



## ANALYTICAL REPORT

Lab Number:	L2536134
Client:	Sumitomo Rubber USA, LLC PO Box 1109 Buffalo, NY 14240
ATTN:	Christine Barton
Phone:	(716) 879-8497
Project Name:	TOP SOIL
Project Number:	Not Specified
Report Date:	06/18/25

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

<b>Lab Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2536134-01	CJ KRANTZ TOP SOIL	SOLID	BUFFALO, NY	06/10/25 12:20	06/10/25

**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Pace's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** TOP SOIL  
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**Lab Number:** L2536134  
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### Case Narrative (continued)

#### Report Submission

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Customer Center account at [www.alphalab.com](http://www.alphalab.com) and building a Data Usability table (format 11) in our Data Merger tool.

#### Sample Receipt

L2536134-01: The sample was received in an inappropriate container for the Volatile Organics analysis. An aliquot was taken from an unpreserved container and preserved appropriately.

#### Total Metals

L2536134-01: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

#### Chromium, Hexavalent

The WG2078105-4 Insoluble MS recovery performed on L2536134-01 is below the acceptance criteria for chromium, hexavalent (38%). The Soluble MS recovery for chromium, hexavalent (26%) was also below criteria. This has been attributed to matrix interference. A post-spike was performed with an acceptable recovery of 87%.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

*Melissa Sturgis* Melissa Sturgis

Title: Technical Director/Representative

Date: 06/18/25

# VOLATILES

**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

**SAMPLE RESULTS**

Lab ID: L2536134-01  
 Client ID: CJ KRANTZ TOP SOIL  
 Sample Location: BUFFALO, NY

Date Collected: 06/10/25 12:20  
 Date Received: 06/10/25  
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid  
 Analytical Method: 1,8260D  
 Analytical Date: 06/17/25 20:13  
 Analyst: JIC  
 Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	6.6	--	1
1,1-Dichloroethane	ND		ug/kg	1.3	--	1
Chloroform	ND		ug/kg	2.0	--	1
Carbon tetrachloride	ND		ug/kg	1.3	--	1
Tetrachloroethene	ND		ug/kg	0.66	--	1
Chlorobenzene	ND		ug/kg	0.66	--	1
1,2-Dichloroethane	ND		ug/kg	1.3	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.66	--	1
Benzene	ND		ug/kg	0.66	--	1
Toluene	ND		ug/kg	1.3	--	1
Ethylbenzene	ND		ug/kg	1.3	--	1
Vinyl chloride	ND		ug/kg	1.3	--	1
1,1-Dichloroethene	ND		ug/kg	1.3	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.0	--	1
Trichloroethene	ND		ug/kg	0.66	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.6	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.6	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.6	--	1
Methyl tert butyl ether	ND		ug/kg	2.6	--	1
p/m-Xylene	ND		ug/kg	2.6	--	1
o-Xylene	ND		ug/kg	1.3	--	1
Xylenes, Total	ND		ug/kg	1.3	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	--	1
Acetone	ND		ug/kg	13	--	1
2-Butanone	ND		ug/kg	13	--	1
n-Butylbenzene	ND		ug/kg	1.3	--	1
sec-Butylbenzene	ND		ug/kg	1.3	--	1
tert-Butylbenzene	ND		ug/kg	2.6	--	1



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**SAMPLE RESULTS**

**Lab ID:** L2536134-01  
**Client ID:** CJ KRANTZ TOP SOIL  
**Sample Location:** BUFFALO, NY

**Date Collected:** 06/10/25 12:20  
**Date Received:** 06/10/25  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.3	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.6	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.6	--	1
1,4-Dioxane	ND		ug/kg	110	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	94		70-130

# SEMIVOLATILES



**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

**SAMPLE RESULTS**

Lab ID: L2536134-01  
 Client ID: CJ KRANTZ TOP SOIL  
 Sample Location: BUFFALO, NY

Date Collected: 06/10/25 12:20  
 Date Received: 06/10/25  
 Field Prep: Not Specified

Sample Depth:

Matrix: Solid  
 Analytical Method: 1,8270E  
 Analytical Date: 06/14/25 06:07  
 Analyst: JG  
 Percent Solids: 76%

Extraction Method: EPA 3546  
 Extraction Date: 06/13/25 12:37

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	170	--	1
Fluoranthene	1300		ug/kg	130	--	1
Naphthalene	ND		ug/kg	220	--	1
Benzo(a)anthracene	500		ug/kg	130	--	1
Benzo(a)pyrene	510		ug/kg	170	--	1
Benzo(b)fluoranthene	700		ug/kg	130	--	1
Benzo(k)fluoranthene	210		ug/kg	130	--	1
Chrysene	500		ug/kg	130	--	1
Acenaphthylene	ND		ug/kg	170	--	1
Anthracene	190		ug/kg	130	--	1
Benzo(ghi)perylene	360		ug/kg	170	--	1
Fluorene	ND		ug/kg	220	--	1
Phenanthrene	760		ug/kg	130	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	130	--	1
Indeno(1,2,3-cd)pyrene	370		ug/kg	170	--	1
Pyrene	960		ug/kg	130	--	1
Dibenzofuran	ND		ug/kg	220	--	1
p-Chloro-m-cresol	ND		ug/kg	220	--	1
Pentachlorophenol	ND		ug/kg	170	--	1
Phenol	ND		ug/kg	220	--	1
2-Methylphenol	ND		ug/kg	220	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	310	--	1

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**Project Number:** Not Specified

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**Report Date:** 06/18/25

**SAMPLE RESULTS**

Lab ID: L2536134-01  
 Client ID: CJ KRANTZ TOP SOIL  
 Sample Location: BUFFALO, NY

Date Collected: 06/10/25 12:20  
 Date Received: 06/10/25  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		25-120
Phenol-d6	71		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	66		30-120
2,4,6-Tribromophenol	74		10-136
4-Terphenyl-d14	62		18-120

# PCBS

**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

**SAMPLE RESULTS**

**Lab ID:** L2536134-01  
**Client ID:** CJ KRANTZ TOP SOIL  
**Sample Location:** BUFFALO, NY

**Date Collected:** 06/10/25 12:20  
**Date Received:** 06/10/25  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Solid  
**Analytical Method:** 1,8082A  
**Analytical Date:** 06/14/25 12:06  
**Analyst:** MEO  
**Percent Solids:** 76%

**Extraction Method:** EPA 3546  
**Extraction Date:** 06/13/25 12:18  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 06/13/25  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 06/13/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	125	--	1	A
Aroclor 1221	ND		ug/kg	125	--	1	A
Aroclor 1232	ND		ug/kg	125	--	1	A
Aroclor 1242	ND		ug/kg	125	--	1	A
Aroclor 1248	ND		ug/kg	125	--	1	A
Aroclor 1254	ND		ug/kg	125	--	1	B
Aroclor 1260	ND		ug/kg	125	--	1	A
Aroclor 1262	ND		ug/kg	125	--	1	A
Aroclor 1268	ND		ug/kg	125	--	1	A
PCBs, Total	ND		ug/kg	125	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	97		30-150	B

# PESTICIDES

**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

**SAMPLE RESULTS**

**Lab ID:** L2536134-01  
**Client ID:** CJ KRANTZ TOP SOIL  
**Sample Location:** BUFFALO, NY

**Date Collected:** 06/10/25 12:20  
**Date Received:** 06/10/25  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Solid  
**Analytical Method:** 1,8081B  
**Analytical Date:** 06/14/25 10:23  
**Analyst:** DLP  
**Percent Solids:** 76%

**Extraction Method:** EPA 3546  
**Extraction Date:** 06/13/25 12:39  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 06/13/25  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 06/13/25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	6.04	--	1	A
Lindane	ND		ug/kg	2.52	--	1	A
Alpha-BHC	ND		ug/kg	2.52	--	1	A
Beta-BHC	ND		ug/kg	6.04	--	1	A
Heptachlor	ND		ug/kg	3.02	--	1	A
Aldrin	ND		ug/kg	6.04	--	1	A
Endrin	ND		ug/kg	2.52	--	1	A
Dieldrin	ND		ug/kg	3.77	--	1	A
4,4'-DDE	18.5		ug/kg	6.04	--	1	A
4,4'-DDD	ND		ug/kg	6.04	--	1	A
4,4'-DDT	20.9		ug/kg	6.04	--	1	B
Endosulfan I	ND		ug/kg	6.04	--	1	A
Endosulfan II	ND		ug/kg	6.04	--	1	A
Endosulfan sulfate	ND		ug/kg	2.52	--	1	A
Chlordane	ND		ug/kg	50.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	97		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	75		30-150	B



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**Report Date:** 06/18/25

**SAMPLE RESULTS**

Lab ID: L2536134-01  
 Client ID: CJ KRANTZ TOP SOIL  
 Sample Location: BUFFALO, NY

Date Collected: 06/10/25 12:20  
 Date Received: 06/10/25  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Solid  
 Analytical Method: 1,8151A  
 Analytical Date: 06/16/25 09:47  
 Analyst: AKM  
 Percent Solids: 76%  
 Methylation Date: 06/16/25 01:40

Extraction Method: EPA 8151A  
 Extraction Date: 06/14/25 13:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	216	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	82		30-150	A
DCAA	81		30-150	B

## METALS



**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

**SAMPLE RESULTS**

Lab ID: L2536134-01  
 Client ID: CJ KRANTZ TOP SOIL  
 Sample Location: BUFFALO, NY

Date Collected: 06/10/25 12:20  
 Date Received: 06/10/25  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Solid  
 Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Arsenic, Total	3.06		mg/kg	1.02	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Barium, Total	76.8		mg/kg	1.02	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Beryllium, Total	ND		mg/kg	0.513	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Cadmium, Total	ND		mg/kg	1.02	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Chromium, Total	9.99		mg/kg	1.02	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Copper, Total	13.1		mg/kg	1.02	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Lead, Total	29.6		mg/kg	5.13	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Manganese, Total	172		mg/kg	1.02	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Mercury, Total	ND		mg/kg	0.085	--	1	06/17/25 10:21	06/17/25 13:19	EPA 7471B	1,7471B	CME
Nickel, Total	7.86		mg/kg	2.56	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Selenium, Total	ND		mg/kg	2.05	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Silver, Total	ND		mg/kg	0.513	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
Zinc, Total	65.2		mg/kg	5.13	--	2	06/17/25 09:42	06/17/25 13:13	EPA 3050B	1,6010D	DMC
<b>General Chemistry - Mansfield Lab</b>											
Chromium, Trivalent	9.99		mg/kg	1.06	--	1		06/17/25 13:13	NA	107,-	



# **INORGANICS & MISCELLANEOUS**

**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

### SAMPLE RESULTS

**Lab ID:** L2536134-01  
**Client ID:** CJ KRANTZ TOP SOIL  
**Sample Location:** BUFFALO, NY

**Date Collected:** 06/10/25 12:20  
**Date Received:** 06/10/25  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.7		%	0.100	NA	1	-	06/13/25 01:16	121,2540G	JMN
Cyanide, Total	ND		mg/kg	1.3	--	1	06/12/25 18:30	06/13/25 16:10	121,4500CN-CE	JER
Chromium, Hexavalent	ND		mg/kg	1.06	--	1	06/12/25 12:20	06/12/25 15:33	1,7196A	RDS



**Project Name:** TOP SOIL**Lab Number:** L2536134**Project Number:** Not Specified**Report Date:** 06/18/25**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information****Cooler**                      **Custody Seal**

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2536134-01A	Plastic 2oz unpreserved for TS	A	NA		2.6	Y	Absent		TS(7)
L2536134-01B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),NI-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),ZN-TI(180),CU-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L2536134-01C	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		NYTCL-8260-R2(14)
L2536134-01D	Glass 250ml/8oz unpreserved	A	NA		2.6	Y	Absent		HEXCR-7196(30)
L2536134-01E	Glass 500ml/16oz unpreserved	A	NA		2.6	Y	Absent		NYTCL-8270(14),HERB-APA(14),TCN-4500(14),NYTCL-8081(14),NYTCL-8082(365)
L2536134-01X	Vial MeOH preserved split	A	NA		2.6	Y	Absent		NYTCL-8260-R2(14)
L2536134-01Y	Vial Water preserved split	A	NA		2.6	Y	Absent	12-JUN-25 08:48	NYTCL-8260-R2(14)
L2536134-01Z	Vial Water preserved split	A	NA		2.6	Y	Absent	12-JUN-25 08:48	NYTCL-8260-R2(14)

**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)  Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report - No QC



**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Chlordane:** The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Gasoline Range Organics (GRO):** Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**Report Format:** DU Report - No QC



**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

**Data Qualifiers**

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

**Project Name:** TOP SOIL  
**Project Number:** Not Specified

**Lab Number:** L2536134  
**Report Date:** 06/18/25

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 107 Calculation method.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Pace Analytical Services performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Pace Analytical Services.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.





**Pace Analytical Services LLC**Facility: **Northeast**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**Revision **27**Published Date: **01/24/2025**Page **1** of **2****Certification Information**

The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility – 8 Walkup Dr. Westborough, MA 01581****EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**MADEP-APH.****Nonpotable Water:** EPA RSK-175 Dissolved Gases**Biological Tissue Matrix:** EPA 3050B**Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048****EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Nonpotable Water:** EPA RSK-175 Dissolved Gases

The following test method is not included in our New Jersey Secondary NELAP Scope of Accreditation:

**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****Determination of Selected Perfluorinated Alkyl Substances by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry Isotope Dilution (via Alpha SOP 23528)**

The following analytes are included in our Massachusetts DEP Scope of Accreditation

**Westborough Facility – 8 Walkup Dr. Westborough, MA 01581****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg. EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

**Pace Analytical Services LLC**ID No.: **17873**Facility: **Northeast**

Revision 27

Department: **Quality Assurance**

Published Date: 01/24/2025

Title: **Certificate/Approval Program Summary**

Page 2 of 2

**Certification IDs:****Westborough Facility – 8 Walkup Dr. Westborough, MA 01581**

CT PH-0826, IL 200077, IN C-MA-03, KY JY98045, ME MA00086, MD 348, MA M-MA086, NH 2064, NJ MA935, NY 11148, NC (DW) 25700, NC (NPW/SCM) 666, OR MA-1316, PA 68-03671, RI LAO00065, TX T104704476, VT VT-0935, VA 460195

**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048**

CT PH-0825, ANAB/DoD L2474, IL 200081, IN C-MA-04, KY KY98046, LA 3090, ME MA00030, MI 9110, MN 025-999-495, NH 2062, NJ MA015, NY 11627, NC (NPW/SCM) 685, OR MA-0262, PA 68-02089, RI LAO00299, TX T-104704419, VT VT-0015, VA 460194, WA C954

**Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048**

ANAB/DoD L2474, ME MA01156, MN 025-999-498, NH 2249, NJ MA025, NY 12191, OR 4203, TX T104704583, VA 460311, WA C1104.

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For a complete listing of analytes and methods, please contact your Project Manager.



<b>Metals</b>	<b>CAS NUMBER</b>	
Arsenic	7440-38-2	
Barium	7440-39-3	
Beryllium	7440-41-7	
Cadmium	7440-43-9	
Chromium, hexavalent <sup>a</sup>	18540-29-9	
Chromium, trivalent <sup>a</sup>	16065-83-1	
Copper	7440-50-8	
Total Cyanide <sup>a, f</sup>		
Lead	7439-92-1	
Manganese	7439-96-5	
Total Mercury		
Nickel	7440-02-0	
Selenium	7782-49-2	
Silver	7440-22-4	
Zinc	7440-66-6	
<b>PCBs/Pesticides</b>		
2,4,5-TP Acid (Silvex) <sup>f</sup>	93-72-1	
4,4'-DDE	72-55-9	
4,4'-DDT	50-29-3	
4,4'-DDD	72-54-8	
Aldrin	309-00-2	
alpha-BHC	319-84-6	
beta-BHC	319-85-7	
Chlordane (alpha)	5103-71-9	
delta-BHC <sup>g</sup>	319-86-8	
Dibenzofuran <sup>f</sup>	132-64-9	
Dieldrin	60-57-1	

Endosulfan I <sup>d, f</sup>	959-98-8	
Endosulfan II <sup>d, f</sup>	33213-65-9	
Endosulfan sulfate <sup>d, f</sup>	1031-07-8	
Endrin	72-20-8	
Heptachlor	76-44-8	
Lindane	58-89-9	
Polychlorinated biphenyls	1336-36-3	
<b>Semivolatile organic compounds</b>		
Acenaphthene	83-32-9	
Acenaphthylene <sup>f</sup>	208-96-8	
Anthracene <sup>f</sup>	120-12-7	
Benz(a)anthracene <sup>f</sup>	56-55-3	
Benzo(a)pyrene	50-32-8	
Benzo(b)fluoranthene <sup>f</sup>	205-99-2	
Benzo(g,h,i)perylene <sup>f</sup>	191-24-2	
Benzo(k)fluoranthene <sup>f</sup>	207-08-9	
Chrysene <sup>f</sup>	218-01-9	
Dibenz(a,h)anthracene <sup>f</sup>	53-70-3	
Fluoranthene <sup>f</sup>	206-44-0	
Fluorene	86-73-7	
Indeno(1,2,3-cd)pyrene <sup>f</sup>	193-39-5	
m-Cresol <sup>f</sup>	108-39-4	
Naphthalene <sup>f</sup>	91-20-3	
o-Cresol <sup>f</sup>	95-48-7	
p-Cresol <sup>f</sup>	106-44-5	
Pentachlorophenol	87-86-5	
Phenanthrene <sup>f</sup>	85-01-8	
Phenol	108-95-2	
Pyrene <sup>f</sup>	129-00-0	

Volatile organic compounds		
1,1,1-Trichloroethane <sup>f</sup>	71-55-6	
1,1-Dichloroethane <sup>f</sup>	75-34-3	
1,1-Dichloroethene <sup>f</sup>	75-35-4	
1,2-Dichlorobenzene <sup>f</sup>	95-50-1	
1,2-Dichloroethane	107-06-2	
cis -1,2-Dichloroethene <sup>f</sup>	156-59-2	
trans-1,2-Dichloroethene <sup>f</sup>	156-60-5	
1,3-Dichlorobenzene <sup>f</sup>	541-73-1	
1,4-Dichlorobenzene	106-46-7	
1,4-Dioxane	123-91-1	
Acetone	67-64-1	
Benzene	71-43-2	
n-Butylbenzene <sup>f</sup>	104-51-8	
Carbon tetrachloride <sup>f</sup>	56-23-5	
Chlorobenzene	108-90-7	
Chloroform	67-66-3	
Ethylbenzene <sup>f</sup>	100-41-4	
Hexachlorobenzene <sup>f</sup>	118-74-1	
Methyl ethyl ketone	78-93-3	
Methyl tert-butyl ether <sup>f</sup>	1634-04-4	
Methylene chloride	75-09-2	
n - Propylbenzene <sup>f</sup>	103-65-1	
sec-Butylbenzene <sup>f</sup>	135-98-8	
tert-Butylbenzene <sup>f</sup>	98-06-6	
Tetrachloroethene	127-18-4	
Toluene	108-88-3	
Trichloroethene	79-01-6	
1,2,4-Trimethylbenzene <sup>f</sup>	95-63-6	
1,3,5-Trimethylbenzene <sup>f</sup>	108-67-8	
Vinyl chloride <sup>f</sup>	75-01-4	

Xylene (mixed)	1330-20-7
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