AEI Consultants

August 20, 2020

GROUNDWATER MONITORING AND SAMPLING REPORT

Property Identification:
837 North 34th Street
Seattle, Washington 98103

AEI Project No. 307024

Prepared for:
Washington Department of Ecology
Voluntary Cleanup Program – NWRO
3190 160th Avenue SE
Bellevue, Washington 98008

Prepared by:
AEI Consultants
115 North 85th Street, Ste. 202
Seattle, Washington 98103

Environmental Due Diligence

Building Assessments

Site Investigation & Remediation

Energy Performance & Benchmarking

Industrial Hygiene

Construction Risk Management

Zoning Analysis Reports & ALTA Surveys

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AEI Consultants

August 20, 2020

Attn: Ms. Heather Vick
Washington Department of Ecology
Voluntary Cleanup Program – NWRO
3190 160th Avenue SE
Bellevue, Washington 98008

Subject: **Groundwater Monitoring and Sampling**
837 North 34th Street, Seattle, Washington 98103
AEI Project No. 307024

Dear Ms. Vick:

On behalf of Kilroy Realty, L.P., AEI Consultants (AEI) is pleased to provide this report which describes the activities and results of the recent groundwater monitoring performed at 837 North 34th Street in Seattle, Washington ("the Property"). The groundwater investigation was completed in accordance with the Workplan dated June 19th, 2019 as well as the Washington Department of Ecology's (Ecology) request for additional groundwater sample analytical results from the two recently installed groundwater monitoring wells in order to consider a No Further Action (NFA) determination for the Property.

1.0 PROPERTY DESCRIPTION

The Property is located to the south of North 34th Street and to the west of Aurora Avenue North/State Route (SR) 99 within a commercial area of Seattle, Washington. The location of the Property and vicinity is shown on Figure 1. The Property totals 1.79 acres and is improved with a multi-tenant commercial office building, identified as the Lakeview Building, and an associated sub-grade parking garage.

The entirety of the building and majority of the land area at the Property is underlain by parking structures. The only portion of the Property not underlain by a parking structure is along the east side of the northeastern corner of the building. The parking structure is continuous offsite to the south and west on adjacent parcels and beneath offsite buildings. An access ramp located under the SR 99 Bridge provides access from North 34th Street. On-site operations are primarily corporate office functions.

The lowest level of the sub-grade parking structure is equipped with four (4) "wells" and a storm water vault. Surface water runoff from the building drainage system and parking areas are

directed into these "wells" and vault, which represent a closed drainage system for the building. None of these "wells" and vault are known to intersect the groundwater table. These features are not expected to alter groundwater flow conditions (i.e., flow direction and/or gradient) beneath the building.

2.0 BACKGROUND

The Property has undergone several phases of environmental investigation and remediation as part of prior developments. A detailed history has been reviewed with Ecology, along with the review of other available information. Previous investigation areas depicting soil sample locations and exploratory test pits are shown on the Site Map, Figure 2. The results of environmental investigation and remedial activities were presented in the following documents:

- *Independent Remedial Action Report (IRAR), Lakeview Building, Seattle, Washington* prepared, by AESI dated July 7, 2008.

- *Phase I Environmental Site Assessment (ESA*), *Lakeview Building, 837 North 34th Street, Seattle, Washington* (Parcel Number 197320-0389), prepared by AEI Consultants, dated April 27, 2012.

- *Subsurface Investigation for the Lakeview Building, 837 North 34th Street, Seattle, Washington,* prepared by AEI Consultants, dated September 26, 2014.

- McRoberts & Associates, P.C., *Correspondence Re: Response to Ecology's Opinion Pursuant to WAC 173-340-515(5) on Remedial Action for the Following Hazardous Waste Site: Fremont Lake View, 837 North 34th Street, Seattle, WA 98103, Facility No.: 5471899, VCP No.: NW2977, Cleanup Site ID: 11902* dated January 31,2017.

- *Well Installation and Sampling Report, 837 North 34th Street, Seattle, Washington,* prepared by AEI Consultants, dated November 25, 2019.

Based on review of Ecology correspondence, it was found the Property would be eligible for an NFA determination, subject to an Environmental Covenant, pending results of additional limited groundwater testing. To investigate the possible presence of pentachlorophenol (PCP) and petroleum hydrocarbons in groundwater, two wells were installed and sampled in August 2019, the results of which were presented in the November 25, 2019 *Well Installation and Sampling Report.* Please refer to that report for additional background information. Based on these results, Ecology requested an additional round of groundwater sampling to obtain representative groundwater samples prior to issuing the NFA determination. The balance of this report presents the methods and results of the subsequent groundwater sampling and analyses conducted in April 2020.

3.0 GROUNDWATER MONITORING

The groundwater sampling was conducted on April 29, 2020. Prior to sampling the each well, the well cap was removed to allow the well to equilibrate with atmospheric conditions. Upon equilibration, the depth to groundwater within the well was measured and recorded. The total depth of the well was also measured and recorded. Groundwater level and total depth measurements were obtained with an electronic water level sounder capable of obtaining measurements to the nearest +/- 0.01 foot. Groundwater level and total depth measurements were recorded onto a Groundwater Monitoring Well Field Sampling Form presented in Appendix A.

Groundwater purging was performed upon completion of the groundwater level measurements. Prior to sample collection, the well was purged of at least three-casing volumes of groundwater using a disposable bailer. During purging, groundwater parameters, including pH, temperature, conductivity and oxidation reduction potential (ORP), were monitored using a hand-held, multi-parameter monitoring instrument until stabilization was achieved. Groundwater parameter measurements were recorded on the Groundwater Monitoring Well Field Sampling Form presented in Appendix A.

Upon purging and stabilization of the groundwater parameters, groundwater samples were collected. Collected groundwater was decanted into laboratory-supplied containers consisting of 40-milliter glass vials containing hydrochloric acid. The sample containers were capped in a manner so that no air bubbles were visible within the sample containers. The sample containers were labelled with the project name, project number, well number, and sampling date/time of sampling. After labeling, the sample containers were placed into an insulated, chilled chest containing crushed ice for transport to the analytical laboratory. Chain-of-custody documentation was completed and accompanied the groundwater samples to the analytical laboratory.

The groundwater samples were submitted to a State of Washington-certified laboratory, Pace Analytical of Mount Juliet, Tennessee for analyses. Each of the groundwater samples collected were analyzed for total petroleum hydrocarbons as as diesel (TPHd) and oil (TPHmo) using Testing Method NWTPH-Dx, and pentachlorophenol (PCP) using US EPA Testing Method 8270E. Chain-of-custody documentation and the certified analytical report are provided in Appendix B.

Standard Quality Assurance/Quality Control (QA/QC) measures were implemented during the sample collection, transport, and chemical analysis process. The QA/QC measures consisted of preparing and submitting a trip blank chemical analysis, as well as evaluating laboratory performance of surrogate spike recovery, matrix spike/matrix spike duplicate (MS/MSD), method blank, and laboratory control spike (LCS) analyses. The primary objective of these QA/QC measures is to ensure that resulting analytical data are reproducible, are of adequate quality for their intended use, and are representative of actual conditions. No anomalies were found in the data resulting from analysis of samples collected during this monitoring event.

Well purging and decontamination water from the field activities was placed into an appropriate, sealed and labeled 16-gallon waste drum for temporary storage pending profiling and proper disposal.

4.0 SAMPLING RESULTS

Table 1 presents a summary of the recent and historical groundwater sample analytical results. Chain-of-custody documentation and the certified analytical report for groundwater are provided in Appendix B. The results can be summarized as follows:

- The groundwater sample collected from monitoring well MW-1 yielded TPHd and TPHmo at concentrations of 216 and 133 J µg/L, both below the MTCA Method A limits. PCP was not detected at or above the laboratory method reporting limit.
- The groundwater sample collected from monitoring well MW-2 yielded TPHd and TPHmo at concentrations of 116 J and 88.2 J µg/L, both below the MTCA Method A limits. PCP was not detected at or above the laboratory method reporting limit.

5.0 SUMMARY AND CONCLUSIONS

AEI collected and analyzed an additional round of samples from monitoring wells MW-1 and MW-2 at the Property.

The two groundwater samples collected as part of this monitoring event from wells MW-1 and MW-2 did not yield TPHd or TPHmo at concentrations that exceed the MTCA Method A Cleanup Standard nor did either sample yield PCP at or above the laboratory method reporting limit.

Based on these results, groundwater at the southern property line is not impacted with TPHd or TPHmo. Therefore, migration of petroleum hydrocarbons off Property or to Lake Union, which is 375 feet in the downgradient direction, is unlikely. Further, and importantly, PCP was not detected at or above laboratory reporting limits or above the State of Washington maximum contaminant level (MCL).

Based on these results, we are requesting Ecology review the existing request and issue a determination regarding a Restricted NFA for the Property.

6.0 REFERENCES

Independent Remedial Action Report (IRAR), Lakeview Building, Seattle, Washington prepared by AESI dated July 7, 2008.

Phase I Environmental Site Assessment (ESA), *Lakeview Building, 837 North 34th Street, Seattle, Washington* (Parcel Number 197320-0389), prepared by AEI Consultants, dated April 27, 2012.

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Washington State Department of Ecology, 2019, Cleanup Levels and Risk Calculation (CLARC) website, CLARC Master Table.

Well Installation and Sampling Report, Lakeview Building, 837 North 34th Street, Seattle, Washington, prepared by AEI Consultants, dated November 25, 2019.

CLOSING

AEI appreciates working with Ecology on this important project and trust that this report meets with your approval. If there are any questions regarding our investigation, please do not hesitate to contact Peter McIntyre at (925) 285-8286.

Sincerely,
AEI Consultants

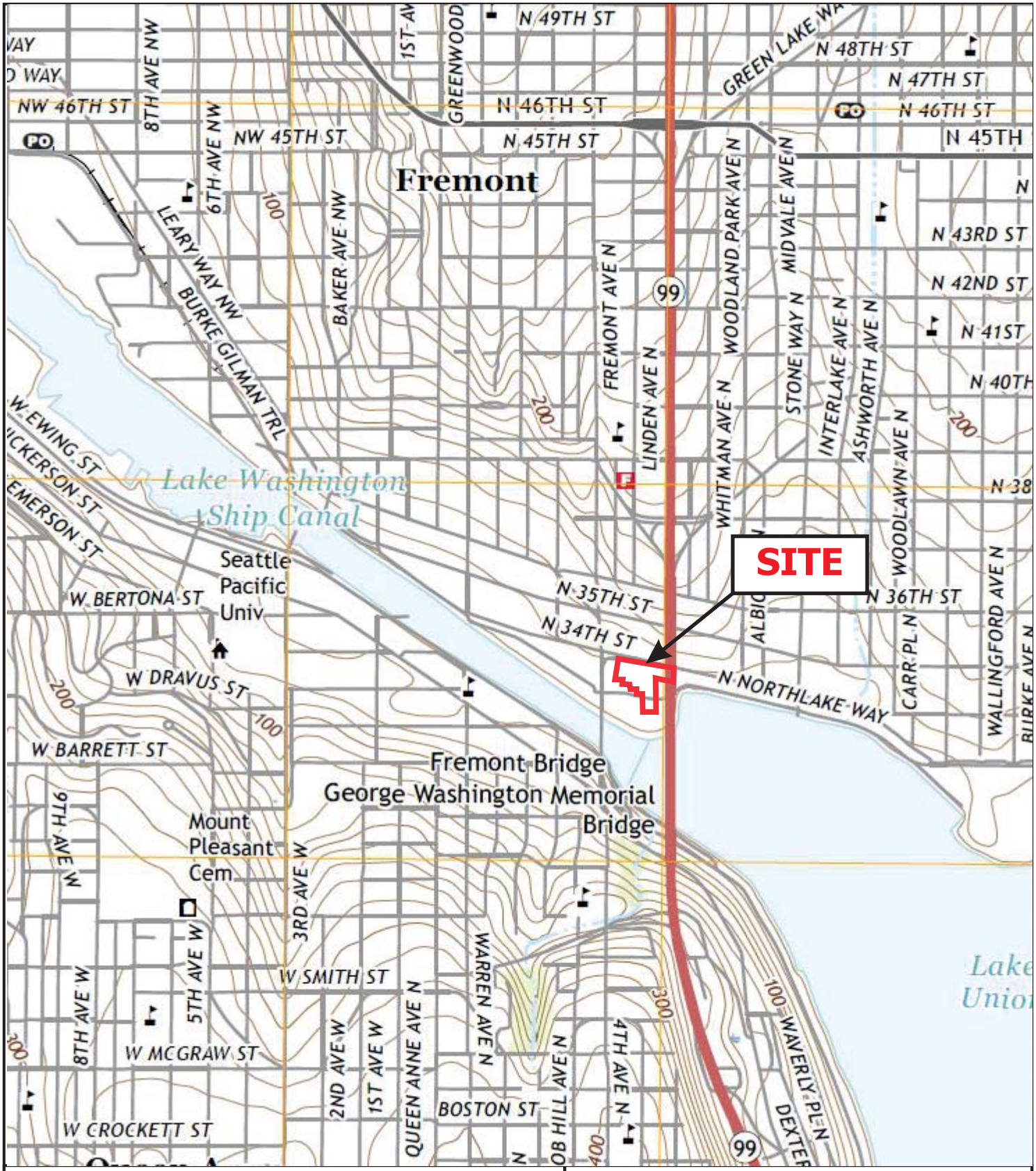
Peter McIntyre
Executive Vice President

Trent A. Weise, P.E. (Lic. No. 40765)
Vice President

Enclosures

Copies:
Nina Prasad, Esq. – Kilroy Realty, L.P.

FIGURES



LEGEND

N

Map: Seattle North
Date: 2017
Source: USGS

0 1,000 2,000
APPROXIMATE SCALE

AEI Consultants
2500 Camino Diablo, Walnut Creek, California

SITE LOCATION MAP

Lakeview Building
Seattle, Washington

FIGURE 1
Project No. 307024

P:\Companywide Projects\307000 Series\307024 Seattle, WA\Figures\2016 10 17 - Figures\2016 10 17 - Figure4 9/18/2016

North 34th Street

Retaining Wall

A

A'

Former Railroad Spurs
(AEI Phase I ESA Sanborn Maps)

Former Railroad Spur
(1998 EMCON Report)

Native Soils Exposed at
Bottom of Building Excavation

Fill Soils Exposed at
Bottom of Building Excavation

Native/Fill Contact

Aurora Street Bridge

TP-212
ES-20
TP-210
TP-211
ES-60
TP-206
ES-57
ES-58
ES-63
ES-59
ES-61/62
TP-209
TP-204
DTP - 31
TP-207
DTP - 31
DTP - 32
ES-65
ES-64
W-5
ES-36
ES-35
ES-34
DTP - 33
TP-203
ES-54
TP-202
ES-53
DTP - 34
ES-38
ES-31
DTP - 36
ES-52
W-4/MW S-1
SB-4
TP-201
SB-3
SB-6
SB-5
DTP - 35
DTP - 37
ES-48
SB-2
TP-205
ES-49
MW-2
TP-208
W-2
MW-1
SB-1

LEGEND

- Excavation Area Test Pit [1997]
- Soil Sample, In Place [May 2007]
- Soil Sample, Removed [May 2007]
- Exploration Pit, Removed [May 2007]
- Exploration Pit, In Place [May 2007]
- Wood Pile, With Creosote [May to Aug 2007]
- Wood Pile, Without Creosote [May to Aug 2007]
- AEI Soil Sample [July 2014]
- Monitoring Well Location (August-2019)

N

0 40 80
APPROXIMATE SCALE IN FEET

AEI CONSULTANTS
2500 CAMINO DIABLO, WALNUT CREEK, CALIFORNIA

Site Plan

Lakeview Building
Seattle, WA

FIGURE 2
Project No. 307024

TABLES

TABLE 1: GROUNDWATER SAMPLE DATA SUMMARY
Lakeview Building, Seattle, Washington

Location ID	Date	Depth (feet bgs)	Diesel Range Organics (µg/L)	Residual Range Organics (µg/L)	Gasoline Range Organics (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Pentachlorophenol (µg/L)
SB-2	7/16/2014	4	<250	<500	<100	<1.0	5.1	<1.0	3.4	NA
SB-3	7/16/2014	4	<250	<500	<100	<1.0	3.7	<1.0	<3.0	NA
SB-4	7/16/2014	4	<250	<500	<100	<1.0	3.6	<1.0	<3.0	NA
SB-5	7/16/2014	4	<250	<500	<100	<1.0	5.4	<1.0	<3.0	NA
SB-6	7/16/2014	10	<250	<500	<100	<1.0	<1.0	<1.0	<3.0	NA
MW-1	8/24/2019		1,070	2,480	NA	NA	NA	NA	NA	<1.0
	4/29/2020		216	133 J	NA	NA	NA	NA	NA	<0.313
MW-2	8/24/2019		150 J	379	NA	NA	NA	NA	NA	<1.0
	4/29/2020		116 J	88.2 J	NA	NA	NA	NA	NA	<0.313
Comparison Values:										
MTCA Method A			500	500	800/1,000 (1)	5	1,000	700	1,000	Not Established
State of WA MCL										1.0

Notes:

µg/L	micrograms per liter
bgs	below ground surface
(1)	Benzene present in groundwater / No benzene present in groundwater
NA	Not Analyzed
J	The identification of the analyte is acceptable; the reported value is an estimate

Comparison Values:
MTCA Method A: Model Toxics Control Cleanup, Metod A Cleanup Levels for Ground Water

APPENDIX A

GROUNDWATER SAMPLING FIELD DATA SHEETS

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW1

Project Name:	LAKEVIEW SEATTLE	Date of Sampling:	04.29.2020
Job Number:	307024	Name of Sampler:	TomNuevez
Project Address:	837 NORTH 34TH ST, SEATTLE, WA		

MONITORING WELL DATA

Well Casing Diameter (~~2"/4"/6"~~)	0.75"		
Wellhead Condition	Good		
Elevation of Top of Casing (feet above msl)	—		
Depth of Well	11.30'		
Depth to Water (from top of casing)	0.86'	Before:	After:
Depth to Free Product (from top of casing)	—	Before:	After:
Water Elevation (feet above msl)	—	Before: 0.00	After: 0.00
Purging and Sampling Method	Peristaltic Pump	Low-Flow (Minimal Drawdown) Purging / Sampling	
Drop Tube Depth (feet bgs)	7'		
Pump Speed (Default = 300 rpms)			
Estimated Purge Rate (Pump Speed * 1.67 ml/rev)			
Actual Volume Purged (gallons)	1.5 Gallons		
Appearance of Purge Water	Clear		
Free Product Present?	No	Thickness (ft):	—

GROUNDWATER SAMPLES

Number of Samples/Container Size

Time	Volume Removed (~~liters~~)Gal	Temperature (deg C)	Conductivity (uS/cm)	DO (mg/l)	pH	ORP (meV)	Comments
0930	—	13.9	1125	3.52	6.86	11.1	Clear; No odor
0935	0.25	13.8	1099	4.14	6.20	-3.2	
0940	0.5	13.7	1090	2.66	6.13	2.7	
0945	0.75	13.7	1088	2.19	6.07	9.2	
0950	1.0	13.7	1089	2.21	6.12	8.4	
0955	1.25	13.7	1092	2.17	6.13	8.3	
1000	1.5	13.7	1086	2.13	6.12	8.1	
	STOP TO ACCLIMATE						
1010	SAMPLE MW1						

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

DEPTH TO WATER 0.91' AFTER SAMPLING

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW 2

Project Name:	LAKEVIEW SEATTLE	Date of Sampling:	04.29.2020
Job Number:	307024	Name of Sampler:	TOM NEMECZ
Project Address:	837 NORTH 34TH ST. SEATTLE, WA		

MONITORING WELL DATA

Well Casing Diameter (~~2"/4"/6"~~)	0.75"		
Wellhead Condition	GOOD		
Elevation of Top of Casing (feet above msl)	—		
Depth of Well	11.69'		
Depth to Water (from top of casing)	0.97	Before:	After:
Depth to Free Product (from top of casing)	—	Before:	After:
Water Elevation (feet above msl)	—	Before: 0.00	After: 0.00
Purging and Sampling Method	PERISTALTIC PUMP	Low-Flow (Minimal Drawdown) Purging / Sampling	
Drop Tube Depth (feet bgs)	7'		
Pump Speed (Default = 300 rpms)			
Estimated Purge Rate (Pump Speed * 1.67 ml/rev)			
Actual Volume Purged (gallons)	1.5 GALLONS		
Appearance of Purge Water	CLEAR		
Free Product Present?	NO	Thickness (ft):	—

GROUNDWATER SAMPLES

Number of Samples/Container Size

Time	Volume Removed (liters)	Temperature (deg C)	Conductivity (uS/cm)	DO (mg/l)	pH	ORP (meV)	Comments
1025	—	13.9	560	5.92	6.62	25.0	CLEAR, NO ODOR
1030	0.25	14.1	522	2.51	6.23	28.5	
1035	0.5	14.0	519	2.36	6.27	23.3	
1040	0.75	14.0	517	2.32	6.24	22.9	
1045	1.0	14.1	517	2.26	6.22	31.4	
1050	1.25	14.0	517	2.24	6.23	29.9	
1055	1.5	14.1	516	2.23	6.23	30.3	
	STOP TO RECHARGE						
1105	SAMPLE MW2						

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

DEPTH TO WATER 0.99' AFTER SAMPLING

APPENDIX B

LABORATORY ANALYTICAL DATA

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

May 06, 2020

AEI Consultants - CA

Sample Delivery Group:	L1213677
Samples Received:	04/30/2020
Project Number:	307024
Description:	Lakeview Building

Report To: Thomas W. Nanevicz
2500 Camino Diablo
Walnut Creek, CA 94597

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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Semi Volatile Organic Compounds (GC/MS) by Method 8270E 8

Gl: Glossary of Terms 9

Al: Accreditations & Locations 10

Sc: Sample Chain of Custody 11

MW-1 L1213677-01 GW

Collected by: Tom N.
Collected date/time: 04/29/20 10:10
Received date/time: 04/30/20 08:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1469903	1	05/03/20 16:21	05/04/20 19:38	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1470344	1	05/05/20 00:52	05/05/20 11:19	JNJ	Mt. Juliet, TN

MW-2 L1213677-02 GW

Collected by: Tom N.
Collected date/time: 04/29/20 11:05
Received date/time: 04/30/20 08:20

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1469903	1	05/03/20 16:21	05/04/20 20:03	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1470344	1	05/05/20 00:52	05/05/20 11:41	JNJ	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	216		66.7	200	1	05/04/2020 19:38	WG1469903
Residual Range Organics (RRO)	133	J	83.3	250	1	05/04/2020 19:38	WG1469903
(S) o-Terphenyl	*85.3*			*52.0-156*		*05/04/2020 19:38*	WG1469903

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Pentachlorophenol	U	J3	0.313	10.0	1	05/05/2020 11:19	WG1470344
(S) 2-Fluorophenol	*36.6*			*10.0-120*		*05/05/2020 11:19*	WG1470344
(S) Phenol-d5	*24.0*			*10.0-120*		*05/05/2020 11:19*	WG1470344
(S) 2,4,6-Tribromophenol	*44.8*			*10.0-155*		*05/05/2020 11:19*	WG1470344

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	116	J	66.7	200	1	05/04/2020 20:03	WG1469903
Residual Range Organics (RRO)	88.2	J	83.3	250	1	05/04/2020 20:03	WG1469903
(S) o-Terphenyl	*77.9*			*52.0-156*		*05/04/2020 20:03*	WG1469903

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Pentachlorophenol	U	J3	0.313	10.0	1	05/05/2020 11:41	WG1470344
(S) 2-Fluorophenol	*34.9*			*10.0-120*		*05/05/2020 11:41*	WG1470344
(S) Phenol-d5	*22.1*			*10.0-120*		*05/05/2020 11:41*	WG1470344
(S) 2,4,6-Tribromophenol	*44.1*			*10.0-155*		*05/05/2020 11:41*	WG1470344

Method Blank (MB)

(MB) R3524522-1 05/04/20 02:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*73.5*			*52.0-156*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3524522-2 05/04/20 02:56 • (LCSD) R3524522-3 05/04/20 03:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	1500	1520	1670	101	111	50.0-150			9.40	20
(S) o-Terphenyl				*87.5*	*88.0*	*52.0-156*				

Method Blank (MB)

(MB) R3525022-3 05/05/20 09:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Pentachlorophenol	U		0.313	10.0
(S) 2-Fluorophenol	*28.7*			*10.0-120*
(S) Phenol-d5	*17.2*			*10.0-120*
(S) 2,4,6-Tribromophenol	*32.0*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3525022-1 05/05/20 08:48 • (LCSD) R3525022-2 05/05/20 09:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Pentachlorophenol	50.0	27.3	37.5	54.6	75.0	23.0-120		J3	31.5	25
(S) 2-Fluorophenol				*28.8*	*46.0*	*10.0-120*				
(S) Phenol-d5				*18.1*	*31.1*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*42.9*	*62.0*	*10.0-155*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

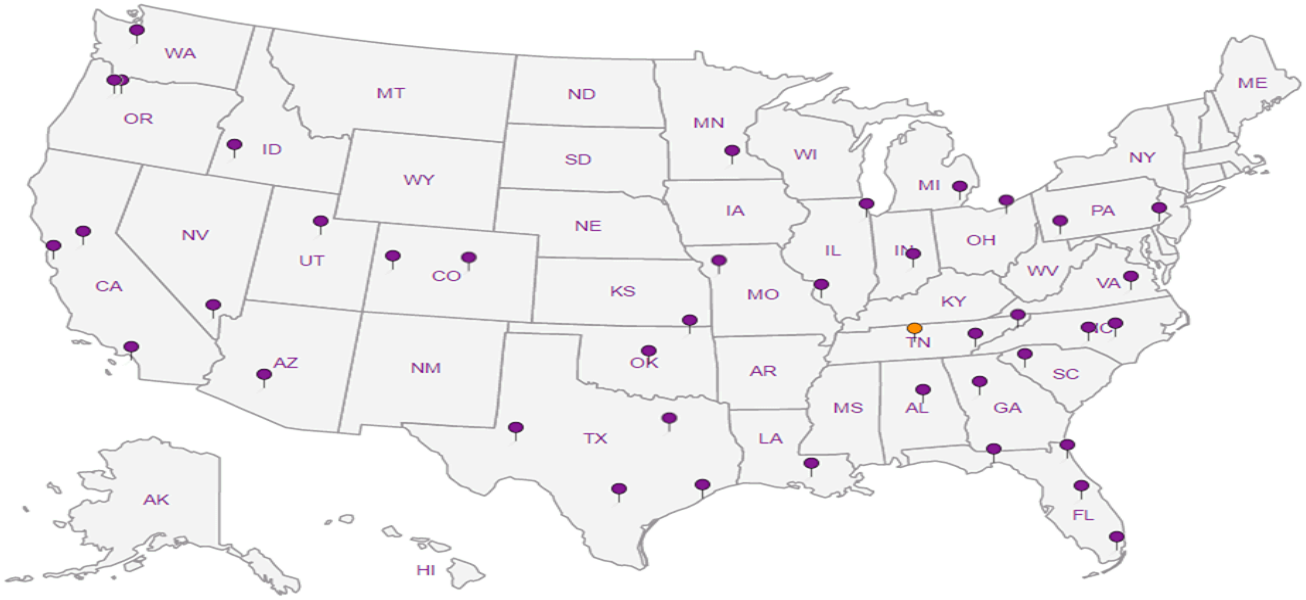
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



AEI Consultants - CA

2500 Camino Diablo
Walnut Creek, CA 94597

Billing Information:
Accounts Payable- Jeremy Smith
2500 Camino Diablo
Walnut Creek, CA 94597

Pres Chk

Report to: Thomas W. Nanevicz / TNANEVICZ

Email To: tnanevicz@aeiconsultants.com TWEISE@AEICONSULTANTS.COM

Project Description: LAKEVIEW BUILDING

City/State Collected: SEATTLE, WA

Please Circle: PT MT CT ET

Phone: 925-746-6000

Client Project # 307024

Lab Project # AEICONWCCA-307024

Collected by (print): TOM NANEVICZ

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX NOSGT 40mlAmb-HCl-BT	PCP LL 8270E 100ml Amb NoPres	Remarks	Sample # (lab only)
MW-1		GW		4.29.2020	1010	4	X	Y		-01
MW-2		GW		↓	1105	4	X	X		-02
		GW								

Chain of Custody Page 1 of 1

Pace Analytical®
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SDG # L1213677

G101

Acctnum: AEICONWCCA

Template: T166879

Prelogin: P769898

PM: 110 - Brian Ford

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 1749 9998 8420

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y	N
COC Signed/Accurate:		Y	N
Bottles arrive intact:		Y	N
Correct bottles used:		Y	N
Sufficient volume sent:		Y	N
If Applicable			
VOA Zero Headspace:		Y	N
Preservation Correct/Checked:		Y	N
RAD Screen <0.5 mR/hr:		Y	N

Relinquished by : (Signature)	Date: 04.29.20	Time: 1200	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.1 -.1 = 1.0 °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/30/20 Time: 0820	Hold: Condition: NCF / (OK)