

October 4, 2023
10157.004

Portland Golf Club
5900 Scholls Ferry Road
Portland, Oregon 97225

VIA Email/First Class

Attention: Jason Dorn, Golf Course Superintendent

Subject: Junor Lake Sediment Characterization

Dear Mr. Dorn:

This document summarizes the results of Junor Lake sediment characterization sampling conducted at Portland Golf Club on August 31, 2023. This investigation was conducted in accordance with industry standard environmental sampling methods and procedures for comparison with Oregon Department of Environmental Quality (DEQ) clean fill determination guidance screening level values (SLVs). The focus of this work was to adequately characterize the nature of the accumulated sediments planned to be removed from the lake bottom in order to facilitate authorizations for upland disposition elsewhere on the property. Figure 1 and Figure 2 show the site location and surrounding vicinity.

Summary

Sampling and analyses for petroleum hydrocarbons and related constituents, priority pollutant metals, and pesticides, was performed given the historical and present land uses in the vicinity. Samples were collected for laboratory testing to screen the sediments to be removed to form indications on whether upland disposal as “clean fill” will be feasible, and to indicate relative contributions to Junor Lake sediment quality on-site and/or from off-site sources upstream. The Junor Lake sediment sample locations are shown on Figure 3. Field sampling logs and photographs of this work are also attached.

An AMSTM-type multi-stage sediment core sampler was used to advance and collect 3- to 4-ft cores from a small vessel, which were field screened at approximate 1-ft intervals and composited for analysis. Recovered core lengths were shortened somewhat by compaction during sampling. Duplicate samples for the 1-ft discrete intervals with sufficient remaining sample volume were also submitted to the analytical laboratory and archived for potential follow-up testing. The composite samples were tested using DEQ- or EPA-specified

analytical methods provided by APEX Laboratories, of Tigard, and Matrix Analytical, of Sherwood, Oregon. A photoionization detector (PID) was used to field screen for volatile content. The analyses covered gasoline- (TPH-Gx) and diesel- to oil-range (TPH-Dx) total petroleum hydrocarbons, select volatile organic compounds (RBDM VOCs), polynuclear aromatic hydrocarbon (SIM PAHs) constituents, priority pollutant metals (EPA 5030), and (multi-residue) pesticides.

Discussion

Field explorations have shown the Junor Lake bottom sediments planned for removal are comprised of silty clay-clayey silt. No elevated PID readings were observed on any of the samples. Sediment analytical results identified concentrations of oil-range hydrocarbons and select PAHs in composite samples Fanno Creek Inlet (FC-I-C) and Pond Center (IP-C-C), as well as lower concentrations of oil-range hydrocarbons and select PAHs in samples Woods Creek Inlet (WC-I-C) and Woods Creek Outlet (WC-O-C). These results can be found in Table 2. Sediment analytical results identified higher concentrations of priority pollutant metals (copper, lead, and zinc) in samples FC-I-C, IP-C-C, and WC-O-C, and lower concentrations in the WC-I-C sample. These results can be found in Table 3. Sediment analytical results identified higher concentrations of pesticides bifenthrin, pendimethalin, and propiconazole, and some high levels of chlordane and fluridone in samples FC-I-C and IP-C-C. Higher legacy pesticides (chlordane, p,p'-DDE, diphenamid, fluridone, and oxidiazon) were found in WC-I-C and WC-O-C. Results for pesticides detected can be found in Table 4. Table 5 shows the typical sediment half-lives for the identified compounds. Analytical reports are attached to this report.

A limited review of the associated laboratory analytical results and quality assurance/quality control (QA/QC) data indicate there were detectable concentrations of the analytes submitted for testing within the method control blanks utilized for QA/QC purposes. The analytical data associated with the sediment characterization samples appears to be of acceptable quality for comparison with the relevant DEQ clean fill SLVs.

Conclusions

Based on the present occupational land use and conceptual site model for human health and ecological exposure, analytical data for the sediment compounds analyzed identify no SLV exceedances, except for copper, lead, and zinc. Where SLV exceedances were identified, evaluation of the present and likely future beneficial land and water uses at the site and within its vicinity indicate this potential pathway to likely be incomplete in consideration that the removed sediments will be permanently seeded with grass and planted with other vegetation. The August 2023 sediment characterization work has provided information

Mr. Jason Dorn
October 4, 2023
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related to the nature of the lake bed environment. The sediments planned to be removed are substantially clean in our professional judgment.

Recommendations

It does not appear the Junor Lake sediments to be removed are highly impacted. While concentrations of copper, lead, and zinc in the sediments were identified above the relevant DEQ clean fill SLVs during this evaluation, the envisioned placement of the removed sediments on site uplands should be acceptable were best management practices implemented, including temporary erosion controls and long-term vegetation management planning.

We hope this letter adequately addresses your needs. If you have any questions or comment, please call *EnviroLogic Resources* at (503)768-5121.

Sincerely,
EnviroLogic Resources, Inc.

Owen E. Daly, GIT
Associate Hydrogeologist

Thomas J. Calabrese, RG, CWRE
Principal Hydrogeologist

OED/

Tables

- Table 1 – Composite Samples Explanation
- Table 2 – TPH, VOCs & PAHs Results
- Table 3 – Priority Pollutant Metals Results
- Table 4 – Detectable Pesticide Results
- Table 5 – Half-Lives for Detected Pesticides

Mr. Jason Dorn
October 4, 2023
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Figures

- Figure 1 – Site Location
- Figure 2 – Site Vicinity
- Figure 3 – Site Plan Map

Attachments

- Photographs (August 31, 2023)
- Sediment Sampling Field Data Sheets (EnviroLogic Resources, 2023)
- Laboratory Analytical Results (Apex, and Matrix Analytical, 2023)



TABLES

TABLE 1
Portland Golf Club – Junor Lake, Portland, Oregon

Sediment Sample Explanation	
Composite Sample ID	Discrete Sample ID *
Composite FC-I	FC-I-1, FC-I-2
Composite IP-C	IP-C-1, IP-C-2
Composite WC-I	No Sample(s)
Composite WC-O	WC-O-1, WC-O-2

* = Discrete samples were submitted for analyses, and archived for potential follow-ups

TABLE 2
SEDIMENT ANALYTICAL RESULTS
Petroleum Hydrocarbons¹, Volatile Organic Compounds² Polynuclear Aromatic Hydrocarbons³
Portland Golf Club-Junior Lake, Portland, Oregon

Sediment Sample ID	Date Sampled	Location	Lakebed Sample Interval (feet)		Moisture Content (%)	Organic Compounds (mg/kg)																							
			Gasoline	Diesel		Benzene	Toluene	Ethylbenzene	Xylenes (total)	Naphthalene	Isopropylbenzene	1,3,5-Trimethylbenzene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benz(a)pyrene	Benz(b,j)fluoranthene(s)	Benz(k)fluoranthene	Benz(g,h,i)perylene	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene		
Characterization	FC-I-C	8/31/2023 Northern area of lake/Fanno Creek inlet	0-3 *	49.1	13.2 U	77.8 U	503 F-03	0.0132 U	0.0658 U	0.0329 U	0.0987 U	0.132 U	0.0658 U	0.0132 j	0.0113 j	0.0494	0.0751	0.0981	0.0338 M-05	0.0811	0.0856	0.131	0.0119 j	0.0700	0.0194 U	0.0127 j	0.0530	0.166	
	IP-C-C	8/31/2023 Central area of lake	0-3 *	48.9	14.6 U	74.9 U	683 F-03	0.0146 U	0.0729 U	0.0365 U	0.109 U	0.146 U	0.0729 U	0.0195 U	0.0195 U	0.0193 j	0.0238	0.0325	0.0115 j	0.0225	0.0320	0.0512	0.0109 j	0.0209	0.0195 U	0.0124 j	0.0479	0.0624	
	WC-I-C	8/31/2023 Southeastern area of lake/Woods Creek inlet	0-3 *	50.1	14.8 U	39.4 U	436 F-13	0.0148 U	0.0739 U	0.0369 U	0.111 U	0.148 U	0.0739 U	0.0123 j	0.0129 j	0.0525	0.0778	0.101	0.0355 M-05	0.0725	0.0871	0.143	0.0200 U	0.0669	0.0200 U	0.0172 j	0.0743	0.172	
	WC-O-C	8/31/2023 Southwestern area of lake/Woods Creek outlet	0-3 *	47.9	16.1 U	37.2 U	416	0.0161 U	0.0804 U	0.0402 U	0.121 U	0.161 U	0.0804 U	0.0984 j	0.0135 j	0.0423	0.0644	0.0559	0.0298 M-05	0.0559	0.0726	0.124	0.0187 U	0.0545	0.0176 j	0.0183 j	0.0919	0.150	
		8/31/2023 Junior Lake Composite Samples Average		49.0	U	U	510	U	U	U	U	U	U	U	U	0.0413	0.0126	0.0409	0.0603	0.0719	0.0277	0.0580	0.0693	0.1123	0.0114	0.0531	0.0176	0.0152	0.0668
DEQ Clean Fill Screening Level Values (SLVs) & Generic Risk-Based Concentrations (RBCs)			Low	Medium	High																								
Table 2 SLV			Total Petroleum Hydrocarbons Aromatic Ranges																										
			1 **	1.4 **	2,500	0.023	23	0.22	1.4	0.077 **	NE	11	120	6.8	0.73	0.11	1.52	11	25	3.1	10	3.7	1.1	11	0.077	5.5	10		

Notes:
Those compounds and Screening Level Values **bolded** were detected at a concentration greater than corresponding SLVs. Table 2 SLVs were updated by DEQ in June 2019.

¹= Petroleum-range hydrocarbons were analyzed by NWTIPH-Gx for gas and NWTIPH-Dx for diesel and oil.

²= Volatile Organic Compounds (VOCs) by EPA Methods 5035A/S260D. See analytical report for full list of analytes and detections.

³= Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Method S270E-SIM. See analytical report for full list of analytes and detections.

mg/kg=milligrams per kilogram

DEQ SLV from Clean Fill IMD Table 2

NE = Numeric SLV or RBC value not established, no value, or exceeds solubility limits: e.g. see DEQ RBC guidance for details.

*= composite sample

** = DEQ SLV or RBC is less than the method reporting limit

U = not detected at the method reporting limit

j = result of limit below normal calibration curve, but above method detection limit, reported concentration or limit estimated

F-03 = results elevated due to presence of analyte peaks in the quantitation range that are not representative of the fuel pattern reported

F-13 = the chromatographic pattern does not resemble the fuel standard used for quantitation

M-05 = results estimated due to peak separation for structural isomers insufficient for accurate quantification

TABLE 3
SEDIMENT ANALYTICAL RESULTS
Priority Pollutant Metals
Portland Golf Club-Junor Lake
Portland, Oregon

Characterization	Sediment Sample ID	Date	Depth Below Lakebed feet	(Total) Priority Pollutant Metals*												
				6020B mg/kg												
				Antimony	Arsenic	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
	FC-I-C	8/31/2023	0-3	2.09 U	6.30	0.781	0.384 j	38.7	60.5	43.3	0.100 j	23.8	2.09 U	0.419 U	0.419 U	254
	IP-C-C	8/31/2023	0-3	1.95 U	5.46	0.703	0.391	36.3	54.9	38.6	0.0984 j	21.9	1.95 U	0.390 U	0.390 U	229
	WC-I-C	8/31/2023	0-3	2.07 U	7.76	0.854	0.269 j	31.9	35.3	25.9	0.166 U	18.9	2.07 U	0.414 U	0.414 U	192
	WC-O-C	8/31/2023	0-3	1.69 U	5.10	0.809	0.396	40.9	43.0	63.5	0.117 j	24.5	1.69 U	0.338 U	0.176 j	188
	JUNOR LAKE COMPOSITE SAMPLING AVERAGE			U	6.16	0.787	0.360	37.0	48.4	42.8	0.105	22.3	U	U	U	216
DEQ IMD Clean Fill Guidance Screening Level Value (SLV) **																
Portland Basin Table				0.56 ***	8.8	2	0.63	76	34	28 / 79 ¹	0.23	47	0.71 ***	0.82	5.2	180

Notes:

mg/kg = milligrams per kilogram, mg/L - milligrams per Liter,

*=See lab report for specific method reporting limits. Only those compounds detected are listed.

**Table 1per Oregon DEQ IMD Clean Fill Guidance

*** = DEQ SLV or RBC is less than the method reporting limit

U = not detected within the laboratory method reporting limits

j = result of limit below normal calibration curve, but above method detection limit, reported concentration or limit estimated

¹ = anthropogenic contributions of lead to the Portland Basin background levels is estimated to be 79 mg/kg

TABLE 4
SEDIMENT SUMMARY OF ANALYTICAL DETECTIONS
Pesticides
Portland Golf Club-Junior Lake, Portland, Oregon¹

Sediment Sample ID	Date	Depth Below Lakebed (feet)	Bifenthrin (mg/kg)	Chlordane (mg/kg)	cis-Nonachlor (α -Chlordane) (mg/kg)	trans-Nonachlor (γ -Chlordane) (mg/kg)	Diazinon (mg/kg)	p,p'-DDE (mg/kg)	p,p'-DDT (mg/kg)	Diphenamid (mg/kg)	Diphenylamine (mg/kg)	Fluridone (mg/kg)	Oxadiazon (mg/kg)	Pendimethalin (mg/kg)	Propiconazole (mg/kg)	
Characterization	FC-I-C	8/31/2023	0-3	0.0084	0.015	0.0067 U	0.011	0.0067 U	0.0067	0.0067 U	0.0067 U	0.0067 U	0.027	0.0086	0.025	0.017
	IP-C-C	8/31/2023	0-3	0.0069	0.011	0.0067 U	0.010	0.0067 U	0.0067 U	0.0067 U	0.0067 U	0.0067 U	0.032	0.0069	0.014	0.015
	WC-I-C	8/31/2023	0-3	0.0067 U	0.11	0.021	0.042	0.0067 U	0.0089	0.0067 U	0.095	0.0067 U	0.16	0.011	0.0067 U	0.013 U
	WC-O-C	8/31/2023	0-3	0.0067 U	0.030	0.0081	0.015	0.0072	0.0076	0.0067 U	0.0067 U	0.0077	0.0067 U	0.0067 U	0.0067 U	0.013 U
	JUNIOR LAKE COMPOSITE SAMPLES AVERAGE			0.008	0.042	0.015	0.020	0.007	0.008	0.0067 U	0.095	0.008	0.073	0.009	0.020	0.016
DEQ IMD Clean Fill Screening Level Value (SLV)																
TABLE 2 SLV			950	0.91	0.27	2.2	3.9	0.01	0.01	310	10	5,100	29	960	320	
TYPICAL USE		Insecticide / Spot Treatment	Organochlorine Pesticide	Degradation from Chlordane	Degradation from Chlordane	Insecticide / Spot Treatment	Degradation from p,p'-DDT	Organochlorine Pesticide	Pre-Emergent Herbicide	Plant Growth Regulator	Aquatic Herbicide	Pre-Emergent Herbicide	Pre-Emergent Herbicide	Pre-Emergent Herbicide	Fungicide	

Notes:

Compounds detected are listed in the table, see analytical report for full list of tested compounds.

Shaded = legacy residual or degradation by-product from pesticides no longer in use

¹= Multi-pesticide residuals were analyzed by Modified EPA 8270D, and Modified EPA 8321B.

mg/kg=milligrams per kilogram

DEQ SLV values from Table 2 of Clean Fill IMD guidance

U = not detected at the method detection limit

Table 5
Sediment Half-Lives for Detected Compounds
Portland Golf Club-Junor Lake
Portland, Oregon

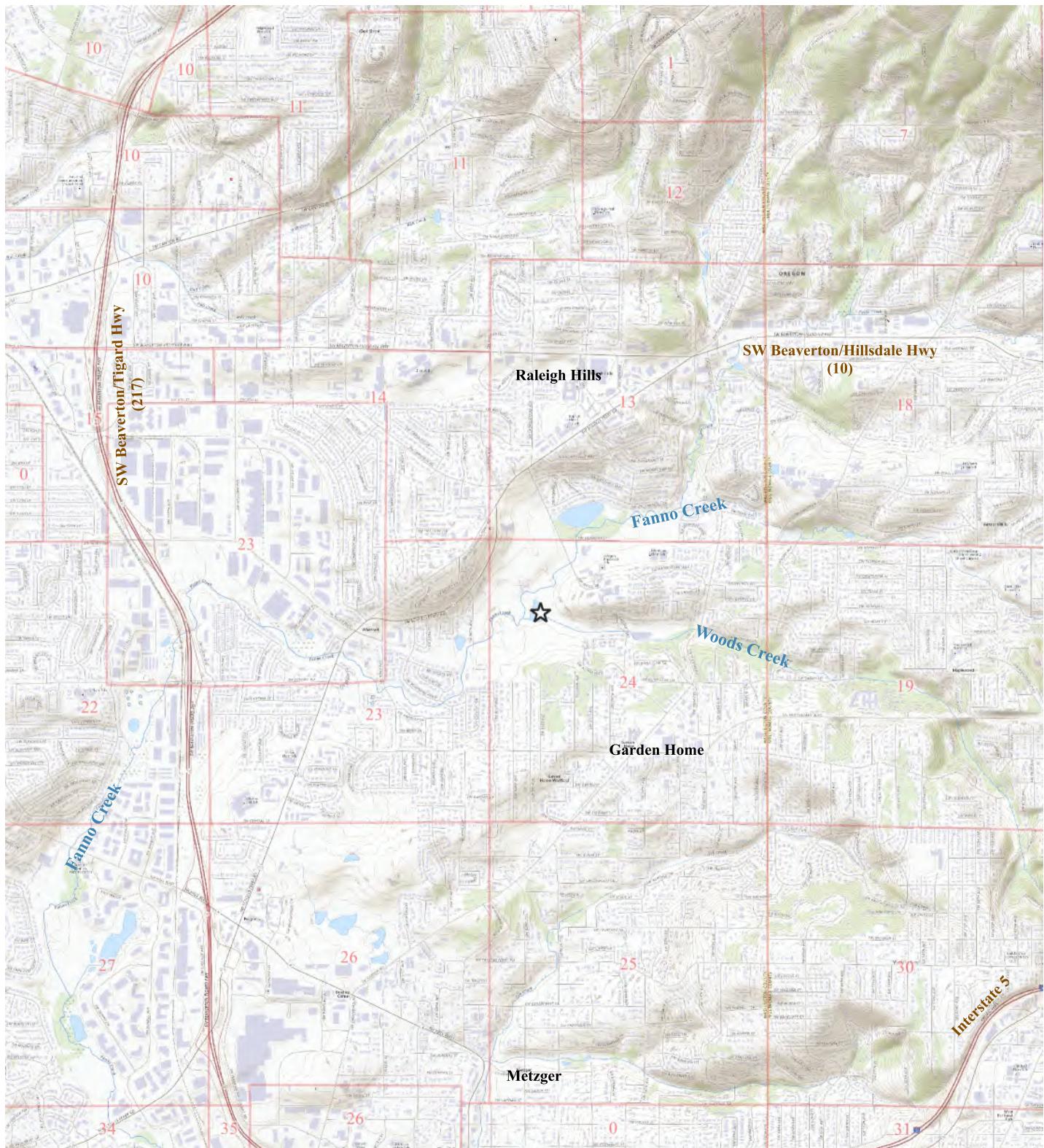
Residence Time	Compound	Duration (days)*
Longer	Chlordane	365 – 7,300
	<i>p,p'</i> -DDE ¹	730 - 5,700
Intermediate	Bifenthrin	270 - 485
	Diphenamid	187 - 630
	Diphenylamine	178 - 365
	Fluridone	119 - 365
	Oxadiazon	60 - 180
	Propiconazole	96 - 575
Shorter	Diazinon	14 - 38
	<i>cis</i> -Nonachlor	9.7 - 20
	<i>trans</i> -Nonachlor	14.3 - 20
	Pendimethalin	12 - 98

* based on most recently available published information accepted by the scientific community

¹= use of DDT that degrades to DDE was generally banned by EPA in 1972



FIGURES



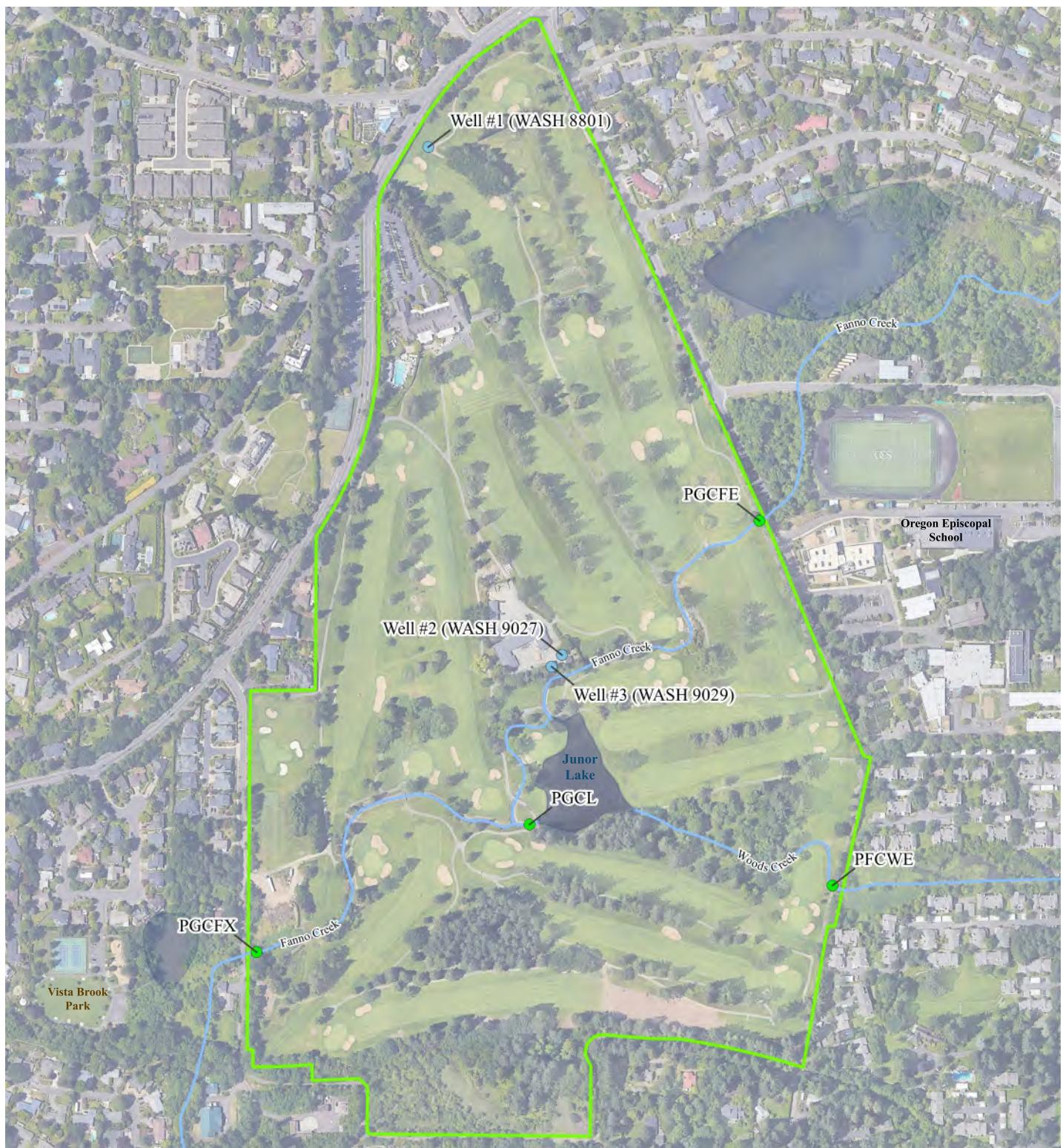
Explanation

- ★ Site Location
- PLSS Lines

0 1/4 1/2 mi



FIGURE 1
SITE LOCATION
Junor Lake
Sediment Characterization
Portland Golf Club
Portland, Oregon



Explanation

- Approximate Site Boundary
- Golf Course Well Locations
- Lakes & Ponds
- Fall/Spring Sample Locations
- Streams

WGS84/Pseudo-Mercator
Prepared October 09, 2023

Sources: PLSS county lines, Washington County tax lots, USGS TOPO (nationalmap.gov), ESRI Satellite, ormap.net.



FIGURE 2
SITE VICINITY
Junior Lake
Sediment Characterization
Portland Golf Club
Portland, Oregon



Explanation

- Approximate Site Boundary
- Sediment Sample Locations (August 31, 2023)

0 100 200 ft



FIGURE 3
SAMPLE LOCATIONS
Junor Lake
Sediment Characterization
Portland Golf Club
Portland, Oregon

ATTACHMENTS

Portland Golf Club – Junor Lake

Portland, Oregon



Photo 1: Photo of boat being inflated near pump house.



Photo 2: Photo of boat staging area on northeast side of Junor Lake.



Photo 3: Photo of sediment sample being taken on boat.



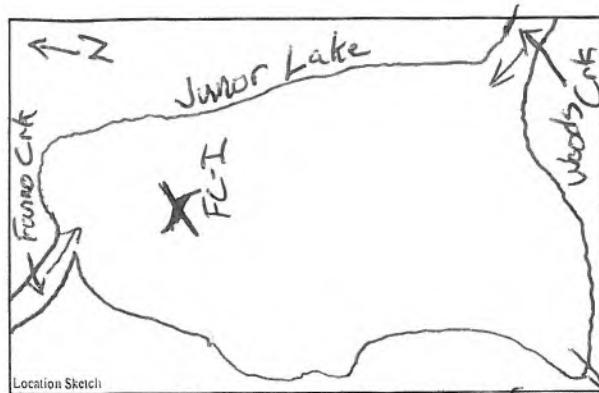
Photo 4: Photo of sample processing area.



Photo 5: Photo of sediment samples WC-O-C and WC-O-2.



Photo 6: Photo of composite sample jars.



LOG OF: FC - I

Project: Portland Golf Club - Sediment Char.
Address: 5900 SW Sholls Ferry Rd.
City, State: Portland, OR 97225

Project Number: 10157.004

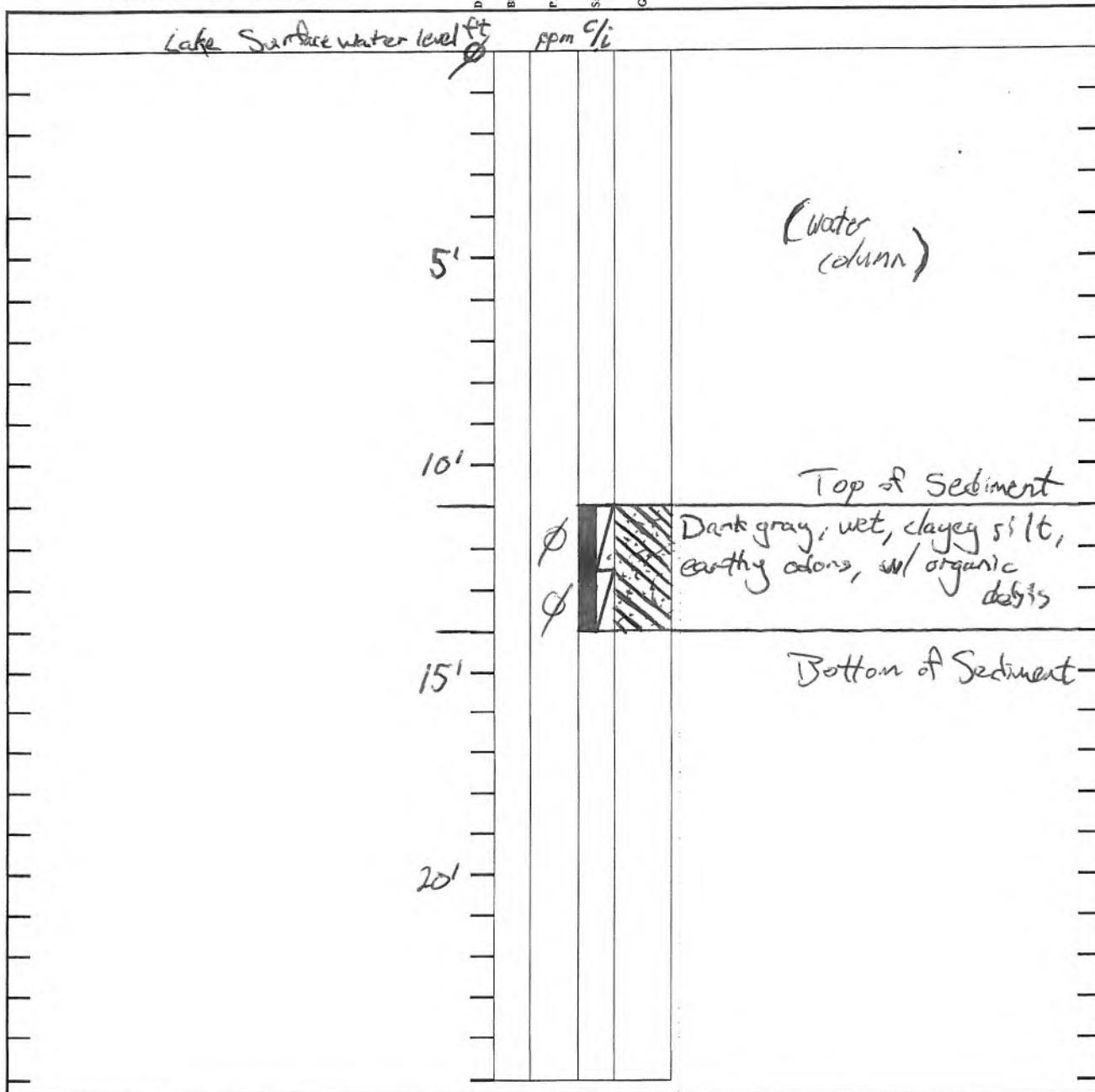
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DRILLING METHOD AMS Multi-Stage Sampler
DRILLING CO EnviroLogic
SAMPLING METHOD AMS Multi-Stage Sampler
DRILLER J. Howard & O. Dailey
LOGGED BY

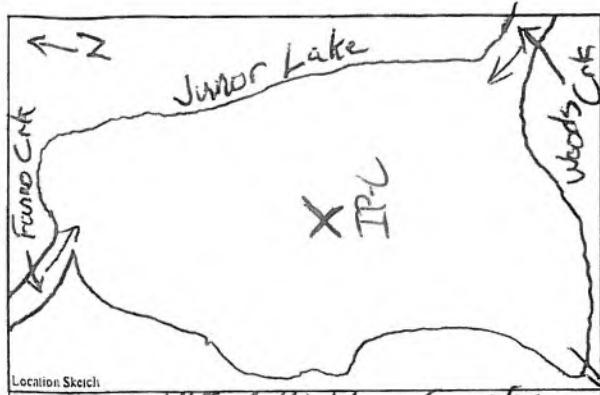
DATE DRILLED 8/31/23
GROUND SURF ELEV ~ 207' lake edge
REFERENCE PT ELEV
DATUM
COMMENTS client provided map

COMPLETION DETAILS

Depth Borehole PID Samples Graphic

SOIL DESCRIPTION





LOG OF: IP-C

Project: Portland Golf Club - Sediment Char.
Address: 5900 SW Shells Ferry Rd.
City, State: Portland, OR 97225

Project Number: 10157.004

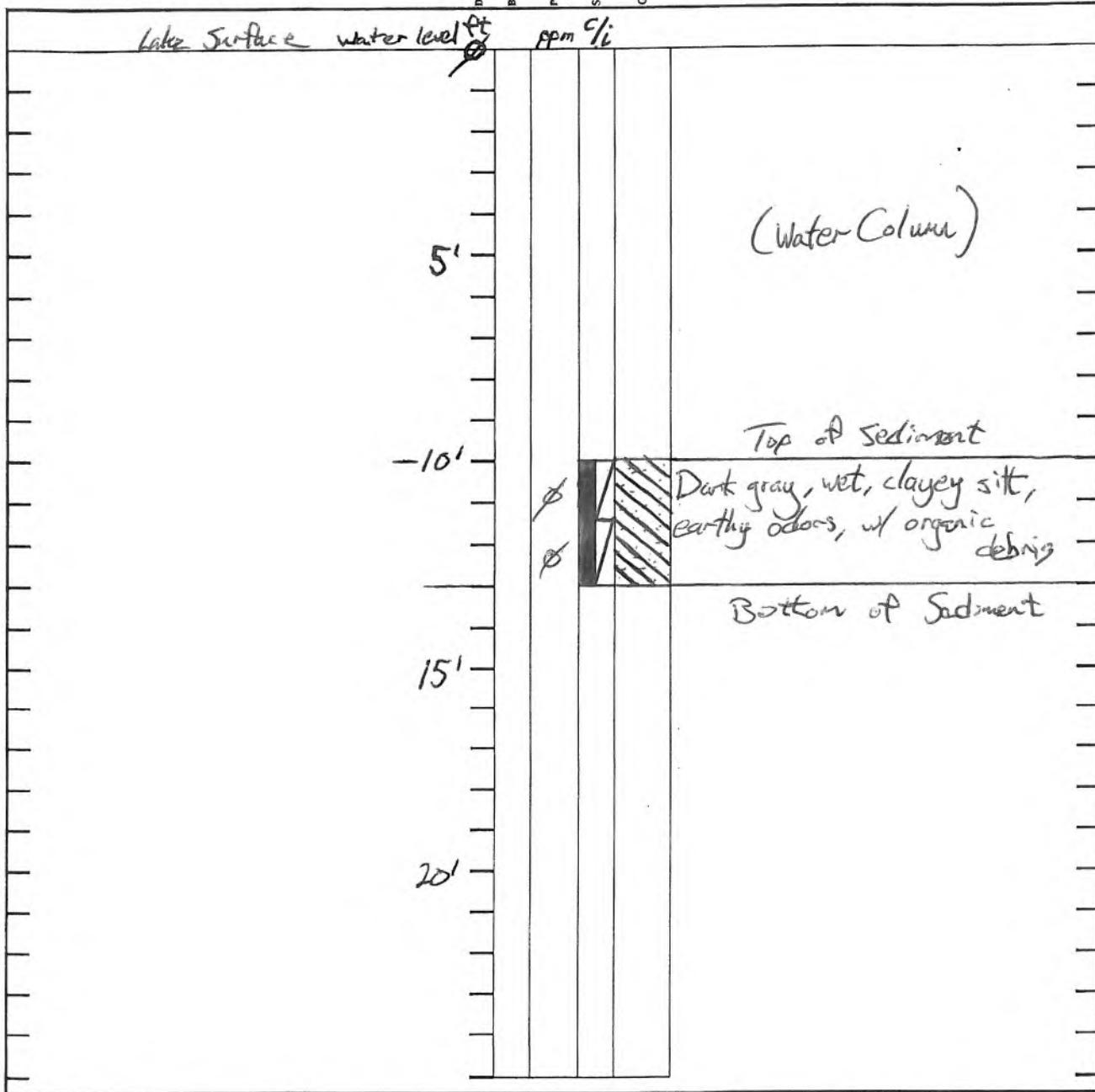
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DRILLING METHOD AMS Multi-Stage Sampler
DRILLING CO EnviroLogic
SAMPLING METHOD AMS Multi-Stage Sampler
DRILLER J. Howard & O. Dailey
LOGGED BY

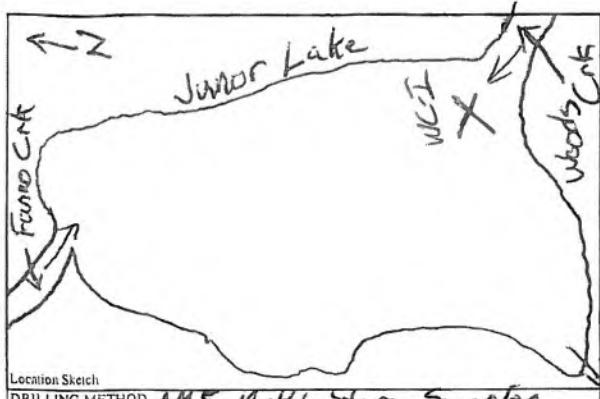
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GROUND SURF ELEV	~207' lake edge
REFERENCE PT ELEV	
DATUM	
COMMENTS	client provided map

COMPLETION DETAILS

Depth Blows P/D Samples Graphic

SOIL DESCRIPTION





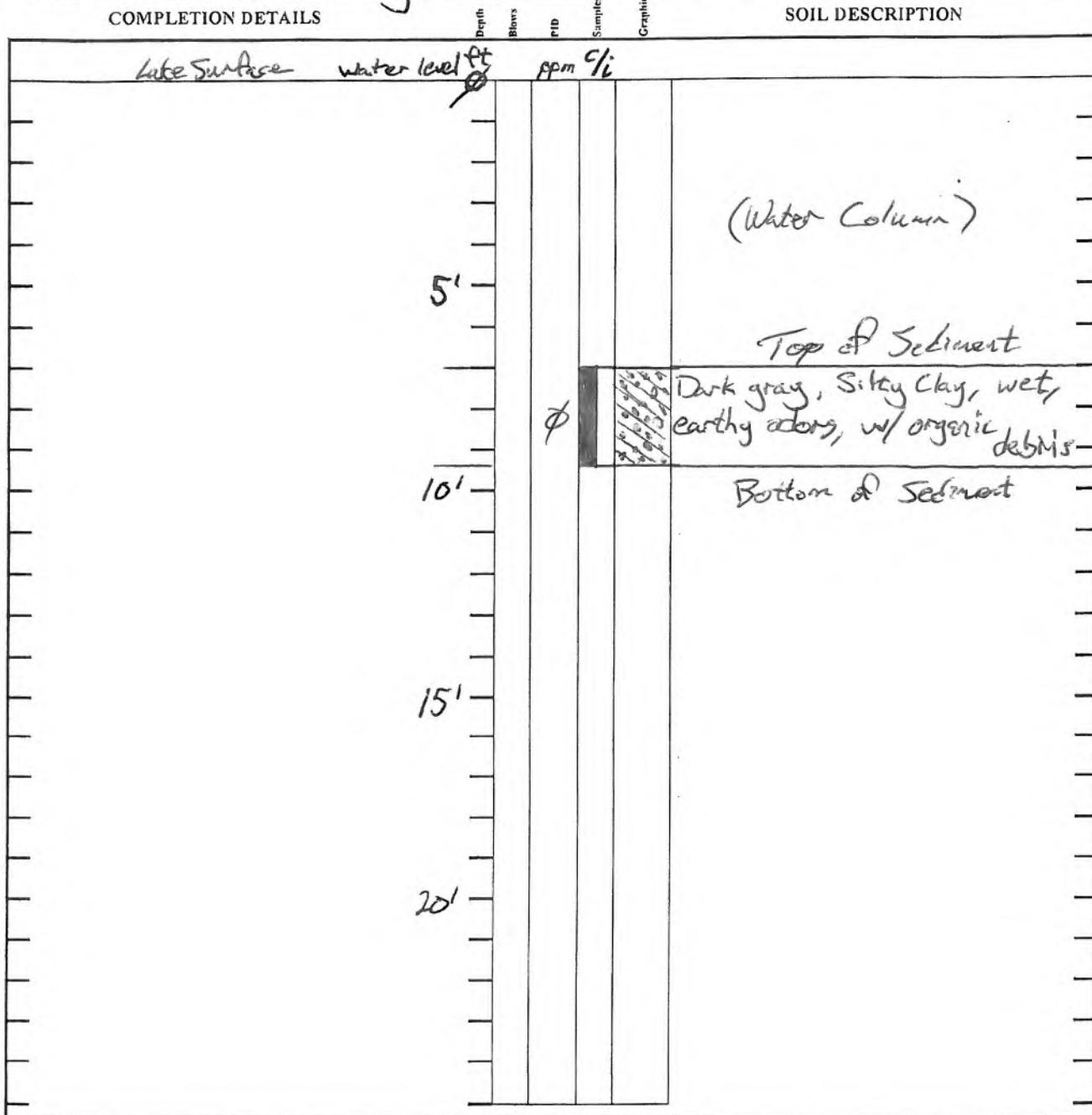
Location Sketch

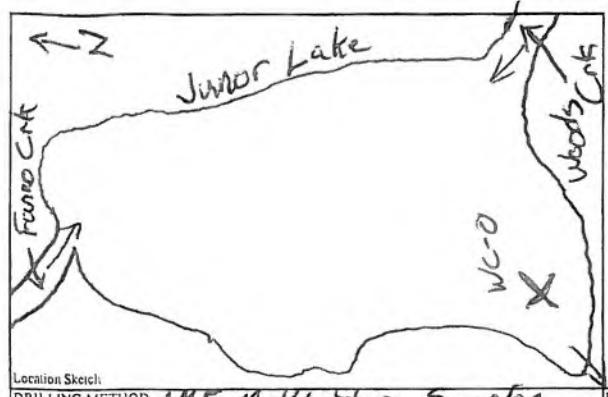
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DRILLING CO EnviroLogic
SAMPLING METHOD AMS Multi-Stage Sampler
DRILLER J. Howard & O. Dailey
LOGGED BY

DATE DRILLED
GROUND SURF ELEV
REFERENCE PT ELEV
DATUM
COMMENTS

8/31/23
~207' lake edge
client provided map

Project Number: 10157.004





Location Sketch:

DRILLING METHOD AMS Multi-Stage Sampler
 DRILLING CO EnviroLogic
 SAMPLING METHOD AMS Multi-Stage Sampler
 DRILLER J. Howard & O. Dailey
 LOGGED BY

LOG OF: WC-O

Project: Portland Golf Club - Sediment Char.
 Address: 5900 SW Sholls Ferry Rd.
 City, State: Portland, OR 97225

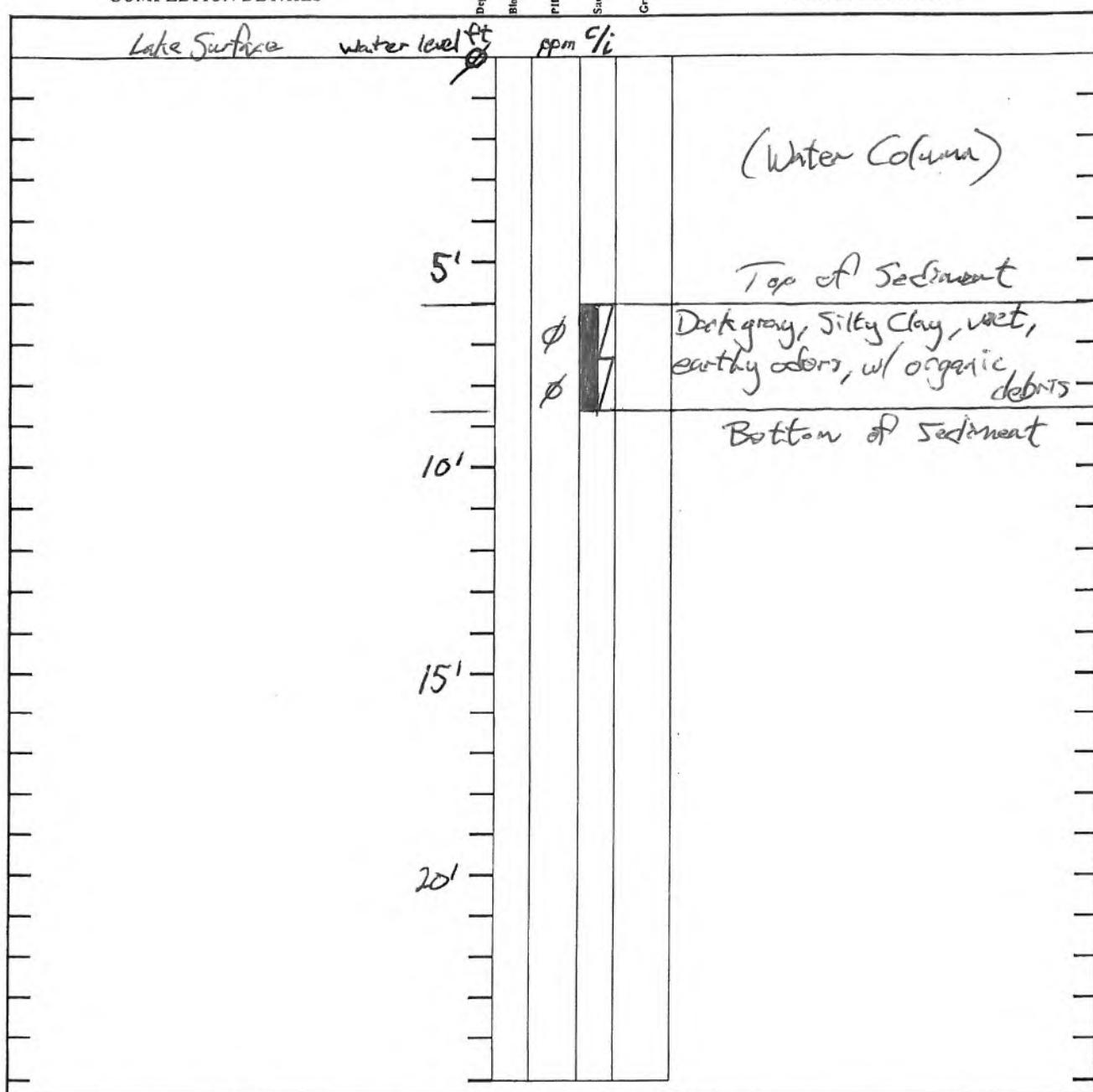
Project Number: 10157.004

DATE DRILLED	8/31/23
GROUND SURF ELEV	~207' lake edge
REFERENCE PT ELEV	
DATUM	
COMMENTS	client provided map

COMPLETION DETAILS

Depth	Bhvs	PID	Samples	Graphic
-------	------	-----	---------	---------

SOIL DESCRIPTION





ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Tuesday, September 26, 2023

Tom Calabrese
EnviroLogic Resources
2830 SW Plum Circle
Portland, OR 97219

RE: A3I0713 - Portland Golf Club/ Junior Lake Sed. Char. - 10157.004

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3I0713, which was received by the laboratory on 9/1/2023 at 11:05:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.

(See Cooler Receipt Form for details)

Default Cooler 1.8 degC

This Final Report is the official version of the data results for this sample submission , unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories

Philip Nerenberg, Lab Director

Page 1 of 36



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources

2830 SW Plum Circle

Portland, OR 97219

Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FC-I-C	A3I0713-01	Soil	08/31/23 11:45	09/01/23 11:05
IP-C-C	A3I0713-02	Soil	08/31/23 12:10	09/01/23 11:05
WC-I-C	A3I0713-03	Soil	08/31/23 12:30	09/01/23 11:05
WC-O-C	A3I0713-04	Soil	08/31/23 12:45	09/01/23 11:05
FC-I Vols Composite	A3I0713-05	Soil	08/31/23 11:45	09/01/23 11:05
IP-C Vols Composite	A3I0713-06	Soil	08/31/23 12:10	09/01/23 11:05
WC-O Vols Composite	A3I0713-07	Soil	08/31/23 12:45	09/01/23 11:05

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FC-I-C (A3I0713-01RE1)								
Diesel	ND	38.9	77.8	mg/kg dry	2	09/15/23 06:38	NWTPH-Dx	
Oil	503	77.8	156	mg/kg dry	2	09/15/23 06:38	NWTPH-Dx	F-03
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 82 %</i>	<i>Limits: 50-150 %</i>		2	09/15/23 06:38	NWTPH-Dx	S-05
IP-C-C (A3I0713-02RE1)								
Diesel	ND	37.5	74.9	mg/kg dry	2	09/15/23 07:49	NWTPH-Dx	
Oil	683	74.9	150	mg/kg dry	2	09/15/23 07:49	NWTPH-Dx	F-03
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 78 %</i>	<i>Limits: 50-150 %</i>		2	09/15/23 07:49	NWTPH-Dx	S-05
WC-I-C (A3I0713-03)								
Diesel	ND	19.7	39.4	mg/kg dry	1	09/15/23 00:47	NWTPH-Dx	
Oil	436	39.4	78.7	mg/kg dry	1	09/15/23 00:47	NWTPH-Dx	F-13
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 86 %</i>	<i>Limits: 50-150 %</i>		1	09/15/23 00:47	NWTPH-Dx	
WC-O-C (A3I0713-04)								
Diesel	ND	18.6	37.2	mg/kg dry	1	09/15/23 01:28	NWTPH-Dx	
Oil	416	37.2	74.4	mg/kg dry	1	09/15/23 01:28	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 82 %</i>	<i>Limits: 50-150 %</i>		1	09/15/23 01:28	NWTPH-Dx	

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.Project Number: **10157.004**Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
WC-I-C (A3I0713-03)								
Gasoline Range Organics	ND	6.58	13.2	mg/kg dry	50	09/05/23 22:21	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 104 %	Limits: 50-150 %	1	09/05/23 22:21	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		108 %	50-150 %	1	09/05/23 22:21	NWTPH-Gx (MS)		
FC-I Vols Composite (A3I0713-05)								
Gasoline Range Organics	ND	7.29	14.6	mg/kg dry	50	09/07/23 23:54	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 104 %	Limits: 50-150 %	1	09/07/23 23:54	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		106 %	50-150 %	1	09/07/23 23:54	NWTPH-Gx (MS)		
IP-C Vols Composite (A3I0713-06)								
Gasoline Range Organics	ND	7.39	14.8	mg/kg dry	50	09/08/23 00:45	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 102 %	Limits: 50-150 %	1	09/08/23 00:45	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/08/23 00:45	NWTPH-Gx (MS)		
WC-O Vols Composite (A3I0713-07)								
Gasoline Range Organics	ND	8.04	16.1	mg/kg dry	50	09/08/23 00:20	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 102 %	Limits: 50-150 %	1	09/08/23 00:20	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		103 %	50-150 %	1	09/08/23 00:20	NWTPH-Gx (MS)		

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Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
WC-I-C (A3I0713-03)								
Benzene	ND	13.2	26.3	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
Toluene	ND	65.8	132	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
Ethylbenzene	ND	32.9	65.8	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
Xylenes, total	ND	98.7	197	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	65.8	132	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
Naphthalene	ND	132	263	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	65.8	132	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	32.9	65.8	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
Isopropylbenzene	ND	65.8	132	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
1,2,4-Trimethylbenzene	ND	65.8	132	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
1,3,5-Trimethylbenzene	ND	65.8	132	ug/kg dry	50	09/05/23 22:21	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		Recovery:	102 %	Limits:	80-120 %	1	09/05/23 22:21	5035A/8260D
<i>Toluene-d8 (Surr)</i>			101 %		80-120 %	1	09/05/23 22:21	5035A/8260D
<i>4-Bromofluorobenzene (Surr)</i>			96 %		79-120 %	1	09/05/23 22:21	5035A/8260D
FC-I Vols Composite (A3I0713-05)								
Benzene	ND	14.6	29.2	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
Toluene	ND	72.9	146	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
Ethylbenzene	ND	36.5	72.9	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
Xylenes, total	ND	109	219	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	72.9	146	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
Naphthalene	ND	146	292	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	72.9	146	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	36.5	72.9	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
Isopropylbenzene	ND	72.9	146	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
1,2,4-Trimethylbenzene	ND	72.9	146	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
1,3,5-Trimethylbenzene	ND	72.9	146	ug/kg dry	50	09/07/23 23:54	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		Recovery:	101 %	Limits:	80-120 %	1	09/07/23 23:54	5035A/8260D
<i>Toluene-d8 (Surr)</i>			100 %		80-120 %	1	09/07/23 23:54	5035A/8260D
<i>4-Bromofluorobenzene (Surr)</i>			97 %		79-120 %	1	09/07/23 23:54	5035A/8260D
IP-C Vols Composite (A3I0713-06)								
Benzene	ND	14.8	29.6	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
Toluene	ND	73.9	148	ug/kg dry	50	09/08/23 00:45	5035A/8260D	

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Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
IP-C Vols Composite (A3I0713-06)				Matrix: Soil		Batch: 23I0187		COMP
Ethylbenzene	ND	36.9	73.9	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
Xylenes, total	ND	111	222	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	73.9	148	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
Naphthalene	ND	148	296	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	73.9	148	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	36.9	73.9	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
Isopropylbenzene	ND	73.9	148	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
1,2,4-Trimethylbenzene	ND	73.9	148	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
1,3,5-Trimethylbenzene	ND	73.9	148	ug/kg dry	50	09/08/23 00:45	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>		<i>09/08/23 00:45</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>	<i>80-120 %</i>	<i>1</i>		<i>09/08/23 00:45</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>	<i>79-120 %</i>	<i>1</i>		<i>09/08/23 00:45</i>	<i>5035A/8260D</i>	
WC-O Vols Composite (A3I0713-07)				Matrix: Soil		Batch: 23I0187		COMP
Benzene	ND	16.1	32.2	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
Toluene	ND	80.4	161	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
Ethylbenzene	ND	40.2	80.4	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
Xylenes, total	ND	121	241	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	80.4	161	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
Naphthalene	ND	161	322	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	80.4	161	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	40.2	80.4	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
Isopropylbenzene	ND	80.4	161	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
1,2,4-Trimethylbenzene	ND	80.4	161	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
1,3,5-Trimethylbenzene	ND	80.4	161	ug/kg dry	50	09/08/23 00:20	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>		<i>09/08/23 00:20</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>	<i>80-120 %</i>	<i>1</i>		<i>09/08/23 00:20</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>	<i>79-120 %</i>	<i>1</i>		<i>09/08/23 00:20</i>	<i>5035A/8260D</i>	

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.Project Number: **10157.004**Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FC-I-C (A3I0713-01)								
Acenaphthene	ND	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Acenaphthylene	13.2	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	J
Anthracene	11.3	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	J
Benz(a)anthracene	49.4	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Benzo(a)pyrene	75.1	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Benzo(b,j)fluoranthene(s)	98.1	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Benzo(k)fluoranthene	33.8	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	81.1	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Chrysene	85.6	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Fluoranthene	131	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Fluorene	11.9	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	J
Indeno(1,2,3-cd)pyrene	70.0	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
1-Methylnaphthalene	ND	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
2-Methylnaphthalene	ND	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Naphthalene	12.7	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	J
Phenanthrene	53.0	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Pyrene	166	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Dibenzofuran	ND	9.70	19.4	ug/kg dry	1	09/11/23 17:24	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)			Recovery: 85 %	Limits: 44-120 %	1	09/11/23 17:24	EPA 8270E SIM	
p-Terphenyl-d14 (Surr)				78 %	54-127 %	1	09/11/23 17:24	EPA 8270E SIM

IP-C-C (A3I0713-02)								
Acenaphthene	ND	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Acenaphthylene	ND	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Anthracene	ND	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Benz(a)anthracene	19.3	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	J
Benzo(a)pyrene	23.8	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Benzo(b,j)fluoranthene(s)	32.5	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Benzo(k)fluoranthene	11.5	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	J
Benzo(g,h,i)perylene	22.5	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Chrysene	32.0	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	

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Philip Nerenberg, Lab Director



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Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
IP-C-C (A3I0713-02)								
Fluoranthene	51.2	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Fluorene	10.9	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	J
Indeno(1,2,3-cd)pyrene	20.9	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
1-Methylnaphthalene	ND	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
2-Methylnaphthalene	ND	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Naphthalene	12.4	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	J
Phenanthrene	47.9	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Pyrene	62.4	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Dibenzofuran	ND	9.77	19.5	ug/kg dry	1	09/11/23 19:06	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 79 %	Limits: 44-120 %		1	09/11/23 19:06	EPA 8270E SIM	
p-Terphenyl-d14 (Surr)			75 %	54-127 %	1	09/11/23 19:06	EPA 8270E SIM	
WC-I-C (A3I0713-03)								
Acenaphthene	ND	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Acenaphthylene	12.3	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	J
Anthracene	12.9	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	J
Benz(a)anthracene	52.5	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Benzo(a)pyrene	77.8	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Benzo(b,j)fluoranthene(s)	101	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Benzo(k)fluoranthene	35.5	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	72.5	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Chrysene	87.1	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Fluoranthene	143	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Fluorene	ND	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	66.9	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
1-Methylnaphthalene	ND	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
2-Methylnaphthalene	ND	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Naphthalene	17.2	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	J
Phenanthrene	74.3	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Pyrene	172	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Dibenzofuran	ND	10.0	20.0	ug/kg dry	1	09/11/23 19:31	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 85 %	Limits: 44-120 %		1	09/11/23 19:31	EPA 8270E SIM	

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Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
WC-I-C (A3I0713-03)								
Surrogate: <i>p</i> -Terphenyl-d14 (Surr)								
			Recovery: 80 %	Limits: 54-127 %	1	09/11/23 19:31	EPA 8270E SIM	
WC-O-C (A3I0713-04)								
Matrix: Soil								
Batch: 23I0273								
Acenaphthene	ND	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Acenaphthylene	9.84	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	J
Anthracene	13.5	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	J
Benz(a)anthracene	42.3	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Benzo(a)pyrene	64.4	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Benzo(b,j)fluoranthene(s)	81.9	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Benzo(k)fluoranthene	29.8	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	55.9	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Chrysene	72.6	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Fluoranthene	124	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Fluorene	ND	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	54.5	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
1-Methylnaphthalene	ND	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
2-Methylnaphthalene	17.6	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	J
Naphthalene	18.3	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	J
Phenanthrene	91.9	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Pyrene	150	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Dibenzofuran	ND	9.34	18.7	ug/kg dry	1	09/11/23 19:56	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)								
Recovery: 82 %								
p-Terphenyl-d14 (Surr)								
Recovery: 81 %								
Limits: 44-120 %								
Limits: 54-127 %								
I								
09/11/23 19:56								
EPA 8270E SIM								
EPA 8270E SIM								

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.Project Number: **10157.004**Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FC-I-C (A3I0713-01)		Matrix: Soil						
Batch: 23I0391								
Antimony	ND	1.05	2.09	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Arsenic	6.30	1.05	2.09	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Beryllium	0.781	0.209	0.419	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Cadmium	0.384	0.209	0.419	mg/kg dry	10	09/14/23 00:17	EPA 6020B	J
Chromium	38.7	1.05	2.09	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Copper	60.5	2.09	4.19	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Lead	43.3	0.209	0.419	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Mercury	0.100	0.0837	0.167	mg/kg dry	10	09/14/23 00:17	EPA 6020B	J
Nickel	23.8	2.09	4.19	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Selenium	ND	1.05	2.09	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Silver	ND	0.209	0.419	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Thallium	ND	0.209	0.419	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
Zinc	254	4.19	8.37	mg/kg dry	10	09/14/23 00:17	EPA 6020B	
IP-C-C (A3I0713-02)		Matrix: Soil						
Batch: 23I0391								
Antimony	ND	0.976	1.95	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Arsenic	5.46	0.976	1.95	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Beryllium	0.703	0.195	0.390	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Cadmium	0.391	0.195	0.390	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Chromium	36.3	0.976	1.95	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Copper	54.9	1.95	3.90	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Lead	38.6	0.195	0.390	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Mercury	0.0984	0.0780	0.156	mg/kg dry	10	09/14/23 00:22	EPA 6020B	J
Nickel	21.9	1.95	3.90	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Selenium	ND	0.976	1.95	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Silver	ND	0.195	0.390	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Thallium	ND	0.195	0.390	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
Zinc	229	3.90	7.80	mg/kg dry	10	09/14/23 00:22	EPA 6020B	
WC-I-C (A3I0713-03)		Matrix: Soil						
Batch: 23I0391								
Antimony	ND	1.04	2.07	mg/kg dry	10	09/14/23 00:27	EPA 6020B	

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503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.Project Number: **10157.004**Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
WC-I-C (A3I0713-03)								
				Matrix: Soil				
Arsenic	7.76	1.04	2.07	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Beryllium	0.854	0.207	0.414	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Cadmium	0.269	0.207	0.414	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Chromium	31.9	1.04	2.07	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Copper	35.3	2.07	4.14	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Lead	25.9	0.207	0.414	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Mercury	ND	0.0829	0.166	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Nickel	18.9	2.07	4.14	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Selenium	ND	1.04	2.07	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Silver	ND	0.207	0.414	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Thallium	ND	0.207	0.414	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
Zinc	192	4.14	8.29	mg/kg dry	10	09/14/23 00:27	EPA 6020B	
WC-O-C (A3I0713-04)								
				Matrix: Soil				
Batch: 23I0391								
Antimony	ND	0.846	1.69	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Arsenic	5.10	0.846	1.69	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Beryllium	0.809	0.169	0.338	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Cadmium	0.396	0.169	0.338	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Chromium	40.9	0.846	1.69	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Copper	43.0	1.69	3.38	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Lead	63.5	0.169	0.338	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Mercury	0.117	0.0677	0.135	mg/kg dry	10	09/14/23 00:32	EPA 6020B	J
Nickel	24.5	1.69	3.38	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Selenium	ND	0.846	1.69	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Silver	ND	0.169	0.338	mg/kg dry	10	09/14/23 00:32	EPA 6020B	
Thallium	0.176	0.169	0.338	mg/kg dry	10	09/14/23 00:32	EPA 6020B	J
Zinc	188	3.38	6.77	mg/kg dry	10	09/14/23 00:32	EPA 6020B	

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Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FC-I-C (A3I0713-01)								
% Solids	50.9	1.00	1.00	%	1	09/06/23 06:44	EPA 8000D	
IP-C-C (A3I0713-02)								
% Solids	51.1	1.00	1.00	%	1	09/06/23 06:44	EPA 8000D	
WC-I-C (A3I0713-03)								
% Solids	49.9	1.00	1.00	%	1	09/06/23 06:44	EPA 8000D	
WC-O-C (A3I0713-04)								
% Solids	52.1	1.00	1.00	%	1	09/06/23 06:44	EPA 8000D	
FC-I Vols Composite (A3I0713-05)								
% Solids	50.9	1.00	1.00	%	1	09/07/23 07:14	EPA 8000D	COMP
IP-C Vols Composite (A3I0713-06)								
% Solids	51.4	1.00	1.00	%	1	09/07/23 07:14	EPA 8000D	
WC-O Vols Composite (A3I0713-07)								
% Solids	51.1	1.00	1.00	%	1	09/07/23 07:14	EPA 8000D	COMP

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Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0407 - EPA 3546 (Fuels)												
Blank (23I0407-BLK1)												
<u>NWTPH-Dx</u>												
Diesel ND 10.0 20.0 mg/kg wet 1 --- --- --- --- --- --- ---												
Oil ND 20.0 40.0 mg/kg wet 1 --- --- --- --- --- --- ---												
Surr: o-Terphenyl (Surr) Recovery: 96 % Limits: 50-150 % Dilution: 1x												
LCS (23I0407-BS1)												
<u>NWTPH-Dx</u>												
Diesel 110 10.0 20.0 mg/kg wet 1 125 --- 88 38-132% --- ---												
Surr: o-Terphenyl (Surr) Recovery: 100 % Limits: 50-150 % Dilution: 1x												
Duplicate (23I0407-DUP2)												
<u>QC Source Sample: Non-SDG (A3I1071-08)</u>												
Diesel ND 11.7 23.3 mg/kg dry 1 --- ND --- --- --- 30%												
Oil ND 23.3 46.6 mg/kg dry 1 --- ND --- --- --- 30%												
Surr: o-Terphenyl (Surr) Recovery: 107 % Limits: 50-150 % Dilution: 1x Q-41												
Duplicate (23I0407-DUP3)												
<u>QC Source Sample: FC-I-C (A3I0713-01RE1)</u>												
<u>NWTPH-Dx</u>												
Diesel ND 38.5 77.0 mg/kg dry 2 --- ND --- --- --- 30%												
Oil 503 77.0 154 mg/kg dry 2 --- 503 --- --- 0.0004 30% F-03												
Surr: o-Terphenyl (Surr) Recovery: 84 % Limits: 50-150 % Dilution: 2x S-05												

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EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.Project Number: 10157.004Report ID:Project Manager: Tom CalabreseA3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD Limit	Notes
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Batch 23I0078 - EPA 5035A**Soil****Blank (23I0078-BLK1)**

Prepared: 09/05/23 10:51 Analyzed: 09/05/23 12:58

NWTPH-Gx (MS)

Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 100 %</i>	<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>					
<i>1,4-Difluorobenzene (Sur)</i>			<i>104 %</i>	<i>50-150 %</i>		"					

LCS (23I0078-BS2)

Prepared: 09/05/23 10:51 Analyzed: 09/05/23 12:28

NWTPH-Gx (MS)

Gasoline Range Organics	26.5	2.50	5.00	mg/kg wet	50	25.0	---	106	80-120%	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 96 %</i>	<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>					
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>		"					

Duplicate (23I0078-DUP1)

Prepared: 09/01/23 10:50 Analyzed: 09/05/23 19:22

QC Source Sample: Non-SDG (A3I0707-01)

Gasoline Range Organics	ND	16.5	32.9	mg/kg dry	200	---	ND	---	---	---	30%
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 104 %</i>	<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>					
<i>1,4-Difluorobenzene (Sur)</i>			<i>105 %</i>	<i>50-150 %</i>		"					

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Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD Limit	Notes
Batch 23I0187 - EPA 5035A											
Blank (23I0187-BLK1)											
Prepared: 09/07/23 10:06 Analyzed: 09/07/23 14:04											
<u>NWTPH-Gx (MS)</u>											
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)											
Recovery: 98 % Limits: 50-150 % Dilution: 1x											
1,4-Difluorobenzene (Sur)											
109 % 50-150 % "											
LCS (23I0187-BS2)											
Prepared: 09/07/23 10:06 Analyzed: 09/07/23 13:34											
<u>NWTPH-Gx (MS)</u>											
Gasoline Range Organics	28.2	2.50	5.00	mg/kg wet	50	25.0	---	113	80-120%	---	---
Surr: 4-Bromofluorobenzene (Sur)											
Recovery: 98 % Limits: 50-150 % Dilution: 1x											
1,4-Difluorobenzene (Sur)											
107 % 50-150 % "											
Duplicate (23I0187-DUP1)											
Prepared: 09/05/23 11:30 Analyzed: 09/07/23 19:13											
<u>QC Source Sample: Non-SDG (A3I0772-01)</u>											
Gasoline Range Organics	849	7.35	14.7	mg/kg dry	100	---	902	---	---	6	30%
Surr: 4-Bromofluorobenzene (Sur)											
Recovery: 107 % Limits: 50-150 % Dilution: 1x											
I,4-Difluorobenzene (Sur)											
106 % 50-150 % "											

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EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD	Limit Notes
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Batch 23I0078 - EPA 5035A

Soil

Blank (23I0078-BLK1)

Prepared: 09/05/23 10:51 Analyzed: 09/05/23 12:58

5035A/8260D

Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
Naphthalene	ND	50.0	100	ug/kg wet	50	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---
Isopropylbenzene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 103 % Limits: 80-120 % Dilution: Ix

Toluene-d8 (Surr)

101 % 80-120 %

4-Bromofluorobenzene (Surr)

97 % 79-120 %

"

LCS (23I0078-BS1)

Prepared: 09/05/23 10:51 Analyzed: 09/05/23 12:03

5035A/8260D

Benzene	1110	5.00	10.0	ug/kg wet	50	1000	---	111	80-120%	---	---
Toluene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---
Ethylbenzene	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---
Xylenes, total	3140	37.5	75.0	ug/kg wet	50	3000	---	105	80-120%	---	---
Methyl tert-butyl ether (MTBE)	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---
Naphthalene	932	50.0	100	ug/kg wet	50	1000	---	93	80-120%	---	---
1,2-Dibromoethane (EDB)	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---
1,2-Dichloroethane (EDC)	1160	12.5	25.0	ug/kg wet	50	1000	---	116	80-120%	---	---
Isopropylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---
1,2,4-Trimethylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---
1,3,5-Trimethylbenzene	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 102 % Limits: 80-120 % Dilution: Ix

Toluene-d8 (Surr)

103 % 80-120 %

4-Bromofluorobenzene (Surr)

94 % 79-120 %

"

Duplicate (23I0078-DUP1)

Prepared: 09/01/23 10:50 Analyzed: 09/05/23 19:22

Apex Laboratories

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD	Limit Notes
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Batch 23I0078 - EPA 5035A

Soil

Duplicate (23I0078-DUP1)

Prepared: 09/01/23 10:50 Analyzed: 09/05/23 19:22

QC Source Sample: Non-SDG (A3I0707-01)

Benzene	ND	32.9	65.9	ug/kg dry	200	---	ND	---	---	---	30%
Toluene	ND	165	329	ug/kg dry	200	---	ND	---	---	---	30%
Ethylbenzene	ND	82.3	165	ug/kg dry	200	---	ND	---	---	---	30%
Xylenes, total	ND	247	494	ug/kg dry	200	---	ND	---	---	---	30%
Methyl tert-butyl ether (MTBE)	ND	165	329	ug/kg dry	200	---	ND	---	---	---	30%
Naphthalene	ND	329	659	ug/kg dry	200	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	165	329	ug/kg dry	200	---	ND	---	---	---	30%
1,2-Dichloroethane (EDC)	ND	82.3	165	ug/kg dry	200	---	ND	---	---	---	30%
Isopropylbenzene	ND	165	329	ug/kg dry	200	---	ND	---	---	---	30%
1,2,4-Trimethylbenzene	ND	165	329	ug/kg dry	200	---	ND	---	---	---	30%
1,3,5-Trimethylbenzene	ND	165	329	ug/kg dry	200	---	ND	---	---	---	30%

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 102 % Limits: 80-120 % Dilution: 1x

Toluene-d8 (Surr)

100 % 80-120 % "

4-Bromofluorobenzene (Surr)

100 % 79-120 % "

Matrix Spike (23I0078-MS1)

Prepared: 08/23/23 16:10 Analyzed: 09/05/23 15:31

QC Source Sample: Non-SDG (A3H1393-17)

5035A/8260D

Benzene	1430	6.45	12.9	ug/kg dry	50	1290	ND	111	77-121%	---	---
Toluene	1400	32.2	64.5	ug/kg dry	50	1290	ND	108	77-121%	---	---
Ethylbenzene	1370	16.1	32.2	ug/kg dry	50	1290	ND	106	76-122%	---	---
Xylenes, total	4090	48.4	96.7	ug/kg dry	50	3870	ND	106	78-124%	---	---
Methyl tert-butyl ether (MTBE)	1290	32.2	64.5	ug/kg dry	50	1290	ND	100	73-125%	---	---
Naphthalene	1160	64.5	129	ug/kg dry	50	1290	ND	90	62-129%	---	---
1,2-Dibromoethane (EDB)	1400	32.2	64.5	ug/kg dry	50	1290	ND	108	78-122%	---	---
1,2-Dichloroethane (EDC)	1450	16.1	32.2	ug/kg dry	50	1290	ND	112	73-128%	---	---
Isopropylbenzene	1370	32.2	64.5	ug/kg dry	50	1290	ND	106	68-134%	---	---
1,2,4-Trimethylbenzene	1330	32.2	64.5	ug/kg dry	50	1290	ND	103	75-123%	---	---
1,3,5-Trimethylbenzene	1360	32.2	64.5	ug/kg dry	50	1290	ND	106	73-124%	---	---

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 104 % Limits: 80-120 % Dilution: 1x

Toluene-d8 (Surr)

100 % 80-120 % "

4-Bromofluorobenzene (Surr)

96 % 79-120 % "

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD	Limit Notes
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Batch 23I0187 - EPA 5035A

Soil

Blank (23I0187-BLK1)

Prepared: 09/07/23 10:06 Analyzed: 09/07/23 14:04

5035A/8260D

Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---
Toluene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
Ethylbenzene	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---
Xylenes, total	ND	37.5	75.0	ug/kg wet	50	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
Naphthalene	ND	50.0	100	ug/kg wet	50	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	12.5	25.0	ug/kg wet	50	---	---	---	---	---	---
Isopropylbenzene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	25.0	50.0	ug/kg wet	50	---	---	---	---	---	---

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 103 % Limits: 80-120 % Dilution: Ix

Toluene-d8 (Surr)

103 % 80-120 %

4-Bromofluorobenzene (Surr)

96 % 79-120 %

"

LCS (23I0187-BS1)

Prepared: 09/07/23 10:06 Analyzed: 09/07/23 13:09

5035A/8260D

Benzene	1050	5.00	10.0	ug/kg wet	50	1000	---	105	80-120%	---	---
Toluene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---
Ethylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---
Xylenes, total	2980	37.5	75.0	ug/kg wet	50	3000	---	99	80-120%	---	---
Methyl tert-butyl ether (MTBE)	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---
Naphthalene	854	50.0	100	ug/kg wet	50	1000	---	85	80-120%	---	---
1,2-Dibromoethane (EDB)	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---
1,2-Dichloroethane (EDC)	1170	12.5	25.0	ug/kg wet	50	1000	---	117	80-120%	---	---
Isopropylbenzene	966	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---
1,2,4-Trimethylbenzene	984	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---
1,3,5-Trimethylbenzene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 101 % Limits: 80-120 % Dilution: Ix

Toluene-d8 (Surr)

103 % 80-120 %

4-Bromofluorobenzene (Surr)

92 % 79-120 %

"

Duplicate (23I0187-DUP1)

Prepared: 09/05/23 11:30 Analyzed: 09/07/23 19:13

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD	Limit Notes
Batch 23I0187 - EPA 5035A											
Duplicate (23I0187-DUP1)											
Prepared: 09/05/23 11:30 Analyzed: 09/07/23 19:13											
<u>QC Source Sample: Non-SDG (A3I0772-01)</u>											
Benzene	176	14.7	29.4	ug/kg dry	100	---	194	---	---	10	30%
Toluene	ND	73.5	147	ug/kg dry	100	---	ND	---	---	---	30%
Ethylbenzene	163	36.7	73.5	ug/kg dry	100	---	182	---	---	11	30%
Xylenes, total	ND	110	220	ug/kg dry	100	---	ND	---	---	---	30%
Methyl tert-butyl ether (MTBE)	ND	73.5	147	ug/kg dry	100	---	ND	---	---	---	30%
Naphthalene	ND	1470	1470	ug/kg dry	100	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	73.5	147	ug/kg dry	100	---	ND	---	---	---	30%
1,2-Dichloroethane (EDC)	ND	36.7	73.5	ug/kg dry	100	---	ND	---	---	---	30%
Isopropylbenzene	1290	73.5	147	ug/kg dry	100	---	1360	---	---	6	30%
1,2,4-Trimethylbenzene	ND	73.5	147	ug/kg dry	100	---	ND	---	---	---	30%
1,3,5-Trimethylbenzene	ND	73.5	147	ug/kg dry	100	---	ND	---	---	---	30%
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x					
Toluene-d8 (Surr)		100 %		80-120 %		"					
4-Bromofluorobenzene (Surr)		96 %		79-120 %		"					

Matrix Spike (23I0187-MS1)											
<u>QC Source Sample: Non-SDG (A3I0824-03)</u>											
<u>5035A/8260D</u>											
Benzene	1670	7.79	15.6	ug/kg dry	50	1560	ND	107	77-121%	---	---
Toluene	1630	39.0	77.9	ug/kg dry	50	1560	ND	105	77-121%	---	---
Ethylbenzene	1610	19.5	39.0	ug/kg dry	50	1560	ND	104	76-122%	---	---
Xylenes, total	4770	58.4	117	ug/kg dry	50	4670	ND	102	78-124%	---	---
Methyl tert-butyl ether (MTBE)	1560	39.0	77.9	ug/kg dry	50	1560	ND	101	73-125%	---	---
Naphthalene	1430	77.9	156	ug/kg dry	50	1560	ND	92	62-129%	---	---
1,2-Dibromoethane (EDB)	1660	39.0	77.9	ug/kg dry	50	1560	ND	107	78-122%	---	---
1,2-Dichloroethane (EDC)	1770	19.5	39.0	ug/kg dry	50	1560	ND	114	73-128%	---	---
Isopropylbenzene	1630	39.0	77.9	ug/kg dry	50	1560	ND	105	68-134%	---	---
1,2,4-Trimethylbenzene	1650	39.0	77.9	ug/kg dry	50	1560	ND	106	75-123%	---	---
1,3,5-Trimethylbenzene	1680	39.0	77.9	ug/kg dry	50	1560	ND	108	73-124%	---	---
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x					
Toluene-d8 (Surr)		100 %		80-120 %		"					
4-Bromofluorobenzene (Surr)		97 %		79-120 %		"					

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Project Manager: Tom Calabrese

Report ID:

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD	Limit Notes
Batch 23I0273 - EPA 3546											
Blank (23I0273-BLK1)											
Prepared: 09/11/23 11:48 Analyzed: 09/11/23 16:33											
<u>EPA 8270E SIM</u>											
Acenaphthene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Acenaphthylene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Anthracene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Benz(a)anthracene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Benzo(a)pyrene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Benzo(b,j)fluoranthene(s)	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Benzo(k)fluoranthene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Benzo(g,h,i)perylene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Chrysene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Dibenz(a,h)anthracene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Fluoranthene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Fluorene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
1-Methylnaphthalene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
2-Methylnaphthalene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Naphthalene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Phenanthrene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Pyrene	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Dibenzofuran	ND	5.00	10.0	ug/kg wet	1	---	---	---	---	---	---
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 92 %		Limits: 44-120 %		Dilution: Ix					
p-Terphenyl-d14 (Surr)		95 %		54-127 %		"					

LCS (23I0273-BS1)

Prepared: 09/11/23 11:48 Analyzed: 09/11/23 16:59

<u>EPA 8270E SIM</u>											
Acenaphthene	777	5.00	10.0	ug/kg wet	1	800	---	97	40-123%	---	---
Acenaphthylene	776	5.00	10.0	ug/kg wet	1	800	---	97	32-132%	---	---
Anthracene	753	5.00	10.0	ug/kg wet	1	800	---	94	47-123%	---	---
Benz(a)anthracene	744	5.00	10.0	ug/kg wet	1	800	---	93	49-126%	---	---
Benzo(a)pyrene	786	5.00	10.0	ug/kg wet	1	800	---	98	45-129%	---	---
Benzo(b,j)fluoranthene(s)	734	5.00	10.0	ug/kg wet	1	800	---	92	45-132%	---	---
Benzo(k)fluoranthene	802	5.00	10.0	ug/kg wet	1	800	---	100	47-132%	---	---
Benzo(g,h,i)perylene	657	5.00	10.0	ug/kg wet	1	800	---	82	43-134%	---	---
Chrysene	788	5.00	10.0	ug/kg wet	1	800	---	98	50-124%	---	---

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ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0273 - EPA 3546												
Soil												
LCS (23I0273-BS1)												
Dibenz(a,h)anthracene	799	5.00	10.0	ug/kg wet	1	800	---	100	45-134%	---	---	
Fluoranthene	824	5.00	10.0	ug/kg wet	1	800	---	103	50-127%	---	---	
Fluorene	772	5.00	10.0	ug/kg wet	1	800	---	97	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	756	5.00	10.0	ug/kg wet	1	800	---	94	45-133%	---	---	
1-Methylnaphthalene	764	5.00	10.0	ug/kg wet	1	800	---	95	40-120%	---	---	
2-Methylnaphthalene	770	5.00	10.0	ug/kg wet	1	800	---	96	38-122%	---	---	
Naphthalene	742	5.00	10.0	ug/kg wet	1	800	---	93	35-123%	---	---	
Phenanthrene	751	5.00	10.0	ug/kg wet	1	800	---	94	50-121%	---	---	
Pyrene	846	5.00	10.0	ug/kg wet	1	800	---	106	47-127%	---	---	
Dibenzofuran	748	5.00	10.0	ug/kg wet	1	800	---	93	44-120%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>							<i>Recovery: 91 %</i>	<i>Limits: 44-120 %</i>	<i>Dilution: 1x</i>			
<i>p-Terphenyl-d14 (Surr)</i>							<i>92 %</i>	<i>54-127 %</i>	"			

Duplicate (23I0273-DUP1) Prepared: 09/11/23 11:48 Analyzed: 09/11/23 17:50

QC Source Sample: FC-I-C (A3I0713-01)

EPA 8270E SIM

Acenaphthene	ND	9.71	19.4	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	13.0	9.71	19.4	ug/kg dry	1	---	13.2	---	---	2	30%	J
Anthracene	12.0	9.71	19.4	ug/kg dry	1	---	11.3	---	---	6	30%	J
Benz(a)anthracene	50.5	9.71	19.4	ug/kg dry	1	---	49.4	---	---	2	30%	
Benzo(a)pyrene	77.6	9.71	19.4	ug/kg dry	1	---	75.1	---	---	3	30%	
Benzo(b,j)fluoranthene(s)	95.9	9.71	19.4	ug/kg dry	1	---	98.1	---	---	2	30%	
Benzo(k)fluoranthene	34.7	9.71	19.4	ug/kg dry	1	---	33.8	---	---	3	30%	M-05
Benzo(g,h,i)perylene	77.8	9.71	19.4	ug/kg dry	1	---	81.1	---	---	4	30%	
Chrysene	82.2	9.71	19.4	ug/kg dry	1	---	85.6	---	---	4	30%	
Dibenz(a,h)anthracene	ND	9.71	19.4	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	139	9.71	19.4	ug/kg dry	1	---	131	---	---	6	30%	
Fluorene	ND	9.71	19.4	ug/kg dry	1	---	11.9	---	---	***	30%	Q-05
Indeno(1,2,3-cd)pyrene	68.3	9.71	19.4	ug/kg dry	1	---	70.0	---	---	2	30%	
1-Methylnaphthalene	ND	9.71	19.4	ug/kg dry	1	---	ND	---	---	---	30%	
2-Methylnaphthalene	ND	9.71	19.4	ug/kg dry	1	---	ND	---	---	---	30%	
Naphthalene	13.8	9.71	19.4	ug/kg dry	1	---	12.7	---	---	8	30%	J
Phenanthrene	76.6	9.71	19.4	ug/kg dry	1	---	53.0	---	---	36	30%	Q-05
Pyrene	174	9.71	19.4	ug/kg dry	1	---	166	---	---	4	30%	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD Limit	Notes
Batch 23I0273 - EPA 3546											
Duplicate (23I0273-DUP1)											
Prepared: 09/11/23 11:48 Analyzed: 09/11/23 17:50											
QC Source Sample: FC-I-C (A3I0713-01)											
Dibenzofuran	ND	9.71	19.4	ug/kg dry	1	---	ND	---	---	---	30%
Surr: 2-Fluorobiphenyl (Surr)											
Recovery: 84 % Limits: 44-120 % Dilution: 1x											
p-Terphenyl-d14 (Surr)											
85 % 54-127 % "											
Matrix Spike (23I0273-MS1)											
Prepared: 09/11/23 11:48 Analyzed: 09/11/23 18:40											
QC Source Sample: Non-SDG (A3I0793-01)											
EPA 8270E SIM											
Acenaphthene	1070	155	309	ug/kg dry	20	1240	ND	87	40-123%	---	---
Acenaphthylene	1120	155	309	ug/kg dry	20	1240	ND	91	32-132%	---	---
Anthracene	1060	155	309	ug/kg dry	20	1240	ND	86	47-123%	---	---
Benz(a)anthracene	1200	155	309	ug/kg dry	20	1240	ND	97	49-126%	---	---
Benzo(a)pyrene	1140	155	309	ug/kg dry	20	1240	ND	92	45-129%	---	---
Benzo(b,j)fluoranthene(s)	1280	155	309	ug/kg dry	20	1240	247	84	45-132%	---	---
Benzo(k)fluoranthene	1130	155	309	ug/kg dry	20	1240	ND	91	47-132%	---	---
Benzo(g,h,i)perylene	1120	155	309	ug/kg dry	20	1240	309	66	43-134%	---	---
Chrysene	1390	155	309	ug/kg dry	20	1240	387	81	50-124%	---	---
Dibenz(a,h)anthracene	896	155	309	ug/kg dry	20	1240	ND	72	45-134%	---	---
Fluoranthene	1490	155	309	ug/kg dry	20	1240	296	97	50-127%	---	---
Fluorene	1110	155	309	ug/kg dry	20	1240	ND	90	43-125%	---	---
Indeno(1,2,3-cd)pyrene	1100	155	309	ug/kg dry	20	1240	ND	89	45-133%	---	---
1-Methylnaphthalene	1050	155	309	ug/kg dry	20	1240	ND	85	40-120%	---	---
2-Methylnaphthalene	1110	155	309	ug/kg dry	20	1240	ND	89	38-122%	---	---
Naphthalene	1170	155	309	ug/kg dry	20	1240	ND	94	35-123%	---	---
Phenanthrene	1150	155	309	ug/kg dry	20	1240	ND	93	50-121%	---	---
Pyrene	1850	155	309	ug/kg dry	20	1240	612	100	47-127%	---	---
Dibenzofuran	1080	155	309	ug/kg dry	20	1240	ND	87	44-120%	---	---
Surr: 2-Fluorobiphenyl (Surr)											
Recovery: 79 % Limits: 44-120 % Dilution: 20x											
p-Terphenyl-d14 (Surr)											
85 % 54-127 % "											

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0391 - EPA 3051A												
Blank (23I0391-BLK1)												
Prepared: 09/13/23 15:07 Analyzed: 09/13/23 22:56												
<u>EPA 6020B</u>												
Antimony	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	
Beryllium	ND	0.100	0.200	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	1.00	2.00	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.100	0.200	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	mg/kg wet	10	---	---	---	---	---	---	
Nickel	ND	1.00	2.00	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.100	0.200	mg/kg wet	10	---	---	---	---	---	---	
Thallium	ND	0.100	0.200	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	2.00	4.00	mg/kg wet	10	---	---	---	---	---	---	
LCS (23I0391-BS1)												
Prepared: 09/13/23 15:07 Analyzed: 09/13/23 23:06												
<u>EPA 6020B</u>												
Antimony	25.9	0.500	1.00	mg/kg wet	10	25.0	---	103	80-120%	---	---	
Arsenic	48.8	0.500	1.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Beryllium	23.9	0.100	0.200	mg/kg wet	10	25.0	---	96	80-120%	---	---	
Cadmium	50.3	0.100	0.200	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Chromium	48.4	0.500	1.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Copper	50.6	1.00	2.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Lead	50.7	0.100	0.200	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Mercury	0.980	0.0400	0.0800	mg/kg wet	10	1.00	---	98	80-120%	---	---	
Nickel	50.8	1.00	2.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Selenium	24.2	0.500	1.00	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Silver	27.6	0.100	0.200	mg/kg wet	10	25.0	---	110	80-120%	---	---	
Thallium	24.3	0.100	0.200	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Zinc	50.0	2.00	4.00	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Duplicate (23I0391-DUP1)												
Prepared: 09/13/23 15:07 Analyzed: 09/14/23 01:03												
<u>QC Source Sample: Non-SDG (A3I0722-15)</u>												
Antimony	ND	0.507	1.01	mg/kg dry	10	---	ND	---	---	---	20%	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0391 - EPA 3051A												
Duplicate (23I0391-DUP1)												
Prepared: 09/13/23 15:07 Analyzed: 09/14/23 01:03												
<u>QC Source Sample: Non-SDG (A3I0722-15)</u>												
Arsenic	26.4	0.507	1.01	mg/kg dry	10	---	24.4	---	---	8	20%	
Beryllium	0.875	0.101	0.203	mg/kg dry	10	---	0.863	---	---	1	20%	
Cadmium	0.128	0.101	0.203	mg/kg dry	10	---	0.123	---	---	4	20%	
Chromium	38.5	0.507	1.01	mg/kg dry	10	---	35.1	---	---	9	20%	
Copper	86.2	1.01	2.03	mg/kg dry	10	---	77.8	---	---	10	20%	
Lead	71.7	0.101	0.203	mg/kg dry	10	---	66.7	---	---	7	20%	
Mercury	ND	0.0405	0.0811	mg/kg dry	10	---	ND	---	---	---	20%	
Nickel	37.7	1.01	2.03	mg/kg dry	10	---	33.4	---	---	12	20%	
Selenium	0.661	0.507	1.01	mg/kg dry	10	---	0.650	---	---	2	20%	
Silver	ND	0.101	0.203	mg/kg dry	10	---	ND	---	---	---	20%	
Thallium	0.185	0.101	0.203	mg/kg dry	10	---	0.173	---	---	7	20%	
Zinc	123	2.03	4.05	mg/kg dry	10	---	111	---	---	10	20%	

Matrix Spike (23I0391-MS1) Prepared: 09/13/23 15:07 Analyzed: 09/14/23 01:08

QC Source Sample: Non-SDG (A3I0722-15)EPA 6020B

Antimony	20.4	0.513	1.03	mg/kg dry	10	25.6	ND	80	75-125%	---	---
Arsenic	76.2	0.513	1.03	mg/kg dry	10	51.3	24.4	101	75-125%	---	---
Beryllium	25.5	0.103	0.205	mg/kg dry	10	25.6	0.863	96	75-125%	---	---
Cadmium	52.5	0.103	0.205	mg/kg dry	10	51.3	0.123	102	75-125%	---	---
Chromium	87.3	0.513	1.03	mg/kg dry	10	51.3	35.1	102	75-125%	---	---
Copper	134	1.03	2.05	mg/kg dry	10	51.3	77.8	110	75-125%	---	---
Lead	118	0.103	0.205	mg/kg dry	10	51.3	66.7	100	75-125%	---	---
Mercury	0.966	0.0410	0.0820	mg/kg dry	10	1.03	ND	94	75-125%	---	---
Nickel	88.6	1.03	2.05	mg/kg dry	10	51.3	33.4	108	75-125%	---	---
Selenium	24.7	0.513	1.03	mg/kg dry	10	25.6	0.650	94	75-125%	---	---
Silver	27.7	0.103	0.205	mg/kg dry	10	25.6	ND	108	75-125%	---	---
Thallium	23.7	0.103	0.205	mg/kg dry	10	25.6	0.173	92	75-125%	---	---
Zinc	169	2.05	4.10	mg/kg dry	10	51.3	111	113	75-125%	---	---

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EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0076 - Total Solids (Dry Weight) - 2022												
Duplicate (23I0076-DUP1)												
<u>QC Source Sample: Non-SDG (A3H1393-06)</u>												
% Solids	74.5	1.00	1.00	%	1	---	74.8	---	---	0.5	10%	
Duplicate (23I0076-DUP2)												
<u>QC Source Sample: Non-SDG (A3H1393-09)</u>												
% Solids	77.4	1.00	1.00	%	1	---	77.3	---	---	0.07	10%	
Duplicate (23I0076-DUP3)												
<u>QC Source Sample: Non-SDG (A3H1393-17)</u>												
% Solids	76.5	1.00	1.00	%	1	---	76.7	---	---	0.2	10%	
Duplicate (23I0076-DUP4)												
<u>QC Source Sample: Non-SDG (A3H1393-22)</u>												
% Solids	75.2	1.00	1.00	%	1	---	74.9	---	---	0.4	10%	
Duplicate (23I0076-DUP5)												
<u>QC Source Sample: Non-SDG (A3H1511-03)</u>												
% Solids	99.3	1.00	1.00	%	1	---	99.3	---	---	0.07	10%	
Duplicate (23I0076-DUP6)												
<u>QC Source Sample: Non-SDG (A3H1511-05)</u>												
% Solids	99.1	1.00	1.00	%	1	---	99.1	---	---	0.03	10%	
Duplicate (23I0076-DUP7)												
<u>QC Source Sample: Non-SDG (A3I0695-01)</u>												
% Solids	97.8	1.00	1.00	%	1	---	96.9	---	---	0.9	10%	
Duplicate (23I0076-DUP8)												
<u>QC Source Sample: Non-SDG (A3I0756-01)</u>												
% Solids	81.5	1.00	1.00	%	1	---	81.9	---	---	0.6	10%	

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Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.Project Number: **10157.004**Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD Limit	Notes
Batch 23I0076 - Total Solids (Dry Weight) - 2022											
Soil											
Duplicate (23I0076-DUP9) Prepared: 09/05/23 19:06 Analyzed: 09/06/23 06:44											
QC Source Sample: Non-SDG (A3I0763-01)											
% Solids	93.4	1.00	1.00	%	1	---	92.6	---	---	0.9	10%
Duplicate (23I0076-DUPA) Prepared: 09/05/23 19:06 Analyzed: 09/06/23 06:44											
QC Source Sample: Non-SDG (A3I0768-05)											
% Solids	96.8	1.00	1.00	%	1	---	97.3	---	---	0.5	10%

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23I0124 - Total Solids (Dry Weight) - 2022												
Duplicate (23I0124-DUP1) Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14												
<u>QC Source Sample: Non-SDG (A3I0752-01)</u>												
% Solids	88.4	1.00	1.00	%	1	---	88.3	---	---	0.1	10%	
Duplicate (23I0124-DUP2) Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14												
<u>QC Source Sample: Non-SDG (A3I0752-02)</u>												
% Solids	88.0	1.00	1.00	%	1	---	88.1	---	---	0.09	10%	
Duplicate (23I0124-DUP3) Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14												
<u>QC Source Sample: Non-SDG (A3I0752-03)</u>												
% Solids	87.0	1.00	1.00	%	1	---	87.5	---	---	0.6	10%	
Duplicate (23I0124-DUP4) Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14												
<u>QC Source Sample: Non-SDG (A3I0752-04)</u>												
% Solids	92.5	1.00	1.00	%	1	---	92.6	---	---	0.1	10%	
Duplicate (23I0124-DUP5) Prepared: 09/06/23 09:14 Analyzed: 09/07/23 07:14												
<u>QC Source Sample: Non-SDG (A3I0752-05)</u>												
% Solids	88.1	1.00	1.00	%	1	---	85.6	---	---	3	10%	
Duplicate (23I0124-DUP6) Prepared: 09/06/23 20:00 Analyzed: 09/07/23 07:14												
<u>QC Source Sample: Non-SDG (A3I0792-01)</u>												
% Solids	76.4	1.00	1.00	%	1	---	76.5	---	---	0.2	10%	
Duplicate (23I0124-DUP7) Prepared: 09/06/23 20:00 Analyzed: 09/07/23 07:14												
<u>QC Source Sample: Non-SDG (A3I0812-01)</u>												
% Solids	77.1	1.00	1.00	%	1	---	79.5	---	---	3	10%	
Duplicate (23I0124-DUP8) Prepared: 09/06/23 20:00 Analyzed: 09/07/23 07:14												
<u>QC Source Sample: Non-SDG (A3I0817-01)</u>												
% Solids	90.8	1.00	1.00	%	1	---	90.6	---	---	0.2	10%	

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Philip Nerenberg, Lab Director



ANALYTICAL REPORT

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EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.Project Number: **10157.004**Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD RPD Limit	Notes
Batch 23I0124 - Total Solids (Dry Weight) - 2022											
Soil											
Duplicate (23I0124-DUP9)											
QC Source Sample: Non-SDG (A3I0822-01)											
% Solids	64.5	1.00	1.00	%	1	---	48.7	---	---	28	10%

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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A3I0713 - 09 26 23 1304

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)							
Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23I0407</u>							
A3I0713-01RE1	Soil	NWTPH-Dx	08/31/23 11:45	09/14/23 07:06	10.1g/5mL	10g/5mL	0.99
A3I0713-02RE1	Soil	NWTPH-Dx	08/31/23 12:10	09/14/23 07:06	10.44g/5mL	10g/5mL	0.96
A3I0713-03	Soil	NWTPH-Dx	08/31/23 12:30	09/14/23 07:06	10.19g/5mL	10g/5mL	0.98
A3I0713-04	Soil	NWTPH-Dx	08/31/23 12:45	09/14/23 07:06	10.32g/5mL	10g/5mL	0.97

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A							
Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23I0078</u>							
A3I0713-03	Soil	NWTPH-Gx (MS)	08/31/23 12:30	08/31/23 12:30	6.17g/5mL	5g/5mL	0.81
<u>Batch: 23I0187</u>							
A3I0713-05	Soil	NWTPH-Gx (MS)	08/31/23 11:45	08/31/23 11:45	10.07g/10mL	5g/5mL	0.99
A3I0713-06	Soil	NWTPH-Gx (MS)	08/31/23 12:10	08/31/23 12:10	9.69g/10mL	5g/5mL	1.03
A3I0713-07	Soil	NWTPH-Gx (MS)	08/31/23 12:45	08/31/23 12:45	8.66g/10mL	5g/5mL	1.15

Selected Volatile Organic Compounds by EPA 5035A/8260D

Prep: EPA 5035A							
Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23I0078</u>							
A3I0713-03	Soil	5035A/8260D	08/31/23 12:30	08/31/23 12:30	6.17g/5mL	5g/5mL	0.81
<u>Batch: 23I0187</u>							
A3I0713-05	Soil	5035A/8260D	08/31/23 11:45	08/31/23 11:45	10.07g/10mL	5g/5mL	0.99
A3I0713-06	Soil	5035A/8260D	08/31/23 12:10	08/31/23 12:10	9.69g/10mL	5g/5mL	1.03
A3I0713-07	Soil	5035A/8260D	08/31/23 12:45	08/31/23 12:45	8.66g/10mL	5g/5mL	1.15

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Prep: EPA 3546							
Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23I0273</u>							
A3I0713-01	Soil	EPA 8270E SIM	08/31/23 11:45	09/11/23 11:56	10.12g/5mL	10g/5mL	0.99
A3I0713-02	Soil	EPA 8270E SIM	08/31/23 12:10	09/11/23 11:56	10.01g/5mL	10g/5mL	1.00
A3I0713-03	Soil	EPA 8270E SIM	08/31/23 12:30	09/11/23 11:56	10.02g/5mL	10g/5mL	1.00

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Project Manager: Tom Calabrese

Report ID:

A3I0713 - 09 26 23 1304

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A3I0713-04	Soil	EPA 8270E SIM	08/31/23 12:45	09/11/23 11:56	10.27g/5mL	10g/5mL	0.97

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23I0391</u>							
A3I0713-01	Soil	EPA 6020B	08/31/23 11:45	09/13/23 15:07	0.469g/50mL	0.5g/50mL	1.07
A3I0713-02	Soil	EPA 6020B	08/31/23 12:10	09/13/23 15:07	0.501g/50mL	0.5g/50mL	1.00
A3I0713-03	Soil	EPA 6020B	08/31/23 12:30	09/13/23 15:07	0.484g/50mL	0.5g/50mL	1.03
A3I0713-04	Soil	EPA 6020B	08/31/23 12:45	09/13/23 15:07	0.567g/50mL	0.5g/50mL	0.88

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23I0076</u>							
A3I0713-01	Soil	EPA 8000D	08/31/23 11:45	09/05/23 09:36			NA
A3I0713-02	Soil	EPA 8000D	08/31/23 12:10	09/05/23 09:36			NA
A3I0713-03	Soil	EPA 8000D	08/31/23 12:30	09/05/23 09:36			NA
A3I0713-04	Soil	EPA 8000D	08/31/23 12:45	09/05/23 09:36			NA
<u>Batch: 23I0124</u>							
A3I0713-05	Soil	EPA 8000D	08/31/23 11:45	09/06/23 09:14			NA
A3I0713-06	Soil	EPA 8000D	08/31/23 12:10	09/06/23 09:14			NA
A3I0713-07	Soil	EPA 8000D	08/31/23 12:45	09/06/23 09:14			NA

Apex Laboratories

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources

2830 SW Plum Circle

Portland, OR 97219

Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: **10157.004**

Report ID:

Project Manager: **Tom Calabrese**

A3I0713 - 09 26 23 1304

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- COMP** Analyzed sample is a composite of discrete samples that was performed in the laboratory.
- F-03** The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- PRO** Sample has undergone sample processing prior to extraction and analysis.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-17** RPD between original and duplicate sample, or spike duplicates, is outside of established control limits.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

Apex Laboratories

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A3I0713 - 09 26 23 1304

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).

If no value is listed ('----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a "dry weight" basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an "As Received" basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources

2830 SW Plum Circle

Portland, OR 97219

Project: **Portland Golf Club/ Junior Lake Sed. Char.**

Project Number: **10157.004**

Report ID:

Project Manager: **Tom Calabrese**

A3I0713 - 09 26 23 1304

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to $\frac{1}{2}$ the Reporting Limit (RL).

-For Blank hits falling between $\frac{1}{2}$ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Philip Nerenberg, Lab Director

Page 33 of 36



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources

2830 SW Plum Circle

Portland, OR 97219

Project: Portland Golf Club/ Junior Lake Sed. Char.

Project Number: **10157.004**

Report ID:

Project Manager: **Tom Calabrese**

A3I0713 - 09 26 23 1304

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation)

EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
--------	----------	--------	---------	--------	---------------

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
QRELAP ID: OR100062**

EnviroLogic Resources
2830 SW Plum Circle
Portland, OR 97219

Project: **Portland Golf Club/ Junior Lake Sed. Char.**
Project Number: **10157.004**
Project Manager: **Tom Calabrese**

Report ID:

A3I0713 - 09 26 23 1304

CHAIN OF CUSTODY									
APEX LABS 6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323		Lab# <u>4310413</u> COC <u>1</u> of <u>1</u>							
ENVIRONMENTAL RESOURCES		Project Mgr: <u>YON CALA BREESE</u>		Project Name: <u>LAKES GOLF CLUB/JUNIOR</u>		PO # <u>10157.004</u>			
Address: <u>P.O. BOX 80762, PORTLAND, OR 97280</u>		Phone: <u>503 766 5711</u>		Email: <u>tom@calabreeze.com</u>		Date: <u>10/157.004</u>			
Sampled by: <u>JASON HOWARD</u>									
ANALYSIS REQUEST									
Site Location:	State <u>OR</u> County <u>WASH.</u>		TIME		DATE		MATRIX		# OF CONTAINERS
FC-I-C	<u>9/1/13 1145</u>		<u>5</u>		<u>9/1/13 1145</u>		<u>5</u>		NWTPH-HCD
IP-c-C	<u>12:00</u>		<u>5</u>		<u>12:00</u>		<u>5</u>		NWTPH-Gx
WC-I-C	<u>12:30</u>		<u>5</u>		<u>12:30</u>		<u>5</u>		NWTPH-Gx
WC-D-C	<u>1245</u>		<u>5</u>		<u>1245</u>		<u>5</u>		NWTPH-Gx
Standard Turn Around Time (TAT) = 10 Business Days									
TAT Requested (circle)	1 Day		2 Day		3 Day				
	<input checked="" type="radio"/> Standard		<input type="radio"/> Other: _____						
SAMPLES ARE HELD FOR 30 DAYS									
RELINQUISHED BY: Signature: <u>Jason Howard</u>	RECEIVED BY: Signature: <u>9/1/13</u>		RELINQUISHED BY: Signature: <u>9/1/13</u>		RECEIVED BY: Signature: <u>9/1/13</u>				
Printed Name: <u>JASON HOWARD</u>	Printed Name: <u>1030</u>		Printed Name: <u>CLOSED DAILY</u>		Printed Name: <u>1030</u>		Printed Name: <u>CLOSED DAILY</u>		Date: <u>9/1/13</u>
Company: <u>ENVIRONMENTAL RESOURCES</u>	Company: <u>ENVIRONMENTAL RESOURCES</u>		Company: <u>ENVIRONMENTAL RESOURCES</u>		Company: <u>ENVIRONMENTAL RESOURCES</u>		Company: <u>ENVIRONMENTAL RESOURCES</u>		Date: <u>9/1/13</u>
SPECIAL INSTRUCTIONS:									
<p>Hold Sample</p> <p>Frozen Archive</p> <p>Project #: <u>10157.004</u></p> <p>PO #: <u>10157.004</u></p> <p>MULTI-RESIDUE</p> <p>PESTICIDES</p> <p>TCPP Metabolites (8)</p> <p>TCPP</p> <p>TOTAL DISS.</p> <p>SC, Ag, Ni, V, Zn</p> <p>Ca, Cr, Cu, Fe, Pb,</p> <p>Al, Sn, As, Bi, Be, Cd,</p> <p>Prterry Metals (13)</p> <p>RCCA Metals (8)</p> <p>8081 PCBs</p> <p>8082 PCBs</p> <p>8270 SEMI-VOLATILE Litter</p> <p>8270 SEMI-PATHS</p> <p>8260 VOCs, FATT Litter</p> <p>8260 HALO VOCs</p> <p>8260 RBBM VOCs</p> <p>8260 BTEX</p> <p>NWTPH-Px</p> <p>NWTPH-HCD</p> <p># OF CONTAINERS</p> <p>MATRIX</p> <p>TIME</p> <p>SAMPLE ID</p> <p>DATE</p> <p>Site Location:</p>									

Apex Laboratories

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Philip Rosenberg

Philip Nerenberg, Lab Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

EnviroLogic Resources2830 SW Plum Circle
Portland, OR 97219Project: Portland Golf Club/ Junior Lake Sed. Char.Project Number: 10157.004

Report ID:

Project Manager: Tom Calabrese

A3I0713 - 09 26 23 1304

APEX LABS COOLER RECEIPT FORMClient: Envirologic Resources Element WO#: A3I0713Project/Project #: Portland Golf Club/ Junior Lake Sed. char. 10157.004Delivery Info:Date/time received: 9/1/23 @ 1105 By: ESTDelivered by: Apex Client ESS FedEx UPS Radio Morgan SDS Evergreen OtherCooler Inspection Date/time inspected: 9/1/23 @ 1115 By: ESTChain of Custody included? Yes No Signed/dated by client? Yes No

Cooler #1 Cooler #2 Cooler #3 Cooler #4 Cooler #5 Cooler #6 Cooler #7

Temperature (°C) 1.8Custody seals? (Y/N) NReceived on ice? (Y/N) YTemp. blanks? (Y/N) YIce type: (Gel/Real/Other) RealCondition (In/Out): In

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes No Out of temperature samples form initiated? Yes No Sample Inspection: Date/time inspected: 9/1/23 @ 1631 By: KamAll samples intact? Yes No Comments: _____Bottle labels/COCs agree? Yes No Comments: No time or date on 1/2 front neck
VOA's car w/c-o-c.COC/container discrepancies form initiated? Yes No Containers/volumes received appropriate for analysis? Yes No Comments: _____Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No pH appropriate? Yes No

Comments: _____

Additional information: _____
_____Labeled by: KamWitness: DJSCooler Inspected by: Kam

Form Y-003 R-00

Apex Laboratories

Philip Nerenberg

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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 8270D (GC-MS/MS)					
9/12/23	9/18/23	2,6-Dichlorobenzamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	a-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Acetochlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Alachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Aldrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ametryn	ND	0.0067 mg/kg	
9/12/23	9/18/23	Aspon	ND	0.0067 mg/kg	
9/12/23	9/18/23	b-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Benfluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bifenthrin	0.0084 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Bolstar	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bromopropylate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Buprofezin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Captan	ND	0.067 mg/kg	
9/12/23	9/18/23	Chlordane	0.015 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Chlорfenapyr	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorfenvinphos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorobenzilate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chloroneb	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpropham	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpyrifos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpyrifos-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	cis-Nonachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Cyfluthrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Cypermethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Dacthal	ND	0.0067 mg/kg	
9/12/23	9/18/23	d-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Deltamethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Demeton	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diazinon	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dichlobenil	ND	0.0067 mg/kg	

Kara Greer
 This analytical report complies with the ISO/IEC 17025:2017
 Quality Standard.

Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Dichlorofenthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dichlorvos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diclofop-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dicloran	ND	0.034 mg/kg	
9/12/23	9/18/23	Dicofol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dieldrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dimethenamid	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diphenamid	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diphenylamine	ND	0.0067 mg/kg	
9/12/23	9/18/23	Disulfoton	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dithiopyr	ND	0.0067 mg/kg	
9/12/23	9/18/23	Endosulfan I	ND	0.013 mg/kg	
9/12/23	9/18/23	Endosulfan II	ND	0.013 mg/kg	
9/12/23	9/18/23	Endosulfan sulfate	ND	0.013 mg/kg	
9/12/23	9/18/23	Endrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Endrin ketone	ND	0.0067 mg/kg	
9/12/23	9/18/23	EPN	ND	0.0067 mg/kg	
9/12/23	9/18/23	Esfenvalerate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethalfluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethofumesate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethoprop	ND	0.0067 mg/kg	
9/12/23	9/18/23	Etoxazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Etridiazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenarimol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenitrothion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenoxyprop-ethyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Fenthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenvalerate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fipronil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fluazifop-p-butyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Fludioxonil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fluroxypyr-meptyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Flutolanil	ND	0.0067 mg/kg	

Kara Greer
 This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.

Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Fonofos	ND	0.0067 mg/kg	
9/12/23	9/18/23	g-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Heptachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Heptachlor epoxide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Hexachlorobenzene	ND	0.0067 mg/kg	
9/12/23	9/18/23	Kresoxim-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	lambda-Cyhalothrin	ND	0.013 mg/kg	
9/12/23	9/18/23	Leptophos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Malathion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Mefenoxam	ND	0.0067 mg/kg	
9/12/23	9/18/23	Methoxychlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Metolachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	MGK-264	ND	0.0067 mg/kg	
9/12/23	9/18/23	Myclobutanil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Napropamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ovex	ND	0.0067 mg/kg	
9/12/23	9/18/23	Oxadiazon	0.0086 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Oxyfluorfen	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDD	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDE	0.0067 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDT	ND	0.0067 mg/kg	
9/12/23	9/18/23	Paclobutrazol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Parathion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Parathion-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCA	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCB	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCNB	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pendimethalin	0.025 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Pentachlorothioanisole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Permethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Phorate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Procymidone	ND	0.0067 mg/kg	
9/12/23	9/18/23	Prodiamine	ND	0.0067 mg/kg	



Kara Greer, Project Manager

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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Pronamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Propachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pyriproxyfen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Quinoxifen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ronnel	ND	0.0067 mg/kg	
9/12/23	9/18/23	Spirodiclofen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Sulfotep	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tefluthrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Terbufos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tetraconazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tetradifon	ND	0.0067 mg/kg	
9/12/23	9/18/23	Thionazin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tokuthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	trans-Nonachlor	0.011 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Trichloronate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Trifluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Vinclozalin	ND	0.0067 mg/kg	

Surrogate Recovery: 73 %

Surrogate Recovery Range: 34-134

(TPP-d15 used as Surrogate)

Method: Modified EPA 8321B (LC-MS/MS)

9/12/23	9/14/23	3-Hydroxycarbofuran	ND	0.0067 mg/kg
9/12/23	9/14/23	Abamectin	ND	0.0067 mg/kg
9/12/23	9/14/23	Acephate	ND	0.0067 mg/kg
9/12/23	9/14/23	Acetamiprid	ND	0.0067 mg/kg
9/12/23	9/14/23	Acibenzolar-S-methyl	ND	0.013 mg/kg
9/12/23	9/14/23	Afidopyropen	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb Sulfone	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb Sulfoxide	ND	0.0067 mg/kg
9/12/23	9/14/23	Allethrin	ND	0.0067 mg/kg
9/12/23	9/14/23	Ametoctradin	ND	0.0067 mg/kg
9/12/23	9/14/23	Atrazine	ND	0.0067 mg/kg

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 Quality Standard.

Apex Laboratories
6700 SW Sandburg St
Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Azinphos-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Azinphos-methyl	ND	0.013 mg/kg	
9/12/23	9/14/23	Azoxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bendiocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bensulide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bitertanol	ND	0.0067 mg/kg	
9/12/23	9/14/23	Boscalid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bromacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbaryl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbendazim	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbofuran	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carfentrazone-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Chlorantraniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Clethodim	ND	0.013 mg/kg	
9/12/23	9/14/23	Clomazone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Clothianidin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyanazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyantraniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyazofamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyclaniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cycloate	ND	0.013 mg/kg	
9/12/23	9/14/23	Cyflufenamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyflumetofen	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyhalofop-butyl	ND	0.013 mg/kg	
9/12/23	9/14/23	Cyprodinil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyprosulfamide	ND	0.0067 mg/kg	
9/12/23	9/14/23	DCPMU	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diaxonon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Difenoconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diflubenzuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diflufenican	ND	0.0067 mg/kg	
9/12/23	9/14/23	Dimethoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Dimethomorph	ND	0.0067 mg/kg	

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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Dinotefuran	ND	0.0067 mg/kg	
9/12/23	9/14/23	Disulfoton sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	d-Phenothrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Emamectin Benzoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ethion	ND	0.0067 mg/kg	
9/12/23	9/14/23	Etofenprox	ND	0.0067 mg/kg	
9/12/23	9/14/23	Famoxadone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Famphur	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamidone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamiphos sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamiphos sulfoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenazaquin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenbuconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenbutatin oxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenhexamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenobucarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenoxy carb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenpropothrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenpyroximate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flonicamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluazinam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flubendiamide	ND	0.013 mg/kg	
9/12/23	9/14/23	Flufenacet	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flumetsulam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flumioxazin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluometuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluopicolide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluopyram	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluoxastrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flupyradifurone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluridone	0.027 mg/kg	0.0067 mg/kg	



Kara Greer, Project Manager

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Apex Laboratories
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Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Flutianil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flutriafol	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluvalinate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluxapyroxad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fonofos	ND	0.013 mg/kg	
9/12/23	9/14/23	Hexaconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Hexazinone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Hexythiazox	ND	0.0067 mg/kg	
9/12/23	9/14/23	Imazalil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Imidacloprid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Indaziflam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Indoxacarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ipconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Iprodione	ND	0.034 mg/kg	
9/12/23	9/14/23	Isofetamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Isoxaben	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ioxidifen-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Lactofen	ND	0.0067 mg/kg	
9/12/23	9/14/23	Linuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Malaoxon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Mandipropamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methamidophos	ND	0.034 mg/kg	
9/12/23	9/14/23	Methidathion	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methiocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methomyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methoxyfenozide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metrafenone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metribuzin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Mevinphos	ND	0.0067 mg/kg	
9/12/23	9/14/23	Monuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Neburon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Norflurazon	ND	0.0067 mg/kg	



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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Novaluron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Omethoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oryzalin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxadixyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxamyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxydemeton-Methyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Penoxsulam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Penthiopyrad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phorate Sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phorate Sulfoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosalone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosmet	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosphamidon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Picoxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Piperonyl Butoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pirimicarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pirimiphos-methyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prallethrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prometon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prometryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propamocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propanil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propargite	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propiconazole	0.017 mg/kg	0.013 mg/kg	
9/12/23	9/14/23	Pyraclostrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyraflufen-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyrethrin	ND	0.034 mg/kg	
9/12/23	9/14/23	Pyridaben	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyridalyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyrimethanil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyroxasulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Quizalofop-p-ethyl	ND	0.0067 mg/kg	

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Apex Laboratories
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 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: FC-I-C
Matrix: soil

PAL Sample ID: P232015-01
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Rotenone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Saflufenacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sethoxydim	ND	0.013 mg/kg	
9/12/23	9/14/23	Siduron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Simazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Simetryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spinetoram	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spinosad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spiromesifen	ND	0.013 mg/kg	
9/12/23	9/14/23	Spirotetramat	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spiroxamine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sulfentrazone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sulfoxaflor	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebuconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebufenozide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebuthiuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbutylazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbutryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiabendazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiacloprid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiamethoxam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiobencarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiodicarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tolfenpyrad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triadimefon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triadimenol	ND	0.013 mg/kg	
9/12/23	9/14/23	Triallate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Trifloxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triflumizole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triticonazole	ND	0.0067 mg/kg	

Surrogate Recovery: 59 %

Surrogate Recovery Range: 36-117

(TPP-d15 used as Surrogate)



Kara Greer, Project Manager

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.

Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C
Matrix: soil

PAL Sample ID: P232015-02
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 8270D (GC-MS/MS)					
9/12/23	9/18/23	2,6-Dichlorobenzamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	a-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Acetochlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Alachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Aldrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ametryn	ND	0.0067 mg/kg	
9/12/23	9/18/23	Aspon	ND	0.0067 mg/kg	
9/12/23	9/18/23	b-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Benfluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bifenthrin	0.0069 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Bolstar	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bromopropylate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Buprofezin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Captan	ND	0.067 mg/kg	
9/12/23	9/18/23	Chlordane	0.011 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Chlorfenapyr	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorfenvinphos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorobenzilate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chloroneb	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpropham	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpyrifos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpyrifos-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	cis-Nonachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Cyfluthrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Cypermethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Dacthal	ND	0.0067 mg/kg	
9/12/23	9/18/23	d-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Deltamethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Demeton	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diazinon	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dichlobenil	ND	0.0067 mg/kg	

Kara Greer
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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C
Matrix: soil

PAL Sample ID: P232015-02
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Dichlorofenthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dichlorvos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diclofop-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dicloran	ND	0.034 mg/kg	
9/12/23	9/18/23	Dicofol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dieldrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dimethenamid	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diphenamid	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diphenylamine	ND	0.0067 mg/kg	
9/12/23	9/18/23	Disulfoton	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dithiopyr	ND	0.0067 mg/kg	
9/12/23	9/18/23	Endosulfan I	ND	0.013 mg/kg	
9/12/23	9/18/23	Endosulfan II	ND	0.013 mg/kg	
9/12/23	9/18/23	Endosulfan sulfate	ND	0.013 mg/kg	
9/12/23	9/18/23	Endrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Endrin ketone	ND	0.0067 mg/kg	
9/12/23	9/18/23	EPN	ND	0.0067 mg/kg	
9/12/23	9/18/23	Esfenvalerate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethalfluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethofumesate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethoprop	ND	0.0067 mg/kg	
9/12/23	9/18/23	Etoxazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Etridiazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenarimol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenitrothion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenoxyprop-ethyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Fenthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenvalerate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fipronil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fluazifop-p-butyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Fludioxonil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fluroxypyr-meptyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Flutolanil	ND	0.0067 mg/kg	

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Apex Laboratories
 6700 SW Sandburg St
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Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C
Matrix: soil

PAL Sample ID: P232015-02
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Fonofos	ND	0.0067 mg/kg	
9/12/23	9/18/23	g-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Heptachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Heptachlor epoxide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Hexachlorobenzene	ND	0.0067 mg/kg	
9/12/23	9/18/23	Kresoxim-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	lambda-Cyhalothrin	ND	0.013 mg/kg	
9/12/23	9/18/23	Leptophos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Malathion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Mefenoxam	ND	0.0067 mg/kg	
9/12/23	9/18/23	Methoxychlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Metolachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	MGK-264	ND	0.0067 mg/kg	
9/12/23	9/18/23	Myclobutanil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Napropamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ovex	ND	0.0067 mg/kg	
9/12/23	9/18/23	Oxadiazon	0.0069 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Oxyfluorfen	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDD	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDE	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDT	ND	0.0067 mg/kg	
9/12/23	9/18/23	Paclobutrazol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Parathion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Parathion-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCA	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCB	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCNB	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pendimethalin	0.014 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Pentachlorothioanisole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Permethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Phorate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Procymidone	ND	0.0067 mg/kg	
9/12/23	9/18/23	Prodiamine	ND	0.0067 mg/kg	



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Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C
Matrix: soil

PAL Sample ID: P232015-02
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Pronamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Propachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pyriproxyfen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Quinoxifen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ronnel	ND	0.0067 mg/kg	
9/12/23	9/18/23	Spirodiclofen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Sulfotep	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tefluthrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Terbufos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tetraconazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tetradifon	ND	0.0067 mg/kg	
9/12/23	9/18/23	Thionazin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tokuthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	trans-Nonachlor	0.010 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Trichloronate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Trifluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Vinclozalin	ND	0.0067 mg/kg	

Surrogate Recovery: 76 %

Surrogate Recovery Range: 34-134

(TPP-d15 used as Surrogate)

Method: Modified EPA 8321B (LC-MS/MS)

9/12/23	9/14/23	3-Hydroxycarbofuran	ND	0.0067 mg/kg
9/12/23	9/14/23	Abamectin	ND	0.0067 mg/kg
9/12/23	9/14/23	Acephate	ND	0.0067 mg/kg
9/12/23	9/14/23	Acetamiprid	ND	0.0067 mg/kg
9/12/23	9/14/23	Acibenzolar-S-methyl	ND	0.013 mg/kg
9/12/23	9/14/23	Afidopyropen	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb Sulfone	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb Sulfoxide	ND	0.0067 mg/kg
9/12/23	9/14/23	Allethrin	ND	0.0067 mg/kg
9/12/23	9/14/23	Ametoctradin	ND	0.0067 mg/kg
9/12/23	9/14/23	Atrazine	ND	0.0067 mg/kg

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Apex Laboratories

 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015

Report Date: September 19, 2023

Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C

Matrix: soil

PAL Sample ID: P232015-02

Sample Date: 8/31/23

Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Azinphos-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Azinphos-methyl	ND	0.013 mg/kg	
9/12/23	9/14/23	Azoxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bendiocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bensulide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bitertanol	ND	0.0067 mg/kg	
9/12/23	9/14/23	Boscalid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bromacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbaryl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbendazim	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbofuran	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carfentrazone-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Chlorantraniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Clethodim	ND	0.013 mg/kg	
9/12/23	9/14/23	Clomazone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Clothianidin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyanazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyantraniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyazofamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyclaniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cycloate	ND	0.013 mg/kg	
9/12/23	9/14/23	Cyflufenamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyflumetofen	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyhalofop-butyl	ND	0.013 mg/kg	
9/12/23	9/14/23	Cyprodinil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyprosulfamide	ND	0.0067 mg/kg	
9/12/23	9/14/23	DCPMU	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diaxonon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Difenoconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diflubenzuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diflufenican	ND	0.0067 mg/kg	
9/12/23	9/14/23	Dimethoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Dimethomorph	ND	0.0067 mg/kg	

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Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C
Matrix: soil

PAL Sample ID: P232015-02
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Dinotefuran	ND	0.0067 mg/kg	
9/12/23	9/14/23	Disulfoton sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	d-Phenothrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Emamectin Benzoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ethion	ND	0.0067 mg/kg	
9/12/23	9/14/23	Etofenprox	ND	0.0067 mg/kg	
9/12/23	9/14/23	Famoxadone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Famphur	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamidone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamiphos sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamiphos sulfoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenazaquin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenbuconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenbutatin oxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenhexamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenobucarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenoxy carb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenpropothrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenpyroximate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flonicamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluazinam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flubendiamide	ND	0.013 mg/kg	
9/12/23	9/14/23	Flufenacet	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flumetsulam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flumioxazin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluometuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluopicolide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluopyram	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluoxastrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flupyradifurone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluridone	0.032 mg/kg	0.0067 mg/kg	



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Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C
Matrix: soil

PAL Sample ID: P232015-02
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Flutianil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flutriafol	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluvalinate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluxapyroxad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fonofos	ND	0.013 mg/kg	
9/12/23	9/14/23	Hexaconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Hexazinone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Hexythiazox	ND	0.0067 mg/kg	
9/12/23	9/14/23	Imazalil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Imidacloprid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Indaziflam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Indoxacarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ipconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Iprodione	ND	0.034 mg/kg	
9/12/23	9/14/23	Isofetamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Isoxaben	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ioxadifen-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Lactofen	ND	0.0067 mg/kg	
9/12/23	9/14/23	Linuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Malaoxon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Mandipropamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methamidophos	ND	0.034 mg/kg	
9/12/23	9/14/23	Methidathion	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methiocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methomyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methoxyfenozide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metrafenone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metribuzin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Mevinphos	ND	0.0067 mg/kg	
9/12/23	9/14/23	Monuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Neburon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Norflurazon	ND	0.0067 mg/kg	



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Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C
Matrix: soil

PAL Sample ID: P232015-02
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Novaluron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Omethoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oryzalin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxadixyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxamyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxydemeton-Methyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Penoxsulam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Penthiopyrad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phorate Sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phorate Sulfoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosalone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosmet	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosphamidon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Picoxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Piperonyl Butoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pirimicarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pirimiphos-methyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prallethrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prometon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prometryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propamocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propanil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propargite	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propiconazole	0.015 mg/kg	0.013 mg/kg	
9/12/23	9/14/23	Pyraclostrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyraflufen-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyrethrin	ND	0.034 mg/kg	
9/12/23	9/14/23	Pyridaben	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyridalyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyrimethanil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyroxasulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Quizalofop-p-ethyl	ND	0.0067 mg/kg	



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Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: IP-C-C
Matrix: soil

PAL Sample ID: P232015-02
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Rotenone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Saflufenacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sethoxydim	ND	0.013 mg/kg	
9/12/23	9/14/23	Siduron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Simazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Simetryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spinetoram	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spinosad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spiromesifen	ND	0.013 mg/kg	
9/12/23	9/14/23	Spirotetramat	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spiroxamine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sulfentrazone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sulfoxaflor	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebuconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebufenozide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebuthiuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbutylazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbutryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiabendazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiacloprid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiamethoxam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiobencarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiodicarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tolfenpyrad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triadimefon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triadimenol	ND	0.013 mg/kg	
9/12/23	9/14/23	Triallate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Trifloxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triflumizole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triticonazole	ND	0.0067 mg/kg	

Surrogate Recovery: 61 %

Surrogate Recovery Range: 36-117

(TPP-d15 used as Surrogate)



Kara Greer, Project Manager

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.

Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 8270D (GC-MS/MS)					
9/12/23	9/18/23	2,6-Dichlorobenzamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	a-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Acetochlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Alachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Aldrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ametryn	ND	0.0067 mg/kg	
9/12/23	9/18/23	Aspon	ND	0.0067 mg/kg	
9/12/23	9/18/23	b-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Benfluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bifenthrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bolstar	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bromopropylate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Buprofezin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Captan	ND	0.067 mg/kg	
9/12/23	9/18/23	Chlordane	0.11 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Chlorfenapyr	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlорfenvinphos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorobenzilate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chloroneb	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpropham	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpyrifos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpyrifos-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	cis-Nonachlor	0.021 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Cyfluthrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Cypermethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Dacthal	ND	0.0067 mg/kg	
9/12/23	9/18/23	d-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Deltamethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Demeton	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diazinon	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dichlobenil	ND	0.0067 mg/kg	

Kara Greer
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 Quality Standard.

Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Dichlorofenthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dichlorvos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diclofop-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dicloran	ND	0.034 mg/kg	
9/12/23	9/18/23	Dicofol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dieldrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dimethenamid	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diphenamid	0.095 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Diphenylamine	ND	0.0067 mg/kg	
9/12/23	9/18/23	Disulfoton	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dithiopyr	ND	0.0067 mg/kg	
9/12/23	9/18/23	Endosulfan I	ND	0.013 mg/kg	
9/12/23	9/18/23	Endosulfan II	ND	0.013 mg/kg	
9/12/23	9/18/23	Endosulfan sulfate	ND	0.013 mg/kg	
9/12/23	9/18/23	Endrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Endrin ketone	ND	0.0067 mg/kg	
9/12/23	9/18/23	EPN	ND	0.0067 mg/kg	
9/12/23	9/18/23	Esfenvalerate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethalfluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethofumesate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethoprop	ND	0.0067 mg/kg	
9/12/23	9/18/23	Etoxazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Etridiazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenarimol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenitrothion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenoxyprop-ethyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Fenthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenvalerate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fipronil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fluazifop-p-butyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Fludioxonil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fluroxypyr-meptyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Flutolanil	ND	0.0067 mg/kg	

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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Fonofos	ND	0.0067 mg/kg	
9/12/23	9/18/23	g-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Heptachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Heptachlor epoxide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Hexachlorobenzene	ND	0.0067 mg/kg	
9/12/23	9/18/23	Kresoxim-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	lambda-Cyhalothrin	ND	0.013 mg/kg	
9/12/23	9/18/23	Leptophos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Malathion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Mefenoxam	ND	0.0067 mg/kg	
9/12/23	9/18/23	Methoxychlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Metolachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	MGK-264	ND	0.0067 mg/kg	
9/12/23	9/18/23	Myclobutanil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Napropamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ovex	ND	0.0067 mg/kg	
9/12/23	9/18/23	Oxadiazon	0.011 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Oxyfluorfen	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDD	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDE	0.0089 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDT	ND	0.0067 mg/kg	
9/12/23	9/18/23	Paclobutrazol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Parathion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Parathion-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCA	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCB	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCNB	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pendimethalin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pentachlorothioanisole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Permethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Phorate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Procymidone	ND	0.0067 mg/kg	
9/12/23	9/18/23	Prodiamine	ND	0.0067 mg/kg	

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Apex Laboratories
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Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Pronamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Propachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pyriproxyfen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Quinoxifen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ronnel	ND	0.0067 mg/kg	
9/12/23	9/18/23	Spirodiclofen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Sulfotep	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tefluthrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Terbufos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tetraconazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tetradifon	ND	0.0067 mg/kg	
9/12/23	9/18/23	Thionazin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tokuthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	trans-Nonachlor	0.042 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Trichloronate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Trifluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Vinclozalin	ND	0.0067 mg/kg	

Surrogate Recovery: 78 %

Surrogate Recovery Range: 34-134

(TPP-d15 used as Surrogate)

Method: Modified EPA 8321B (LC-MS/MS)

9/12/23	9/14/23	3-Hydroxycarbofuran	ND	0.0067 mg/kg
9/12/23	9/14/23	Abamectin	ND	0.0067 mg/kg
9/12/23	9/14/23	Acephate	ND	0.0067 mg/kg
9/12/23	9/14/23	Acetamiprid	ND	0.0067 mg/kg
9/12/23	9/14/23	Acibenzolar-S-methyl	ND	0.013 mg/kg
9/12/23	9/14/23	Afidopyropen	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb Sulfone	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb Sulfoxide	ND	0.0067 mg/kg
9/12/23	9/14/23	Allethrin	ND	0.0067 mg/kg
9/12/23	9/14/23	Ametoctradin	ND	0.0067 mg/kg
9/12/23	9/14/23	Atrazine	ND	0.0067 mg/kg

Kara Greer
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Quality Standard.

Apex Laboratories
6700 SW Sandburg St
Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Azinphos-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Azinphos-methyl	ND	0.013 mg/kg	
9/12/23	9/14/23	Azoxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bendiocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bensulide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bitertanol	ND	0.0067 mg/kg	
9/12/23	9/14/23	Boscalid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bromacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbaryl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbendazim	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbofuran	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carfentrazone-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Chlorantraniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Clethodim	ND	0.013 mg/kg	
9/12/23	9/14/23	Clomazone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Clothianidin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyanazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyantraniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyazofamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyclaniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cycloate	ND	0.013 mg/kg	
9/12/23	9/14/23	Cyflufenamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyflumetofen	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyhalofop-butyl	ND	0.013 mg/kg	
9/12/23	9/14/23	Cyprodinil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyprosulfamide	ND	0.0067 mg/kg	
9/12/23	9/14/23	DCPMU	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diaxonon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Difenoconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diflubenzuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diflufenican	ND	0.0067 mg/kg	
9/12/23	9/14/23	Dimethoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Dimethomorph	ND	0.0067 mg/kg	

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Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Dinotefuran	ND	0.0067 mg/kg	
9/12/23	9/14/23	Disulfoton sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	d-Phenothrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Emamectin Benzoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ethion	ND	0.0067 mg/kg	
9/12/23	9/14/23	Etofenprox	ND	0.0067 mg/kg	
9/12/23	9/14/23	Famoxadone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Famphur	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamidone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamiphos sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamiphos sulfoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenazaquin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenbuconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenbutatin oxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenhexamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenobucarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenoxy carb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenpropothrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenpyroximate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flonicamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluazinam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flubendiamide	ND	0.013 mg/kg	
9/12/23	9/14/23	Flufenacet	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flumetsulam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flumioxazin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluometuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluopicolide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluopyram	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluoxastrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flupyradifurone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluridone	0.16 mg/kg	0.0067 mg/kg	

Kara Greer
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Apex Laboratories
6700 SW Sandburg St
Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Flutianil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flutriafol	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluvalinate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluxapyroxad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fonofos	ND	0.013 mg/kg	
9/12/23	9/14/23	Hexaconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Hexazinone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Hexythiazox	ND	0.0067 mg/kg	
9/12/23	9/14/23	Imazalil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Imidacloprid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Indaziflam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Indoxacarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ipconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Iprodione	ND	0.034 mg/kg	
9/12/23	9/14/23	Isofetamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Isoxaben	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ioxadifen-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Lactofen	ND	0.0067 mg/kg	
9/12/23	9/14/23	Linuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Malaoxon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Mandipropamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methamidophos	ND	0.034 mg/kg	
9/12/23	9/14/23	Methidathion	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methiocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methomyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methoxyfenozide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metrafenone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metribuzin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Mevinphos	ND	0.0067 mg/kg	
9/12/23	9/14/23	Monuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Neburon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Norflurazon	ND	0.0067 mg/kg	



Kara Greer, Project Manager

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.

Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Novaluron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Omethoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oryzalin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxadixyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxamyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxydemeton-Methyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Penoxsulam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Penthiopyrad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phorate Sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phorate Sulfoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosalone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosmet	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosphamidon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Picoxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Piperonyl Butoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pirimicarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pirimiphos-methyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prallethrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prometon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prometryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propamocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propanil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propargite	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propiconazole	ND	0.013 mg/kg	
9/12/23	9/14/23	Pyraclostrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyraflufen-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyrethrin	ND	0.034 mg/kg	
9/12/23	9/14/23	Pyridaben	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyridalyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyrimethanil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyroxasulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Quizalofop-p-ethyl	ND	0.0067 mg/kg	

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Apex Laboratories
6700 SW Sandburg St
Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-I-C
Matrix: soil

PAL Sample ID: P232015-03
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Rotenone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Saflufenacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sethoxydim	ND	0.013 mg/kg	
9/12/23	9/14/23	Siduron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Simazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Simetryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spinetoram	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spinosad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spiromesifen	ND	0.013 mg/kg	
9/12/23	9/14/23	Spirotetramat	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spiroxamine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sulfentrazone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sulfoxaflor	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebuconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebufenozide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebuthiuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbutylazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbutryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiabendazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiacloprid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiamethoxam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiobencarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiodicarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tolfenpyrad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triadimefon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triadimenol	ND	0.013 mg/kg	
9/12/23	9/14/23	Triallate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Trifloxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triflumizole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triticonazole	ND	0.0067 mg/kg	

Surrogate Recovery: 60 %

Surrogate Recovery Range: 36-117

(TPP-d15 used as Surrogate)



Kara Greer, Project Manager

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.

Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C
Matrix: soil

PAL Sample ID: P232015-04
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 8270D (GC-MS/MS)					
9/12/23	9/18/23	2,6-Dichlorobenzamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	a-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Acetochlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Alachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Aldrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ametryn	ND	0.0067 mg/kg	
9/12/23	9/18/23	Aspon	ND	0.0067 mg/kg	
9/12/23	9/18/23	b-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Benfluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bifenthrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bolstar	ND	0.0067 mg/kg	
9/12/23	9/18/23	Bromopropylate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Buprofezin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Captan	ND	0.067 mg/kg	
9/12/23	9/18/23	Chlordane	0.030 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Chlorfenapyr	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlорfenvinphos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorobenzilate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chloroneb	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpropham	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpyrifos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Chlorpyrifos-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	cis-Nonachlor	0.0081 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Cyfluthrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Cypermethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Dacthal	ND	0.0067 mg/kg	
9/12/23	9/18/23	d-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Deltamethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Demeton	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diazinon	0.0072 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Dichlobenil	ND	0.0067 mg/kg	

Kara Greer
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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C
Matrix: soil

PAL Sample ID: P232015-04
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Dichlorofenthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dichlorvos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diclofop-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dicloran	ND	0.034 mg/kg	
9/12/23	9/18/23	Dicofol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dieldrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dimethenamid	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diphenamid	ND	0.0067 mg/kg	
9/12/23	9/18/23	Diphenylamine	0.0077 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Disulfoton	ND	0.0067 mg/kg	
9/12/23	9/18/23	Dithiopyr	ND	0.0067 mg/kg	
9/12/23	9/18/23	Endosulfan I	ND	0.013 mg/kg	
9/12/23	9/18/23	Endosulfan II	ND	0.013 mg/kg	
9/12/23	9/18/23	Endosulfan sulfate	ND	0.013 mg/kg	
9/12/23	9/18/23	Endrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Endrin ketone	ND	0.0067 mg/kg	
9/12/23	9/18/23	EPN	ND	0.0067 mg/kg	
9/12/23	9/18/23	Esfenvalerate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethalfluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethofumesate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ethoprop	ND	0.0067 mg/kg	
9/12/23	9/18/23	Etoxazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Etridiazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenarimol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenitrothion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenoxyprop-ethyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Fenthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fenvalerate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fipronil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fluazifop-p-butyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Fludioxonil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Fluroxypyr-meptyl	ND	0.013 mg/kg	
9/12/23	9/18/23	Flutolanil	ND	0.0067 mg/kg	



Kara Greer, Project Manager

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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C
Matrix: soil

PAL Sample ID: P232015-04
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Fonofos	ND	0.0067 mg/kg	
9/12/23	9/18/23	g-BHC	ND	0.0067 mg/kg	
9/12/23	9/18/23	Heptachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Heptachlor epoxide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Hexachlorobenzene	ND	0.0067 mg/kg	
9/12/23	9/18/23	Kresoxim-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	lambda-Cyhalothrin	ND	0.013 mg/kg	
9/12/23	9/18/23	Leptophos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Malathion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Mefenoxam	ND	0.0067 mg/kg	
9/12/23	9/18/23	Methoxychlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Metolachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	MGK-264	ND	0.0067 mg/kg	
9/12/23	9/18/23	Myclobutanil	ND	0.0067 mg/kg	
9/12/23	9/18/23	Napropamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ovex	ND	0.0067 mg/kg	
9/12/23	9/18/23	Oxadiazon	ND	0.0067 mg/kg	
9/12/23	9/18/23	Oxyfluorfen	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDD	ND	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDE	0.0076 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	p,p'-DDT	ND	0.0067 mg/kg	
9/12/23	9/18/23	Paclobutrazol	ND	0.0067 mg/kg	
9/12/23	9/18/23	Parathion	ND	0.0067 mg/kg	
9/12/23	9/18/23	Parathion-methyl	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCA	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCB	ND	0.0067 mg/kg	
9/12/23	9/18/23	PCNB	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pendimethalin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pentachlorothioanisole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Permethrin	ND	0.034 mg/kg	
9/12/23	9/18/23	Phorate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Procymidone	ND	0.0067 mg/kg	
9/12/23	9/18/23	Prodiamine	ND	0.0067 mg/kg	

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Apex Laboratories
 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C
Matrix: soil

PAL Sample ID: P232015-04
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/18/23	Pronamide	ND	0.0067 mg/kg	
9/12/23	9/18/23	Propachlor	ND	0.0067 mg/kg	
9/12/23	9/18/23	Pyriproxyfen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Quinoxifen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Ronnel	ND	0.0067 mg/kg	
9/12/23	9/18/23	Spirodiclofen	ND	0.0067 mg/kg	
9/12/23	9/18/23	Sulfotep	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tefluthrin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Terbufos	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tetraconazole	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tetradifon	ND	0.0067 mg/kg	
9/12/23	9/18/23	Thionazin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Tokuthion	ND	0.0067 mg/kg	
9/12/23	9/18/23	trans-Nonachlor	0.015 mg/kg	0.0067 mg/kg	
9/12/23	9/18/23	Trichloronate	ND	0.0067 mg/kg	
9/12/23	9/18/23	Trifluralin	ND	0.0067 mg/kg	
9/12/23	9/18/23	Vinclozalin	ND	0.0067 mg/kg	

Surrogate Recovery: 89 %

Surrogate Recovery Range: 34-134

(TPP-d15 used as Surrogate)

Method: Modified EPA 8321B (LC-MS/MS)

9/12/23	9/14/23	3-Hydroxycarbofuran	ND	0.0067 mg/kg
9/12/23	9/14/23	Abamectin	ND	0.0067 mg/kg
9/12/23	9/14/23	Acephate	ND	0.0067 mg/kg
9/12/23	9/14/23	Acetamiprid	ND	0.0067 mg/kg
9/12/23	9/14/23	Acibenzolar-S-methyl	ND	0.013 mg/kg
9/12/23	9/14/23	Afidopyropen	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb Sulfone	ND	0.0067 mg/kg
9/12/23	9/14/23	Aldicarb Sulfoxide	ND	0.0067 mg/kg
9/12/23	9/14/23	Allethrin	ND	0.0067 mg/kg
9/12/23	9/14/23	Ametoctradin	ND	0.0067 mg/kg
9/12/23	9/14/23	Atrazine	ND	0.0067 mg/kg

Kara Greer
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 Quality Standard.

Apex Laboratories

 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015

Report Date: September 19, 2023

Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C

Matrix: soil

PAL Sample ID: P232015-04

Sample Date: 8/31/23

Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Azinphos-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Azinphos-methyl	ND	0.013 mg/kg	
9/12/23	9/14/23	Azoxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bendiocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bensulide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bitertanol	ND	0.0067 mg/kg	
9/12/23	9/14/23	Boscalid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Bromacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbaryl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbendazim	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carbofuran	ND	0.0067 mg/kg	
9/12/23	9/14/23	Carfentrazone-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Chlorantraniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Clethodim	ND	0.013 mg/kg	
9/12/23	9/14/23	Clomazone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Clothianidin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyanazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyantraniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyazofamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyclaniliprole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cycloate	ND	0.013 mg/kg	
9/12/23	9/14/23	Cyflufenamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyflumetofen	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyhalofop-butyl	ND	0.013 mg/kg	
9/12/23	9/14/23	Cyprodinil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Cyprosulfamide	ND	0.0067 mg/kg	
9/12/23	9/14/23	DCPMU	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diaxonon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Difenoconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diflubenzuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diflufenican	ND	0.0067 mg/kg	
9/12/23	9/14/23	Dimethoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Dimethomorph	ND	0.0067 mg/kg	

Kara Greer
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Apex Laboratories
6700 SW Sandburg St
Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C
Matrix: soil

PAL Sample ID: P232015-04
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Dinotefuran	ND	0.0067 mg/kg	
9/12/23	9/14/23	Disulfoton sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Diuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	d-Phenothrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Emamectin Benzoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ethion	ND	0.0067 mg/kg	
9/12/23	9/14/23	Etofenprox	ND	0.0067 mg/kg	
9/12/23	9/14/23	Famoxadone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Famphur	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamidone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamiphos sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenamiphos sulfoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenazaquin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenbuconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenbutatin oxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenhexamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenobucarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenoxy carb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenpropothrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenpyroximate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fenuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flonicamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluazinam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flubendiamide	ND	0.013 mg/kg	
9/12/23	9/14/23	Flufenacet	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flumetsulam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flumioxazin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluometuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluopicolide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluopyram	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluoxastrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flupyradifurone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluridone	ND	0.0067 mg/kg	



Kara Greer, Project Manager

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Report Date: September 19, 2023
Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C
Matrix: soil

PAL Sample ID: P232015-04
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Flutianil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Flutriafol	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluvalinate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fluxapyroxad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Fonofos	ND	0.013 mg/kg	
9/12/23	9/14/23	Hexaconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Hexazinone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Hexythiazox	ND	0.0067 mg/kg	
9/12/23	9/14/23	Imazalil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Imidacloprid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Indaziflam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Indoxacarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ipconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Iprodione	ND	0.034 mg/kg	
9/12/23	9/14/23	Isofetamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Isoxaben	ND	0.0067 mg/kg	
9/12/23	9/14/23	Ioxidifen-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Lactofen	ND	0.0067 mg/kg	
9/12/23	9/14/23	Linuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Malaoxon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Mandipropamid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methamidophos	ND	0.034 mg/kg	
9/12/23	9/14/23	Methidathion	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methiocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methomyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Methoxyfenozide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metrafenone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Metribuzin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Mevinphos	ND	0.0067 mg/kg	
9/12/23	9/14/23	Monuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Neburon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Norflurazon	ND	0.0067 mg/kg	

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Report Number: P232015
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Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C
Matrix: soil

PAL Sample ID: P232015-04
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Novaluron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Omethoate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oryzalin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxadixyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxamyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Oxydemeton-Methyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Penoxsulam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Penthiopyrad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phorate Sulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phorate Sulfoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosalone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosmet	ND	0.0067 mg/kg	
9/12/23	9/14/23	Phosphamidon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Picoxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Piperonyl Butoxide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pirimicarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pirimiphos-methyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prallethrin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prometon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Prometryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propamocarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propanil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propargite	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Propiconazole	ND	0.013 mg/kg	
9/12/23	9/14/23	Pyraclostrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyraflufen-ethyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyrethrin	ND	0.034 mg/kg	
9/12/23	9/14/23	Pyridaben	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyridalyl	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyrimethanil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Pyroxasulfone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Quizalofop-p-ethyl	ND	0.0067 mg/kg	



Kara Greer, Project Manager

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Client Project ID: A3I0713

Analytical Report

Client Sample ID: WC-0-C
Matrix: soil

PAL Sample ID: P232015-04
Sample Date: 8/31/23
Received Date: 9/5/23

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
9/12/23	9/14/23	Rotenone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Saflufenacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sethoxydim	ND	0.013 mg/kg	
9/12/23	9/14/23	Siduron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Simazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Simetryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spinetoram	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spinosad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spiromesifen	ND	0.013 mg/kg	
9/12/23	9/14/23	Spirotetramat	ND	0.0067 mg/kg	
9/12/23	9/14/23	Spiroxamine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sulfentrazone	ND	0.0067 mg/kg	
9/12/23	9/14/23	Sulfoxaflor	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebuconazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebufenozide	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tebuthiuron	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbacil	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbutylazine	ND	0.0067 mg/kg	
9/12/23	9/14/23	Terbutryn	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiabendazole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiacloprid	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiamethoxam	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiobencarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Thiodicarb	ND	0.0067 mg/kg	
9/12/23	9/14/23	Tolfenpyrad	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triadimefon	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triadimenol	ND	0.013 mg/kg	
9/12/23	9/14/23	Triallate	ND	0.0067 mg/kg	
9/12/23	9/14/23	Trifloxystrobin	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triflumizole	ND	0.0067 mg/kg	
9/12/23	9/14/23	Triticonazole	ND	0.0067 mg/kg	

Surrogate Recovery: 59 %

Surrogate Recovery Range: 36-117

(TPP-d15 used as Surrogate)



Kara Greer, Project Manager

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Apex Laboratories

 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015

Report Date: September 19, 2023

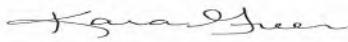
Client Project ID: A3I0713

Quality Assurance

Method Blank Data
Matrix: soil

Extraction	Analysis	Batch QC	Analyte	% Recovery	Expected % Recovery	Notes
Date	Date	Sample #				
9/12/23	9/13/23	23I1202-BLK1	2,6-Dichlorobenzamide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	3-Hydroxycarbofuran	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Abamectin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	a-BHC	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Acephate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Acetamiprid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Acetochlor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Acibenzolar-S-methyl	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Afidopyropen	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Alachlor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Aldicarb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Aldicarb Sulfone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Aldicarb Sulfoxide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Aldrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Allethrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Ametoctradin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Ametryn	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Aspon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Atrazine	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Azinphos-ethyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Azinphos-methyl	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Azoxystrobin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	b-BHC	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Bendiocarb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Benfluralin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Bensulide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Bifenthrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Bitertanol	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Bolstar	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Boscalid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Bromacil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Bromopropylate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Buprofezin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Captan	Not Detected	< 0.067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Carbaryl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Carbendazim	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Carbofuran	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Carfentrazone-ethyl	Not Detected	< 0.0067 mg/kg	

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Apex Laboratories

6700 SW Sandburg St
Tigard, OR 97223

Method Blank Data
Matrix: soil

Report Number: P232015

Report Date: September 19, 2023

Client Project ID: A3I0713

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
9/12/23	9/14/23	23I1202-BLK1	Chlorantraniliprole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Chlordane	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Chlorfenapyr	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Chlorfenvinphos	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Chlorobenzilate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Chloroneb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Chlorpropham	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Chlorpyrifos	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Chlorpyrifos-methyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	cis-Nonachlor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Clethodim	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Clomazone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Clothianidin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyanazine	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyantraniliprole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyazofamid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyclaniliprole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cycloate	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyflufenamid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyflumetofen	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Cyfluthrin	Not Detected	< 0.034 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyhalofop-butyl	Not Detected	< 0.013 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Cypermethrin	Not Detected	< 0.034 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyprodinil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Cyprosulfamide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dacthal	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	d-BHC	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	DCPMU	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Deltamethrin	Not Detected	< 0.034 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Demeton	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Diazinon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Diazoxon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dichlobenil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dichlorfenthion	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dichlorvos	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Diclofop-methyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dicloran	Not Detected	< 0.034 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dicofol	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dieldrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Difenoconazole	Not Detected	< 0.0067 mg/kg	

Kara Greer
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Apex Laboratories

6700 SW Sandburg St
Tigard, OR 97223

Method Blank Data
Matrix: soil

Report Number: P232015

Report Date: September 19, 2023

Client Project ID: A3I0713

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
9/12/23	9/14/23	23I1202-BLK1	Diflubenzuron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Diflufenican	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dimethenamid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Dimethoate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Dimethomorph	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Dinotefuran	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Diphenamid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Diphenylamine	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Disulfoton	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Disulfoton sulfone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Dithiopyr	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Diuron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	d-Phenothrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Emamectin Benzoate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Endosulfan I	Not Detected	< 0.013 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Endosulfan II	Not Detected	< 0.013 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Endosulfan sulfate	Not Detected	< 0.013 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Endrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Endrin ketone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	EPN	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Esfenvalerate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Ethalfluralin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Ethion	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Ethofumesate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Ethoprop	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Etofenprox	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Etoxazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Etridiazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Famoxadone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Famphur	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenamidone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenamiphos sulfone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenamiphos sulfoxide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fenarimol	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenazaquin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenbuconazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenbutatin oxide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenhexamid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fenitrothion	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenobucarb	Not Detected	< 0.0067 mg/kg	

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.


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 6700 SW Sandburg St
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Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
9/12/23	9/13/23	23I1202-BLK1	Fenoxyprop-ethyl	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenoxy carb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenpropathrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenpyroximate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fenthion	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fenuron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fenvalerate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fipronil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Flonicamid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fluazifop-p-butyl	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fluazinam	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Flubendiamide	Not Detected	< 0.013 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fludioxonil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Flufenacet	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Flumetsulam	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Flumioxazin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fluometuron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fluopicolide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fluopyram	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fluoxastrobin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Flupyradifurone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fluridone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fluroxypyr-meptyl	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Flutianil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Flutolanil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Flutriafol	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fluvalinate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fluxapyroxad	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Fonofos	Not Detected	< 0.013 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Fonofos	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	g-BHC	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Heptachlor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Heptachlor epoxide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Hexachlorobenzene	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Hexaconazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Hexazinone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Hexythiazox	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Imazalil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Imidacloprid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Indaziflam	Not Detected	< 0.0067 mg/kg	

Kara Greer
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Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
9/12/23	9/14/23	23I1202-BLK1	Indoxacarb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Ipconazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Iprodione	Not Detected	< 0.034 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Isofetamid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Isoxaben	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Isoxadifen-ethyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Kresoxim-methyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Lactofen	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	lambda-Cyhalothrin	Not Detected	< 0.013 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Leptophos	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Linuron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Malaoxon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Malathion	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Mandipropamid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Mefenoxam	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Metconazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Methamidophos	Not Detected	< 0.034 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Methidathion	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Methiocarb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Methomyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Methoxychlor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Methoxyfenozide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Metolachlor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Metrafenone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Metribuzin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Mevinphos	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	MGK-264	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Monuron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Myclobutanil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Napropamide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Neburon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Norflurazon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Novaluron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Omethoate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Oryzalin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Ovex	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Oxadiazon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Oxadixyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Oxamyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Oxydemeton-Methyl	Not Detected	< 0.0067 mg/kg	

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Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
9/12/23	9/13/23	23I1202-BLK1	Oxyfluorfen	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	p,p'-DDD	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	p,p'-DDE	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	p,p'-DDT	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Paclbutrazol	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Parathion	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Parathion-methyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	PCA	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	PCB	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	PCNB	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Pendimethalin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Penoxsulam	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Pentachlorothioanisole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Penthiopyrad	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Permethrin	Not Detected	< 0.034 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Phorate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Phorate Sulfone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Phorate Sulfoxide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Phosalone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Phosmet	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Phosphamidon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Picoxystrobin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Piperonyl Butoxide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Pirimicarb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Pirimiphos-methyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Prallethrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Procymidone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Prodiamine	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Prometon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Prometryn	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Pronamide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Propachlor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Propamocarb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Propanil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Propargite	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Propazine	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Propiconazole	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Pyraclostrobin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Pyraflufen-ethyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Pyrethrin	Not Detected	< 0.034 mg/kg	

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Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
9/12/23	9/14/23	23I1202-BLK1	Pyridaben	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Pyridalyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Pyrimethanil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Pyriproxyfen	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Pyroxasulfone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Quinoxifen	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Quizalofop-p-ethyl	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Ronnel	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Rotenone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Saflufenacil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Sethoxydim	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Siduron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Simazine	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Simetryn	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Spinetoram	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Spinosad	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Spirodiclofen	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Spiromesifen	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Spirotetramat	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Spiroxamine	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Sulfentrazone	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Sulfotep	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Sulfoxaflor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Tebuconazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Tebufenozide	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Tebuthiuron	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Tefluthrin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Terbacil	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Terbufos	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Terbutylazine	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Terbutryn	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Tetraconazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Tetradifon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Thiabendazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Thiacloprid	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Thiamethoxam	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Thiobencarb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Thiodicarb	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Thionazin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Tokuthion	Not Detected	< 0.0067 mg/kg	

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.


Apex Laboratories

 6700 SW Sandburg St
 Tigard, OR 97223

Method Blank Data
Matrix: soil

Report Number: P232015

Report Date: September 19, 2023

Client Project ID: A3I0713

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
9/12/23	9/14/23	23I1202-BLK1	Tolfenpyrad	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	trans-Nonachlor	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Triadimefon	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Triadimenol	Not Detected	< 0.013 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Triallate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Trichloronate	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Trifloxystrobin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Triflumizole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Trifluralin	Not Detected	< 0.0067 mg/kg	
9/12/23	9/14/23	23I1202-BLK1	Triticonazole	Not Detected	< 0.0067 mg/kg	
9/12/23	9/13/23	23I1202-BLK1	Vinclozalin	Not Detected	< 0.0067 mg/kg	



Kara Greer, Project Manager

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Apex Laboratories

 6700 SW Sandburg St
 Tigard, OR 97223

Report Number: P232015

Report Date: September 19, 2023

Client Project ID: A3I0713

Matrix Spike Data
Matrix: soil

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
9/12/23	9/14/23	23I1202-MS1	Azoxystrobin	78	53-103	
9/12/23	9/14/23	23I1202-MSD1	Azoxystrobin	87	53-103	
9/12/23	9/13/23	23I1202-MS1	Bifenthrin	101	50-151	
9/12/23	9/13/23	23I1202-MSD1	Bifenthrin	132	50-151	
9/12/23	9/14/23	23I1202-MS1	Boscalid	83	52-120	
9/12/23	9/14/23	23I1202-MSD1	Boscalid	91	52-120	
9/12/23	9/14/23	23I1202-MS1	Bromacil	85	64-106	
9/12/23	9/14/23	23I1202-MSD1	Bromacil	90	64-106	
9/12/23	9/13/23	23I1202-MS1	Chlorpyrifos	106	45-145	
9/12/23	9/13/23	23I1202-MSD1	Chlorpyrifos	128	45-145	
9/12/23	9/13/23	23I1202-MS1	Dimethenamid	85	46-142	
9/12/23	9/13/23	23I1202-MSD1	Dimethenamid	110	46-142	
9/12/23	9/13/23	23I1202-MS1	Dithiopyr	97	53-139	
9/12/23	9/13/23	23I1202-MSD1	Dithiopyr	126	53-139	
9/12/23	9/14/23	23I1202-MS1	Diuron	88	59-98	
9/12/23	9/14/23	23I1202-MSD1	Diuron	94	59-98	
9/12/23	9/13/23	23I1202-MS1	Endosulfan I	67	58-126	
9/12/23	9/13/23	23I1202-MSD1	Endosulfan I	89	58-126	
9/12/23	9/14/23	23I1202-MS1	Flumioxazin	66	44-121	
9/12/23	9/14/23	23I1202-MSD1	Flumioxazin	79	44-121	
9/12/23	9/14/23	23I1202-MS1	Imidacloprid	90	56-109	
9/12/23	9/14/23	23I1202-MSD1	Imidacloprid	98	56-109	
9/12/23	9/14/23	23I1202-MS1	Indaziflam	72	49-105	
9/12/23	9/14/23	23I1202-MSD1	Indaziflam	82	49-105	
9/12/23	9/14/23	23I1202-MS1	Iprodione	135	60-116	
9/12/23	9/14/23	23I1202-MSD1	Iprodione	127	60-116	
9/12/23	9/14/23	23I1202-MS1	Isoxaben	80	58-108	
9/12/23	9/14/23	23I1202-MSD1	Isoxaben	90	58-108	
9/12/23	9/13/23	23I1202-MS1	Myclobutanil	80	42-149	
9/12/23	9/13/23	23I1202-MSD1	Myclobutanil	101	42-149	
9/12/23	9/14/23	23I1202-MS1	Oryzalin	68	34-135	
9/12/23	9/14/23	23I1202-MSD1	Oryzalin	76	34-135	
9/12/23	9/13/23	23I1202-MS1	Pendimethalin	131	45-157	
9/12/23	9/13/23	23I1202-MSD1	Pendimethalin	165	45-157	R1
9/12/23	9/13/23	23I1202-MS1	Prodiamine	115	35-150	
9/12/23	9/13/23	23I1202-MSD1	Prodiamine	152	35-150	R1
9/12/23	9/14/23	23I1202-MS1	Pyraclostrobin	82	60-114	
9/12/23	9/14/23	23I1202-MSD1	Pyraclostrobin	90	60-114	
9/12/23	9/13/23	23I1202-MS1	Pyriproxyfen	104	48-158	
9/12/23	9/13/23	23I1202-MSD1	Pyriproxyfen	125	48-158	
9/12/23	9/14/23	23I1202-MS1	Thiabendazole	55	14-104	
9/12/23	9/14/23	23I1202-MSD1	Thiabendazole	59	14-104	
9/12/23	9/13/23	23I1202-MS1	Trifluralin	108	49-136	
9/12/23	9/13/23	23I1202-MSD1	Trifluralin	134	49-136	

Kara Greer
 This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.



PAL PACIFIC AGRICULTURAL
LABORATORY

PACAGLACOM

503.626.7943

21830 S.W. Alexander Ln
Sherwood, OR 97140

Apex Laboratories
6700 SW Sandburg St
Tigard, OR 97223

Report Number: P232015
Report Date: September 19, 2023
Client Project ID: A3I0713

Project Notes

Notes	Definition
R1	Spike recovery is outside of control limits.

A handwritten signature in black ink that reads "Kara Greer".

Kara Greer, Project Manager

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Quality Standard.*