



Tacoma-Pierce County Health Department  
Attn: Keith Johnston, RS  
Environmental Health Specialist Supervisor -  
Waste Management  
3629 South D Street  
Tacoma, WA 98418-6813

**Your Reference**  
Facility Name: Former  
Nalley's Fine Foods/  
Bird's Eye Site,  
Permit #RO0001775

**Our Reference**  
518300040-001

Mott MacDonald  
1601 5th Avenue  
Suite 800  
Seattle  
WA 98101  
United States of America

T +1 (206) 838 2886  
mottmac.com

## **Former Birds Eye Foods Tacoma, Third Quarter 2022 Groundwater Monitoring Event Summary Report**

November 22, 2022

Dear Keith:

This letter report summarizes groundwater monitoring performed in the third quarter 2022 (2022 Q3) at the former Birds Eye Foods facility located at 3403 South 35th Street, Tacoma, Washington. The 2022 Q3 sampling event was performed, and this summary report was prepared, to satisfy semi-annual groundwater monitoring required by the Tacoma Pierce County Health Department (TPCHD).

Petroleum-related contamination in soil was identified in a portion of the facility, referred to as the "Boiler Room Site" (Site), which was the subject of a 2011 Remedial Investigation/Feasibility Study (2011 RI/FS) (Pacific Groundwater Group 2011). The preferred remedial alternative identified in the 2011 RI/FS includes an environmental restrictive covenant and long-term groundwater quality monitoring. In 2013 the Washington State Department of Ecology (Ecology) determined that no further remedial action is necessary to clean up contamination at the Boiler Room Site, dependent on the continued performance and effectiveness of the post-cleanup controls and groundwater quality monitoring. The 2013 no further action was issued to Pinnacle Foods LLC, the property owner at that time. Subsequently the property was sold although Pinnacle Foods maintained responsibility for groundwater quality monitoring. Conagra Brands acquired Pinnacle Foods in 2018.

The Boiler Room Site is jointly regulated by TPCHD and Ecology. TPCHD regulate the Boiler Room Site as an open Underground Storage Tank (UST) site. Due to the presence of contaminated soil below the water table, TPCHD requires ongoing semi-annual groundwater monitoring to assess the efficacy of remedial actions and to monitor for potential contamination migration (Marek, undated; received June 13, 2013). The semi-annual monitoring events are performed in the spring and fall and involve sampling from two (2) shallow and deep well pairs generally located upgradient and downgradient of contaminated soil. In the absence of evidence of contaminant migration, TPCHD will not require remedial action other than the

preferred *Soil Containment and Natural Source Zone Depletion* remedy identified in the 2011 RI/FS (Marek, undated; received June 13, 2013).

The semi-annual monitoring program required by TPCHD is in addition to, and does not alter, the long-term groundwater monitoring program (Pacific Groundwater Group 2012) required by the *Soil Containment and Natural Source Zone Depletion* remedy identified in the 2011 RI/FS that was authorized by Ecology and incorporated into the Environmental Restrictive Covenant and No Further Action (Ecology 2013).

Analytical results for groundwater samples collected in 2022 Q3 indicate that the preferred remedial alternative identified in the 2011 RI/FS is effective; the petroleum contamination in soil is not resulting in a dissolved plume with concentrations exceeding the Model Toxics Control Act (MTCA) Method A cleanup levels.

This work was performed, and this report prepared, in accordance with hydrogeologic practices generally accepted at this time and in this area for the exclusive use of Conagra Brands, for specific application to the project Site. No other warranty, express or implied, is made.

## **1 2022 Q3 Semi-Annual Groundwater Sampling Summary**

The 2022 Q3 groundwater sampling event was performed in compliance with TPCHD requirements (Marek, undated; received June 13, 2013) and the Semi-Annual Groundwater Monitoring Plan (Pacific Groundwater Group 2013). Groundwater samples were collected from the Boiler Room Site semi-annual well network on September 22, 2022 by representatives of Mott MacDonald (formerly Pacific Groundwater Group). The semi-annual monitoring well network is presented in Figure 1 and construction details are summarized in Table 1.

The monitoring wells were purged and sampled using new, disposable tubing and peristaltic pumps. Low-flow purging and sampling techniques were used to minimize turbidity in the groundwater samples. During purging, field meters were used to monitor pH, specific conductance, temperature, and turbidity. Samples were collected when these field parameters had stabilized or after a minimum of three casing volumes had been purged. Purge water was drummed onsite prior to anticipated disposal offsite by Marine Vacuum Services, Inc. of Seattle, WA.

### **1.1 Chemicals of Concern and Site Cleanup Levels**

Groundwater samples were received by Analytical Resources, Inc. (ARI), a Washington State certified laboratory, on September 23, 2022. Samples were stored and delivered in ice chests following standard chain-of-custody procedures.

Groundwater samples were analyzed according to Ecology and/or U.S. Environmental Protection Agency (EPA) methods for the following parameters:

- Northwest Total Petroleum Hydrocarbons – Gasoline Range Organics (NWTPH-G) and Diesel-Range and Heavy Oil-Range Organics (NTWPH-Dx) with silica gel cleanup.
- BTEX Compounds – Benzene, Toluene, Ethylbenzene, and Xylenes (EPA Method SW8260D).
- PAHs – Polycyclic Aromatic Hydrocarbons (EPA SW8270E with select ion monitoring modification to achieve required reporting limits).

As described in the 2011 RI/FS and Semi-Annual Groundwater Monitoring Plan (Pacific Groundwater Group 2011 and 2013, respectively), standard MTCA Method A Unrestricted Land Use cleanup levels are applicable to the Boiler Room Site to

evaluate the relative chemical effects from soil contamination at the Site on groundwater quality. MTCA Method A cleanup levels meet the criteria of WAC 173-340-704(1) because there are few hazardous substances at the Site and numerical Method A standards have been established. Groundwater cleanup levels presented in Table 2 are consistent with the 2011 RI/FS.

## 1.2 Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) data associated with the Boiler Room Site 2022 Q3 groundwater samples were reviewed by Mott MacDonald. All requested analyses were performed, and the QA/QC assessments indicate that the data are considered usable for the intended purpose of the project. The following notable results were identified during the QA/QC review:

- Method Blanks are types of internal laboratory QA/QC samples. They are reagent-free matrices (e.g. deionized water) that are processed in the same manner as field samples to document potential contamination resulting from the analytical process. Diesel-range organics were detected in the method blank associated with the 2022 Q3 Boiler Room samples at a concentration (0.111 mg/L) greater than the reporting limit (0.100 mg/L), indicating an analytical artifact. Diesel-range organics were also detected in samples MW-9S, MW-12S, MW-12D, and field duplicate MW-22S (discussed below). ARI flagged the 2022 Q3 samples with detected concentrations of diesel-range organics, "B," to indicate the lab contamination<sup>1</sup>. The concentrations of diesel-range organics in the samples (0.125 – 0.154 mg/L) and field duplicate (0.106 mg/L) were slightly above the reporting limit (0.100 mg/L) and less than 5 times the method blank concentration, indicating lab contamination of the samples. Accordingly, sample results are reported in Table 2 as non-detect at the laboratory reported sample values using "UJ" qualifiers, which is consistent with data validation actions for the analytical method.
- Matrix Spikes (MS) and Matrix Spike Duplicates (MSD) are also QA/QC samples. The lab prepares the MS/MSDs by adding known spikes of target analytes to samples collected in the field. Recoveries of the spikes from the MS assess the effects of interferences caused by the specific sample matrix. MSDs are replicates of the MS to check for precision and bias of a method for a specific sample matrix. During the 2022 Q3 sampling event, additional volume for MS/MSD analysis was collected from MW-12D. PAH recoveries of benzo(g,h,i)perylene, dibenz(a,h)anthracene, and indeno(1,2,3)pyrene were above control limits in the MS; recoveries of benzo(g,h,i)perylene and dibenz(a,h)anthracene were above control limits in the MSD. Since MS/MSD recovery limits are advisory only (Bottem 2021) and PAHs were not detected in the 2022 Q3 samples, no corrective actions were required, and the data are considered acceptable for purposes of the monitoring program without qualification.
- Field QA/QC included a blind field duplicate labeled MW-22S that was collected at well MW-12S and analyzed for the semi-annual sampling analytical suite to evaluate analytical precision. The only Site chemical of concern detected in the

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<sup>1</sup> ARI determined that false positives in the diesel range were caused by a reaction that occurred between two chemicals added to the samples and method blank during analysis. Specifically, the methylene chloride used during the extraction process reacted with the sulfuric acid used in the silica gel cleanup process to produce a biproduct that was detected in the diesel-range. ARI believes the methylene chloride contamination was vendor specific and intend to discontinue using this vendor for methylene chloride.

2022 Q3 MW-12S sample or the field duplicate MW-22S was diesel-range organics. As described above, the diesel detections in MW-12S and MW-22S were "UJ" qualified to indicate results are non-detect at the sample result value. The interpreted data qualifiers are due to laboratory contamination.

### **1.3 Analytical Results**

The 2022 Q3 groundwater monitoring analytical results are summarized in Table 2 and the analytical lab report is presented in Appendix A. Site contaminants of concern were not detected in the groundwater samples. As discussed in Section 1.2, diesel-range organics were detected in the method blank and the lab determined that the samples and method blank were contaminated in the diesel-range during analysis. Accordingly, MW-9S, MW-12S, and MW-12D diesel results are reported in Table 2 as non-detect at the laboratory reported sample values using "UJ" qualifiers. The non-detect diesel-range organic values in the 2022 Q3 samples (0.125 UJ to 0.154 UJ mg/L) are less than the Site cleanup level (0.5 mg/L). Diesel-range organics have not been detected in these wells since 2008.

The 2022 Q3 groundwater analytical results indicate that the preferred remedial alternative identified in the 2011 RI/FS is effective; the petroleum contamination in soil is not resulting in a dissolved groundwater plume with concentrations exceeding MTCA Method A cleanup levels.

## **2 References**

- Bottem, Kelly. 2021. Email from Kelly Bottem, Analytical Resources, LLC, to Inger Jackson, Pacific Groundwater Group. Re: 21I0412 Final report EDD and Invoice Birds Eye. November 2, 2021.
- Marek, undated. Birds Eye Foods – UST Site Tacoma, WA. Letter from Mr. Steve Marek, Director Environmental Health Division Tacoma – Pierce County Health Department to Mr. Scott Fehseke, Pinnacle Foods, LLC. Digital version of letter received by Pinnacle Foods, LLC via email on June 13, 2013.
- Pacific Groundwater Group, 2011. Birds Eye Foods Tacoma, WA 2011 Remedial Investigation/Feasibility Study. Consultant's report prepared for Pinnacle Foods Group, LLC. December 16, 2011.
- Pacific Groundwater Group, 2012. Birds Eye Foods, Tacoma Boiler Room Site Long-Term Groundwater Monitoring Plan VCP Site Number SW1187. Consultant's re-port prepared for Pinnacle Foods Group, LLC. October 23, 2012
- Washington State Department of Ecology, 2007. Model Toxics Control Act Statute and Regulation. WAC 173-340. Publication No. 94-06. Revised November 2007.

### 3 Closing

We hope this data contributes to your understanding of the Site and groundwater monitoring data. Please contact Inger Jackson at Mott MacDonald with questions.

Sincerely,



Inger Jackson, LHG  
Senior Project Scientist  
206-329-0138  
inger.jackson@mottmac.com

cc René Rimelspach  
Andrew Smith

Conagra Brands  
Washington State Department of  
Ecology

### Attachments

Table 1. VCP Long-Term Monitoring Well Network Construction Details, Birds Eye Boiler Room Site

Table 2. Summary of Groundwater Quality Data, Birds Eye Foods, TPCHD Monitoring Event, 2022 Q3

Figure 1. Semi-Annual Monitoring Well Network

Appendix A. ARI Lab Report 22I0409

**Table 1. Semi-Annual Monitoring Well Network Construction Details, Birds Eye Boiler Room Site**

Units, Datum*		MW-9S	MW-9D	MW-12S	MW-12D
Unique Well ID (UWID)		Not available	Not available	BHL 104	BHL 103
Location Information					
Township/Range-Section		21N/R3E-07	21N/R3E-07	21N/R3E-07	21N/R3E-07
Northing	feet, NAD 83/91 WA South	697261.9	697257.9	697590.9	697585.0
Easting	feet, NAD 83/91 WA South	1148195.0	1148194.9	1148259.2	1148259.1
Ground Surface Elevation	feet, NAVD 88	247.67	247.64	248.24	248.19
Measuring Point Elevation	feet, NAVD 88	246.99	247.14	247.86	247.90
Construction Information					
Date Completed		10/22/1991	8/24/1992	4/23/2012	4/23/2012
Diameter	inches	2	2	2	2
Depth Drilled	feet bgs	37	82	35	75
Top of Screen	feet bgs	22	77	20	63
Bottom of Screen	feet bgs	37	82	35	73
Depth Completed	feet bgs	37	82	35	73
Monument Type		← Sherwood High Traffic Flush Monument →			

\* Vertical and Horizontal Datums use the Washington State Reference Network

**Table 2. Summary of Groundwater Quality Data, Birds Eye Foods, TPCHD Monitoring Event, 2022 Q3**

CONSTITUENT	UNITS	Site Cleanup Levels*	MW-9S	MW-9D	MW-12S	MW-12D
<b>Field Parameters</b>						
Depth to Water	feet		17.23	17.55	18.19	18.33
pH, Field	std. units		6.92	7.0	7.17	7.46
Specific Conductance, Field	umhos/cm		312.7	398.7	870.3	551.1
Temperature (C)	C		15.5	15.8	15.8	17.1
Turbidity, Field	NTU		3.07	0.98	20	8.29
<b>NWTPH Analytes</b>						
Diesel Range Organics	mg/L	0.5	0.154 UJ	0.1 U	0.125 UJ	0.151 UJ
Gasoline Range Organics	mg/L	0.8	0.1 U	0.1 U	0.1 U	0.1 U
Oil Range Organics	mg/L	0.5	0.2 U	0.2 U	0.2 U	0.2 U
<b>BTEX (EPA 8260)</b>						
Benzene	ug/L	5	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	ug/L	700	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	ug/L	1000	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	ug/L		0.2 U	0.2 U	0.2 U	0.2 U
Xylene Isomers, m+p	ug/L		0.4 U	0.4 U	0.4 U	0.4 U
<b>Carcinogenic PAHs</b>						
Benzo(a)anthracene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	ug/L	0.1	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Dibenzo(a,h)anthracene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
<b>Non-Carcinogenic PAHs</b>						
Acenaphthene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	ug/L	160	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	ug/L		0.1 U	0.1 U	0.1 U	0.1 U

\*Cleanup Levels based on MTCA Method A, consistent with Birds Eye Foods Tacoma, WA 2011 Remedial Investigation/Feasibility Study

MTCA Cleanup Levels: Gasoline Range Organics 0.8 mg/L if benzene present, 1.0 mg/L if benzene not present; Xylenes 1000 ug/L (individual cleanup levels for m+p xylenes and o-xylenes not established); Benzo(a)pyrene 0.1 ug/L, this represents the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency method in WAC 173-340-708(8).

NWTPH-Dx analysis with silica gel cleanup, consistent with historical site analyses

Lower case qualifiers assigned by PGG QA/QC data reviewer.

Upper case qualifiers assigned by lab.

Bold text indicates constituent detected at or above method reporting limit.

U - Compound not detected

J - Concentration estimated

B - Compound detected in blank

K:\RUSS\BirdsEye\GIS\MonitoringNetwork\_LongTerm\_2021.mxd - 4/20/2021



- Semi-Annual Monitoring Well Network
- ▨ 2011 Delineated Petroleum Contaminated Soil Areas

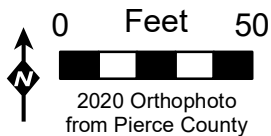


Figure 1  
Semi-Annual Monitoring  
Well Network

Birds Eye Semi-Annual Monitoring Plan

**M**  
**M**  
MOTT  
MACDONALD





## Appendix A Analytical Lab Reports



**Analytical Resources, LLC**  
Analytical Chemists and Consultants

24 October 2022

Inger Jackson  
Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle, WA 98102

RE: Birds Eye (Birds Eye)

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

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

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

Associated Work Order(s)  
22I0409

Associated SDG ID(s)  
N/A

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

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

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

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



# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: <b>2210409</b>	Turn-around Requested: <b>Standard</b>	Page: <b>1</b> of <b>1</b>	
ARI Client Company: <b>PGG/Mott MacDonald</b>	Phone: <b>206 329 0138</b>	Date: <b>9/22/22</b>	Ice Present? <b></b>
Client Contact: <b>Inger Jackson</b>		No. of Coolers: <b></b>	Cooler Temps: <b></b>



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

Client Project Name: <b>Birds Eye</b>					Analysis Requested								Notes/Comments		
Client Project #: <b>518300040-001</b>					BTEX+G NUTPH-Dx 12 Silica Gel SIM PAHs										
Sample ID	Date	Time	Matrix	No. Containers											
MW-9S	9/22/22	1610	GW	10	6	2	2								
MW-9D		1425	GW	9	5	2	2								
MW-12S		1020	GW	9	5	2	2								
MW-12D (+ms/msd)		1340	GW	27	15	6	6								
MW-22S		1030	GW	9	5	2	2								
Trip Blanks				2	2										
Comments/Special Instructions <b>EDD in PGG format plus EIM Format.</b>					Relinquished by: (Signature) <b>Inger Jackson</b>			Received by: (Signature) <b>Phillip Bates</b>			Relinquished by: (Signature) <b></b>			Received by: (Signature) <b></b>	
					Printed Name: <b>Inger Jackson</b>			Printed Name: <b>Phillip Bates</b>			Printed Name: <b></b>			Printed Name: <b></b>	
					Company: <b>Mott MacDonald</b>			Company: <b>AR</b>			Company: <b></b>			Company: <b></b>	
					Date & Time: <b>9/22/22 1748</b>			Date & Time: <b>9/22/22 9/23/22 8:33</b>			Date & Time: <b></b>			Date & Time: <b></b>	

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

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



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle WA, 98102

Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-9S	22I0409-01	Water	22-Sep-2022 16:10	26-Sep-2022 08:35
MW-9D	22I0409-02	Water	22-Sep-2022 14:25	26-Sep-2022 08:35
MW-12S	22I0409-03	Water	22-Sep-2022 10:20	26-Sep-2022 08:35
MW-12D	22I0409-04	Water	22-Sep-2022 13:40	26-Sep-2022 08:35
MW-22S	22I0409-05	Water	22-Sep-2022 10:30	26-Sep-2022 08:35
Trip Blanks	22I0409-06	Water	23-Sep-2022 00:00	26-Sep-2022 08:35



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle WA, 98102

Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

## **Work Order Case Narrative**

### **Gasoline by NWTPH-g (GC/MS)**

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

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

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

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

### **Volatiles - EPA Method SW8260D**

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

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

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

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

### **Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270E-SIM**

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

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle WA, 98102

Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

The surrogate percent recoveries were within control limits.

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

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

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

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

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

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits with the exception of contamination in the diesel range organics (c12-c24). Associated samples that contain analyte have been flagged with a "B" qualifier.

The client was notified and the contamination was due to methylene chloride that is added to the samples during the extraction step of the analysis and that the Honeywell methylene chloride used to extract these samples may have contaminated the samples when sulfuric acid was added as part of the silica gel cleanup process. The methylene chloride and sulfuric acid react and produce a biproduct that shows up in the diesel range of the chromatogram at concentrations greater than the method blank. The contamination caused by methylene chloride can be vendor specific; however, the vendor pool for methylenechloride is decreasing.

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

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



## WORK ORDER

22I0409

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

Client: Pacific Groundwater Group

Project Manager: Kelly Bottem

Project: Birds Eye

Project Number: Birds Eye

**Report To:**

Pacific Groundwater Group  
Inger Jackson  
2377 Eastlake Ave. E. Suite 200  
Seattle, WA 98102  
Phone: (206) 329-0141  
Fax: -

**Invoice To:**

Pacific Groundwater Group  
Inger Jackson  
2377 Eastlake Ave. E. Suite 200  
Seattle, WA 98102  
Phone : (206) 329-0141  
Fax: -

Date Due: 11-Oct-2022 18:00 (10 day TAT)

Received By: Phillip Bates

Date Received: 26-Sep-2022 08:35

Logged In By: Phillip Bates

Date Logged In: 26-Sep-2022 09:24

Samples Received at: 4.1°C

Intact, properly signed and dated custody seals attached to outside of cooler(s).....No  
Custody papers properly filled out (in, signed, analyses requested, etc).....Yes  
Was sufficient ice used (if appropriate).....Yes  
All bottles arrived in good condition (unbroken).....Yes  
Number of containers listed on COC match number received.....Yes  
Correct bottles used for the requested analyses.....Yes  
Analyses/bottles require preservation (attach preservation sheet excluding VOC).....No  
Sample split at ARI.....No

Custody papers included with the cooler..... Yes  
Was a temperature blank included in the cooler..... No  
All bottles sealed in individual plastic bags..... No  
All bottle labels complete and legible..... Yes  
Bottle labels and tags agree with COC..... Yes  
All VOC vials free of air bubbles..... Yes  
Sufficient amount of sample sent in each bottle..... Yes

Analysis	Due	TAT	Expires	Comments
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## WORK ORDER

22I0409

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

Client: Pacific Groundwater Group

Project Manager: Kelly Bottem

Project: Birds Eye

Project Number: Birds Eye

Analysis	Due	TAT	Expires	Comments
<b>22I0409-04 MW-12D [Water] Sampled 22-Sep-2022 13:40 (GMT-08:00) Pacific Time (US &amp; Canada)</b>				
A = Glass NM, Amber, 500 mL	AA = VOA Vial, Clear, 40 mL, HCL	B = Glass NM, Amber, 500 mL	C = Glass NM, Amber, 500 mL	
D = Glass NM, Amber, 500 mL	E = Glass NM, Amber, 500 mL	F = Glass NM, Amber, 500 mL	G = Glass NM, Amber, 500 mL	
H = Glass NM, Amber, 500 mL	I = Glass NM, Amber, 500 mL	J = Glass NM, Amber, 500 mL	K = Glass NM, Amber, 500 mL	
L = Glass NM, Amber, 500 mL	M = VOA Vial, Clear, 40 mL, HCL	N = VOA Vial, Clear, 40 mL, HCL	O = VOA Vial, Clear, 40 mL, HCL	
P = VOA Vial, Clear, 40 mL, HCL	Q = VOA Vial, Clear, 40 mL, HCL	R = VOA Vial, Clear, 40 mL, HCL	S = VOA Vial, Clear, 40 mL, HCL	
T = VOA Vial, Clear, 40 mL, HCL	U = VOA Vial, Clear, 40 mL, HCL	V = VOA Vial, Clear, 40 mL, HCL	W = VOA Vial, Clear, 40 mL, HCL	
X = VOA Vial, Clear, 40 mL, HCL	Y = VOA Vial, Clear, 40 mL, HCL	Z = VOA Vial, Clear, 40 mL, HCL		
8260D Gas (NWTPH)	11-Oct-2022 15:00	10	06-Oct-2022 23:59	
8260D VOA	11-Oct-2022 15:00	10	06-Oct-2022 23:59	
8270E-SIM PAH (0.1ug/L or 5ug/kg)	11-Oct-2022 15:00	10	29-Sep-2022 23:59	
TPH NW (Extractables) low level	11-Oct-2022 15:00	10	29-Sep-2022 23:59	Client gets raw data
<b>22I0409-05 MW-22S [Water] Sampled 22-Sep-2022 10:30 (GMT-08:00) Pacific Time (US &amp; Canada)</b>				
A = Glass NM, Amber, 500 mL	B = Glass NM, Amber, 500 mL	C = Glass NM, Amber, 500 mL	D = Glass NM, Amber, 500 mL	
E = VOA Vial, Clear, 40 mL, HCL	F = VOA Vial, Clear, 40 mL, HCL	G = VOA Vial, Clear, 40 mL, HCL	H = VOA Vial, Clear, 40 mL, HCL	
I = VOA Vial, Clear, 40 mL, HCL				
8260D Gas (NWTPH)	11-Oct-2022 15:00	10	06-Oct-2022 23:59	
8260D VOA	11-Oct-2022 15:00	10	06-Oct-2022 23:59	
8270E-SIM PAH (0.1ug/L or 5ug/kg)	11-Oct-2022 15:00	10	29-Sep-2022 23:59	
TPH NW (Extractables) low level	11-Oct-2022 15:00	10	29-Sep-2022 23:59	Client gets raw data
<b>22I0409-06 Trip Blanks [Water] Sampled 23-Sep-2022 00:00 (GMT-08:00) Pacific Time (US &amp; Canada)</b>				
A = VOA Vial, Clear, 40 mL, HCL	B = VOA Vial, Clear, 40 mL, HCL			
8260D Gas (NWTPH)	11-Oct-2022 15:00	10	07-Oct-2022 23:59	
8260D VOA	11-Oct-2022 15:00	10	07-Oct-2022 23:59	





Analytical Resources, LLC  
Analytical Chemists and Consultants

# Cooler Receipt Form

ARI Client: PGG

Project Name: BIRDSE

COC No(s): \_\_\_\_\_ (NA)

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

Assigned ARI Job No: 2210404

Tracking No: \_\_\_\_\_ (NA)

## Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler? YES (NO)

Were custody papers included with the cooler? YES NO

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

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

Time 8:35 4.1 0.8

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

Temp Gun ID#: 7004028 PB

Cooler Accepted by: Philip Bates Date: 9/23/22 Time: 8:35 9:08

**Complete custody forms and attach all shipping documents**

## Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: \_\_\_\_\_

Was sufficient ice used (if appropriate)? NA YES NO

How were bottles sealed in plastic bags? Individually Grouped Not

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA 9/13/22

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

Samples Logged by: Philip Bates Date: 9/26/22 Time: 9:24 Labels checked by: \_\_\_\_\_

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

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

**Additional Notes, Discrepancies, & Resolutions:**

By: \_\_\_\_\_ Date: \_\_\_\_\_



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle WA, 98102

Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-9S**  
**22I0409-01 (Water)**

**Volatile Organic Compounds**

Method: EPA 8260D

Sampled: 09/22/2022 16:10

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 14:26

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)  
Preparation Batch: BK10589  
Prepared: 09/26/2022

Sample Size: 10 mL  
Final Volume: 10 mL

Extract ID: 22I0409-01 D

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	116	%	
Surrogate: Toluene-d8			80-120 %	97.5	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	90.0	%	
Surrogate: 1,2-Dichlorobenzene-d4			80-120 %	106	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-9S**  
**22I0409-01 (Water)**

**Volatile Organic Compounds**

Method: NWTPHg

Sampled: 09/22/2022 16:10

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 14:26

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-01 D

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			80-120 %	97.5	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	90.0	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-9S**  
**22I0409-01 (Water)**

**Semivolatile Organic Compounds - SIM**

Method: EPA 8270E-SIM

Sampled: 09/22/2022 16:10

Instrument: NT8 Analyst: JZ

Analyzed: 10/05/2022 23:38

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)  
Preparation Batch: BK10663  
Prepared: 09/29/2022

Sample Size: 500 mL  
Final Volume: 0.5 mL

Extract ID: 22I0409-01 B 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.10	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	0.10	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.10	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.10	ND	ug/L	U
Acenaphthene	83-32-9	1	0.10	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.10	ND	ug/L	U
Fluorene	86-73-7	1	0.10	ND	ug/L	U
Phenanthrene	85-01-8	1	0.10	ND	ug/L	U
Anthracene	120-12-7	1	0.10	ND	ug/L	U
Fluoranthene	206-44-0	1	0.10	ND	ug/L	U
Pyrene	129-00-0	1	0.10	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.10	ND	ug/L	U
Chrysene	218-01-9	1	0.10	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.10	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.10	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.10	ND	ug/L	U
Benzofluoranthenes, Total		1	0.20	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.10	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.10	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.10	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.10	ND	ug/L	U

Surrogate: 2-Methylnaphthalene-d10

31-120 % 39.8 %

Surrogate: Dibenzo[a,h]anthracene-d14

10-125 % 83.5 %



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle WA, 98102

Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**MW-9S**  
**22I0409-01 (Water)**

**Petroleum Hydrocarbons**

Method: NWTPH-Dx

Sampled: 09/22/2022 16:10

Instrument: FID4 Analyst: AA

Analyzed: 10/18/2022 19:46

**Analysis by: Analytical Resources, LLC**

Sample Preparation:

Preparation Method: EPA 3510C SepF

Extract ID: 22I0409-01 A 01

Preparation Batch: BK10648

Sample Size: 500 mL

Prepared: 09/29/2022

Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	0.154	mg/L	B
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			50-150 %	105	%	



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle WA, 98102

Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**MW-9D**  
**22I0409-02 (Water)**

**Volatile Organic Compounds**

Method: EPA 8260D

Sampled: 09/22/2022 14:25

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 14:47

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-02 F

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	119	%	
Surrogate: Toluene-d8			80-120 %	94.6	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	86.9	%	
Surrogate: 1,2-Dichlorobenzene-d4			80-120 %	104	%	



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-9D**  
**22I0409-02 (Water)**

**Volatile Organic Compounds**

Method: NWTPHg

Sampled: 09/22/2022 14:25

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 14:47

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-02 F

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			80-120 %	94.6	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	86.9	%	



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**MW-9D**  
**22I0409-02 (Water)**

**Semivolatile Organic Compounds - SIM**

Method: EPA 8270E-SIM

Sampled: 09/22/2022 14:25

Instrument: NT8 Analyst: JZ

Analyzed: 10/06/2022 00:05

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)  
Preparation Batch: BK10663  
Prepared: 09/29/2022

Sample Size: 500 mL  
Final Volume: 0.5 mL

Extract ID: 22I0409-02 B 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.10	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	0.10	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.10	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.10	ND	ug/L	U
Acenaphthene	83-32-9	1	0.10	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.10	ND	ug/L	U
Fluorene	86-73-7	1	0.10	ND	ug/L	U
Phenanthrene	85-01-8	1	0.10	ND	ug/L	U
Anthracene	120-12-7	1	0.10	ND	ug/L	U
Fluoranthene	206-44-0	1	0.10	ND	ug/L	U
Pyrene	129-00-0	1	0.10	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.10	ND	ug/L	U
Chrysene	218-01-9	1	0.10	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.10	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.10	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.10	ND	ug/L	U
Benzofluoranthenes, Total		1	0.20	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.10	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.10	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.10	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.10	ND	ug/L	U

Surrogate: 2-Methylnaphthalene-d10

31-120 % 43.9 %

Surrogate: Dibenzo[a,h]anthracene-d14

10-125 % 74.2 %





Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**MW-9D**  
**22I0409-02 (Water)**

**Petroleum Hydrocarbons**

Method: NWTPH-Dx

Sampled: 09/22/2022 14:25

Instrument: FID4 Analyst: AA

Analyzed: 10/18/2022 20:06

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 3510C SepF  
Preparation Batch: BK10648  
Prepared: 09/29/2022

Sample Size: 500 mL  
Final Volume: 1 mL

Extract ID: 22I0409-02 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	ND	mg/L	U
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
<i>Surrogate: o-Terphenyl</i>			<i>50-150 %</i>	<i>99.4</i>	<i>%</i>	



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**MW-12S**  
**22I0409-03 (Water)**

**Volatile Organic Compounds**

Method: EPA 8260D

Sampled: 09/22/2022 10:20

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 15:08

**Analysis by: Analytical Resources, LLC**

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-03 F

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	120	%	
Surrogate: Toluene-d8			80-120 %	94.4	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	87.6	%	
Surrogate: 1,2-Dichlorobenzene-d4			80-120 %	103	%	



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle WA, 98102

Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-12S**  
**22I0409-03 (Water)**

**Volatile Organic Compounds**

Method: NWTPHg

Sampled: 09/22/2022 10:20

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 15:08

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-03 F

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			80-120 %	94.4	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	87.6	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-12S**  
**22I0409-03 (Water)**

**Semivolatile Organic Compounds - SIM**

Method: EPA 8270E-SIM

Sampled: 09/22/2022 10:20

Instrument: NT8 Analyst: JZ

Analyzed: 10/07/2022 14:53

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)  
Preparation Batch: BK10663  
Prepared: 09/29/2022

Sample Size: 500 mL  
Final Volume: 0.5 mL

Extract ID: 22I0409-03 B 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.10	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	0.10	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.10	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.10	ND	ug/L	U
Acenaphthene	83-32-9	1	0.10	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.10	ND	ug/L	U
Fluorene	86-73-7	1	0.10	ND	ug/L	U
Phenanthrene	85-01-8	1	0.10	ND	ug/L	U
Anthracene	120-12-7	1	0.10	ND	ug/L	U
Fluoranthene	206-44-0	1	0.10	ND	ug/L	U
Pyrene	129-00-0	1	0.10	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.10	ND	ug/L	U
Chrysene	218-01-9	1	0.10	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.10	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.10	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.10	ND	ug/L	U
Benzofluoranthenes, Total		1	0.20	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.10	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.10	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.10	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.10	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			31-120 %	39.9	%	
Surrogate: Dibenzo[a,h]anthracene-d14			10-125 %	69.7	%	



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**MW-12S**  
**22I0409-03 (Water)**

**Petroleum Hydrocarbons**

Method: NWTPH-Dx

Sampled: 09/22/2022 10:20

Instrument: FID4 Analyst: AA

Analyzed: 10/18/2022 20:25

**Analysis by: Analytical Resources, LLC**

Sample Preparation:

Preparation Method: EPA 3510C SepF

Extract ID: 22I0409-03 A 01

Preparation Batch: BK10648

Sample Size: 500 mL

Prepared: 09/29/2022

Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	0.125	mg/L	B
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			50-150 %	93.0	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-12D**  
**22I0409-04 (Water)**

**Volatile Organic Compounds**

Method: EPA 8260D

Sampled: 09/22/2022 13:40

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 15:28

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-04 T

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	122	%	
Surrogate: Toluene-d8			80-120 %	95.1	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	88.6	%	
Surrogate: 1,2-Dichlorobenzene-d4			80-120 %	102	%	



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-12D**  
**22I0409-04 (Water)**

**Volatile Organic Compounds**

Method: NWTPHg

Sampled: 09/22/2022 13:40

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 15:28

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-04 T

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			80-120 %	95.1	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	88.6	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-12D**  
**22I0409-04 (Water)**

**Semivolatile Organic Compounds - SIM**

Method: EPA 8270E-SIM

Sampled: 09/22/2022 13:40

Instrument: NT8 Analyst: JZ

Analyzed: 10/07/2022 15:20

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)  
Preparation Batch: BK10663  
Prepared: 09/29/2022

Sample Size: 500 mL  
Final Volume: 0.5 mL

Extract ID: 22I0409-04 E 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.10	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	0.10	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.10	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.10	ND	ug/L	U
Acenaphthene	83-32-9	1	0.10	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.10	ND	ug/L	U
Fluorene	86-73-7	1	0.10	ND	ug/L	U
Phenanthrene	85-01-8	1	0.10	ND	ug/L	U
Anthracene	120-12-7	1	0.10	ND	ug/L	U
Fluoranthene	206-44-0	1	0.10	ND	ug/L	U
Pyrene	129-00-0	1	0.10	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.10	ND	ug/L	U
Chrysene	218-01-9	1	0.10	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.10	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.10	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.10	ND	ug/L	U
Benzofluoranthenes, Total		1	0.20	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.10	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.10	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.10	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.10	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			31-120 %	42.0	%	
Surrogate: Dibenzo[a,h]anthracene-d14			10-125 %	77.0	%	





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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**MW-12D**  
**22I0409-04 (Water)**

**Petroleum Hydrocarbons**

Method: NWTPH-Dx

Sampled: 09/22/2022 13:40

Instrument: FID4 Analyst: AA

Analyzed: 10/18/2022 20:45

**Analysis by: Analytical Resources, LLC**

Sample Preparation:

Preparation Method: EPA 3510C SepF

Extract ID: 22I0409-04 A 01

Preparation Batch: BK10648

Sample Size: 500 mL

Prepared: 09/29/2022

Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	0.151	mg/L	B
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			50-150 %	96.1	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-22S**  
**22I0409-05 (Water)**

**Volatile Organic Compounds**

Method: EPA 8260D

Sampled: 09/22/2022 10:30

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 15:50

**Analysis by: Analytical Resources, LLC**

Sample Preparation:

Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-05 F

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	122	%	
Surrogate: Toluene-d8			80-120 %	95.1	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	88.9	%	
Surrogate: 1,2-Dichlorobenzene-d4			80-120 %	104	%	



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-22S**  
**22I0409-05 (Water)**

**Volatile Organic Compounds**

Method: NWTPHg

Sampled: 09/22/2022 10:30

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 15:50

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-05 F

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			80-120 %	95.1	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	88.9	%	



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Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**MW-22S**  
**22I0409-05 (Water)**

**Semivolatile Organic Compounds - SIM**

Method: EPA 8270E-SIM

Sampled: 09/22/2022 10:30

Instrument: NT8 Analyst: JZ

Analyzed: 10/03/2022 20:27

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)  
Preparation Batch: BK10663  
Prepared: 09/29/2022

Sample Size: 500 mL  
Final Volume: 0.5 mL

Extract ID: 22I0409-05 B 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	0.10	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	0.10	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	0.10	ND	ug/L	U
Acenaphthylene	208-96-8	1	0.10	ND	ug/L	U
Acenaphthene	83-32-9	1	0.10	ND	ug/L	U
Dibenzofuran	132-64-9	1	0.10	ND	ug/L	U
Fluorene	86-73-7	1	0.10	ND	ug/L	U
Phenanthrene	85-01-8	1	0.10	ND	ug/L	U
Anthracene	120-12-7	1	0.10	ND	ug/L	U
Fluoranthene	206-44-0	1	0.10	ND	ug/L	U
Pyrene	129-00-0	1	0.10	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	0.10	ND	ug/L	U
Chrysene	218-01-9	1	0.10	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.10	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.10	ND	ug/L	U
Benzo(j)fluoranthene	205-82-3	1	0.10	ND	ug/L	U
Benzofluoranthenes, Total		1	0.20	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.10	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.10	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.10	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	0.10	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10			31-120 %	42.4	%	
Surrogate: Dibenzo[a,h]anthracene-d14			10-125 %	110	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**MW-22S**  
**22I0409-05 (Water)**

**Petroleum Hydrocarbons**

Method: NWTPH-Dx

Sampled: 09/22/2022 10:30

Instrument: FID4 Analyst: AA

Analyzed: 10/18/2022 21:44

**Analysis by: Analytical Resources, LLC**

Sample Preparation:

Preparation Method: EPA 3510C SepF

Extract ID: 22I0409-05 A 01

Preparation Batch: BK10648

Sample Size: 500 mL

Prepared: 09/29/2022

Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	0.100	0.106	mg/L	B
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	0.200	ND	mg/L	U
Surrogate: o-Terphenyl			50-150 %	98.0	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**Trip Blanks**  
**22I0409-06 (Water)**

**Volatile Organic Compounds**

Method: EPA 8260D

Sampled: 09/23/2022 00:00

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 14:05

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-06 A

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			80-129 %	115	%	
Surrogate: Toluene-d8			80-120 %	96.4	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	90.2	%	
Surrogate: 1,2-Dichlorobenzene-d4			80-120 %	103	%	



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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

**Trip Blanks**  
**22I0409-06 (Water)**

**Volatile Organic Compounds**

Method: NWTPHg

Sampled: 09/23/2022 00:00

Instrument: NT2 Analyst: PKC

Analyzed: 09/26/2022 14:05

**Analysis by: Analytical Resources, LLC**

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap)

Extract ID: 22I0409-06 A

Preparation Batch: BK10589

Sample Size: 10 mL

Prepared: 09/26/2022

Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			80-120 %	96.4	%	
Surrogate: 4-Bromofluorobenzene			80-120 %	90.2	%	



Pacific Groundwater Group  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**Analysis by: Analytical Resources, LLC**

### Volatile Organic Compounds - Quality Control

#### Batch BKI0589 - NWTPHg

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Blank (BKI0589-BLK1)</b>		Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 10:57								
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.85		ug/L	5.00		97.1	80-120			
Surrogate: 4-Bromofluorobenzene	4.84		ug/L	5.00		96.7	80-120			
<b>Blank (BKI0589-BLK2)</b>		Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 10:57								
Benzene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4.95		ug/L	5.00		99.1	80-129			
Surrogate: Toluene-d8	4.85		ug/L	5.00		97.1	80-120			
Surrogate: 4-Bromofluorobenzene	4.84		ug/L	5.00		96.7	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	5.16		ug/L	5.00		103	80-120			
<b>LCS (BKI0589-BS1)</b>		Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 09:14								
Gasoline Range Organics (Tol-Nap)	959	100	ug/L	1000		95.9	72-128			
Surrogate: Toluene-d8	5.06		ug/L	5.00		101	80-120			
Surrogate: 4-Bromofluorobenzene	5.24		ug/L	5.00		105	80-120			
<b>LCS (BKI0589-BS2)</b>		Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 09:34								
Benzene	9.52	0.20	ug/L	10.0		95.2	80-120			
Toluene	9.32	0.20	ug/L	10.0		93.2	80-120			
Ethylbenzene	9.52	0.20	ug/L	10.0		95.2	80-120			
m,p-Xylene	20.2	0.40	ug/L	20.0		101	80-121			
o-Xylene	9.55	0.20	ug/L	10.0		95.5	80-121			
Surrogate: 1,2-Dichloroethane-d4	4.72		ug/L	5.00		94.4	80-129			
Surrogate: Toluene-d8	5.10		ug/L	5.00		102	80-120			
Surrogate: 4-Bromofluorobenzene	5.15		ug/L	5.00		103	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	5.01		ug/L	5.00		100	80-120			
<b>LCS Dup (BKI0589-BSD1)</b>		Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 09:54								
Gasoline Range Organics (Tol-Nap)	931	100	ug/L	1000		93.1	72-128	2.93	30	
Surrogate: Toluene-d8	5.15		ug/L	5.00		103	80-120			





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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**Analysis by: Analytical Resources, LLC**

**Volatile Organic Compounds - Quality Control**

**Batch BK10589 - NWTPHg**

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>LCS Dup (BK10589-BSD1)</b>					Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 09:54					
Surrogate: 4-Bromofluorobenzene	5.17		ug/L	5.00		103	80-120			
<b>LCS Dup (BK10589-BSD2)</b>					Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 10:15					
Benzene	9.58	0.20	ug/L	10.0		95.8	80-120	0.63	30	
Toluene	9.27	0.20	ug/L	10.0		92.7	80-120	0.54	30	
Ethylbenzene	9.58	0.20	ug/L	10.0		95.8	80-120	0.65	30	
m,p-Xylene	20.3	0.40	ug/L	20.0		101	80-121	0.38	30	
o-Xylene	9.63	0.20	ug/L	10.0		96.3	80-121	0.80	30	
Surrogate: 1,2-Dichloroethane-d4	4.74		ug/L	5.00		94.8	80-129			
Surrogate: Toluene-d8	5.11		ug/L	5.00		102	80-120			
Surrogate: 4-Bromofluorobenzene	5.31		ug/L	5.00		106	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	5.04		ug/L	5.00		101	80-120			
<b>Matrix Spike (BK10589-MS1)</b>					Source: 2210409-04 Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 16:53					
Gasoline Range Organics (Tol-Nap)	934	100	ug/L	1000	ND	93.4	72-128			
Surrogate: Toluene-d8	5.09		ug/L	5.00	4.76	102	80-120			
Surrogate: 4-Bromofluorobenzene	5.08		ug/L	5.00	4.43	102	80-120			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
<b>Matrix Spike (BK10589-MS2)</b>					Source: 2210409-04 Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 17:34					
Benzene	10.5	0.20	ug/L	10.0	ND	105	80-120			
Toluene	10.2	0.20	ug/L	10.0	ND	102	80-120			
Ethylbenzene	10.6	0.20	ug/L	10.0	ND	106	80-120			
m,p-Xylene	22.7	0.40	ug/L	20.0	ND	113	80-121			
o-Xylene	10.6	0.20	ug/L	10.0	ND	106	80-121			
Surrogate: 1,2-Dichloroethane-d4	5.05		ug/L	5.00	6.10	101	80-129			
Surrogate: Toluene-d8	5.06		ug/L	5.00	4.76	101	80-120			
Surrogate: 4-Bromofluorobenzene	5.07		ug/L	5.00	4.43	101	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	5.02		ug/L	5.00	5.11	100	80-120			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
<b>Matrix Spike Dup (BK10589-MSD1)</b>					Source: 2210409-04 Prepared: 26-Sep-2022 Analyzed: 26-Sep-2022 17:13					
Gasoline Range Organics (Tol-Nap)	995	100	ug/L	1000	ND	99.5	72-128	6.26	30	
Surrogate: Toluene-d8	5.10		ug/L	5.00	4.76	102	80-120			



Pacific Groundwater Group  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

Analysis by: Analytical Resources, LLC

### Volatile Organic Compounds - Quality Control

#### Batch BK10589 - NWTPHg

Instrument: NT2 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Matrix Spike Dup (BK10589-MSD1)</b>		<b>Source: 2210409-04</b>		Prepared: 26-Sep-2022		Analyzed: 26-Sep-2022 17:13				
Surrogate: 4-Bromofluorobenzene	4.99		ug/L	5.00	4.43	99.8	80-120			

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

<b>Matrix Spike Dup (BK10589-MSD2)</b>		<b>Source: 2210409-04</b>		Prepared: 26-Sep-2022		Analyzed: 26-Sep-2022 17:55				
Benzene	10.0	0.20	ug/L	10.0	ND	100	80-120	5.30	30	
Toluene	9.70	0.20	ug/L	10.0	ND	97.0	80-120	4.84	30	
Ethylbenzene	10.2	0.20	ug/L	10.0	ND	102	80-120	3.93	30	
m,p-Xylene	21.6	0.40	ug/L	20.0	ND	108	80-121	4.95	30	
o-Xylene	10.2	0.20	ug/L	10.0	ND	102	80-121	4.21	30	
Surrogate: 1,2-Dichloroethane-d4	5.02		ug/L	5.00	6.10	100	80-129			
Surrogate: Toluene-d8	5.03		ug/L	5.00	4.76	101	80-120			
Surrogate: 4-Bromofluorobenzene	5.16		ug/L	5.00	4.43	103	80-120			
Surrogate: 1,2-Dichlorobenzene-d4	4.93		ug/L	5.00	5.11	98.7	80-120			

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



Pacific Groundwater Group  
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Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**Analysis by: Analytical Resources, LLC**

**Semivolatile Organic Compounds - SIM - Quality Control**

**Batch BK10663 - EPA 8270E-SIM**

Instrument: NT8 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Blank (BK10663-BLK1)</b>		Prepared: 29-Sep-2022 Analyzed: 05-Oct-2022 22:44								
Naphthalene	ND	0.10	ug/L							U
2-Methylnaphthalene	ND	0.10	ug/L							U
1-Methylnaphthalene	ND	0.10	ug/L							U
Acenaphthylene	ND	0.10	ug/L							U
Acenaphthene	ND	0.10	ug/L							U
Dibenzofuran	ND	0.10	ug/L							U
Fluorene	ND	0.10	ug/L							U
Phenanthrene	ND	0.10	ug/L							U
Anthracene	ND	0.10	ug/L							U
Fluoranthene	ND	0.10	ug/L							U
Pyrene	ND	0.10	ug/L							U
Benzo(a)anthracene	ND	0.10	ug/L							U
Chrysene	ND	0.10	ug/L							U
Benzo(b)fluoranthene	ND	0.10	ug/L							U
Benzo(k)fluoranthene	ND	0.10	ug/L							U
Benzo(j)fluoranthene	ND	0.10	ug/L							U
Benzofluoranthenes, Total	ND	0.20	ug/L							U
Benzo(a)pyrene	ND	0.10	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L							U
Dibenzo(a,h)anthracene	ND	0.10	ug/L							U
Benzo(g,h,i)perylene	ND	0.10	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	1.32		ug/L	3.00		44.0	31-120			
Surrogate: Dibenzo[a,h]anthracene-d14	2.68		ug/L	3.00		89.4	10-125			

<b>LCS (BK10663-BS1)</b>		Prepared: 29-Sep-2022 Analyzed: 05-Oct-2022 23:11								
Naphthalene	1.24	0.10	ug/L	3.00		41.3	33-120			
2-Methylnaphthalene	1.24	0.10	ug/L	3.00		41.4	29-120			
1-Methylnaphthalene	1.29	0.10	ug/L	3.00		43.1	37-120			
Acenaphthylene	0.99	0.10	ug/L	3.00		33.0	32-120			
Acenaphthene	1.26	0.10	ug/L	3.00		42.0	38-120			
Dibenzofuran	1.33	0.10	ug/L	3.00		44.4	38-120			
Fluorene	1.38	0.10	ug/L	3.00		45.9	41-120			
Phenanthrene	1.50	0.10	ug/L	3.00		49.9	49-120			
Anthracene	1.38	0.10	ug/L	3.00		46.1	39-120			
Fluoranthene	1.76	0.10	ug/L	3.00		58.8	48-120			



Pacific Groundwater Group  
2377 Eastlake Ave. E. Suite 200  
Seattle WA, 98102

Project: Birds Eye  
Project Number: Birds Eye  
Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**Analysis by: Analytical Resources, LLC**

**Semivolatile Organic Compounds - SIM - Quality Control**

**Batch BKI0663 - EPA 8270E-SIM**

Instrument: NT8 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>LCS (BKI0663-BS1)</b>		Prepared: 29-Sep-2022 Analyzed: 05-Oct-2022 23:11								
Pyrene	1.83	0.10	ug/L	3.00		61.0	48-120			
Benzo(a)anthracene	1.71	0.10	ug/L	3.00		57.0	37-120			
Chrysene	1.81	0.10	ug/L	3.00		60.5	48-120			
Benzo(b)fluoranthene	2.43	0.10	ug/L	3.00		80.9	38-128			
Benzo(k)fluoranthene	2.37	0.10	ug/L	3.00		79.0	36-130			
Benzo(j)fluoranthene	2.43	0.10	ug/L	3.00		80.9	49-120			
Benzofluoranthenes, Total	7.12	0.20	ug/L	9.00		79.2	46-120			
Benzo(a)pyrene	1.70	0.10	ug/L	3.00		56.5	25-120			
Indeno(1,2,3-cd)pyrene	2.51	0.10	ug/L	3.00		83.6	32-120			
Dibenzo(a,h)anthracene	2.84	0.10	ug/L	3.00		94.8	21-120			
Benzo(g,h,i)perylene	2.69	0.10	ug/L	3.00		89.6	28-120			
Surrogate: 2-Methylnaphthalene-d10	1.27		ug/L	3.00		42.2	31-120			
Surrogate: Dibenzo[a,h]anthracene-d14	2.77		ug/L	3.00		92.2	10-125			
<b>Matrix Spike (BKI0663-MS1)</b>		Source: 2210409-04 Prepared: 29-Sep-2022 Analyzed: 03-Oct-2022 19:32								
Naphthalene	1.61	0.10	ug/L	3.00	ND	53.7	33-120			
2-Methylnaphthalene	1.69	0.10	ug/L	3.00	ND	56.3	29-120			
1-Methylnaphthalene	1.71	0.10	ug/L	3.00	ND	57.1	37-120			
Acenaphthylene	1.28	0.10	ug/L	3.00	ND	42.5	32-120			
Acenaphthene	1.69	0.10	ug/L	3.00	ND	56.2	38-120			
Dibenzofuran	1.74	0.10	ug/L	3.00	ND	57.9	38-120			
Fluorene	1.85	0.10	ug/L	3.00	ND	61.6	41-120			
Phenanthrene	2.02	0.10	ug/L	3.00	ND	67.2	49-120			
Anthracene	1.78	0.10	ug/L	3.00	ND	59.3	39-120			
Fluoranthene	2.29	0.10	ug/L	3.00	ND	76.2	48-120			
Pyrene	2.14	0.10	ug/L	3.00	ND	71.3	48-120			
Benzo(a)anthracene	2.06	0.10	ug/L	3.00	ND	68.8	37-120			
Chrysene	2.35	0.10	ug/L	3.00	ND	78.2	48-120			
Benzo(b)fluoranthene	3.38	0.10	ug/L	3.00	ND	113	38-128			
Benzo(k)fluoranthene	3.29	0.10	ug/L	3.00	ND	110	36-130			
Benzo(j)fluoranthene	3.54	0.10	ug/L	3.00	ND	118	49-120			
Benzofluoranthenes, Total	10.1	0.20	ug/L	9.00	ND	113	46-120			
Benzo(a)pyrene	2.28	0.10	ug/L	3.00	ND	76.0	25-120			
Indeno(1,2,3-cd)pyrene	3.66	0.10	ug/L	3.00	ND	122	32-120			*
Dibenzo(a,h)anthracene	4.10	0.10	ug/L	3.00	ND	137	21-120			*



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Project: Birds Eye  
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Project Manager: Inger Jackson

**Reported:**  
24-Oct-2022 08:28

**Analysis by: Analytical Resources, LLC**

**Semivolatile Organic Compounds - SIM - Quality Control**

**Batch BK10663 - EPA 8270E-SIM**

Instrument: NT8 Analyst: JZ

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Matrix Spike (BK10663-MS1)</b>		<b>Source: 2210409-04</b>		Prepared: 29-Sep-2022		Analyzed: 03-Oct-2022 19:32				
Benzo(g,h,i)perylene	4.02	0.10	ug/L	3.00	ND	134	28-120			*
Surrogate: 2-Methylnaphthalene-d10	1.47		ug/L	3.00	1.26	49.0	31-120			
Surrogate: Dibenzo[a,h]anthracene-d14	3.62		ug/L	3.00	2.31	121	10-125			

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

<b>Matrix Spike Dup (BK10663-MSD1)</b>		<b>Source: 2210409-04</b>		Prepared: 29-Sep-2022		Analyzed: 03-Oct-2022 19:59				
Naphthalene	1.66	0.10	ug/L	3.00	ND	55.4	33-120	3.09	30	
2-Methylnaphthalene	1.70	0.10	ug/L	3.00	ND	56.7	29-120	0.86	30	
1-Methylnaphthalene	1.76	0.10	ug/L	3.00	ND	58.5	37-120	2.44	30	
Acenaphthylene	1.35	0.10	ug/L	3.00	ND	45.1	32-120	5.80	30	
Acenaphthene	1.76	0.10	ug/L	3.00	ND	58.6	38-120	4.29	30	
Dibenzofuran	1.81	0.10	ug/L	3.00	ND	60.2	38-120	3.90	30	
Fluorene	1.85	0.10	ug/L	3.00	ND	61.5	41-120	0.06	30	
Phenanthrene	2.02	0.10	ug/L	3.00	ND	67.5	49-120	0.46	30	
Anthracene	1.82	0.10	ug/L	3.00	ND	60.8	39-120	2.44	30	
Fluoranthene	2.30	0.10	ug/L	3.00	ND	76.6	48-120	0.46	30	
Pyrene	2.13	0.10	ug/L	3.00	ND	70.9	48-120	0.67	30	
Benzo(a)anthracene	2.02	0.10	ug/L	3.00	ND	67.4	37-120	2.10	30	
Chrysene	2.31	0.10	ug/L	3.00	ND	77.1	48-120	1.52	30	
Benzo(b)fluoranthene	3.26	0.10	ug/L	3.00	ND	109	38-128	3.56	30	
Benzo(k)fluoranthene	3.20	0.10	ug/L	3.00	ND	107	36-130	2.68	30	
Benzo(j)fluoranthene	3.33	0.10	ug/L	3.00	ND	111	49-120	6.25	30	
Benzofluoranthenes, Total	9.80	0.20	ug/L	9.00	ND	109	46-120	3.39	30	
Benzo(a)pyrene	2.25	0.10	ug/L	3.00	ND	74.8	25-120	1.50	30	
Indeno(1,2,3-cd)pyrene	3.50	0.10	ug/L	3.00	ND	117	32-120	4.50	30	
Dibenzo(a,h)anthracene	3.97	0.10	ug/L	3.00	ND	132	21-120	3.23	30	*
Benzo(g,h,i)perylene	3.86	0.10	ug/L	3.00	ND	129	28-120	3.97	30	*
Surrogate: 2-Methylnaphthalene-d10	1.46		ug/L	3.00	1.26	48.5	31-120			
Surrogate: Dibenzo[a,h]anthracene-d14	3.45		ug/L	3.00	2.31	115	10-125			

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



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Project: Birds Eye  
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Project Manager: Inger Jackson

Reported:  
24-Oct-2022 08:28

Analysis by: Analytical Resources, LLC

### Petroleum Hydrocarbons - Quality Control

#### Batch BKI0648 - NWTPH-Dx

Instrument: FID4 Analyst: AA

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Blank (BKI0648-BLK1)</b>				Prepared: 29-Sep-2022 Analyzed: 18-Oct-2022 18:46						
Diesel Range Organics (C12-C24)	0.111	0.100	mg/L							B
Motor Oil Range Organics (C24-C38)	ND	0.200	mg/L							U
Surrogate: o-Terphenyl	0.199		mg/L	0.225		88.3	50-150			
<b>LCS (BKI0648-BS1)</b>				Prepared: 29-Sep-2022 Analyzed: 18-Oct-2022 19:06						
Diesel Range Organics (C12-C24)	2.89	0.100	mg/L	3.00		96.5	56-120			B
Surrogate: o-Terphenyl	0.220		mg/L	0.225		97.7	50-150			
<b>LCS Dup (BKI0648-BSD1)</b>				Prepared: 29-Sep-2022 Analyzed: 18-Oct-2022 19:26						
Diesel Range Organics (C12-C24)	3.23	0.100	mg/L	3.00		108	56-120	11.00	30	B
Surrogate: o-Terphenyl	0.241		mg/L	0.225		107	50-150			
<b>Matrix Spike (BKI0648-MS1)</b>				Source: 22I0409-04 Prepared: 29-Sep-2022 Analyzed: 18-Oct-2022 21:05						
Diesel Range Organics (C12-C24)	2.99	0.100	mg/L	3.00	0.151	94.5	56-120			B
Surrogate: o-Terphenyl	0.232		mg/L	0.225	0.216	103	50-150			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
<b>Matrix Spike Dup (BKI0648-MSD1)</b>				Source: 22I0409-04 Prepared: 29-Sep-2022 Analyzed: 18-Oct-2022 21:25						
Diesel Range Organics (C12-C24)	2.88	0.100	mg/L	3.00	0.151	91.0	56-120	3.55	30	B
Surrogate: o-Terphenyl	0.216		mg/L	0.225	0.216	95.8	50-150			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										



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## Certified Analyses included in this Report

Analyte	Certifications
<b>EPA 8260D in Water</b>	
Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE



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**Reported:**  
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2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE





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**EPA 8270E-SIM in Water**

Naphthalene	DoD-ELAP
2-Methylnaphthalene	DoD-ELAP
1-Methylnaphthalene	DoD-ELAP
2-Chloronaphthalene	DoD-ELAP
Biphenyl	DoD-ELAP
2,6-Dimethylnaphthalene	DoD-ELAP
Acenaphthylene	DoD-ELAP
Acenaphthene	DoD-ELAP
Dibenzofuran	DoD-ELAP
2,3,5-Trimethylnaphthalene	DoD-ELAP
Fluorene	DoD-ELAP
Dibenzothiophene	DoD-ELAP
Phenanthrene	DoD-ELAP
Anthracene	DoD-ELAP
Carbazole	DoD-ELAP
1-Methylphenanthrene	DoD-ELAP
Fluoranthene	DoD-ELAP
Pyrene	DoD-ELAP
Benzo(a)anthracene	DoD-ELAP
Chrysene	DoD-ELAP
Benzo(b)fluoranthene	DoD-ELAP
Benzo(k)fluoranthene	DoD-ELAP
Benzo(j)fluoranthene	DoD-ELAP
Benzo(a)fluoranthene, Total	DoD-ELAP
Benzo(e)pyrene	DoD-ELAP
Benzo(a)pyrene	DoD-ELAP
Perylene	DoD-ELAP
Indeno(1,2,3-cd)pyrene	DoD-ELAP
Dibenzo(a,h)anthracene	DoD-ELAP
Benzo(g,h,i)perylene	DoD-ELAP
Benzo(b)thiophene	DoD-ELAP

**NWTPH-Dx in Water**

Diesel Range Organics (C12-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C25)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C24)	DoD-ELAP,NELAP,WADOE
Diesel Range Organics (C10-C28)	DoD-ELAP,NELAP,WADOE



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Diesel Range Organics (C12-C22)	DoD-ELAP
Diesel Range Organics (C12-C25)	DoD-ELAP
Motor Oil Range Organics (C24-C38)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C25-C36)	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-C40)	DoD-ELAP,NELAP,WADOE
Residual Range Organics (C23-C32)	DoD-ELAP
Mineral Spirits Range Organics (Tol-C12)	DoD-ELAP,NELAP,WADOE
Mineral Oil Range Organics (C16-C28)	DoD-ELAP,NELAP,WADOE
Kerosene Range Organics (Tol-C18)	DoD-ELAP,NELAP,WADOE
JP8 Range Organics (C8-C18)	DoD-ELAP,NELAP,WADOE
JP5 Range Organics (C10-C16)	DoD-ELAP,NELAP,WADOE
JP4 Range Organics (Tol-C14)	DoD-ELAP,NELAP,WADOE
Jet-A Range Organics (C10-C18)	DoD-ELAP,NELAP,WADOE
Creosote Range Organics (C12-C22)	DoD-ELAP,NELAP,WADOE
Bunker C Range Organics (C10-C38)	DoD-ELAP,NELAP,WADOE
Stoddard Range Organics (C8-C12)	DoD-ELAP,NELAP,WADOE
Transformer Oil Range Organics (C12-C28)	DoD-ELAP,NELAP,WADOE

**NWTPHg in Water**

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2023



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### Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
J	Estimated concentration value detected below the reporting limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.