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Report of Work Completed

COGCC Location Name (ID)	NPR A03-596 (335720)
Operator Location Name	A03 596
COGCC Pit Facility ID	414549
Legal Description	SENE Sec. 3 T5S-R96W
Coordinates (Lat/Long)	39.647904 / -108.147875
County	Garfield County, Colorado

Mr. Middleton,

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for Caerus Oil & Gas LLC (Caerus) to document recent investigation activities associated with a historical pit at the A03 596 well pad (Location). The Location is 20.5 miles northwest of Rifle, Colorado in Garfield County as illustrated in the attached Topographic Location Map. Additional information on the Location and the associated sundry notice is provided in the title block above, the attached Site Diagram, soil boring logs, and laboratory analytical reports. This ROWC provides background on the Location, methods used to complete the site investigation, results of the investigation, and recommendations for how to proceed with this information.

Background

The Location contains a former Pit Facility (Facility ID: 414549) which was granted closure via Remediation Project Number 7741 in February 2015. Sundry Notice # 402473553 was submitted August 24, 2020, to request permission to beneficially reuse remediated drill cuttings for interim reclamation at the Location. The form was approved with a Condition of Approval (COA) stating that the operator shall advance borings through the north bottom and southwest bottom footprints of the former Pit Facility to collect confirmation soil samples.

Methodology

On September 23, 2021, Confluence coordinated and oversaw the advancement of soil borings at the Location. All activities were conducted in accordance with approved COGCC Form 4 Document # 402473553 and associated COA. Using a sonic drill rig, two soil borings (SB01 and SB02) were advanced within the footprint of the former pit to a total depth of 24 and 25 feet below ground surface (bgs), respectively. Due to health and safety concerns associated with the steep slope to the north of the Location and existing infrastructure, the soil boring locations were shifted slightly from the proposed locations. However, the borings still targeted the north bottom and southwest bottom areas of the pit. Investigation activities were directed by Confluence personnel who characterized soil using visual and olfactory observations and field-screened soil samples for volatile organic compounds (VOC) using a photoionization detector (PID). Field-screening was conducted

continuously as each boring was advanced. Soil samples were collected from the terminus of each soil boring for laboratory analysis. The samples were placed in laboratory prepared jars, packed on ice, and shipped for laboratory analysis of total petroleum hydrocarbons (TPH); and benzene, toluene, ethylbenzene, and xylenes (BTEX). Sample locations and field screening results are illustrated in the attached Site Diagram, and Boring Logs are attached.

Results

These results summarize observations from onsite investigation efforts and associated laboratory analytical results. For organizational and presentation purposes, the results summary is divided between general observations of lithology and hydrogeology for the entire Location and soil boring activities.

Collected spatial data are depicted in the attached Site Diagram. Field-screening data are included in the Soil Boring Logs. Laboratory analytical reports are attached and summarized in the Laboratory Results Summary Table.

Lithology and Hydrogeology

Lithology at the Location is characterized by sandy loam. Groundwater is expected to flow north toward Corral Springs tributary and ultimately into Davis Gulch, located 1.4 miles east of the Location.

Investigation Results

During advancement of SB01 and SB02 cuttings were encountered at approximately 18 feet bgs. The cuttings extended to approximately 24 to 25 feet bgs where a competent sandstone was encountered. Field-screening did not indicate impacts to soil, with PID measurements ranging from 0.3 to 4.2 parts per million (ppm). No staining or odor were noted in either of the soil borings. Laboratory results investigation soil samples collected from the base of the of the pit indicate compliance with COGCC Table 910-1 allowable levels for TPH and BTEX.

Analysis and Recommendations

Historical pit investigation soil samples are within COGCC Table 910-1 allowable limits for TPH and BTEX. Continuous field-screening and characterization of samples collected from borings SB01 and SB02 did not indicate impacts. Based on these results, Confluence recommends that Caerus request a no further action (NFA) determination for the COA attached to Sundry Notice Document # 402473553.



Confluence is grateful for the opportunity to support you with this project. If you have any questions about the methods, results, or recommendations presented here, please do not hesitate to contact me.

Regards,



Chris McKisson
Senior Project Manager
(720) 490-6758
chris.mckisson@confluence-cc.com

Attachments

- Topographic Location Map
- Site Diagram – Historical Pit Investigation
- Laboratory Results Summary Table
- Soil Boring Logs
- Laboratory Analytical Reports



Topographic Location Map

Caerus Oil & Gas LLC

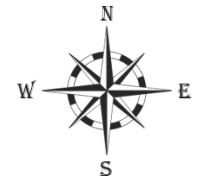
A03 596

(NPR /A03-596)

COGCC Location ID: 335720

Garfield County

SENE Sec. 3 T5S-R96W



Topographic map sourced from 2020 Earth Point using data provided by United States Geological Survey.

Created by: Andrew Smith - 10/15/2021.

Site Diagram Sample Locations

Caerus Oil and Gas LLC

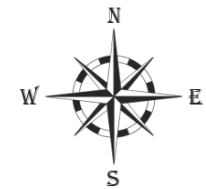
A03 596

(NPR /A03-596)

COGCC Location ID: 335720

Garfield County

SENE Sec. 3 T5S-R96W



Legend

 Soil Sample – 09/23/2021

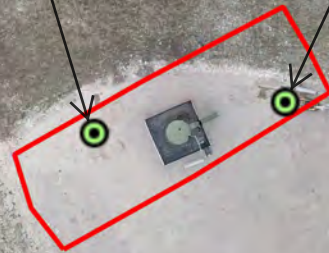
 Previous Pit Location

Spatial data was collected using a handheld GPS unit with submeter accuracy. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map created by: Andrew Smith on 11/01/2021.

20210923 - A03 (SB02@25')

20210923 - A03 (SB01@24')



Soil Screening and Remediation Limits			Organic Compounds (mg/kg [ppm])						
COGCC Table 910-1 Allowable Concentration -->			500	NA	NA	0.17	85	100	175
Sample Date	Solid/Soil Source (Equipment) [Vault/Sump, Separator, Tank Battery, Dump Line, Pit, Cuttings, Background, etc.]	Sample ID	TPH (total volatile and extractable petroleum hydrocarbons) (GRO+DRO+ORO)	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C28) High Fraction	Benzene	Toluene	Ethylbenzene	Xylenes - total (sum of o-, m-, p-isomers)
9/23/2021	Pit	20210923 - A03 (SB01@24')	15.6	0.156	15.4	<0.00100	<0.00500	<0.00250	0.00173
9/23/2021	Pit	20210923 - A03 (SB02@25')	4.34	0.0460	4.29	<0.00100	<0.00500	<0.00250	<0.00650

STEP 1:
IS SEDIMENT
COARSE GRAINED
OR

UNIFIED SOIL CLASSIFICATION SYSTEM
FOR COMMON INORGANIC AND ORGANIC SOILS
Modified from ASTM

STEP 2: DETERMINE SAND VS. GRAVEL RATIO
INCREASING GRAIN SIZE



STEP 3:
CONTINUE WITH
"SAND" OR "GRAVEL"
AND FOLLOW FLOW CHART
AND FLOW FLOW CHART
AND FLOW FLOW CHART

Project Name: A03						
Location: A03						
Lat/Long:				Project Number:		
Boring Number: SB01		Scope:		Geologist: SMITH		
Date: 9-23-21	Start Time: 1250	Finish Time: 1345	DTW:	Drilling Equipment:		
Drilling Method: SONIC RIG			Drilling Contractor: CDI		Driller: ERIC & DEAN	
Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
0-5'	1315	14%	NA	GP - GC	0-17'; BROWN SANDY-CLAY W/ WELL GRADED GRAVEL 2" MAX SIZE. NO ODDK NO STAIN.	0-17' 1.1 ppm
18'	1320				18' PIT MATERIAL BEGINS. DARK BROWN CLAY W/ ORGANIC MATERIAL "SAWTOOTH" SMALL GRAVEL POORLY GRADED.	18' 2.5 ppm
19-23'	1340	58%	NA	SAT	19'-23': PIT MATERIAL BLACK TO BROWN W/ ORGANIC MATERIAL. SAT	19-23' 2.6 ppm
23'-24'	1345				23'-24': SAND STONE. LIGHT BROWN. W/ WELL GRADED GRAVEL.	24' 4.2 ppm
Total Depth of Boring:		Samples Collected:			Comments:	
24'		19-23' 24'				

STEP 1:

IS SEDIMENT
COARSE GRAINED
OR
FINE GRAINED?

UNIFIED SOIL CLASSIFICATION
FOR COMMON INORGANIC AND ORGANIC SEDIMENTS
Modified from ASTM

STEP 2: DETERMINE SAND VS. GRAVEL RATIO

INCREASING GRAIN SIZE
4.75 MM 75.0 MM
GRAVEL

STEP 3:

CONTINUE WITH
"SAND" OR "GRAVEL"
AND FOLLOW FLOW CHART
TO DESIGN A GROUP SYMBOL



Project Name: **A03 PIT**
 Location: **A03**
 Lat/Long: _____ Project Number: _____
 Boring Number: **SB02** Scope: _____ Geologist: **SMITH**
 Date: **9-23-21** Start Time: **1353** Finish Time: **1440** DTW: **-** Drilling Equipment: **SONIC RIG**
 Drilling Method: **SONIC RIG** Drilling Contractor: **GDI** Driller: **ERIC & DEAN**

Depth (ft)	Time	Recovery	Standard Penetration Test Results	USCS Symbol	Material Description	PID Reading (ppm)
5	1400 0-8	25%	NA	Up - GC	BROWN SANDY-CLAY 2" GRAVEL, NO ODOR NO STAIN	0.3 0-8'
8'						
10	1410 0-17	20%	NA	GW - GC	PIT MATERIAL APPEARS CLAY Y W/ SAND & GRAVEL. ORGANIC MATERIAL MIXED IN NO ODOR.	8-17' 1.0 18'
15	1445 18					2.3
20						
25	1430 TD	50%	NA	GW - GC	at 18' SOIL BEGINS TO APPEAR MORE SANDY W/ SAND STONE GRAVEL MIXED IN. UNSURE IF WE HAVE FULLY PENETRATED THROUGH PIT LAYER NO ODOR. NO STAIN.	23' 0.9
25'				SP - SC	DRILL SLOWS DOWN at 23', SIGNIFYING NEW LAYER. SANDSTONE W/ CLAYEY _{1/2} MIXED IN. NO ODOR. NO STAIN.	25' 0.5

Total Depth of Boring: **25'** Samples Collected: **18'**
25' Comments: _____

Caerus Oil and Gas

Sample Delivery Group: L1413192
Samples Received: 10/05/2021
Project Number:
Description: A03 Pit
Site: A03
Report To: Brett Middleton
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
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.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20210923 - A03 (SB01@24') L1413192-01 Solid

Collected by: Andrew Smith
 Collected date/time: 09/23/21 13:40
 Received date/time: 10/05/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1752467	1	10/06/21 10:00	10/06/21 18:44	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1752717	1	10/06/21 10:00	10/06/21 20:03	GLN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1753909	1	10/06/21 10:00	10/08/21 17:11	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1752584	1	10/06/21 22:16	10/07/21 15:09	JDG	Mt. Juliet, TN

20210923 - A03 (SB02@25') L1413192-02 Solid

Collected by: Andrew Smith
 Collected date/time: 09/23/21 13:40
 Received date/time: 10/05/21 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1752467	1	10/06/21 10:00	10/06/21 19:06	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1752717	1	10/06/21 10:00	10/06/21 20:22	GLN	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1752584	1	10/06/21 22:16	10/07/21 14:16	JDG	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

CASE NARRATIVE

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.



Chris Ward
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.156	B	0.0217	0.100	1	10/06/2021 18:44	WG1752467
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	90.4			77.0-120		10/06/2021 18:44	WG1752467

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/06/2021 20:03	WG1752717
Toluene	U		0.00130	0.00500	1	10/06/2021 20:03	WG1752717
Ethylbenzene	U		0.000737	0.00250	1	10/06/2021 20:03	WG1752717
Total Xylenes	0.00173	J	0.000880	0.00650	1	10/08/2021 17:11	WG1753909
1,2,4-Trimethylbenzene	0.0322		0.00158	0.00500	1	10/06/2021 20:03	WG1752717
1,3,5-Trimethylbenzene	0.00823		0.00200	0.00500	1	10/06/2021 20:03	WG1752717
(S) Toluene-d8	120			75.0-131		10/06/2021 20:03	WG1752717
(S) Toluene-d8	102			75.0-131		10/08/2021 17:11	WG1753909
(S) 4-Bromofluorobenzene	89.9			67.0-138		10/06/2021 20:03	WG1752717
(S) 4-Bromofluorobenzene	98.1			67.0-138		10/08/2021 17:11	WG1753909
(S) 1,2-Dichloroethane-d4	84.8			70.0-130		10/06/2021 20:03	WG1752717
(S) 1,2-Dichloroethane-d4	107			70.0-130		10/08/2021 17:11	WG1753909

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Sample Narrative:

L1413192-01 WG1752717: Results biased high due to carryover from previous sample.

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	15.4		0.769	4.00	1	10/07/2021 15:09	WG1752584
(S) <i>o</i> -Terphenyl	67.2			18.0-148		10/07/2021 15:09	WG1752584

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0460	<u>B</u> <u>J</u>	0.0217	0.100	1	10/06/2021 19:06	WG1752467
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	88.3			77.0-120		10/06/2021 19:06	WG1752467

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	10/06/2021 20:22	WG1752717
Toluene	U		0.00130	0.00500	1	10/06/2021 20:22	WG1752717
Ethylbenzene	U		0.000737	0.00250	1	10/06/2021 20:22	WG1752717
Total Xylenes	U		0.000880	0.00650	1	10/06/2021 20:22	WG1752717
1,2,4-Trimethylbenzene	0.0199		0.00158	0.00500	1	10/06/2021 20:22	WG1752717
1,3,5-Trimethylbenzene	0.00478	<u>J</u>	0.00200	0.00500	1	10/06/2021 20:22	WG1752717
(S) <i>Toluene-d8</i>	122			75.0-131		10/06/2021 20:22	WG1752717
(S) <i>4-Bromofluorobenzene</i>	93.2			67.0-138		10/06/2021 20:22	WG1752717
(S) <i>1,2-Dichloroethane-d4</i>	87.2			70.0-130		10/06/2021 20:22	WG1752717

Sample Narrative:

L1413192-02 WG1752717: Results biased high due to carryover from previous sample

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	4.29		0.769	4.00	1	10/07/2021 14:16	WG1752584
(S) <i>o</i> -Terphenyl	71.2			18.0-148		10/07/2021 14:16	WG1752584

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3713480-2 10/06/21 17:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0320	↓	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	89.3			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3713480-1 10/06/21 16:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.60	102	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			116	77.0-120	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3714092-3 10/06/21 12:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	115			75.0-131
(S) 4-Bromofluorobenzene	93.1			67.0-138
(S) 1,2-Dichloroethane-d4	86.1			70.0-130

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

(LCS) R3714092-1 10/06/21 11:35 • (LCSD) R3714092-2 10/06/21 11:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.127	0.124	102	99.2	70.0-123			2.39	20
Ethylbenzene	0.125	0.142	0.139	114	111	74.0-126			2.14	20
Toluene	0.125	0.141	0.138	113	110	75.0-121			2.15	20
1,2,4-Trimethylbenzene	0.125	0.154	0.143	123	114	70.0-126			7.41	20
1,3,5-Trimethylbenzene	0.125	0.157	0.144	126	115	73.0-127			8.64	20
Xylenes, Total	0.375	0.400	0.393	107	105	72.0-127			1.77	20
(S) Toluene-d8				119	118	75.0-131				
(S) 4-Bromofluorobenzene				88.8	91.9	67.0-138				
(S) 1,2-Dichloroethane-d4				93.8	92.5	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3715876-3 10/08/21 09:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	95.6			67.0-138
(S) 1,2-Dichloroethane-d4	97.1			70.0-130

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

(LCS) R3715876-1 10/08/21 08:17 • (LCSD) R3715876-2 10/08/21 08:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Xylenes, Total	0.375	0.326	0.329	86.9	87.7	72.0-127			0.916	20
(S) Toluene-d8				101	101	75.0-131				
(S) 4-Bromofluorobenzene				101	101	67.0-138				
(S) 1,2-Dichloroethane-d4				112	115	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3714001-1 10/07/21 12:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
<i>(S) o-Terphenyl</i>	66.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3714001-2 10/07/21 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	38.7	77.4	50.0-150	
<i>(S) o-Terphenyl</i>			79.9	18.0-148	

L1411641-24 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1411641-24 10/07/21 14:29 • (MS) R3714001-3 10/07/21 14:42 • (MSD) R3714001-4 10/07/21 14:56

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	50.0	U	37.1	34.1	74.2	68.2	1	50.0-150			8.43	20
<i>(S) o-Terphenyl</i>					72.8	66.5		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

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.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
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
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

