0171	0.00486		mg/Kg-dry	1	03/01/23 16:13:47
Endosulfan II	ND	0.0171	0.00545		mg/Kg-dry	1	03/01/23 16:13:47
4,4'-DDD	ND	0.0171	0.00525		mg/Kg-dry	1	03/01/23 16:13:47
Endrin aldehyde	ND	0.0183	0.00590		mg/Kg-dry	1	03/01/23 16:13:47
Endosulfan sulfate	ND	0.0171	0.00568		mg/Kg-dry	1	03/01/23 16:13:47
4,4'-DDT	ND	0.0183	0.00626		mg/Kg-dry	1	03/01/23 16:13:47
Endrin ketone	ND	0.0229	0.00629		mg/Kg-dry	1	03/01/23 16:13:47
Methoxychlor	ND	0.0229	0.00862		mg/Kg-dry	1	03/01/23 16:13:47
Surr: Decachlorobiphenyl	99.5	12.7 - 168			%Rec	1	03/01/23 16:13:47
Surr: Tetrachloro-m-xylene	91.4	66.6 - 140			%Rec	1	03/01/23 16:13:47

Sample Moisture (Percent Moisture)

Batch ID: R82092

Analyst: MP

Percent Moisture	17.8	0.500	0.100		wt%	1	02/27/23 9:32:50
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Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-003
Client Sample ID: SO-SS16-0.5-1-0223

Collection Date: 2/24/2023 8:48:00 AM

Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570

Analyst: KJ

Toxaphene	ND	0.0820	0.0292		mg/Kg-dry	1	03/01/23 16:23:28
Alpha BHC	ND	0.0117	0.00302		mg/Kg-dry	1	03/01/23 16:23:28
Beta BHC	ND	0.0117	0.00305		mg/Kg-dry	1	03/01/23 16:23:28
Gamma BHC (Lindane)	ND	0.0117	0.00336		mg/Kg-dry	1	03/01/23 16:23:28
Delta BHC	ND	0.0117	0.00244		mg/Kg-dry	1	03/01/23 16:23:28
Heptachlor	ND	0.0117	0.00443		mg/Kg-dry	1	03/01/23 16:23:28
Aldrin	ND	0.0117	0.00293		mg/Kg-dry	1	03/01/23 16:23:28
Heptachlor epoxide	ND	0.0117	0.00355		mg/Kg-dry	1	03/01/23 16:23:28
gamma-Chlordane	ND	0.0117	0.00332		mg/Kg-dry	1	03/01/23 16:23:28
Endosulfan I	ND	0.0117	0.00450		mg/Kg-dry	1	03/01/23 16:23:28
alpha-Chlordane	ND	0.0117	0.00361		mg/Kg-dry	1	03/01/23 16:23:28
Dieldrin	ND	0.0117	0.00459		mg/Kg-dry	1	03/01/23 16:23:28
4,4'-DDE	ND	0.0117	0.00259		mg/Kg-dry	1	03/01/23 16:23:28
Endrin	ND	0.0176	0.00498		mg/Kg-dry	1	03/01/23 16:23:28
Endosulfan II	ND	0.0176	0.00559		mg/Kg-dry	1	03/01/23 16:23:28
4,4'-DDD	ND	0.0176	0.00538		mg/Kg-dry	1	03/01/23 16:23:28
Endrin aldehyde	ND	0.0187	0.00604		mg/Kg-dry	1	03/01/23 16:23:28
Endosulfan sulfate	ND	0.0176	0.00583		mg/Kg-dry	1	03/01/23 16:23:28
4,4'-DDT	ND	0.0187	0.00641		mg/Kg-dry	1	03/01/23 16:23:28
Endrin ketone	ND	0.0234	0.00645		mg/Kg-dry	1	03/01/23 16:23:28
Methoxychlor	ND	0.0234	0.00884		mg/Kg-dry	1	03/01/23 16:23:28
Surr: Decachlorobiphenyl	111	12.7 - 168			%Rec	1	03/01/23 16:23:28
Surr: Tetrachloro-m-xylene	97.1	66.6 - 140			%Rec	1	03/01/23 16:23:28

Sample Moisture (Percent Moisture)

Batch ID: R82092

Analyst: MP

Percent Moisture	18.5	0.500	0.100		wt%	1	02/27/23 9:32:50
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Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-004
Client Sample ID: SO-SS17-0.5-1-0223

Collection Date: 2/24/2023 8:51:00 AM

Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570

Analyst: KJ

Toxaphene	ND	0.0856	0.0305		mg/Kg-dry	1	03/01/23 16:33:08
Alpha BHC	ND	0.0122	0.00315		mg/Kg-dry	1	03/01/23 16:33:08
Beta BHC	ND	0.0122	0.00319		mg/Kg-dry	1	03/01/23 16:33:08
Gamma BHC (Lindane)	ND	0.0122	0.00351		mg/Kg-dry	1	03/01/23 16:33:08
Delta BHC	ND	0.0122	0.00255		mg/Kg-dry	1	03/01/23 16:33:08
Heptachlor	ND	0.0122	0.00462		mg/Kg-dry	1	03/01/23 16:33:08
Aldrin	ND	0.0122	0.00306		mg/Kg-dry	1	03/01/23 16:33:08
Heptachlor epoxide	ND	0.0122	0.00371		mg/Kg-dry	1	03/01/23 16:33:08
gamma-Chlordane	ND	0.0122	0.00347		mg/Kg-dry	1	03/01/23 16:33:08
Endosulfan I	ND	0.0122	0.00469		mg/Kg-dry	1	03/01/23 16:33:08
alpha-Chlordane	ND	0.0122	0.00377		mg/Kg-dry	1	03/01/23 16:33:08
Dieldrin	ND	0.0122	0.00479		mg/Kg-dry	1	03/01/23 16:33:08
4,4'-DDE	ND	0.0122	0.00270		mg/Kg-dry	1	03/01/23 16:33:08
Endrin	ND	0.0183	0.00520		mg/Kg-dry	1	03/01/23 16:33:08
Endosulfan II	ND	0.0183	0.00583		mg/Kg-dry	1	03/01/23 16:33:08
4,4'-DDD	ND	0.0183	0.00562		mg/Kg-dry	1	03/01/23 16:33:08
Endrin aldehyde	ND	0.0196	0.00631		mg/Kg-dry	1	03/01/23 16:33:08
Endosulfan sulfate	ND	0.0183	0.00608		mg/Kg-dry	1	03/01/23 16:33:08
4,4'-DDT	ND	0.0196	0.00669		mg/Kg-dry	1	03/01/23 16:33:08
Endrin ketone	ND	0.0244	0.00673		mg/Kg-dry	1	03/01/23 16:33:08
Methoxychlor	ND	0.0244	0.00922		mg/Kg-dry	1	03/01/23 16:33:08
Surr: Decachlorobiphenyl	108	12.7 - 168			%Rec	1	03/01/23 16:33:08
Surr: Tetrachloro-m-xylene	98.6	66.6 - 140			%Rec	1	03/01/23 16:33:08

Sample Moisture (Percent Moisture)

Batch ID: R82094

Analyst: MP

Percent Moisture	19.2	0.500	0.100		wt%	1	02/27/23 9:50:37
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Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-005
Client Sample ID: SO-SS18-0.5-1-0223

Collection Date: 2/24/2023 8:53:00 AM

Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570

Analyst: KJ

Toxaphene	ND	0.0772	0.0275		mg/Kg-dry	1	03/01/23 16:42:51
Alpha BHC	ND	0.0110	0.00284		mg/Kg-dry	1	03/01/23 16:42:51
Beta BHC	ND	0.0110	0.00287		mg/Kg-dry	1	03/01/23 16:42:51
Gamma BHC (Lindane)	ND	0.0110	0.00317		mg/Kg-dry	1	03/01/23 16:42:51
Delta BHC	ND	0.0110	0.00230		mg/Kg-dry	1	03/01/23 16:42:51
Heptachlor	ND	0.0110	0.00417		mg/Kg-dry	1	03/01/23 16:42:51
Aldrin	ND	0.0110	0.00276		mg/Kg-dry	1	03/01/23 16:42:51
Heptachlor epoxide	ND	0.0110	0.00335		mg/Kg-dry	1	03/01/23 16:42:51
gamma-Chlordane	ND	0.0110	0.00313		mg/Kg-dry	1	03/01/23 16:42:51
Endosulfan I	ND	0.0110	0.00423		mg/Kg-dry	1	03/01/23 16:42:51
alpha-Chlordane	ND	0.0110	0.00340		mg/Kg-dry	1	03/01/23 16:42:51
Dieldrin	ND	0.0110	0.00432		mg/Kg-dry	1	03/01/23 16:42:51
4,4'-DDE	ND	0.0110	0.00243		mg/Kg-dry	1	03/01/23 16:42:51
Endrin	ND	0.0165	0.00469		mg/Kg-dry	1	03/01/23 16:42:51
Endosulfan II	ND	0.0165	0.00526		mg/Kg-dry	1	03/01/23 16:42:51
4,4'-DDD	ND	0.0165	0.00507		mg/Kg-dry	1	03/01/23 16:42:51
Endrin aldehyde	ND	0.0176	0.00569		mg/Kg-dry	1	03/01/23 16:42:51
Endosulfan sulfate	ND	0.0165	0.00548		mg/Kg-dry	1	03/01/23 16:42:51
4,4'-DDT	ND	0.0176	0.00604		mg/Kg-dry	1	03/01/23 16:42:51
Endrin ketone	ND	0.0221	0.00607		mg/Kg-dry	1	03/01/23 16:42:51
Methoxychlor	ND	0.0221	0.00832		mg/Kg-dry	1	03/01/23 16:42:51
Surr: Decachlorobiphenyl	107	12.7 - 168			%Rec	1	03/01/23 16:42:51
Surr: Tetrachloro-m-xylene	95.2	66.6 - 140			%Rec	1	03/01/23 16:42:51

Sample Moisture (Percent Moisture)

Batch ID: R82094

Analyst: MP

Percent Moisture	14.8	0.500	0.100		wt%	1	02/27/23 9:50:37
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Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-006
Client Sample ID: SO-SS19-0.5-1-0223

Collection Date: 2/24/2023 8:56:00 AM
Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570

Analyst: KJ

Toxaphene	ND	0.0849	0.0302		mg/Kg-dry	1	03/01/23 16:52:31
Alpha BHC	ND	0.0121	0.00312		mg/Kg-dry	1	03/01/23 16:52:31
Beta BHC	ND	0.0121	0.00316		mg/Kg-dry	1	03/01/23 16:52:31
Gamma BHC (Lindane)	ND	0.0121	0.00348		mg/Kg-dry	1	03/01/23 16:52:31
Delta BHC	ND	0.0121	0.00253		mg/Kg-dry	1	03/01/23 16:52:31
Heptachlor	ND	0.0121	0.00459		mg/Kg-dry	1	03/01/23 16:52:31
Aldrin	ND	0.0121	0.00303		mg/Kg-dry	1	03/01/23 16:52:31
Heptachlor epoxide	ND	0.0121	0.00368		mg/Kg-dry	1	03/01/23 16:52:31
gamma-Chlordane	ND	0.0121	0.00344		mg/Kg-dry	1	03/01/23 16:52:31
Endosulfan I	ND	0.0121	0.00465		mg/Kg-dry	1	03/01/23 16:52:31
alpha-Chlordane	ND	0.0121	0.00374		mg/Kg-dry	1	03/01/23 16:52:31
Dieldrin	0.00840	0.0121	0.00476	J	mg/Kg-dry	1	03/01/23 16:52:31
4,4'-DDE	0.00705	0.0121	0.00268	J	mg/Kg-dry	1	03/01/23 16:52:31
Endrin	ND	0.0182	0.00516		mg/Kg-dry	1	03/01/23 16:52:31
Endosulfan II	ND	0.0182	0.00579		mg/Kg-dry	1	03/01/23 16:52:31
4,4'-DDD	ND	0.0182	0.00557		mg/Kg-dry	1	03/01/23 16:52:31
Endrin aldehyde	ND	0.0194	0.00626		mg/Kg-dry	1	03/01/23 16:52:31
Endosulfan sulfate	ND	0.0182	0.00603		mg/Kg-dry	1	03/01/23 16:52:31
4,4'-DDT	ND	0.0194	0.00664		mg/Kg-dry	1	03/01/23 16:52:31
Endrin ketone	ND	0.0242	0.00667		mg/Kg-dry	1	03/01/23 16:52:31
Methoxychlor	ND	0.0242	0.00915		mg/Kg-dry	1	03/01/23 16:52:31
Surr: Decachlorobiphenyl	112	12.7 - 168			%Rec	1	03/01/23 16:52:31
Surr: Tetrachloro-m-xylene	98.1	66.6 - 140			%Rec	1	03/01/23 16:52:31

Sample Moisture (Percent Moisture)

Batch ID: R82094

Analyst: MP

Percent Moisture	19.9	0.500	0.100		wt%	1	02/27/23 9:50:37
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Analytical Report

Work Order: 2302446
Date Reported: 3/15/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-007
Client Sample ID: SO-SS20-0.5-1-0223

Collection Date: 2/24/2023 8:59:00 AM
Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570 Analyst: KJ

Toxaphene	ND	0.0819	0.0292		mg/Kg-dry	1	03/01/23 17:02:11
Alpha BHC	ND	0.0117	0.00301		mg/Kg-dry	1	03/01/23 17:02:11
Beta BHC	ND	0.0117	0.00305		mg/Kg-dry	1	03/01/23 17:02:11
Gamma BHC (Lindane)	ND	0.0117	0.00336		mg/Kg-dry	1	03/01/23 17:02:11
Delta BHC	ND	0.0117	0.00244		mg/Kg-dry	1	03/01/23 17:02:11
Heptachlor	ND	0.0117	0.00443		mg/Kg-dry	1	03/01/23 17:02:11
Aldrin	ND	0.0117	0.00293		mg/Kg-dry	1	03/01/23 17:02:11
Heptachlor epoxide	ND	0.0117	0.00355		mg/Kg-dry	1	03/01/23 17:02:11
gamma-Chlordane	ND	0.0117	0.00332		mg/Kg-dry	1	03/01/23 17:02:11
Endosulfan I	ND	0.0117	0.00449		mg/Kg-dry	1	03/01/23 17:02:11
alpha-Chlordane	ND	0.0117	0.00361		mg/Kg-dry	1	03/01/23 17:02:11
Dieldrin	ND	0.0117	0.00459		mg/Kg-dry	1	03/01/23 17:02:11
4,4'-DDE	0.0343	0.0117	0.00258		mg/Kg-dry	1	03/01/23 17:02:11
Endrin	ND	0.0176	0.00498		mg/Kg-dry	1	03/01/23 17:02:11
Endosulfan II	ND	0.0176	0.00558		mg/Kg-dry	1	03/01/23 17:02:11
4,4'-DDD	ND	0.0176	0.00538		mg/Kg-dry	1	03/01/23 17:02:11
Endrin aldehyde	ND	0.0187	0.00604		mg/Kg-dry	1	03/01/23 17:02:11
Endosulfan sulfate	ND	0.0176	0.00582		mg/Kg-dry	1	03/01/23 17:02:11
4,4'-DDT	0.00982	0.0187	0.00641	J	mg/Kg-dry	1	03/01/23 17:02:11
Endrin ketone	ND	0.0234	0.00644		mg/Kg-dry	1	03/01/23 17:02:11
Methoxychlor	ND	0.0234	0.00883		mg/Kg-dry	1	03/01/23 17:02:11
Surr: Decachlorobiphenyl	106	12.7 - 168			%Rec	1	03/01/23 17:02:11
Surr: Tetrachloro-m-xylene	99.4	66.6 - 140			%Rec	1	03/01/23 17:02:11

Sample Moisture (Percent Moisture)

Batch ID: R82094 Analyst: MP

Percent Moisture	20.0	0.500	0.100		wt%	1	02/27/23 9:50:37
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Analytical Report

Work Order: 2302446
Date Reported: 3/15/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-008
Client Sample ID: SO-SS21-0.5-1-0223

Collection Date: 2/24/2023 9:01:00 AM
Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570 Analyst: KJ

Toxaphene	2.73	0.0810	0.0288		mg/Kg-dry	1	03/01/23 17:11:56
Alpha BHC	ND	0.0116	0.00298		mg/Kg-dry	1	03/01/23 17:11:56
Beta BHC	ND	0.0116	0.00302		mg/Kg-dry	1	03/01/23 17:11:56
Gamma BHC (Lindane)	ND	0.0116	0.00332		mg/Kg-dry	1	03/01/23 17:11:56
Delta BHC	ND	0.0116	0.00241		mg/Kg-dry	1	03/01/23 17:11:56
Heptachlor	ND	0.0116	0.00438		mg/Kg-dry	1	03/01/23 17:11:56
Aldrin	ND	0.0116	0.00289		mg/Kg-dry	1	03/01/23 17:11:56
Heptachlor epoxide	ND	0.0116	0.00351		mg/Kg-dry	1	03/01/23 17:11:56
gamma-Chlordane	ND	0.0116	0.00328		mg/Kg-dry	1	03/01/23 17:11:56
Endosulfan I	ND	0.0116	0.00444		mg/Kg-dry	1	03/01/23 17:11:56
alpha-Chlordane	ND	0.0116	0.00357		mg/Kg-dry	1	03/01/23 17:11:56
Dieldrin	0.00754	0.0116	0.00454	J	mg/Kg-dry	1	03/01/23 17:11:56
4,4'-DDE	0.0470	0.0116	0.00255		mg/Kg-dry	1	03/01/23 17:11:56
Endrin	ND	0.0173	0.00492		mg/Kg-dry	1	03/01/23 17:11:56
Endosulfan II	ND	0.0173	0.00552		mg/Kg-dry	1	03/01/23 17:11:56
4,4'-DDD	ND	0.0173	0.00532		mg/Kg-dry	1	03/01/23 17:11:56
Endrin aldehyde	ND	0.0185	0.00597		mg/Kg-dry	1	03/01/23 17:11:56
Endosulfan sulfate	ND	0.0173	0.00575		mg/Kg-dry	1	03/01/23 17:11:56
4,4'-DDT	0.0272	0.0185	0.00633		mg/Kg-dry	1	03/01/23 17:11:56
Endrin ketone	ND	0.0231	0.00636		mg/Kg-dry	1	03/01/23 17:11:56
Methoxychlor	ND	0.0231	0.00873		mg/Kg-dry	1	03/01/23 17:11:56
Surr: Decachlorobiphenyl	102	12.7 - 168			%Rec	1	03/01/23 17:11:56
Surr: Tetrachloro-m-xylene	89.7	66.6 - 140			%Rec	1	03/01/23 17:11:56

Sample Moisture (Percent Moisture)

Batch ID: R82094 Analyst: MP

Percent Moisture	19.2	0.500	0.100		wt%	1	02/27/23 9:50:37
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Analytical Report

Work Order: 2302446
Date Reported: 3/15/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-009
Client Sample ID: SO-SS22-0.5-1-0223

Collection Date: 2/24/2023 9:03:00 AM
Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570 Analyst: KJ

Toxaphene	ND	0.0810	0.0288		mg/Kg-dry	1	03/01/23 17:31:20
Alpha BHC	ND	0.0116	0.00298		mg/Kg-dry	1	03/01/23 17:31:20
Beta BHC	ND	0.0116	0.00302		mg/Kg-dry	1	03/01/23 17:31:20
Gamma BHC (Lindane)	ND	0.0116	0.00332		mg/Kg-dry	1	03/01/23 17:31:20
Delta BHC	ND	0.0116	0.00241		mg/Kg-dry	1	03/01/23 17:31:20
Heptachlor	ND	0.0116	0.00438		mg/Kg-dry	1	03/01/23 17:31:20
Aldrin	ND	0.0116	0.00289		mg/Kg-dry	1	03/01/23 17:31:20
Heptachlor epoxide	ND	0.0116	0.00351		mg/Kg-dry	1	03/01/23 17:31:20
gamma-Chlordane	ND	0.0116	0.00328		mg/Kg-dry	1	03/01/23 17:31:20
Endosulfan I	ND	0.0116	0.00444		mg/Kg-dry	1	03/01/23 17:31:20
alpha-Chlordane	ND	0.0116	0.00357		mg/Kg-dry	1	03/01/23 17:31:20
Dieldrin	0.127	0.0116	0.00454		mg/Kg-dry	1	03/01/23 17:31:20
4,4'-DDE	0.170	0.0116	0.00255		mg/Kg-dry	1	03/01/23 17:31:20
Endrin	ND	0.0173	0.00492		mg/Kg-dry	1	03/01/23 17:31:20
Endosulfan II	ND	0.0173	0.00552		mg/Kg-dry	1	03/01/23 17:31:20
4,4'-DDD	ND	0.0173	0.00532		mg/Kg-dry	1	03/01/23 17:31:20
Endrin aldehyde	ND	0.0185	0.00597		mg/Kg-dry	1	03/01/23 17:31:20
Endosulfan sulfate	ND	0.0173	0.00575		mg/Kg-dry	1	03/01/23 17:31:20
4,4'-DDT	0.0601	0.0185	0.00633		mg/Kg-dry	1	03/01/23 17:31:20
Endrin ketone	ND	0.0231	0.00636		mg/Kg-dry	1	03/01/23 17:31:20
Methoxychlor	ND	0.0231	0.00873		mg/Kg-dry	1	03/01/23 17:31:20
Surr: Decachlorobiphenyl	106	12.7 - 168			%Rec	1	03/01/23 17:31:20
Surr: Tetrachloro-m-xylene	89.7	66.6 - 140			%Rec	1	03/01/23 17:31:20

Organochlorine Pesticides by EPA Method 8081

Batch ID: 39688 Analyst: KJ

Toxaphene	ND	0.0835	0.0297	H	mg/Kg-dry	1	03/13/23 18:37:18
Alpha BHC	ND	0.0119	0.00307	H	mg/Kg-dry	1	03/13/23 18:37:18
Beta BHC	ND	0.0119	0.00311	H	mg/Kg-dry	1	03/13/23 18:37:18
Gamma BHC (Lindane)	ND	0.0119	0.00342	H	mg/Kg-dry	1	03/13/23 18:37:18
Delta BHC	ND	0.0119	0.00248	H	mg/Kg-dry	1	03/13/23 18:37:18



Analytical Report

Work Order: 2302446
Date Reported: 3/15/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-009
Client Sample ID: SO-SS22-0.5-1-0223

Collection Date: 2/24/2023 9:03:00 AM
Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39688 Analyst: KJ

Heptachlor	ND	0.0119	0.00451	H	mg/Kg-dry	1	03/13/23 18:37:18
Aldrin	ND	0.0119	0.00298	H	mg/Kg-dry	1	03/13/23 18:37:18
Heptachlor epoxide	ND	0.0119	0.00362	H	mg/Kg-dry	1	03/13/23 18:37:18
gamma-Chlordane	ND	0.0119	0.00338	H	mg/Kg-dry	1	03/13/23 18:37:18
Endosulfan I	ND	0.0119	0.00458	H	mg/Kg-dry	1	03/13/23 18:37:18
alpha-Chlordane	ND	0.0119	0.00368	H	mg/Kg-dry	1	03/13/23 18:37:18
Dieldrin	0.0997	0.0119	0.00468	H	mg/Kg-dry	1	03/13/23 18:37:18
4,4'-DDE	0.121	0.0119	0.00263	H	mg/Kg-dry	1	03/13/23 18:37:18
Endrin	ND	0.0179	0.00508	H	mg/Kg-dry	1	03/13/23 18:37:18
Endosulfan II	ND	0.0179	0.00569	H	mg/Kg-dry	1	03/13/23 18:37:18
4,4'-DDD	ND	0.0179	0.00548	H	mg/Kg-dry	1	03/13/23 18:37:18
Endrin aldehyde	ND	0.0191	0.00615	H	mg/Kg-dry	1	03/13/23 18:37:18
Endosulfan sulfate	ND	0.0179	0.00593	H	mg/Kg-dry	1	03/13/23 18:37:18
4,4'-DDT	0.0459	0.0191	0.00653	H	mg/Kg-dry	1	03/13/23 18:37:18
Endrin ketone	ND	0.0239	0.00656	H	mg/Kg-dry	1	03/13/23 18:37:18
Methoxychlor	ND	0.0239	0.00900	H	mg/Kg-dry	1	03/13/23 18:37:18
Surr: Decachlorobiphenyl	100	12.7 - 168		H	%Rec	1	03/13/23 18:37:18
Surr: Tetrachloro-m-xylene	84.6	66.6 - 140		H	%Rec	1	03/13/23 18:37:18

NOTES:
Aliquot 2

Organochlorine Pesticides by EPA Method 8081

Batch ID: 39688 Analyst: KJ

Toxaphene	ND	0.0842	0.0300	H	mg/Kg-dry	1	03/13/23 18:56:45
Alpha BHC	ND	0.0120	0.00310	H	mg/Kg-dry	1	03/13/23 18:56:45
Beta BHC	ND	0.0120	0.00314	H	mg/Kg-dry	1	03/13/23 18:56:45
Gamma BHC (Lindane)	ND	0.0120	0.00345	H	mg/Kg-dry	1	03/13/23 18:56:45
Delta BHC	ND	0.0120	0.00251	H	mg/Kg-dry	1	03/13/23 18:56:45
Heptachlor	ND	0.0120	0.00455	H	mg/Kg-dry	1	03/13/23 18:56:45
Aldrin	ND	0.0120	0.00301	H	mg/Kg-dry	1	03/13/23 18:56:45
Heptachlor epoxide	ND	0.0120	0.00365	H	mg/Kg-dry	1	03/13/23 18:56:45
gamma-Chlordane	ND	0.0120	0.00341	H	mg/Kg-dry	1	03/13/23 18:56:45



Analytical Report

Work Order: 2302446
Date Reported: 3/15/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-009
Client Sample ID: SO-SS22-0.5-1-0223

Collection Date: 2/24/2023 9:03:00 AM

Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39688

Analyst: KJ

Endosulfan I	ND	0.0120	0.00462	H	mg/Kg-dry	1	03/13/23 18:56:45
alpha-Chlordane	ND	0.0120	0.00371	H	mg/Kg-dry	1	03/13/23 18:56:45
Dieldrin	0.136	0.0120	0.00472	H	mg/Kg-dry	1	03/13/23 18:56:45
4,4'-DDE	0.0981	0.0120	0.00266	H	mg/Kg-dry	1	03/13/23 18:56:45
Endrin	ND	0.0180	0.00512	H	mg/Kg-dry	1	03/13/23 18:56:45
Endosulfan II	ND	0.0180	0.00574	H	mg/Kg-dry	1	03/13/23 18:56:45
4,4'-DDD	ND	0.0180	0.00553	H	mg/Kg-dry	1	03/13/23 18:56:45
Endrin aldehyde	ND	0.0192	0.00621	H	mg/Kg-dry	1	03/13/23 18:56:45
Endosulfan sulfate	ND	0.0180	0.00598	H	mg/Kg-dry	1	03/13/23 18:56:45
4,4'-DDT	0.0284	0.0192	0.00659	H	mg/Kg-dry	1	03/13/23 18:56:45
Endrin ketone	ND	0.0241	0.00662	H	mg/Kg-dry	1	03/13/23 18:56:45
Methoxychlor	ND	0.0241	0.00908	H	mg/Kg-dry	1	03/13/23 18:56:45
Surr: Decachlorobiphenyl	120	12.7 - 168		H	%Rec	1	03/13/23 18:56:45
Surr: Tetrachloro-m-xylene	103	66.6 - 140		H	%Rec	1	03/13/23 18:56:45

NOTES:
Aliquot 3

Sample Moisture (Percent Moisture)

Batch ID: R82094

Analyst: MP

Percent Moisture	20.5	0.500	0.100		wt%	1	02/27/23 9:50:37
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Analytical Report

Work Order: 2302446
Date Reported: 3/15/2023

Client: Libby Environmental
Project: 2021 Blvd Interim Action
Lab ID: 2302446-010
Client Sample ID: SO-SS23-0.5-1-0223

Collection Date: 2/24/2023 9:06:00 AM
Matrix: Soil

Analyses	Result	RL	MDL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39570 Analyst: KJ

Toxaphene	ND	0.0834	0.0297		mg/Kg-dry	1	03/01/23 17:41:02
Alpha BHC	ND	0.0119	0.00307		mg/Kg-dry	1	03/01/23 17:41:02
Beta BHC	ND	0.0119	0.00311		mg/Kg-dry	1	03/01/23 17:41:02
Gamma BHC (Lindane)	ND	0.0119	0.00342		mg/Kg-dry	1	03/01/23 17:41:02
Delta BHC	ND	0.0119	0.00248		mg/Kg-dry	1	03/01/23 17:41:02
Heptachlor	ND	0.0119	0.00451		mg/Kg-dry	1	03/01/23 17:41:02
Aldrin	ND	0.0119	0.00298		mg/Kg-dry	1	03/01/23 17:41:02
Heptachlor epoxide	ND	0.0119	0.00362		mg/Kg-dry	1	03/01/23 17:41:02
gamma-Chlordane	ND	0.0119	0.00338		mg/Kg-dry	1	03/01/23 17:41:02
Endosulfan I	ND	0.0119	0.00457		mg/Kg-dry	1	03/01/23 17:41:02
alpha-Chlordane	ND	0.0119	0.00367		mg/Kg-dry	1	03/01/23 17:41:02
Dieldrin	ND	0.0119	0.00467		mg/Kg-dry	1	03/01/23 17:41:02
4,4'-DDE	ND	0.0119	0.00263		mg/Kg-dry	1	03/01/23 17:41:02
Endrin	ND	0.0179	0.00507		mg/Kg-dry	1	03/01/23 17:41:02
Endosulfan II	ND	0.0179	0.00568		mg/Kg-dry	1	03/01/23 17:41:02
4,4'-DDD	ND	0.0179	0.00547		mg/Kg-dry	1	03/01/23 17:41:02
Endrin aldehyde	ND	0.0191	0.00615		mg/Kg-dry	1	03/01/23 17:41:02
Endosulfan sulfate	ND	0.0179	0.00592		mg/Kg-dry	1	03/01/23 17:41:02
4,4'-DDT	ND	0.0191	0.00652		mg/Kg-dry	1	03/01/23 17:41:02
Endrin ketone	ND	0.0238	0.00655		mg/Kg-dry	1	03/01/23 17:41:02
Methoxychlor	ND	0.0238	0.00899		mg/Kg-dry	1	03/01/23 17:41:02
Surr: Decachlorobiphenyl	106	12.7 - 168			%Rec	1	03/01/23 17:41:02
Surr: Tetrachloro-m-xylene	86.7	66.6 - 140			%Rec	1	03/01/23 17:41:02

Sample Moisture (Percent Moisture)

Batch ID: R82094 Analyst: MP

Percent Moisture	20.2	0.500	0.100		wt%	1	02/27/23 9:50:37
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Work Order: 2302446
 CLIENT: Libby Environmental
 Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: MB-39570	SampType: MBLK	Units: mg/Kg	Prep Date: 2/28/2023	RunNo: 82165							
Client ID: MBLKS	Batch ID: 39570		Analysis Date: 3/1/2023	SeqNo: 1706229							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.0700									
Alpha BHC	ND	0.0100									
Beta BHC	ND	0.0100									
Gamma BHC (Lindane)	ND	0.0100									
Delta BHC	ND	0.0100									
Heptachlor	ND	0.0100									
Aldrin	ND	0.0100									
Heptachlor epoxide	ND	0.0100									
gamma-Chlordane	ND	0.0100									
Endosulfan I	ND	0.0100									
alpha-Chlordane	ND	0.0100									
Dieldrin	ND	0.0100									
4,4'-DDE	ND	0.0100									
Endrin	ND	0.0150									
Endosulfan II	ND	0.0150									
4,4'-DDD	ND	0.0150									
Endrin aldehyde	ND	0.0160									
Endosulfan sulfate	ND	0.0150									
4,4'-DDT	ND	0.0160									
Endrin ketone	ND	0.0200									
Methoxychlor	ND	0.0200									
Surr: Decachlorobiphenyl	0.193		0.2000		96.6	12.7	168				
Surr: Tetrachloro-m-xylene	0.173		0.2000		86.5	66.6	140				

Sample ID: LCS1-39570	SampType: LCS	Units: mg/Kg	Prep Date: 2/28/2023	RunNo: 82165							
Client ID: LCSS	Batch ID: 39570		Analysis Date: 3/1/2023	SeqNo: 1706230							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.172	0.0100	0.2000	0	86.1	69	143				
Beta BHC	0.160	0.0100	0.2000	0	80.1	67.4	133				
Gamma BHC (Lindane)	0.174	0.0100	0.2000	0	87.0	66.8	135				

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QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: LCS1-39570	SampType: LCS	Units: mg/Kg			Prep Date: 2/28/2023	RunNo: 82165					
Client ID: LCSS	Batch ID: 39570				Analysis Date: 3/1/2023	SeqNo: 1706230					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Delta BHC	0.171	0.0100	0.2000	0	85.6	67.9	133				
Heptachlor	0.173	0.0100	0.2000	0	86.5	73.5	149				
Aldrin	0.177	0.0100	0.2000	0	88.6	68.7	140				
Heptachlor epoxide	0.178	0.0100	0.2000	0	89.0	69.9	139				
gamma-Chlordane	0.174	0.0100	0.2000	0	87.2	68.1	136				
Endosulfan I	0.175	0.0100	0.2000	0	87.4	70.2	137				
alpha-Chlordane	0.170	0.0100	0.2000	0	85.2	66.4	135				
Dieldrin	0.175	0.0100	0.2000	0	87.3	65.1	137				
4,4'-DDE	0.171	0.0100	0.2000	0	85.3	62.7	131				
Endrin	0.177	0.0150	0.2000	0	88.5	68.1	142				
Endosulfan II	0.176	0.0150	0.2000	0	88.1	63.8	135				
4,4'-DDD	0.171	0.0150	0.2000	0	85.3	59.3	139				
Endrin aldehyde	0.175	0.0160	0.2000	0	87.4	62.9	134				
Endosulfan sulfate	0.172	0.0150	0.2000	0	85.9	62.5	133				
4,4'-DDT	0.170	0.0160	0.2000	0	85.1	67.4	135				
Endrin ketone	0.182	0.0200	0.2000	0	91.0	61	132				
Methoxychlor	0.170	0.0200	0.2000	0	84.9	65.9	135				
Surr: Decachlorobiphenyl	0.179		0.2000		89.7	12.7	168				
Surr: Tetrachloro-m-xylene	0.163		0.2000		81.7	66.6	140				

Sample ID: LCS2-39570	SampType: LCS	Units: mg/Kg			Prep Date: 2/28/2023	RunNo: 82165					
Client ID: LCSS	Batch ID: 39570				Analysis Date: 3/1/2023	SeqNo: 1706231					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	0.752	0.0700	1.000	0	75.2	48.6	147				
Surr: Decachlorobiphenyl	0.178		0.2000		88.9	12.7	168				
Surr: Tetrachloro-m-xylene	0.166		0.2000		82.9	66.6	140				

Work Order: 2302446
 CLIENT: Libby Environmental
 Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: 2302446-001AMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 2/28/2023		RunNo: 82165			
Client ID: SO-SS14-0.5-1-0223		Batch ID: 39570				Analysis Date: 3/1/2023		SeqNo: 1706234			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.248	0.0120	0.2393	0	103	73.2	151				
Beta BHC	0.235	0.0120	0.2393	0	98.1	65.1	144				
Gamma BHC (Lindane)	0.247	0.0120	0.2393	0	103	67.5	144				
Delta BHC	0.254	0.0120	0.2393	0	106	67.7	143				
Heptachlor	0.251	0.0120	0.2393	0	105	75.3	159				
Aldrin	0.256	0.0120	0.2393	0	107	68.5	149				
Heptachlor epoxide	0.260	0.0120	0.2393	0	109	70.6	147				
gamma-Chlordane	0.251	0.0120	0.2393	0	105	54.2	149				
Endosulfan I	0.254	0.0120	0.2393	0	106	65	147				
alpha-Chlordane	0.248	0.0120	0.2393	0	104	61.9	144				
Dieldrin	0.255	0.0120	0.2393	0	106	61.2	146				
4,4'-DDE	0.261	0.0120	0.2393	0.007332	106	59.4	143				
Endrin	0.259	0.0179	0.2393	0	108	71.1	147				
Endosulfan II	0.253	0.0179	0.2393	0	106	65.3	138				
4,4'-DDD	0.248	0.0179	0.2393	0	104	59	146				
Endrin aldehyde	0.211	0.0191	0.2393	0	88.2	49.9	129				
Endosulfan sulfate	0.250	0.0179	0.2393	0	104	53.3	142				
4,4'-DDT	0.252	0.0191	0.2393	0	105	57.3	154				
Endrin ketone	0.261	0.0239	0.2393	0	109	61.7	133				
Methoxychlor	0.253	0.0239	0.2393	0	106	57.5	145				
Surr: Decachlorobiphenyl	0.249		0.2393		104	12.7	168				
Surr: Tetrachloro-m-xylene	0.228		0.2393		95.1	66.6	140				

Sample ID: 2302446-001AMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 2/28/2023		RunNo: 82165			
Client ID: SO-SS14-0.5-1-0223		Batch ID: 39570				Analysis Date: 3/1/2023		SeqNo: 1706235			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.247	0.0121	0.2412	0	102	73.2	151	0.2476	0.243	30	
Beta BHC	0.234	0.0121	0.2412	0	97.0	65.1	144	0.2349	0.377	30	
Gamma BHC (Lindane)	0.248	0.0121	0.2412	0	103	67.5	144	0.2474	0.112	30	
Delta BHC	0.253	0.0121	0.2412	0	105	67.7	143	0.2537	0.446	30	

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QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: 2302446-001AMSD	SampType: MSD	Units: mg/Kg-dry			Prep Date: 2/28/2023	RunNo: 82165					
Client ID: SO-SS14-0.5-1-0223	Batch ID: 39570				Analysis Date: 3/1/2023	SeqNo: 1706235					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Heptachlor	0.250	0.0121	0.2412	0	104	75.3	159	0.2510	0.264	30	
Aldrin	0.256	0.0121	0.2412	0	106	68.5	149	0.2561	0.168	30	
Heptachlor epoxide	0.258	0.0121	0.2412	0	107	70.6	147	0.2598	0.617	30	
gamma-Chlordane	0.251	0.0121	0.2412	0	104	54.2	149	0.2505	0.172	30	
Endosulfan I	0.253	0.0121	0.2412	0	105	65	147	0.2539	0.344	30	
alpha-Chlordane	0.247	0.0121	0.2412	0	102	61.9	144	0.2477	0.376	30	
Dieldrin	0.253	0.0121	0.2412	0	105	61.2	146	0.2546	0.693	30	
4,4'-DDE	0.261	0.0121	0.2412	0.007332	105	59.4	143	0.2610	0.144	30	
Endrin	0.257	0.0181	0.2412	0	107	71.1	147	0.2592	0.764	30	
Endosulfan II	0.249	0.0181	0.2412	0	103	65.3	138	0.2529	1.56	30	
4,4'-DDD	0.247	0.0181	0.2412	0	102	59	146	0.2485	0.700	30	
Endrin aldehyde	0.217	0.0193	0.2412	0	90.0	49.9	129	0.2111	2.77	30	
Endosulfan sulfate	0.248	0.0181	0.2412	0	103	53.3	142	0.2495	0.476	30	
4,4'-DDT	0.251	0.0193	0.2412	0	104	57.3	154	0.2525	0.589	30	
Endrin ketone	0.259	0.0241	0.2412	0	107	61.7	133	0.2612	0.938	30	
Methoxychlor	0.253	0.0241	0.2412	0	105	57.5	145	0.2531	0.0653	30	
Surr: Decachlorobiphenyl	0.251		0.2412		104	12.7	168		0		
Surr: Tetrachloro-m-xylene	0.227		0.2412		93.9	66.6	140		0		

Sample ID: MB-39688	SampType: MBLK	Units: mg/Kg			Prep Date: 3/13/2023	RunNo: 82443					
Client ID: MBLKS	Batch ID: 39688				Analysis Date: 3/13/2023	SeqNo: 1712925					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.0700									
Alpha BHC	ND	0.0100									
Beta BHC	ND	0.0100									
Gamma BHC (Lindane)	ND	0.0100									
Delta BHC	ND	0.0100									
Heptachlor	ND	0.0100									
Aldrin	ND	0.0100									
Heptachlor epoxide	ND	0.0100									

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 CLIENT: Libby Environmental
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QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: MB-39688	SampType: MBLK	Units: mg/Kg			Prep Date: 3/13/2023	RunNo: 82443					
Client ID: MBLKS	Batch ID: 39688				Analysis Date: 3/13/2023	SeqNo: 1712925					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
gamma-Chlordane	ND	0.0100									
Endosulfan I	ND	0.0100									
alpha-Chlordane	ND	0.0100									
Dieldrin	ND	0.0100									
4,4'-DDE	ND	0.0100									
Endrin	ND	0.0150									
Endosulfan II	ND	0.0150									
4,4'-DDD	ND	0.0150									
Endrin aldehyde	ND	0.0160									
Endosulfan sulfate	ND	0.0150									
4,4'-DDT	ND	0.0160									
Endrin ketone	ND	0.0200									
Methoxychlor	ND	0.0200									
Surr: Decachlorobiphenyl	0.198		0.2000		98.9	12.7	168				
Surr: Tetrachloro-m-xylene	0.172		0.2000		85.8	66.6	140				

Sample ID: LCS1-39688	SampType: LCS	Units: mg/Kg			Prep Date: 3/13/2023	RunNo: 82443					
Client ID: LCSS	Batch ID: 39688				Analysis Date: 3/13/2023	SeqNo: 1712926					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.182	0.0100	0.2000	0	91.1	69	143				
Beta BHC	0.168	0.0100	0.2000	0	83.9	67.4	133				
Gamma BHC (Lindane)	0.184	0.0100	0.2000	0	92.2	66.8	135				
Delta BHC	0.182	0.0100	0.2000	0	91.0	67.9	133				
Heptachlor	0.184	0.0100	0.2000	0	92.0	73.5	149				
Aldrin	0.187	0.0100	0.2000	0	93.7	68.7	140				
Heptachlor epoxide	0.189	0.0100	0.2000	0	94.3	69.9	139				
gamma-Chlordane	0.185	0.0100	0.2000	0	92.5	68.1	136				
Endosulfan I	0.186	0.0100	0.2000	0	92.9	70.2	137				
alpha-Chlordane	0.179	0.0100	0.2000	0	89.4	66.4	135				
Dieldrin	0.185	0.0100	0.2000	0	92.4	65.1	137				

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QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: LCS1-39688	SampType: LCS	Units: mg/Kg				Prep Date: 3/13/2023	RunNo: 82443				
Client ID: LCSS	Batch ID: 39688					Analysis Date: 3/13/2023	SeqNo: 1712926				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDE	0.180	0.0100	0.2000	0	90.0	62.7	131				
Endrin	0.188	0.0150	0.2000	0	94.0	68.1	142				
Endosulfan II	0.187	0.0150	0.2000	0	93.3	63.8	135				
4,4'-DDD	0.179	0.0150	0.2000	0	89.5	59.3	139				
Endrin aldehyde	0.186	0.0160	0.2000	0	93.1	62.9	134				
Endosulfan sulfate	0.184	0.0150	0.2000	0	91.9	62.5	133				
4,4'-DDT	0.181	0.0160	0.2000	0	90.4	67.4	135				
Endrin ketone	0.195	0.0200	0.2000	0	97.4	61	132				
Methoxychlor	0.180	0.0200	0.2000	0	90.1	65.9	135				
Surr: Decachlorobiphenyl	0.219		0.2000		109	12.7	168				
Surr: Tetrachloro-m-xylene	0.175		0.2000		87.6	66.6	140				

Sample ID: LCS2-39688	SampType: LCS	Units: mg/Kg				Prep Date: 3/13/2023	RunNo: 82443				
Client ID: LCSS	Batch ID: 39688					Analysis Date: 3/13/2023	SeqNo: 1712927				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	0.767	0.0700	1.000	0	76.7	48.6	147				
Surr: Decachlorobiphenyl	0.209		0.2000		105	12.7	168				
Surr: Tetrachloro-m-xylene	0.172		0.2000		86.2	66.6	140				

Sample ID: 2303175-001AMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 3/13/2023	RunNo: 82443				
Client ID: BATCH	Batch ID: 39688					Analysis Date: 3/13/2023	SeqNo: 1712929				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.190	0.0103	0.2064	0	92.2	73.2	151				
Beta BHC	0.177	0.0103	0.2064	0	85.8	65.1	144				
Gamma BHC (Lindane)	0.193	0.0103	0.2064	0	93.5	67.5	144				
Delta BHC	0.192	0.0103	0.2064	0	93.3	67.7	143				
Heptachlor	0.189	0.0103	0.2064	0	91.7	75.3	159				
Aldrin	0.192	0.0103	0.2064	0	93.0	68.5	149				
Heptachlor epoxide	0.194	0.0103	0.2064	0	93.8	70.6	147				

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QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: 2303175-001AMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 3/13/2023	RunNo: 82443					
Client ID: BATCH	Batch ID: 39688				Analysis Date: 3/13/2023	SeqNo: 1712929					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
gamma-Chlordane	0.189	0.0103	0.2064	0	91.5	54.2	149				
Endosulfan I	0.190	0.0103	0.2064	0	92.0	65	147				
alpha-Chlordane	0.183	0.0103	0.2064	0	88.8	61.9	144				
Dieldrin	0.189	0.0103	0.2064	0	91.6	61.2	146				
4,4'-DDE	0.183	0.0103	0.2064	0	88.8	59.4	143				
Endrin	0.192	0.0155	0.2064	0	93.2	71.1	147				
Endosulfan II	0.191	0.0155	0.2064	0	92.7	65.3	138				
4,4'-DDD	0.181	0.0155	0.2064	0	87.8	59	146				
Endrin aldehyde	0.184	0.0165	0.2064	0	89.2	49.9	129				
Endosulfan sulfate	0.186	0.0155	0.2064	0	90.3	53.3	142				
4,4'-DDT	0.181	0.0165	0.2064	0	87.9	57.3	154				
Endrin ketone	0.198	0.0206	0.2064	0	96.1	61.7	133				
Methoxychlor	0.179	0.0206	0.2064	0	86.9	57.5	145				
Surr: Decachlorobiphenyl	0.206		0.2064		99.7	12.7	168				
Surr: Tetrachloro-m-xylene	0.179		0.2064		86.9	66.6	140				

Sample ID: 2303175-001AMSD	SampType: MSD	Units: mg/Kg-dry			Prep Date: 3/13/2023	RunNo: 82443					
Client ID: BATCH	Batch ID: 39688				Analysis Date: 3/13/2023	SeqNo: 1712930					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.201	0.0103	0.2064	0	97.4	73.2	151	0.1904	5.43	30	
Beta BHC	0.186	0.0103	0.2064	0	90.0	65.1	144	0.1771	4.74	30	
Gamma BHC (Lindane)	0.204	0.0103	0.2064	0	98.9	67.5	144	0.1931	5.52	30	
Delta BHC	0.203	0.0103	0.2064	0	98.5	67.7	143	0.1925	5.48	30	
Heptachlor	0.202	0.0103	0.2064	0	97.7	75.3	159	0.1893	6.35	30	
Aldrin	0.205	0.0103	0.2064	0	99.2	68.5	149	0.1919	6.52	30	
Heptachlor epoxide	0.206	0.0103	0.2064	0	99.9	70.6	147	0.1935	6.29	30	
gamma-Chlordane	0.201	0.0103	0.2064	0	97.6	54.2	149	0.1888	6.45	30	
Endosulfan I	0.202	0.0103	0.2064	0	97.9	65	147	0.1899	6.22	30	
alpha-Chlordane	0.195	0.0103	0.2064	0	94.7	61.9	144	0.1832	6.44	30	
Dieldrin	0.201	0.0103	0.2064	0	97.5	61.2	146	0.1890	6.30	30	

Work Order: 2302446
CLIENT: Libby Environmental
Project: 2021 Blvd Interim Action

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: 2303175-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 3/13/2023	RunNo: 82443
Client ID: BATCH	Batch ID: 39688		Analysis Date: 3/13/2023	SeqNo: 1712930

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,4'-DDE	0.195	0.0103	0.2064	0	94.7	59.4	143	0.1832	6.46	30	
Endrin	0.205	0.0155	0.2064	0	99.3	71.1	147	0.1923	6.33	30	
Endosulfan II	0.203	0.0155	0.2064	0	98.5	65.3	138	0.1912	6.14	30	
4,4'-DDD	0.194	0.0155	0.2064	0	93.8	59	146	0.1812	6.65	30	
Endrin aldehyde	0.195	0.0165	0.2064	0	94.4	49.9	129	0.1842	5.64	30	
Endosulfan sulfate	0.198	0.0155	0.2064	0	96.2	53.3	142	0.1863	6.32	30	
4,4'-DDT	0.194	0.0165	0.2064	0	94.1	57.3	154	0.1814	6.82	30	
Endrin ketone	0.210	0.0206	0.2064	0	102	61.7	133	0.1984	5.65	30	
Methoxychlor	0.191	0.0206	0.2064	0	92.4	57.5	145	0.1793	6.14	30	
Surr: Decachlorobiphenyl	0.220		0.2064		107	12.7	168		0		
Surr: Tetrachloro-m-xylene	0.190		0.2064		92.0	66.6	140		0		

Client Name: LIBBY	Work Order Number: 2302446
Logged by: Clare Griggs	Date Received: 2/24/2023 11:45:00 AM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Present
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >2°C to 6°C * Unknown prior to receipt. Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	7.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



2302446 Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

**SUBCONTRACT
ORDER
L23B105**

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) Std

Project: 2021 Blvd Interim Action

Analysis	Comments
Client Sample ID: SO-SS14-0.5-1-0223 <i>Soil Sampled: 02/24/2023 07:06</i> Lab ID: L23B105-01 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS15-0.5-1-0223 <i>Soil Sampled: 02/24/2023 07:10</i> Lab ID: L23B105-02 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS16-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:48</i> Lab ID: L23B105-03 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS17-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:51</i> Lab ID: L23B105-04 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS18-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:53</i> Lab ID: L23B105-05 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS19-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:56</i> Lab ID: L23B105-06 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	

Released By HANK 11:45 2-24-23
Sherry Chilcutt

Received By *[Signature]* 2/24/23 11:45
Date



2302446 Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

**SUBCONTRACT
ORDER
L23B105
(Continued)**

Project: 2021 Blvd Interim Action

Analysis	Comments
Client Sample ID: SO-SS20-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:59</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B105-07 8081 please
Client Sample ID: SO-SS21-0.5-1-0223 <i>Soil Sampled: 02/24/2023 09:01</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B105-08 8081 please
Client Sample ID: SO-SS22-0.5-1-0223 <i>Soil Sampled: 02/24/2023 09:03</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B105-09 8081 please
Client Sample ID: SO-SS23-0.5-1-0223 <i>Soil Sampled: 02/24/2023 09:06</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B105-10 8081 please

HANK
Released By

11:45

2-24-23
Date

[Signature]
Received By

2/24/23 11:45
Date



2302446

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

**SUBCONTRACT
ORDER
L23B105**

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) Std

Project: 2021 Blvd Interim Action
Edits per S.C. 3/8/2023 -BB

Analysis	Comments
Client Sample ID: SO-SS14-0.5-1-0223 <i>Soil Sampled: 02/24/2023 07:06</i> Lab ID: L23B105-01 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS15-0.5-1-0223 <i>Soil Sampled: 02/24/2023 07:10</i> Lab ID: L23B105-02 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS16-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:48</i> Lab ID: L23B105-03 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS17-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:51</i> Lab ID: L23B105-04 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS18-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:53</i> Lab ID: L23B105-05 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	
Client Sample ID: SO-SS19-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:56</i> Lab ID: L23B105-06 Pesticide, Chlorinated 8081 please <i>Containers Supplied:</i>	

HANK 11:45 2-24-23
 Released By _____ Date _____
Sherry Chilcutt

A. W. W. W. 2/24/23 11:45
 Received By _____ Date _____



2302446 Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

**SUBCONTRACT
ORDER
L23B105
(Continued)**

Project: 2021 Blvd Interim Action

Analysis	Comments
Client Sample ID: SO-SS20-0.5-1-0223 <i>Soil Sampled: 02/24/2023 08:59</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B105-07 8081 please
Client Sample ID: SO-SS21-0.5-1-0223 <i>Soil Sampled: 02/24/2023 09:01</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B105-08 8081 please
Client Sample ID: SO-SS22-0.5-1-0223 <i>Soil Sampled: 02/24/2023 09:03</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B105-09 8081 please Re-analyze twice, once from each sample jar provided.
Client Sample ID: SO-SS23-0.5-1-0223 <i>Soil Sampled: 02/24/2023 09:06</i> Pesticide, Chlorinated <i>Containers Supplied:</i>	Lab ID: L23B105-10 8081 please

HANK
Released By

11:45

2-24-23
Date

[Signature]
Received By

2/24/23 11:45
Date



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

Phone (360) 352-2110 • libbyenv@gmail.com

April 07, 2023

Joel Hecker
Pioneer Technologies Corporation
5205 Corporate Center Court SE, Suite A
Olympia, WA 98503

RE: 2021 Boulevard
Work Order Number: L23C173

Enclosed are the results of analyses for samples received by our laboratory on 3/30/2023.

Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please feel free to contact us. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry Chilcutt
Senior Chemist

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

2021 BOULEVARD PROJECT
Pioneer Technologies Corporation
Libby Project # L23C173

Date Received 3/30/2023

Time Received 9:41

Received By SG

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is complete? Yes No
2. How was the sample delivered? Hand Delivered Picked Up Shipped

Log In

3. Cooler or Shipping Container is present. Yes No N/A
4. Cooler or Shipping Container is in good condition. Yes No N/A
5. Cooler or Shipping Container has Custody Seals present. Yes No N/A
6. Was an attempt made to cool the samples? Yes No N/A
7. Temperature of cooler (0°C to 8°C recommended) 6.6 °C
8. Temperature of sample(s) (0°C to 8°C recommended) 6.8 °C
9. Did all containers arrive in good condition (unbroken)? Yes No
10. Is it clear what analyses were requested? Yes No
11. Did container labels match Chain of Custody? Yes No
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Are correct containers used for the analysis indicated? Yes No
14. Is there sufficient sample volume for indicated analysis? Yes No
15. Were all containers properly preserved per each analysis? Yes No
16. Were VOA vials collected correctly (no headspace)? Yes No N/A
17. Were all holding times able to be met? Yes No

Discrepancies/ Notes

18. Was client notified of all discrepancies? Yes No N/A

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments. _____



Libby Environmental

Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 2021 Boulevard
Work Order Number: 2303697

April 07, 2023

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 2 sample(s) on 3/31/2023 for the analyses presented in the following report.

Organochlorine Pesticides by EPA Method 8081
Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager



CLIENT: Libby Environmental
Project: 2021 Boulevard
Work Order: 2303697

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2303697-001	SO-SS24-0323	03/30/2023 9:20 AM	03/31/2023 9:35 AM
2303697-002	SO-SS-25-0323	03/30/2023 9:25 AM	03/31/2023 9:35 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Original

CLIENT: Libby Environmental

Project: 2021 Boulevard

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- DUP - Sample Duplicate
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MCL - Maximum Contaminant Level
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- REP - Sample Replicate
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Libby Environmental

Collection Date: 3/30/2023 9:20:00 AM

Project: 2021 Boulevard

Lab ID: 2303697-001

Matrix: Soil

Client Sample ID: SO-SS24-0323

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39930

Analyst: KJ

Toxaphene	ND	0.0827		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Alpha BHC	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Beta BHC	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Gamma BHC (Lindane)	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Delta BHC	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Heptachlor	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Aldrin	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Heptachlor epoxide	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
gamma-Chlordane	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Endosulfan I	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
alpha-Chlordane	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Dieldrin	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
4,4'-DDE	ND	0.0118		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Endrin	ND	0.0177		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Endosulfan II	ND	0.0177		mg/Kg-dry	1	4/6/2023 3:56:57 PM
4,4'-DDD	ND	0.0177		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Endrin aldehyde	ND	0.0189		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Endosulfan sulfate	ND	0.0177		mg/Kg-dry	1	4/6/2023 3:56:57 PM
4,4'-DDT	ND	0.0189		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Endrin ketone	ND	0.0236		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Methoxychlor	ND	0.0236		mg/Kg-dry	1	4/6/2023 3:56:57 PM
Surr: Decachlorobiphenyl	86.5	12.7 - 168		%Rec	1	4/6/2023 3:56:57 PM
Surr: Tetrachloro-m-xylene	67.2	66.6 - 140		%Rec	1	4/6/2023 3:56:57 PM

Sample Moisture (Percent Moisture)

Batch ID: R82874

Analyst: MP

Percent Moisture	17.4	0.500		wt%	1	4/3/2023 8:35:16 AM
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Analytical Report

Work Order: 2303697
Date Reported: 4/7/2023

Client: Libby Environmental

Collection Date: 3/30/2023 9:25:00 AM

Project: 2021 Boulevard

Lab ID: 2303697-002

Matrix: Soil

Client Sample ID: SO-SS-25-0323

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 39930

Analyst: KJ

Toxaphene	ND	0.0830		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Alpha BHC	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Beta BHC	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Gamma BHC (Lindane)	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Delta BHC	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Heptachlor	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Aldrin	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Heptachlor epoxide	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
gamma-Chlordane	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Endosulfan I	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
alpha-Chlordane	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Dieldrin	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
4,4'-DDE	ND	0.0119		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Endrin	ND	0.0178		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Endosulfan II	ND	0.0178		mg/Kg-dry	1	4/6/2023 4:26:02 PM
4,4'-DDD	ND	0.0178		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Endrin aldehyde	ND	0.0190		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Endosulfan sulfate	ND	0.0178		mg/Kg-dry	1	4/6/2023 4:26:02 PM
4,4'-DDT	ND	0.0190		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Endrin ketone	ND	0.0237		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Methoxychlor	ND	0.0237		mg/Kg-dry	1	4/6/2023 4:26:02 PM
Surr: Decachlorobiphenyl	145	12.7 - 168		%Rec	1	4/6/2023 4:26:02 PM
Surr: Tetrachloro-m-xylene	119	66.6 - 140		%Rec	1	4/6/2023 4:26:02 PM

Sample Moisture (Percent Moisture)

Batch ID: R82874

Analyst: MP

Percent Moisture	19.4	0.500		wt%	1	4/3/2023 8:35:16 AM
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Work Order: 2303697
 CLIENT: Libby Environmental
 Project: 2021 Boulevard

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: MB-39930	SampType: MBLK	Units: mg/Kg	Prep Date: 4/5/2023	RunNo: 83000							
Client ID: MBLKS	Batch ID: 39930		Analysis Date: 4/6/2023	SeqNo: 1727586							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toxaphene	ND	0.0700									
Alpha BHC	ND	0.0100									
Beta BHC	ND	0.0100									
Gamma BHC (Lindane)	ND	0.0100									
Delta BHC	ND	0.0100									
Heptachlor	ND	0.0100									
Aldrin	ND	0.0100									
Heptachlor epoxide	ND	0.0100									
gamma-Chlordane	ND	0.0100									
Endosulfan I	ND	0.0100									
alpha-Chlordane	ND	0.0100									
Dieldrin	ND	0.0100									
4,4'-DDE	ND	0.0100									
Endrin	ND	0.0150									
Endosulfan II	ND	0.0150									
4,4'-DDD	ND	0.0150									
Endrin aldehyde	ND	0.0160									
Endosulfan sulfate	ND	0.0150									
4,4'-DDT	ND	0.0160									
Endrin ketone	ND	0.0200									
Methoxychlor	ND	0.0200									
Surr: Decachlorobiphenyl	0.191		0.2000		95.7	12.7	168				
Surr: Tetrachloro-m-xylene	0.146		0.2000		73.1	66.6	140				

Sample ID: LCS1-39930	SampType: LCS	Units: mg/Kg	Prep Date: 4/5/2023	RunNo: 83000							
Client ID: LCSS	Batch ID: 39930		Analysis Date: 4/6/2023	SeqNo: 1727587							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alpha BHC	0.192	0.0100	0.2000	0	95.8	68.1	149				
Beta BHC	0.177	0.0100	0.2000	0	88.7	69.8	138				
Gamma BHC (Lindane)	0.196	0.0100	0.2000	0	97.8	68.7	139				

Work Order: 2303697
 CLIENT: Libby Environmental
 Project: 2021 Boulevard

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: LCS1-39930	SampType: LCS	Units: mg/Kg	Prep Date: 4/5/2023	RunNo: 83000							
Client ID: LCSS	Batch ID: 39930		Analysis Date: 4/6/2023	SeqNo: 1727587							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Delta BHC	0.193	0.0100	0.2000	0	96.5	70	138				
Heptachlor	0.196	0.0100	0.2000	0	98.0	77.9	150				
Aldrin	0.199	0.0100	0.2000	0	99.3	68.1	144				
Heptachlor epoxide	0.203	0.0100	0.2000	0	102	69.3	143				
gamma-Chlordane	0.197	0.0100	0.2000	0	98.6	67	141				
Endosulfan I	0.202	0.0100	0.2000	0	101	68.2	142				
alpha-Chlordane	0.192	0.0100	0.2000	0	96.0	65.3	140				
Dieldrin	0.198	0.0100	0.2000	0	98.9	66.3	142				
4,4'-DDE	0.191	0.0100	0.2000	0	95.4	64	135				
Endrin	0.200	0.0150	0.2000	0	99.9	71.7	144				
Endosulfan II	0.203	0.0150	0.2000	0	102	67.6	135				
4,4'-DDD	0.189	0.0150	0.2000	0	94.7	61.8	142				
Endrin aldehyde	0.173	0.0160	0.2000	0	86.5	65.1	135				
Endosulfan sulfate	0.199	0.0150	0.2000	0	99.7	64.1	135				
4,4'-DDT	0.192	0.0160	0.2000	0	95.8	68.2	140				
Endrin ketone	0.209	0.0200	0.2000	0	105	66.4	132				
Methoxychlor	0.188	0.0200	0.2000	0	93.9	66	136				
Surr: Decachlorobiphenyl	0.200		0.2000		99.8	12.7	168				
Surr: Tetrachloro-m-xylene	0.154		0.2000		76.8	66.6	140				

Sample ID: LCS2-39930	SampType: LCS	Units: mg/Kg	Prep Date: 4/5/2023	RunNo: 83000							
Client ID: LCSS	Batch ID: 39930		Analysis Date: 4/6/2023	SeqNo: 1727588							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toxaphene	0.794	0.0700	1.000	0	79.4	58	150				
Surr: Decachlorobiphenyl	0.187		0.2000		93.4	12.7	168				
Surr: Tetrachloro-m-xylene	0.147		0.2000		73.6	66.6	140				

Work Order: 2303697
 CLIENT: Libby Environmental
 Project: 2021 Boulevard

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: **2303697-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/5/2023** RunNo: **83000**
 Client ID: **SO-SS24-0323** Batch ID: **39930** Analysis Date: **4/6/2023** SeqNo: **1727590**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.260	0.0118	0.2366	0	110	70.1	157				
Beta BHC	0.242	0.0118	0.2366	0	102	69.4	153				
Gamma BHC (Lindane)	0.265	0.0118	0.2366	0	112	62.3	155				
Delta BHC	0.267	0.0118	0.2366	0	113	67.8	154				
Heptachlor	0.261	0.0118	0.2366	0	110	72.6	164				
Aldrin	0.264	0.0118	0.2366	0	112	65.1	155				
Heptachlor epoxide	0.272	0.0118	0.2366	0	115	67.1	156				
gamma-Chlordane	0.263	0.0118	0.2366	0	111	50.8	158				
Endosulfan I	0.270	0.0118	0.2366	0	114	69.5	145				
alpha-Chlordane	0.256	0.0118	0.2366	0	108	60.1	148				
Dieldrin	0.266	0.0118	0.2366	0	112	55.3	159				
4,4'-DDE	0.257	0.0118	0.2366	0	109	49.3	157				
Endrin	0.254	0.0177	0.2366	0	107	62.8	162				
Endosulfan II	0.277	0.0177	0.2366	0	117	69.2	143				
4,4'-DDD	0.257	0.0177	0.2366	0	109	60.5	152				
Endrin aldehyde	0.262	0.0189	0.2366	0	111	49.6	134				
Endosulfan sulfate	0.272	0.0177	0.2366	0	115	59.9	146				
4,4'-DDT	0.260	0.0189	0.2366	0	110	46.2	168				
Endrin ketone	0.291	0.0237	0.2366	0	123	60	147				
Methoxychlor	0.256	0.0237	0.2366	0	108	55	154				
Surr: Decachlorobiphenyl	0.267		0.2366		113	12.7	168				
Surr: Tetrachloro-m-xylene	0.203		0.2366		85.7	66.6	140				

Sample ID: **2303697-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/5/2023** RunNo: **83000**
 Client ID: **SO-SS24-0323** Batch ID: **39930** Analysis Date: **4/6/2023** SeqNo: **1727591**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.246	0.0118	0.2368	0	104	70.1	157	0.2600	5.73	30	
Beta BHC	0.231	0.0118	0.2368	0	97.6	69.4	153	0.2417	4.41	30	
Gamma BHC (Lindane)	0.251	0.0118	0.2368	0	106	62.3	155	0.2652	5.52	30	
Delta BHC	0.255	0.0118	0.2368	0	108	67.8	154	0.2668	4.44	30	

Work Order: 2303697
CLIENT: Libby Environmental
Project: 2021 Boulevard

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID: 2303697-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 4/5/2023	RunNo: 83000
Client ID: SO-SS24-0323	Batch ID: 39930		Analysis Date: 4/6/2023	SeqNo: 1727591

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Heptachlor	0.250	0.0118	0.2368	0	106	72.6	164	0.2609	4.21	30	
Aldrin	0.254	0.0118	0.2368	0	107	65.1	155	0.2643	3.83	30	
Heptachlor epoxide	0.262	0.0118	0.2368	0	111	67.1	156	0.2724	3.87	30	
gamma-Chlordane	0.254	0.0118	0.2368	0	107	50.8	158	0.2626	3.14	30	
Endosulfan I	0.261	0.0118	0.2368	0	110	69.5	145	0.2704	3.51	30	
alpha-Chlordane	0.248	0.0118	0.2368	0	105	60.1	148	0.2564	3.24	30	
Dieldrin	0.257	0.0118	0.2368	0	108	55.3	159	0.2658	3.52	30	
4,4'-DDE	0.249	0.0118	0.2368	0	105	49.3	157	0.2567	3.20	30	
Endrin	0.248	0.0178	0.2368	0	105	62.8	162	0.2542	2.52	30	
Endosulfan II	0.267	0.0178	0.2368	0	113	69.2	143	0.2769	3.76	30	
4,4'-DDD	0.247	0.0178	0.2368	0	105	60.5	152	0.2569	3.74	30	
Endrin aldehyde	0.258	0.0189	0.2368	0	109	49.6	134	0.2621	1.46	30	
Endosulfan sulfate	0.260	0.0178	0.2368	0	110	59.9	146	0.2724	4.48	30	
4,4'-DDT	0.251	0.0189	0.2368	0	106	46.2	168	0.2604	3.80	30	
Endrin ketone	0.277	0.0237	0.2368	0	117	60	147	0.2906	4.81	30	
Methoxychlor	0.244	0.0237	0.2368	0	103	55	154	0.2558	4.56	30	
Surr: Decachlorobiphenyl	0.288		0.2368		122	12.7	168		0		
Surr: Tetrachloro-m-xylene	0.224		0.2368		94.5	66.6	140		0		

Client Name: LIBBY	Work Order Number: 2303697
Logged by: Morgan Wilson	Date Received: 3/31/2023 9:35:00 AM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? UPS

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Present
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >2°C to 6°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	1.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

**SUBCONTRACT
ORDER
L23C173**

2373697

Sending Laboratory:

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506
Phone: 360-352-2110
Fax: 360-352-4154

Project Manager: Sherry Chilcutt
LibbyEnv@gmail.com

Subcontracted Laboratory:

Fremont Analytical, Inc.
3600 Fremont Ave N
Seattle, WA 98103
Phone: (206) 352-3790
Fax:

Requested Turnaround (TAT) Std

Project: 2021 Boulevard

Analysis	Comments
Client Sample ID: SO-SS24-0323 <i>Soil Sampled: 03/30/2023 09:20</i>	Lab ID: L23C173-01
Pesticide, Chlorinated <i>Containers Supplied:</i>	8081 please
Client Sample ID: SO-SS-25-0323 <i>Soil Sampled: 03/30/2023 09:25</i>	Lab ID: L23C173-02
Pesticide, Chlorinated <i>Containers Supplied:</i>	8081 please

Released By: Date: 3.30.23
 Received By: Date: 3/31/23
 Page 1 of 1 Page 12 of 12 Page 15 of 15

Appendix E



Waste Profile: Boulevard Nursery Soil

Status: APPROVED

Approval Number: WC-23-28

Generator Company

Company: Pioneer Technologies Corporation

Address:

City:

Postal Code:

Phone:

State/Province:

County:

Generator Site

Site: PIONEER Technologies Corporation

Address: 5205 Corporate Center Court Southeast

City: Lacey

Postal code: 98503

Phone:

State/Province: WA

County:

Waste Origin

Address: 2021 Boulevard Road SE

City: Olympia

State/Province: WA

Postal code: 98501

County: Thurston

Landfill

Landfill: Wasco County Landfill

Address: 2550 Steele Road

City: The Dalles

State/Province: OR

Postal code: 97058

Phone:

Billing Company

Company: DH Environmental

Address: 1011 SW Klickitat Way

Address 2: Suite 107

City: Seattle

Postal Code: 98134

Phone: 206-445-4556

State/Province: WA

County: King

Billing Site

Company: DH Environmental

Address: 1011 SW Klickitat Way

Address 2: Suite 107

City: Seattle

Postal code: 98134

Phone: 206-445-4556

State/Province: WA

County: King

Broker/Consultant Company 1

Company: DH Environmental
Address: 1011 SW Klickitat Way
Address 2: Suite 107
City: Seattle
Postal Code: 98134
Phone: 206-445-4556
State/Province: WA
County: King

Broker/Consultant Site 1

Company: DH Environmental
Address: 1011 SW Klickitat Way
Address 2: Suite 107
City: Seattle
Postal Code: 98134
Phone: 206-445-4556
State/Province: WA
County: King

Transporter Company 1

Company: Dietrich Trucking, LLC
Address: 7211 NE 43rd Ave.
Address 2: STE. A
City: Vancouver
Postal Code: 98661
Phone: (360) 892-3881
State/Province: WA
County: Clark

Transporter Site 1

Company: Garland
Address: 7211 NE 43rd Ave. STE. A Vancouver, WA 98661
Address 2: STE. A
City: Vancouver
Postal code: 98661
Phone: Smith
State/Province: WA
County: Clark
State ID: Clark
Permit #:
Permit Exp.:

Non-Hazardous determination

EPA hazardous waste: **No**
Process knowledge: **No**
Process knowledge details:
Safety data sheet:false
Certified analytical: **Yes**
Is this a representative sample in accordance with 40 CFR 261? **Yes**
What type of sample is this?:Grab
Sample ID:Multiple samples - see attached data
Exempt waste:False
Exempt waste item:
Reference to exemption:
State hazardous material: **No**
State waste codes:
Waste delisted: **No**
Contains PCB: **No**
Is this waste subject to 40 CFR 761? **No**
Is this a remediation project under 40 CFR 761.61(a)? **No**
Has this waste been imported into the USA? **No**

Contains asbestos: **No**
Asbestos type:
Produced from benzene transfer or benzene waste operations: **No**
Waste contain NORM or TENORM radioactive material: **No**
Isotopes:
Waste contain regulated, untreated or infectious medical waste: **No**
Waste subject to RCRA Organic Air Emissions Standards: **No**
Waste from a CERCLA site: **No**
Record of decision:
Waste produced from a site remediation project: **No**
DOT hazardous: **No**

Waste Description

Waste description: Soil containing concentrations of Dieldrin
Industrial waste: **No**
How was waste generated?: Nursery operations
Why is this material being disposed?: the Dieldrin concentration exceeds the Ecology Method B cleanup level for Dieldrin - 0.88 mg/kg was the highest concentration detected
Waste been contaminated: **Yes**
Contamination description: Concentrations of Dieldrin detected in the soil
Waste constituents: Dieldrin: 0.00-0.00%
Color: gray to brown
Physical state: Solid
Free liquid range: -
pH: N/A
Odor: No Odor
Odor description:
Material reactive: **No**
Flash point: N/A

Shipping details

Event frequency: One Time
Anticipated number of loads: 17
Estimated annual quantity: 500
Unit of measure: Tons
Shipping frequency: One time
Quantity per shipment: 500 tons
Container type: Dump Truck
Container type description:
Container size: 30 tons

Signature

I hereby certify that all information contained herein is true and correct, and the material described is properly identified, classified, packaged, labeled, and prepared as indicated. I certify that this waste is either (i) not hazardous or dangerous as defined by the U.S. EPA, or the state or province of origin; or (ii) (and applicable to TX only) hazardous, special or industrial waste (including friable asbestos) that meets the classification of Class II waste. I certify that this waste does not contain any regulated radioactive materials and does not contain PCB's regulated by TSCA or any other regulatory authority. I certify that all known and suspected hazards have been disclosed. I certify that all samples used for this analysis are representative of the materials described herein. I understand that all wastes may undergo inspection upon arrival at the designated facility and may be refused if the delivered material does not conform to the description herein. Notification will be provided immediately if there is a change in the composition of, or process generating this waste stream, prior to offering the waste for shipment or management.

Print Name: Tony Bahnick

Certification signature: 

Title: Sr. Project Manager

Company: DH Environmental

Certified at: 2023-01-25T18:49:09.3345548+00:00

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459231

Date In: 2/21/2023

Time In: 10:29:08

Date Out: 2/21/2023

Time Out: 11:06:52

Ref: 8403

Description

Scale 3 Gross Weight:	98460	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39520	Roll- Off:	
Net Weight:	58940	Tons:	29.47

OTHER SOILS

OTHER SOILS

OPERATOR: LINDAM

PO:

TRAILER:

DRIVER: DIETRICH 8403

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459232

Date In: 2/21/2023

Time In: 10:29:53

Date Out: 2/21/2023

Time Out: 10:57:01

Ref: 8402

Description

Scale 3 Gross Weight:	102940	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39640	Roll- Off:	
Net Weight:	63300	Tons:	31.65

OTHER SOILS

OTHER SOILS

OPERATOR: LINDAM

PO:

TRAILER:

DRIVER: DIETRICH 8402

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459233

Date In: 2/21/2023

Time In: 10:30:29

Date Out: 2/21/2023

Time Out: 11:07:50

Ref: 8537

Description

Scale 3 Gross Weight:	102840	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39500	Roll- Off:	
Net Weight:	63340	Tons:	31.67

OTHER SOILS

OTHER SOILS

OPERATOR: LINDAM

PO:

TRAILER:

DRIVER: DIETRICH 8537

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459244

Date In: 2/21/2023

Time In: 10:51:01

Date Out: 2/21/2023

Time Out: 11:28:34

Ref: 8401

Description

Scale 3 Gross Weight:	102060	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39720	Roll- Off:	
Net Weight:	62340	Tons:	31.17

OTHER SOILS

OTHER SOILS

OPERATOR: LINDAM

PO:

TRAILER:

DRIVER: DIETRICH 8401

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459418

Date In: 2/22/2023

Time In: 10:49:40

Date Out: 2/22/2023

Time Out: 11:32:21

Ref: 8403

Description

Scale 3 Gross Weight:	101680	Vehicle:	WC-23-28
Scale 7 Tare Weight:	40060	Roll- Off:	
Net Weight:	61620	Tons:	30.81

OTHER SOILS

OTHER SOILS

OPERATOR: BLWEST

PO:

TRAILER:

DRIVER: DIETRICH 8403

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459419

Date In: 2/22/2023

Time In: 10:50:26

Date Out: 2/22/2023

Time Out: 11:30:27

Ref: 8402

Description

Scale 3 Gross Weight:	105960	Vehicle:	WC-23-28
Scale 7 Tare Weight:	40100	Roll- Off:	
Net Weight:	65860	Tons:	32.93

OTHER SOILS

OTHER SOILS

OPERATOR: BLWEST

PO:

TRAILER:

DRIVER: DIETRICH 8402

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459420

Date In: 2/22/2023

Time In: 10:51:15

Date Out: 2/22/2023

Time Out: 11:31:26

Ref: 8401

Description

Scale 3 Gross Weight:	103700	Vehicle:	WC-23-28
Scale 7 Tare Weight:	40160	Roll- Off:	
Net Weight:	63540	Tons:	31.77

OTHER SOILS

OTHER SOILS

OPERATOR: BLWEST

PO:

TRAILER:

DRIVER: DIETRICH 8401

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459422

Date In: 2/22/2023

Time In: 10:52:58

Date Out: 2/22/2023

Time Out: 11:20:00

Ref: 8537

Description

Scale 3 Gross Weight:	104020	Vehicle:	WC-23-28
Scale 7 Tare Weight:	40120	Roll- Off:	
Net Weight:	63900	Tons:	31.95

OTHER SOILS

OTHER SOILS

OPERATOR: BLWEST

PO:

TRAILER:

DRIVER: DIETRICH 8537

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459532

Date In: 2/24/2023

Time In: 11:24:30

Date Out: 2/24/2023

Time Out: 11:39:33

Ref: 8402

Description

Scale 3 Gross Weight:	103160	Vehicle:	WC-23-28
Scale 7 Tare Weight:	41420	Roll- Off:	
Net Weight:	61740	Tons:	30.87

OTHER SOILS

OTHER SOILS

OPERATOR: BLWEST

PO:

TRAILER:

DRIVER: DIETRICH 8402

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459533

Date In: 2/24/2023

Time In: 11:25:15

Date Out: 2/24/2023

Time Out: 11:45:29

Ref: 8401

Description

Scale 3 Gross Weight:	102600	Vehicle:	WC-23-28
Scale 7 Tare Weight:	42180	Roll- Off:	
Net Weight:	60420	Tons:	30.21

OTHER SOILS

OTHER SOILS

OPERATOR: BLWEST

PO:

TRAILER:

DRIVER: DIETRICH 8401

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459534

Date In: 2/24/2023

Time In: 11:30:41

Date Out: 2/24/2023

Time Out: 12:06:23

Ref: 8537

Description

Scale 3 Gross Weight:	102420	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39680	Roll- Off:	
Net Weight:	62740	Tons:	31.37

OTHER SOILS

OTHER SOILS

OPERATOR: BLWEST

PO:

TRAILER:

DRIVER: DIETRICH 8537

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459542

Date In: 2/24/2023

Time In: 11:58:43

Date Out: 2/24/2023

Time Out: 12:30:25

Ref: 8404

Description

Scale 3 Gross Weight:	100960	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39920	Roll- Off:	
Net Weight:	61040	Tons:	30.52

OTHER SOILS

OTHER SOILS

OPERATOR: BLWEST

PO:

TRAILER:

DRIVER: DIETRICH 8404

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459666

Date In: 2/27/2023

Time In: 10:33:11

Date Out: 2/27/2023

Time Out: 10:59:35

Ref: 8402

Description

Scale 3 Gross Weight:	87880	Vehicle:	WC-23-28
Scale 7 Tare Weight:	40280	Roll- Off:	
Net Weight:	47600	Tons:	23.80

OTHER SOILS

OTHER SOILS

OPERATOR: SBEAVER

PO:

TRAILER:

DRIVER: DIETRICH 8402

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459672

Date In: 2/27/2023

Time In: 10:46:48

Date Out: 2/27/2023

Time Out: 11:56:49

Ref: 8401

Description

Scale 3 Gross Weight:	103220	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39560	Roll- Off:	
Net Weight:	63660	Tons:	31.83

OTHER SOILS

OTHER SOILS

OPERATOR: SBEAVER

PO:

TRAILER:

DRIVER: DIETRICH 8401

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459681

Date In: 2/27/2023

Time In: 11:22:55

Date Out: 2/27/2023

Time Out: 11:55:33

Ref: 8404

Description

Scale 3 Gross Weight:	101880	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39340	Roll- Off:	
Net Weight:	62540	Tons:	31.27

OTHER SOILS

OTHER SOILS

OPERATOR: SBEAVER

PO:

TRAILER:

DRIVER: DIETRICH 8404

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

WASCO COUNTY LANDFILL

2550 Steele Road

The Dalles, OR 97058

369

DH Environmental, Inc.

David Hill

Seattle, WA 98134

Ticket: 459683

Date In: 2/27/2023

Time In: 11:26:21

Date Out: 2/27/2023

Time Out: 11:54:33

Ref: 8537

Description

Scale 3 Gross Weight:	91960	Vehicle:	WC-23-28
Scale 7 Tare Weight:	39520	Roll- Off:	
Net Weight:	52440	Tons:	26.22

OTHER SOILS

OTHER SOILS

OPERATOR: SBEAVER

PO:

TRAILER:

DRIVER: DIETRICH 8537

BY SIGNING THIS, I CERTIFY THAT THIS DISPOSAL MATERIAL
ORIGINATED IN THE COUNTY/STATE AS STATED ABOVE. I ALSO
CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS LOAD
CONTAINS NO HAZARDOUS WASTE. **OFFICE PH# (541)296-4082**

Signature: _____

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

None Required

2. Page 1 of

1

3. Emergency Response Phone

800-337-7455

4. Waste Tracking Number

3NS-IDW-41223-01

5. Generator's Name and Mailing Address

Boulevard Nursery Soil
2021 Boulevard Road SE
Olympia WA 98501

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name

DH Environmental Inc.

U.S. EPA ID Number

WAHD000047217

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

5400 W Marginal
Seattle WA, 98106

U.S. EPA ID Number

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total Quantity

12. Unit Wt./Vol.

1. Non-RCRA, non-DOT (IDW Soil)

03 DM 2100 P

13. Special Handling Instructions and Additional Information

1) Profile# Pnr-Tech-Soil-41223

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offorer's Printed/Typed Name

Behoff of Customer

Signature

Month Day Year

4 17 23

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Al Lavate

Signature

Al Lavate

Month Day Year

4 17 23

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Michael Barber

Signature

Michael Barber

Month Day Year

4 17 23

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY