



*P. O. Box 7192 (zip 71137-7192)  
1000 Grimmer Dr.  
Shreveport, LA 71107  
Phone: (318) 222-2424  
Fax: (318) 222-2425*

November 27, 2018

Mr. Todd Emmert  
Elm Springs, Inc.  
P.O. Box 58  
Shangaloo, LA 71072-0058

Re: LDNR-Residential Water Well Sampling Project  
Tommie Niten Water Well- Serial Number: 9312Z  
Section 28, Township 13 N, Range 15 W  
GPS via hand held (Water Well): 32.091054, -93.914313

Dear Mr. Emmert:

Approach Environmental, LLC (Approach Environmental) was retained by Elm Springs, Inc. (Elm Springs) to conduct a Residential Water Well Sampling Project at the referenced location. On October 25, 2018, Approach Environmental split groundwater samples with ICON Environmental Services, Inc. (ICON) and Hydro-Environmental Technology, Inc. (HET) from the referenced water well to evaluate specific groundwater quality requested by the Louisiana Department of Natural Resources (LDNR). ICON was the lead consultant onsite and was responsible for landowner notifications and scheduling as well as water well purging and sampling procedures.

The residential water well sampling activities included photo documentation of the water well (photos attached), water well purging (if well was not used on a regular basis), obtaining GPS coordinates (via hand-held GPS), groundwater sampling, and preparation of a brief letter report presenting the analytical data, sampling procedures, and well conditions. According to LDNR SONRIS, the Tommie Niten (LDNR serial number 9312Z) water well has a recorded total depth of 300' below ground surface, is completed in the Wilcox formation, and has a recorded depth to water of 40' below ground surface on the registration form. The depth to water could not be measured during the sampling event due to an existing pump in the well. The well is constructed of 4-inch diameter PVC piping and the equipment to pump the well was located in garage, approximately 30' southwest of the well. The well was equipped with a valve, and the sample was collected directly from the well. The well was purged of approximately 50- 100 gallons of

water since the owner stated the well water was used frequently. Once purged, the water sample was collected in laboratory supplied sample containers by an experienced Environmental Scientist wearing nitrile gloves and immediately placed on ice in an ice chest. Proper chain-of-custody procedures were followed and are documented with the attached laboratory report.

The sample was, then, delivered, via FedEx overnight, to Element Materials Technology, a LELAP Certification No.: 01997, a LDHH Certification No.: LA180028, and a ISDH Certification No.: C-LA-01 located in Lafayette, Louisiana. As requested by the LDNR, the sample was analyzed for Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO), TPH Diesel Range Organics (DRO), TPH Oil Range Organics (ORO) by method SW8015, RCRA Metals by method SW6010/7470A, Inorganic Anions in water by IC method SW9056 (Chlorides), Polynuclear Aromatic Hydrocarbons (PAH) by EPA 8270C, Semi-Volatile Organic Compounds by method SW8270C, Volatile Organic Compounds (VOC) by method SW8260B, Total Dissolved Solids (TDS) by method SM2540C, and Dissolved Methane by EPA RSK-175.

A Google Earth map illustrating the location of the referenced residential water well, photographic documentation, and the analytical laboratory report are attached for review. Based on our review of the analytical data, the following parameters were detected within the respective method detection limits: TPH-GRO was detected at 0.0404 mg/l; Chlorides was detected at 59.2 mg/l; Arsenic was detected at 0.0135 mg/l; Barium was detected at 0.0181 mg/l; Selenium was detected at 0.0133 mg/l; Sodium was detected at 252 mg/l; Bis(2-ethylhexyl)phthalate was detected at 0.00196 mg/l; Di-n-octyl phthalate was detected at 0.00153 mg/l; TDS was detected at 635 mg/l and Methane was detected at 712 ug/l. No other parameters were detected above the respective method detection limits.

Should you have any questions and/or comments, please do not hesitate to contact me at (318) 222-2424.

Sincerely,



Mark S. Moore  
Louisiana Professional Geoscientist (P.G. #490)  
Approach Environmental, L.L.C.

Encl./

## **Attachments Table of Contents**

Site Photographs with Maps

Analytical Data Report



Tommie Niten-9312Z water well



Zoomed in Google Earth Aerial Map of the Tommie Niten-9312Z water well



Zoomed out Google Earth Aerial Map of the Tommie Niten-9312Z water well



*Element Materials Technology Lafayette*  
2417 W. Pinhook Road  
Lafayette, LA 70508-3344  
TEL: (337) 235-0483 FAX: (337) 233-6540  
Website: [www.element.com](http://www.element.com)

November 09, 2018

Mark Moore  
Approach Environmental, LLC  
151 Freestate Blvd.  
Suite B  
Shreveport, LA 71107  
TEL: 318 222 2424  
FAX

Order No.: 18100983

RE: Approach Environmental - LDNR Residential Water Wells

Dear Mark Moore:

Element Materials Technology Lafayette received 2 sample(s) on 10/26/2018 for the analyses presented in the following report.

In accordance with your instructions Element Lafayette conducted the analysis shown on the following pages on samples submitted by your company. The results related only to the items tested. Unless otherwise noted, all analyses were conducted using EPA approved methodologies and all test results meet all requirements of TNI. All relevant sampling information is on the attached Chain-of-Custody form.

All soil data, except for 29-B, are on a wet-weight basis unless otherwise indicated in the units field as -dry.

LELAP Certification No.: 01997. TCEQ Certification No.: T104704261. LDHH Certification No.: LA180028. ISDH Certification No.: C-LA-01. A scope of accredited parameters is available upon request. A "#" by the test method or analyte indicates this parameter is outside the scope of accreditation.

Estimated uncertainty is available upon request. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

Cristina Thibeaux  
Customer Service Supervisor  
2417 W. Pinhook Road  
Lafayette, LA 70508-3344



Element Materials Technology Lafayette  
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Lafayette, LA 70508-3344  
TEL: (337) 235-0483 FAX: (337) 233-6540  
Website: www.element.com

## Case Narrative

WO#: 18100983  
Date: 11/9/2018

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**CLIENT:** Approach Environmental, LLC  
**Project:** Approach Environmental - LDNR Residential Water Wells

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Unless specified by the client, a duplicate or MS/MSD, wherever applicable, is randomly selected and analyzed from each analytical batch provided sample volume is sufficient. The sample chosen for duplicate or MS/MSD may or may not be a sample submitted in this workorder. A method blank and/or a lab control sample (LCS)/lab control sample duplicate (LCSD), wherever applicable, are processed as a quality control check for each analytical batch. When the matrix QC data is not available due to insufficient sample volume or when the results indicate possible matrix effect, the validity of the batch is determined by the method blank and LCS/LCSD.

The results of the laboratory internal quality control data are provided in the QC Summary Report section of the report for your review. Laboratory-related QC exceptions that may impact the validity of data are discussed in the case narrative. Sample-related QC exceptions are flagged either in the results page(s) or in the QC report page(s). End users should consider QC exceptions when evaluating sample data against data quality objectives.

Any other exceptions associated with this report will be footnoted in the results page(s) or the QC summary page(s).

The Dissolved Methane (RSK175) analysis was subcontracted to Gulf Coast Analytical Laboratories, Inc. Their report is attached in its entirety.



Element Materials Technology Lafayette  
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# Analytical Report

(consolidated MDL)

WO#: **18100983**

Date Reported **11/9/2018**

**CLIENT:** Approach Environmental, LLC **Collection Date:** 10/25/2018 3:45:00 PM  
**Project:** Approach Environmental - LDNR Residential Water Wells  
**Lab ID:** 18100983-001 **Matrix:** WATER  
**Client Sample ID** 9312 Z Tommie Nitén

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>TPH-D/O IN WATER BY SW8015</b>					<b>SW8015B</b>	<b>SW3511</b>	Analyst: CRM
<b>TPH DRO/ORO IN WATER BY SW8015</b>							
TPH (Diesel Range)	< 0.135	0.00412	0.135		mg/L	1	10/26/2018 3:26:00 PM
TPH (Oil Range)	< 0.124	0.0491	0.124		mg/L	1	10/26/2018 3:26:00 PM
Surr: 4-Terphenyl-d14	61.8		51.4-146		%Rec	1	10/26/2018 3:26:00 PM
<b>TPH-GRO IN WATER BY SW8015</b>					<b>SW8015B</b>		Analyst: CRM
TPH (Gasoline Range)	0.0404	0.0149	0.150	J	mg/L	1	10/26/2018 2:36:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	106		70-130		%Rec	1	10/26/2018 2:36:00 PM
<b>RCRA METALS - SW6010/7470A</b>					<b>SW7470A</b>		Analyst: AC
<b>MERCURY IN GROUND WATER, TOTAL</b>							
Mercury	< 0.000200	0.0000540	0.000200		mg/L	1	10/30/2018 3:10:34 PM
<b>INORGANIC ANIONS IN WATER BY IC</b>					<b>SW9056A</b>		Analyst: SGP
Chloride	59.2	0.332	5.00		mg/L	20	10/31/2018 10:39:38 AM
<b>RCRA METALS - SW6010/7470A</b>					<b>SW6010B</b>		Analyst: STS
<b>METALS IN WATER BY ICP, TOTALS</b>							
Arsenic	0.0135	0.00895	0.0100		mg/L	1	10/30/2018 9:07:20 PM
Barium	0.0181	0.00103	0.0100		mg/L	1	10/30/2018 9:07:20 PM
Cadmium	< 0.00500	0.000781	0.00500		mg/L	1	10/30/2018 9:07:20 PM
Chromium	< 0.0100	0.000483	0.0100		mg/L	1	10/30/2018 9:07:20 PM
Lead	< 0.0100	0.00488	0.0100		mg/L	1	10/30/2018 9:07:20 PM
Selenium	0.0133	0.00526	0.0200	J	mg/L	1	10/30/2018 9:07:20 PM
Silver	< 0.00500	0.000340	0.00500		mg/L	1	10/30/2018 9:07:20 PM
Sodium	252	2.32	5.00		mg/L	1	10/30/2018 9:07:20 PM
<b>PAH IN WATER BY EPA 8270C</b>					<b>SW8270C</b>	<b>SW3511</b>	Analyst: CRM
2-Methylnaphthalene	< 0.000522	0.0000196	0.000522		mg/L	1	10/26/2018 8:59:00 PM
Acenaphthene	< 0.00104	0.0000544	0.00104		mg/L	1	10/26/2018 8:59:00 PM
Acenaphthylene	< 0.00104	0.000117	0.00104		mg/L	1	10/26/2018 8:59:00 PM

**Qualifiers:**

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
C Value is below Minimum Compound Limit.	DF Dilution Factor
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	M Matrix Interference
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits





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# Analytical Report

(consolidated MDL)

WO#: **18100983**

Date Reported **11/9/2018**

**CLIENT:** Approach Environmental, LLC **Collection Date:** 10/25/2018 3:45:00 PM  
**Project:** Approach Environmental - LDNR Residential Water Wells  
**Lab ID:** 18100983-001 **Matrix:** WATER  
**Client Sample ID** 9312 Z Tommie Nitén

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>PAH IN WATER BY EPA 8270C</b>					<b>SW8270C</b>	<b>SW3511</b>	Analyst: CRM
Anthracene	< 0.00104	0.00000622	0.00104		mg/L	1	10/26/2018 8:59:00 PM
Benzo(a)anthracene	< 0.000522	0.0000254	0.000522		mg/L	1	10/26/2018 8:59:00 PM
Benzo(a)pyrene	< 0.000178	0.0000474	0.000178		mg/L	1	10/26/2018 8:59:00 PM
Benzo(b)fluoranthene	< 0.000522	0.0000446	0.000522		mg/L	1	10/26/2018 8:59:00 PM
Benzo(k)fluoranthene	< 0.000522	0.0000641	0.000522		mg/L	1	10/26/2018 8:59:00 PM
Chrysene	< 0.000522	0.0000252	0.000522		mg/L	1	10/26/2018 8:59:00 PM
Dibenz(a,h)anthracene	< 0.00104	0.0000537	0.00104		mg/L	1	10/26/2018 8:59:00 PM
Fluoranthene	< 0.00104	0.000000564	0.00104		mg/L	1	10/26/2018 8:59:00 PM
Fluorene	< 0.000626	0.0000241	0.000626		mg/L	1	10/26/2018 8:59:00 PM
Indeno(1,2,3-cd)pyrene	< 0.000522	0.000150	0.000522		mg/L	1	10/26/2018 8:59:00 PM
Naphthalene	< 0.00104	0.0000269	0.00104		mg/L	1	10/26/2018 8:59:00 PM
Phenanthrene	< 0.00104	0.00000311	0.00104		mg/L	1	10/26/2018 8:59:00 PM
Pyrene	< 0.00104	0.00000121	0.00104		mg/L	1	10/26/2018 8:59:00 PM
Surr: 4-Terphenyl-d14	84.1	0	49.2-161		%Rec	1	10/26/2018 8:59:00 PM

<b>SEMIVOLATILE ORGANICS IN WATER</b>					<b>SW8270C</b>	<b>E625/SW351</b>	Analyst: KSK
1,2,4,5-Tetrachlorobenzene	< 0.00100	0.000500	0.00100		mg/L	1	10/26/2018 5:16:00 PM
1,2,4-Trichlorobenzene	< 0.00500	0.00100	0.00500		mg/L	1	10/26/2018 5:16:00 PM
1,2-Dichlorobenzene	< 0.00500	0.00100	0.00500		mg/L	1	10/26/2018 5:16:00 PM
1,3-Dichlorobenzene	< 0.00500	0.000504	0.00500		mg/L	1	10/26/2018 5:16:00 PM
1,3-Dinitrobenzene	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
1,4-Dichlorobenzene	< 0.00500	0.00100	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2,3,4,6-Tetrachlorophenol	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2,4,5-Trichlorophenol	< 0.0100	0.000500	0.0100		mg/L	1	10/26/2018 5:16:00 PM
2,4,6-Trichlorophenol	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2,4-Dichlorophenol	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2,4-Dimethylphenol	< 0.00500	0.000556	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2,4-Dinitrophenol	< 0.0200	0.00200	0.0200		mg/L	1	10/26/2018 5:16:00 PM
2,4-Dinitrotoluene	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2,6-Dinitrotoluene	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2-Chloronaphthalene	< 0.00500	0.0000614	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2-Chlorophenol	< 0.00500	0.0000539	0.00500		mg/L	1	10/26/2018 5:16:00 PM
2-Nitroaniline	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM

**Qualifiers:**  
 \* Value exceeds Maximum Contaminant Level.  
 C Value is below Minimum Compound Limit.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit

B Analyte detected in the associated Method Blank  
 DF Dilution Factor  
 H Holding times for preparation or analysis exceeded  
 M Matrix Interference  
 R RPD outside accepted recovery limits



Element Materials Technology Lafayette  
 2417 W. Pinhook Road  
 Lafayette, LA 70508-3344  
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# Analytical Report

(consolidated MDL)

WO#: **18100983**

Date Reported **11/9/2018**

**CLIENT:** Approach Environmental, LLC **Collection Date:** 10/25/2018 3:45:00 PM  
**Project:** Approach Environmental - LDNR Residential Water Wells  
**Lab ID:** 18100983-001 **Matrix:** WATER  
**Client Sample ID** 9312 Z Tommie Nitén

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILE ORGANICS IN WATER</b>					<b>SW8270C</b>	<b>E625/SW351</b>	Analyst: <b>KSK</b>
3,3'-Dichlorobenzidine	< 0.0100	0.000477	0.0100		mg/L	1	10/26/2018 5:16:00 PM
3-Nitroaniline	< 0.0200	0.000500	0.0200		mg/L	1	10/26/2018 5:16:00 PM
4-Chloroaniline	< 0.00500	0.000237	0.00500		mg/L	1	10/26/2018 5:16:00 PM
4-Nitroaniline	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
4-Nitrophenol	< 0.0200	0.00500	0.0200		mg/L	1	10/26/2018 5:16:00 PM
Aniline	< 0.00500	0.000490	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Biphenyl	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Bis(2-chloroethyl)ether	< 0.00500	0.0000817	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Bis(2-chloroisopropyl)ether	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Bis(2-ethylhexyl)phthalate	0.00196	0.000302	0.00500	J	mg/L	1	10/26/2018 5:16:00 PM
Butyl benzyl phthalate	< 0.00500	0.000106	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Dibenzofuran	< 0.00500	0.0000800	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Diethyl phthalate	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Dimethyl phthalate	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Di-n-octyl phthalate	0.00153	0.000182	0.0100	J	mg/L	1	10/26/2018 5:16:00 PM
Dinoseb	< 0.00500	0.000300	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Hexachlorobenzene	< 0.00100	0.000500	0.00100		mg/L	1	10/26/2018 5:16:00 PM
Hexachlorobutadiene	< 0.00200	0.00100	0.00200		mg/L	1	10/26/2018 5:16:00 PM
Hexachlorocyclopentadiene	< 0.0100	0.000500	0.0100		mg/L	1	10/26/2018 5:16:00 PM
Hexachloroethane	< 0.00500	0.00200	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Isophorone	< 0.00500	0.000179	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Nitrobenzene	< 0.00100	0.000500	0.00100		mg/L	1	10/26/2018 5:16:00 PM
N-Nitrosodi-n-propylamine	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 5:16:00 PM
N-Nitrosodiphenylamine	< 0.00500	0.000143	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Pentachlorophenol	< 0.0100	0.00100	0.0100		mg/L	1	10/26/2018 5:16:00 PM
Phenol	< 0.00500	0.0000521	0.00500		mg/L	1	10/26/2018 5:16:00 PM
Surr: 2,4,6-Tribromophenol	74.9		47.2-144		%Rec	1	10/26/2018 5:16:00 PM
Surr: 2-Fluorobiphenyl	89.8		52.2-116		%Rec	1	10/26/2018 5:16:00 PM
Surr: 2-Fluorophenol	45.4		27.3-80.6		%Rec	1	10/26/2018 5:16:00 PM
Surr: 4-Terphenyl-d14	103		48.1-134		%Rec	1	10/26/2018 5:16:00 PM
Surr: Nitrobenzene-d5	81.0		42.5-144		%Rec	1	10/26/2018 5:16:00 PM
Surr: Phenol-d5	29.7		10-67.1		%Rec	1	10/26/2018 5:16:00 PM

**Qualifiers:** \* Value exceeds Maximum Contaminant Level. B Analyte detected in the associated Method Blank  
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# Analytical Report

(consolidated MDL)

WO#: **18100983**

Date Reported **11/9/2018**

**CLIENT:** Approach Environmental, LLC **Collection Date:** 10/25/2018 3:45:00 PM  
**Project:** Approach Environmental - LDNR Residential Water Wells  
**Lab ID:** 18100983-001 **Matrix:** WATER  
**Client Sample ID** 9312 Z Tommie Nitén

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>VOLATILES BY GC/MS IN WATER</b>				<b>SW8260B</b>		Analyst: <b>KSK</b>	
1,1,1,2-Tetrachloroethane	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
1,1,1-Trichloroethane	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
1,1,2,2-Tetrachloroethane	< 0.000500	0.000150	0.000500		mg/L	1	10/26/2018 10:54:00 AM
1,1,2-Trichloroethane	< 0.00500	0.000172	0.00500		mg/L	1	10/26/2018 10:54:00 AM
1,1-Dichloroethane	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
1,1-Dichloroethene	< 0.00500	0.000361	0.00500		mg/L	1	10/26/2018 10:54:00 AM
1,2-Dibromo-3-chloropropane	< 0.00500	0.000210	0.00500		mg/L	1	10/26/2018 10:54:00 AM
1,2-Dichlorobenzene	< 0.0200	0.000500	0.0200		mg/L	1	10/26/2018 10:54:00 AM
1,2-Dichloroethane	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 10:54:00 AM
1,2-Dichloroethene, Total	< 0.00600	0.000400	0.00600		mg/L	1	10/26/2018 10:54:00 AM
1,2-Dichloropropane	< 0.00500	0.000148	0.00500		mg/L	1	10/26/2018 10:54:00 AM
1,3-Dichlorobenzene	< 0.0100	0.000500	0.0100		mg/L	1	10/26/2018 10:54:00 AM
1,4-Dichlorobenzene	< 0.0200	0.000500	0.0200		mg/L	1	10/26/2018 10:54:00 AM
2-Butanone	< 0.0100	0.000442	0.0100		mg/L	1	10/26/2018 10:54:00 AM
4-Methyl-2-pentanone	< 0.0100	0.000325	0.0100		mg/L	1	10/26/2018 10:54:00 AM
Acetone	< 0.0100	0.00226	0.0100		mg/L	1	10/26/2018 10:54:00 AM
Benzene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Bromodichloromethane	< 0.00500	0.000136	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Bromoform	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Bromomethane	< 0.00500	0.000688	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Carbon disulfide	< 0.0100	0.000133	0.0100		mg/L	1	10/26/2018 10:54:00 AM
Carbon tetrachloride	< 0.00500	0.0000773	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Chlorobenzene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Chlorodibromomethane	< 0.00500	0.000170	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Chloroethane	< 0.0100	0.00155	0.0100		mg/L	1	10/26/2018 10:54:00 AM
Chloroform	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Chloromethane	< 0.00500	0.00200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
cis-1,2-Dichloroethene	< 0.00300	0.000200	0.00300		mg/L	1	10/26/2018 10:54:00 AM
cis-1,3-Dichloropropene	< 0.00200	0.000500	0.00200		mg/L	1	10/26/2018 10:54:00 AM
Ethylbenzene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Isobutyl alcohol	< 0.100	0.00400	0.100		mg/L	1	10/26/2018 10:54:00 AM
Methyl tert-butyl ether	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Methylene chloride	< 0.00500	0.000457	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Styrene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	C Value is below Minimum Compound Limit.	DF Dilution Factor
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	M Matrix Interference
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits



Element Materials Technology Lafayette  
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 Lafayette, LA 70508-3344  
 TEL: (337) 235-0483 FAX: (337) 233-6540  
 Website: www.element.com

# Analytical Report

(consolidated MDL)

WO#: **18100983**

Date Reported **11/9/2018**

**CLIENT:** Approach Environmental, LLC **Collection Date:** 10/25/2018 3:45:00 PM  
**Project:** Approach Environmental - LDNR Residential Water Wells  
**Lab ID:** 18100983-001 **Matrix:** WATER  
**Client Sample ID** 9312 Z Tommie Nitén

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>VOLATILES BY GC/MS IN WATER</b>				<b>SW8260B</b>		Analyst: <b>KSK</b>	
Tetrachloroethene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Toluene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
trans-1,2-Dichloroethene	< 0.00300	0.000204	0.00300		mg/L	1	10/26/2018 10:54:00 AM
trans-1,3-Dichloropropene	< 0.00200	0.000500	0.00200		mg/L	1	10/26/2018 10:54:00 AM
Trichloroethene	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Trichlorofluoromethane	< 0.00500	0.00200	0.00500		mg/L	1	10/26/2018 10:54:00 AM
Vinyl chloride	< 0.00200	0.00200	0.00200		mg/L	1	10/26/2018 10:54:00 AM
Xylenes, Total	< 0.0150	0.00150	0.0150		mg/L	1	10/26/2018 10:54:00 AM
Surr: 4-Bromofluorobenzene	106		65.1-136		%Rec	1	10/26/2018 10:54:00 AM
Surr: Dibromofluoromethane	103		40.4-143		%Rec	1	10/26/2018 10:54:00 AM
Surr: Toluene-d8	102		58.2-127		%Rec	1	10/26/2018 10:54:00 AM
<b>TOTAL DISSOLVED SOLIDS</b>				<b>SM2540C</b>		Analyst: <b>GMS</b>	
Total Dissolved Solids (Residue, Filterable)	635	11.9	20.0		mg/L	1	10/26/2018 10:22:00 AM

**Qualifiers:**

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
C Value is below Minimum Compound Limit.	DF Dilution Factor
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	M Matrix Interference
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits



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# Analytical Report

(consolidated MDL)

WO#: **18100983**

Date Reported **11/9/2018**

**CLIENT:** Approach Environmental, LLC **Collection Date:** 10/25/2018  
**Project:** Approach Environmental - LDNR Residential Water Wells  
**Lab ID:** 18100983-002 **Matrix:** WATER  
**Client Sample ID** Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>TPH-GRO IN WATER BY SW8015</b>			<b>SW8015B</b>		Analyst: <b>CRM</b>		
TPH (Gasoline Range)	0.0461	0.0149	0.150	J	mg/L	1	10/26/2018 2:09:00 PM
Surr: alpha, alpha, alpha-Trifluorotoluene	104		70-130		%Rec	1	10/26/2018 2:09:00 PM
<b>VOLATILES BY GC/MS IN WATER</b>			<b>SW8260B</b>		Analyst: <b>KSK</b>		
1,1,1,2-Tetrachloroethane	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
1,1,1-Trichloroethane	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
1,1,2,2-Tetrachloroethane	< 0.000500	0.000150	0.000500		mg/L	1	10/26/2018 11:15:00 AM
1,1,2-Trichloroethane	< 0.00500	0.000172	0.00500		mg/L	1	10/26/2018 11:15:00 AM
1,1-Dichloroethane	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
1,1-Dichloroethene	< 0.00500	0.000361	0.00500		mg/L	1	10/26/2018 11:15:00 AM
1,2-Dibromo-3-chloropropane	< 0.00500	0.000210	0.00500		mg/L	1	10/26/2018 11:15:00 AM
1,2-Dichlorobenzene	< 0.0200	0.000500	0.0200		mg/L	1	10/26/2018 11:15:00 AM
1,2-Dichloroethane	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 11:15:00 AM
1,2-Dichloroethene, Total	< 0.00600	0.000400	0.00600		mg/L	1	10/26/2018 11:15:00 AM
1,2-Dichloropropane	< 0.00500	0.000148	0.00500		mg/L	1	10/26/2018 11:15:00 AM
1,3-Dichlorobenzene	< 0.0100	0.000500	0.0100		mg/L	1	10/26/2018 11:15:00 AM
1,4-Dichlorobenzene	< 0.0200	0.000500	0.0200		mg/L	1	10/26/2018 11:15:00 AM
2-Butanone	< 0.0100	0.000442	0.0100		mg/L	1	10/26/2018 11:15:00 AM
4-Methyl-2-pentanone	< 0.0100	0.000325	0.0100		mg/L	1	10/26/2018 11:15:00 AM
Acetone	< 0.0100	0.00226	0.0100		mg/L	1	10/26/2018 11:15:00 AM
Benzene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Bromodichloromethane	< 0.00500	0.000136	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Bromoform	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Bromomethane	< 0.00500	0.000688	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Carbon disulfide	< 0.0100	0.000133	0.0100		mg/L	1	10/26/2018 11:15:00 AM
Carbon tetrachloride	< 0.00500	0.0000773	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Chlorobenzene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Chlorodibromomethane	< 0.00500	0.000170	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Chloroethane	< 0.0100	0.00155	0.0100		mg/L	1	10/26/2018 11:15:00 AM
Chloroform	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Chloromethane	< 0.00500	0.00200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
cis-1,2-Dichloroethene	< 0.00300	0.000200	0.00300		mg/L	1	10/26/2018 11:15:00 AM

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	C Value is below Minimum Compound Limit.	DF Dilution Factor
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	M Matrix Interference
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits



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# Analytical Report

(consolidated MDL)

WO#: **18100983**

Date Reported **11/9/2018**

**CLIENT:** Approach Environmental, LLC **Collection Date:** 10/25/2018  
**Project:** Approach Environmental - LDNR Residential Water Wells  
**Lab ID:** 18100983-002 **Matrix:** WATER  
**Client Sample ID** Trip Blank

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>VOLATILES BY GC/MS IN WATER</b>				<b>SW8260B</b>		Analyst: <b>KSK</b>	
cis-1,3-Dichloropropene	< 0.00200	0.000500	0.00200		mg/L	1	10/26/2018 11:15:00 AM
Ethylbenzene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Isobutyl alcohol	< 0.100	0.00400	0.100		mg/L	1	10/26/2018 11:15:00 AM
Methyl tert-butyl ether	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Methylene chloride	< 0.00500	0.000457	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Styrene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Tetrachloroethene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Toluene	< 0.00500	0.000200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
trans-1,2-Dichloroethene	< 0.00300	0.000204	0.00300		mg/L	1	10/26/2018 11:15:00 AM
trans-1,3-Dichloropropene	< 0.00200	0.000500	0.00200		mg/L	1	10/26/2018 11:15:00 AM
Trichloroethene	< 0.00500	0.000500	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Trichlorofluoromethane	< 0.00500	0.00200	0.00500		mg/L	1	10/26/2018 11:15:00 AM
Vinyl chloride	< 0.00200	0.00200	0.00200		mg/L	1	10/26/2018 11:15:00 AM
Xylenes, Total	< 0.0150	0.00150	0.0150		mg/L	1	10/26/2018 11:15:00 AM
Surr: 4-Bromofluorobenzene	102		65.1-136		%Rec	1	10/26/2018 11:15:00 AM
Surr: Dibromofluoromethane	102		40.4-143		%Rec	1	10/26/2018 11:15:00 AM
Surr: Toluene-d8	107		58.2-127		%Rec	1	10/26/2018 11:15:00 AM

**Qualifiers:**

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
C Value is below Minimum Compound Limit.	DF Dilution Factor
E Value above quantitation range	H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits	M Matrix Interference
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits

Page 9 of 53



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: <b>MB-28141</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_W_REC</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73627</b>						
Client ID: <b>PBW</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1841977</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4,5-Tetrachlorobenzene	< 0.00100	0.00100									
1,2,4-Trichlorobenzene	< 0.00500	0.00500									
1,2-Dichlorobenzene	< 0.00500	0.00500									
1,3-Dichlorobenzene	< 0.00500	0.00500									
1,3-Dinitrobenzene	< 0.00500	0.00500									
1,4-Dichlorobenzene	< 0.00500	0.00500									
2,3,4,6-Tetrachlorophenol	< 0.00500	0.00500									
2,4,5-Trichlorophenol	< 0.0100	0.0100									
2,4,6-Trichlorophenol	< 0.00500	0.00500									
2,4-Dichlorophenol	< 0.00500	0.00500									
2,4-Dimethylphenol	< 0.00500	0.00500									
2,4-Dinitrophenol	< 0.0200	0.0200									
2,4-Dinitrotoluene	< 0.00500	0.00500									
2,6-Dinitrotoluene	< 0.00500	0.00500									
2-Chloronaphthalene	< 0.00500	0.00500									
2-Chlorophenol	< 0.00500	0.00500									
2-Nitroaniline	< 0.00500	0.00500									
3,3'-Dichlorobenzidine	< 0.0100	0.0100									
3-Nitroaniline	< 0.0200	0.0200									
4-Chloroaniline	< 0.00500	0.00500									
4-Nitroaniline	< 0.00500	0.00500									
4-Nitrophenol	< 0.0200	0.0200									
Aniline	< 0.00500	0.00500									
Biphenyl	< 0.00500	0.00500									
Bis(2-chloroethyl)ether	< 0.00500	0.00500									
Bis(2-chloroisopropyl)ether	< 0.00500	0.00500									

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: <b>MB-28141</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_W_REC</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73627</b>						
Client ID: <b>PBW</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1841977</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Bis(2-ethylhexyl)phthalate	< 0.00500	0.00500									
Butyl benzyl phthalate	< 0.00500	0.00500									
Dibenzofuran	< 0.00500	0.00500									
Diethyl phthalate	< 0.00500	0.00500									
Dimethyl phthalate	< 0.00500	0.00500									
Di-n-octyl phthalate	< 0.0100	0.0100									
Dinoseb	< 0.00500	0.00500									
Hexachlorobenzene	< 0.00100	0.00100									
Hexachlorobutadiene	< 0.00200	0.00200									
Hexachlorocyclopentadiene	< 0.0100	0.0100									
Hexachloroethane	< 0.00500	0.00500									
Isophorone	< 0.00500	0.00500									
Nitrobenzene	< 0.00100	0.00100									
N-Nitrosodi-n-propylamine	< 0.00500	0.00500									
N-Nitrosodiphenylamine	< 0.00500	0.00500									
Pentachlorophenol	< 0.0100	0.0100									
Phenol	< 0.00500	0.00500									
Surr: 2,4,6-Tribromophenol	0.0222		0.03000		74.0	47.2	144				
Surr: 2-Fluorobiphenyl	0.0190		0.02000		94.8	52.2	116				
Surr: 2-Fluorophenol	0.0151		0.03000		50.4	27.3	80.6				
Surr: 4-Terphenyl-d14	0.0222		0.02000		111	48.1	134				
Surr: Nitrobenzene-d5	0.0178		0.02000		88.8	42.5	144				
Surr: Phenol-d5	0.0104		0.03000		34.7	10	67.1				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				





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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC  
**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: LCSD-28141	SampType: LCSD	TestCode: 8270_W_REC	Units: mg/L	Prep Date: 10/25/2018	RunNo: 73627						
Client ID: LCSS02	Batch ID: 28141	TestNo: SW8270C	E625/SW3510	Analysis Date: 10/26/2018	SeqNo: 1841978						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4,5-Tetrachlorobenzene	0.0398	0.00100	0.05000	0	79.6	51.3	119	0.03953	0.643	40	
1,2,4-Trichlorobenzene	0.0340	0.00500	0.05000	0	67.9	47.4	103	0.03375	0.656	40	
1,2-Dichlorobenzene	0.0354	0.00500	0.05000	0	70.8	32	119	0.03522	0.547	40	
1,3-Dichlorobenzene	0.0336	0.00500	0.05000	0	67.2	33.9	108	0.03339	0.597	40	
1,3-Dinitrobenzene	0.0432	0.00500	0.05000	0	86.4	56.5	132	0.04171	3.54	40	
1,4-Dichlorobenzene	0.0328	0.00500	0.05000	0	65.5	31.8	107	0.03307	0.984	40	
2,3,4,6-Tetrachlorophenol	0.0487	0.00500	0.05000	0	97.4	71.4	118	0.04776	1.90	40	
2,4,5-Trichlorophenol	0.0463	0.0100	0.05000	0	92.7	63.4	113	0.04490	3.13	40	
2,4,6-Trichlorophenol	0.0453	0.00500	0.05000	0	90.6	62.5	109	0.04384	3.29	40	
2,4-Dichlorophenol	0.0427	0.00500	0.05000	0	85.4	65.8	105	0.04116	3.63	40	
2,4-Dimethylphenol	0.0441	0.00500	0.05000	0	88.3	56.4	106	0.04265	3.42	40	
2,4-Dinitrophenol	0.0477	0.0200	0.05000	0	95.4	10	171	0.04553	4.67	40	
2,4-Dinitrotoluene	0.0428	0.00500	0.05000	0	85.6	72.6	107	0.04103	4.19	40	
2,6-Dinitrotoluene	0.0460	0.00500	0.05000	0	91.9	62.5	112	0.04493	2.27	40	
2-Chloronaphthalene	0.0385	0.00500	0.05000	0	76.9	43.2	121	0.03734	2.94	40	
2-Chlorophenol	0.0403	0.00500	0.05000	0	80.6	57.4	104	0.03877	3.86	40	
2-Nitroaniline	0.0463	0.00500	0.05000	0	92.6	71.4	120	0.04448	4.01	40	
3,3'-Dichlorobenzidine	0.0714	0.0100	0.1000	0	71.4	49.2	113	0.07104	0.577	40	
3-Nitroaniline	0.0371	0.0200	0.05000	0	74.1	37.7	116	0.03579	3.48	40	
4-Chloroaniline	0.0387	0.00500	0.05000	0	77.4	56.4	98.6	0.03712	4.23	40	
4-Nitroaniline	0.0462	0.00500	0.05000	0	92.4	64	113	0.04496	2.68	40	
4-Nitrophenol	0.0220	0.0200	0.05000	0	43.9	22.5	63.1	0.02131	2.97	40	
Aniline	0.0351	0.00500	0.05000	0	70.2	48.9	102	0.03310	5.91	40	
Biphenyl	0.0414	0.00500	0.05000	0	82.8	41.7	130	0.04000	3.40	40	
Bis(2-chloroethyl)ether	0.0399	0.00500	0.05000	0	79.8	51.9	112	0.03784	5.24	40	
Bis(2-chloroisopropyl)ether	0.0430	0.00500	0.05000	0	86.0	50.1	125	0.04021	6.70	40	

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: LCSD-28141	SampType: LCSD	TestCode: 8270_W_REC	Units: mg/L	Prep Date: 10/25/2018	RunNo: 73627						
Client ID: LCSS02	Batch ID: 28141	TestNo: SW8270C	E625/SW3510	Analysis Date: 10/26/2018	SeqNo: 1841978						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bis(2-ethylhexyl)phthalate	0.0488	0.00500	0.05000	0	97.7	46.9	137	0.04728	3.27	40	
Butyl benzyl phthalate	0.0482	0.00500	0.05000	0	96.5	47.6	134	0.04683	2.98	40	
Dibenzofuran	0.0440	0.00500	0.05000	0	87.9	59.5	126	0.04282	2.64	40	
Diethyl phthalate	0.0449	0.00500	0.05000	0	89.9	55.4	121	0.04352	3.22	40	
Dimethyl phthalate	0.0457	0.00500	0.05000	0	91.5	66	109	0.04439	3.02	40	
Di-n-octyl phthalate	0.0526	0.0100	0.05000	0	105	36.9	145	0.05037	4.28	40	
Dinoseb	0.0404	0.00500	0.05000	0	80.7	10	180	0.03925	2.81	40	
Hexachlorobenzene	0.0371	0.00100	0.05000	0	74.2	59.5	100	0.03569	3.85	40	
Hexachlorobutadiene	0.0306	0.00200	0.05000	0	61.2	43.1	101	0.03127	2.19	40	
Hexachlorocyclopentadiene	0.0368	0.0100	0.05000	0	73.5	10	151	0.03705	0.775	40	
Hexachloroethane	0.0298	0.00500	0.05000	0	59.6	22.2	110	0.03012	1.05	40	
Isophorone	0.0474	0.00500	0.05000	0	94.7	63.1	110	0.04544	4.15	40	
Nitrobenzene	0.0418	0.00100	0.05000	0	83.7	67	108	0.03988	4.77	40	
N-Nitrosodi-n-propylamine	0.0404	0.00500	0.05000	0	80.9	49.4	130	0.03808	6.02	40	
N-Nitrosodiphenylamine	0.0431	0.00500	0.05000	0	86.2	67.1	105	0.04187	2.86	40	
Pentachlorophenol	0.0350	0.0100	0.05000	0	69.9	47.1	104	0.03386	3.21	40	
Phenol	0.0205	0.00500	0.05000	0	41.0	25.2	50.1	0.01917	6.76	40	
Surr: 2,4,6-Tribromophenol	0.0219		0.03000		73.2	47.2	144		0	40	
Surr: 2-Fluorobiphenyl	0.0182		0.02000		91.0	52.2	116		0	40	
Surr: 2-Fluorophenol	0.0180		0.03000		59.8	27.3	80.6		0	40	
Surr: 4-Terphenyl-d14	0.0217		0.02000		108	48.1	134		0	40	
Surr: Nitrobenzene-d5	0.0175		0.02000		87.3	42.5	144		0	40	
Surr: Phenol-d5	0.0115		0.03000		38.2	10	67.1		0	40	

**Qualifiers:**  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits  
 W Sample container temperature is out of limit as specified at testcode

J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits  
 SDL Sample detection limit

M Matrix Interference  
 RL Reporting Limit  
 U Analyte not detected



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 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: <b>LCS-28141</b>	SampType: <b>LCS</b>	TestCode: <b>8270_W_REC</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73627</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1841979</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4,5-Tetrachlorobenzene	0.0395	0.00100	0.05000	0	79.1	51.3	119				
1,2,4-Trichlorobenzene	0.0337	0.00500	0.05000	0	67.5	47.4	103				
1,2-Dichlorobenzene	0.0352	0.00500	0.05000	0	70.4	32	119				
1,3-Dichlorobenzene	0.0334	0.00500	0.05000	0	66.8	33.9	108				
1,3-Dinitrobenzene	0.0417	0.00500	0.05000	0	83.4	56.5	132				
1,4-Dichlorobenzene	0.0331	0.00500	0.05000	0	66.1	31.8	107				
2,3,4,6-Tetrachlorophenol	0.0478	0.00500	0.05000	0	95.5	71.4	118				
2,4,5-Trichlorophenol	0.0449	0.0100	0.05000	0	89.8	63.4	113				
2,4,6-Trichlorophenol	0.0438	0.00500	0.05000	0	87.7	62.5	109				
2,4-Dichlorophenol	0.0412	0.00500	0.05000	0	82.3	65.8	105				
2,4-Dimethylphenol	0.0426	0.00500	0.05000	0	85.3	56.4	106				
2,4-Dinitrophenol	0.0455	0.0200	0.05000	0	91.1	10	171				
2,4-Dinitrotoluene	0.0410	0.00500	0.05000	0	82.1	72.6	107				
2,6-Dinitrotoluene	0.0449	0.00500	0.05000	0	89.9	62.5	112				
2-Chloronaphthalene	0.0373	0.00500	0.05000	0	74.7	43.2	121				
2-Chlorophenol	0.0388	0.00500	0.05000	0	77.5	57.4	104				
2-Nitroaniline	0.0445	0.00500	0.05000	0	89.0	71.4	120				
3,3'-Dichlorobenzidine	0.0710	0.0100	0.1000	0	71.0	49.2	113				
3-Nitroaniline	0.0358	0.0200	0.05000	0	71.6	37.7	116				
4-Chloroaniline	0.0371	0.00500	0.05000	0	74.2	56.4	98.6				
4-Nitroaniline	0.0450	0.00500	0.05000	0	89.9	64	113				
4-Nitrophenol	0.0213	0.0200	0.05000	0	42.6	22.5	63.1				
Aniline	0.0331	0.00500	0.05000	0	66.2	48.9	102				
Biphenyl	0.0400	0.00500	0.05000	0	80.0	41.7	130				
Bis(2-chloroethyl)ether	0.0378	0.00500	0.05000	0	75.7	51.9	112				
Bis(2-chloroisopropyl)ether	0.0402	0.00500	0.05000	0	80.4	50.1	125				

**Qualifiers:**  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits  
 W Sample container temperature is out of limit as specified at testcode

J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits  
 SDL Sample detection limit

M Matrix Interference  
 RL Reporting Limit  
 U Analyte not detected



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: LCS-28141	SampType: LCS	TestCode: 8270_W_REC	Units: mg/L	Prep Date: 10/25/2018	RunNo: 73627						
Client ID: LCSW	Batch ID: 28141	TestNo: SW8270C	E625/SW3510	Analysis Date: 10/26/2018	SeqNo: 1841979						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bis(2-ethylhexyl)phthalate	0.0473	0.00500	0.05000	0	94.6	46.9	137				
Butyl benzyl phthalate	0.0468	0.00500	0.05000	0	93.7	47.6	134				
Dibenzofuran	0.0428	0.00500	0.05000	0	85.6	59.5	126				
Diethyl phthalate	0.0435	0.00500	0.05000	0	87.0	55.4	121				
Dimethyl phthalate	0.0444	0.00500	0.05000	0	88.8	66	109				
Di-n-octyl phthalate	0.0504	0.0100	0.05000	0	101	36.9	145				
Dinoseb	0.0392	0.00500	0.05000	0	78.5	10	180				
Hexachlorobenzene	0.0357	0.00100	0.05000	0	71.4	59.5	100				
Hexachlorobutadiene	0.0313	0.00200	0.05000	0	62.5	43.1	101				
Hexachlorocyclopentadiene	0.0371	0.0100	0.05000	0	74.1	10	151				
Hexachloroethane	0.0301	0.00500	0.05000	0	60.2	22.2	110				
Isophorone	0.0454	0.00500	0.05000	0	90.9	63.1	110				
Nitrobenzene	0.0399	0.00100	0.05000	0	79.8	67	108				
N-Nitrosodi-n-propylamine	0.0381	0.00500	0.05000	0	76.2	49.4	130				
N-Nitrosodiphenylamine	0.0419	0.00500	0.05000	0	83.7	67.1	105				
Pentachlorophenol	0.0339	0.0100	0.05000	0	67.7	47.1	104				
Phenol	0.0192	0.00500	0.05000	0	38.3	25.2	50.1				
Surr: 2,4,6-Tribromophenol	0.0226		0.03000		75.3	47.2	144				
Surr: 2-Fluorobiphenyl	0.0184		0.02000		92.1	52.2	116				
Surr: 2-Fluorophenol	0.0178		0.03000		59.3	27.3	80.6				
Surr: 4-Terphenyl-d14	0.0223		0.02000		112	48.1	134				
Surr: Nitrobenzene-d5	0.0176		0.02000		87.8	42.5	144				
Surr: Phenol-d5	0.0113		0.03000		37.8	10	67.1				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: <b>MB-28141</b>	SampType: <b>MBLK</b>	TestCode: <b>625_ALL</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73670</b>						
Client ID: <b>PBW</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842768</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2,4-Trichlorobenzene	< 0.00400	0.00400									
1,3-Dinitrobenzene	< 0.00400	0.00400									
2,4,5-Trichlorophenol	< 0.00800	0.00800									
2,4,6-Trichlorophenol	< 0.00800	0.00800									
2,4-Dichlorophenol	< 0.00800	0.00800									
2,4-Dimethylphenol	< 0.00800	0.00800									
2,4-Dinitrophenol	< 0.0200	0.0200									
2,4-Dinitrotoluene	< 0.00400	0.00400									
2,6-Dinitrotoluene	< 0.00400	0.00400									
2-Chloronaphthalene	< 0.00400	0.00400									
2-Chlorophenol	< 0.00800	0.00800									
2-Nitroaniline	< 0.00400	0.00400									
3,3'-Dichlorobenzidine	< 0.00400	0.00400									
3-Nitroaniline	< 0.00400	0.00400									
4-Chloroaniline	< 0.00400	0.00400									
4-Nitroaniline	< 0.00400	0.00400									
4-Nitrophenol	< 0.0200	0.0200									
Aniline	< 0.00400	0.00400									
Bis(2-chloroethyl)ether	< 0.00400	0.00400									
Bis(2-chloroisopropyl)ether	< 0.00400	0.00400									
Bis(2-ethylhexyl)phthalate	< 0.00400	0.00400									
Butyl benzyl phthalate	< 0.00400	0.00400									
Dibenzofuran	< 0.00400	0.00400									
Diethyl phthalate	< 0.00400	0.00400									
Dimethyl phthalate	< 0.00400	0.00400									
Di-n-octyl phthalate	< 0.00400	0.00400									

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: <b>MB-28141</b>	SampType: <b>MBLK</b>	TestCode: <b>625_ALL</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73670</b>						
Client ID: <b>PBW</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842768</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexachlorobenzene	< 0.00400	0.00400									
Hexachlorobutadiene	< 0.00400	0.00400									
Hexachlorocyclopentadiene	< 0.00400	0.00400									
Hexachloroethane	< 0.00400	0.00400									
Isophorone	< 0.00400	0.00400									
Nitrobenzene	< 0.00400	0.00400									
N-Nitrosodi-n-propylamine	< 0.00400	0.00400									
N-Nitrosodiphenylamine	< 0.00400	0.00400									
Pentachlorophenol	< 0.00400	0.00400									
Phenol	< 0.00800	0.00800									
Surr: 2,4,6-Tribromophenol	0.0222		0.03000		74.0	74	120				S
Surr: 2-Fluorobiphenyl	0.0190		0.02000		94.8	63	111				
Surr: 2-Fluorophenol	0.0151		0.03000		50.4	40	71				
Surr: Nitrobenzene-d5	0.0178		0.02000		88.8	67	104				
Surr: Phenol-d5	0.0104		0.03000		34.7	27	58				
Surr: Terphenyl-d14	0.0222		0.02000		111	55	123				

Sample ID: <b>LCSD-28141</b>	SampType: <b>LCSD</b>	TestCode: <b>625_ALL</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73670</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842774</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2,4-Trichlorobenzene	0.0340	0.00400	0.05000	0	67.9	57	130	0.03375	0.656	30	
1,3-Dinitrobenzene	0.0432	0.00400	0.05000	0	86.4	79	120	0.04171	3.54	40	
2,4,5-Trichlorophenol	0.0463	0.00800	0.05000	0	92.7	65	120	0.04490	3.13	40	
2,4,6-Trichlorophenol	0.0453	0.00800	0.05000	0	90.6	52	129	0.04384	3.29	35	

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC  
**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: LCSD-28141	SampType: LCSD	TestCode: 625_ALL	Units: mg/L	Prep Date: 10/25/2018	RunNo: 73670						
Client ID: LCSS02	Batch ID: 28141	TestNo: SW8270C	E625/SW3510	Analysis Date: 10/26/2018	SeqNo: 1842774						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-Dichlorophenol	0.0427	0.00800	0.05000	0	85.4	53	122	0.04116	3.63	30	
2,4-Dimethylphenol	0.0441	0.00800	0.05000	0	88.3	42	120	0.04265	3.42	35	
2,4-Dinitrophenol	0.0477	0.0200	0.05000	0	95.4	5	173	0.04553	4.67	79	
2,4-Dinitrotoluene	0.0428	0.00400	0.05000	0	85.6	48	127	0.04103	4.19	25	
2,6-Dinitrotoluene	0.0460	0.00400	0.05000	0	91.9	68	137	0.04493	2.27	29	
2-Chloronaphthalene	0.0385	0.00400	0.05000	0	76.9	65	120	0.03734	2.94	15	
2-Chlorophenol	0.0403	0.00800	0.05000	0	80.6	36	120	0.03877	3.86	37	
2-Nitroaniline	0.0463	0.00400	0.05000	0	92.6	80	120	0.04448	4.01	40	
3,3'-Dichlorobenzidine	0.0714	0.00400	0.1000	0	71.4	8	213	0.07104	0.577	65	
3-Nitroaniline	0.0371	0.00400	0.05000	0	74.1	68	101	0.03579	3.48	40	
4-Chloroaniline	0.0387	0.00400	0.05000	0	77.4	65	107	0.03712	4.23	40	
4-Nitroaniline	0.0462	0.00400	0.05000	0	92.4	78	120	0.04496	2.68	40	
4-Nitrophenol	0.0220	0.0200	0.05000	0	43.9	13	129	0.02131	2.97	79	
Aniline	0.0351	0.00400	0.05000	0	70.2	39	101	0.03310	5.91	40	
Bis(2-chloroethyl)ether	0.0399	0.00400	0.05000	0	79.8	43	126	0.03784	5.24	65	
Bis(2-chloroisopropyl)ether	0.0430	0.00400	0.05000	0	86.0	63	139	0.04021	6.70	46	
Bis(2-ethylhexyl)phthalate	0.0488	0.00400	0.05000	0	97.7	29	137	0.04728	3.27	50	
Butyl benzyl phthalate	0.0482	0.00400	0.05000	0	96.5	5	140	0.04683	2.98	36	
Dibenzofuran	0.0440	0.00400	0.05000	0	87.9	81	120	0.04282	2.64	40	
Diethyl phthalate	0.0449	0.00400	0.05000	0	89.9	5	120	0.04352	3.22	60	
Dimethyl phthalate	0.0457	0.00400	0.05000	0	91.5	5	120	0.04439	3.02	110	
Di-n-octyl phthalate	0.0526	0.00400	0.05000	0	105	19	132	0.05037	4.28	42	
Hexachlorobenzene	0.0371	0.00400	0.05000	0	74.2	8	142	0.03569	3.85	33	
Hexachlorobutadiene	0.0306	0.00400	0.05000	0	61.2	38	120	0.03127	2.19	38	
Hexachlorocyclopentadiene	0.0368	0.00400	0.05000	0	73.5	10	116	0.03705	0.775	40	
Hexachloroethane	0.0298	0.00400	0.05000	0	59.6	55	120	0.03012	1.05	32	

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: <b>LCS-28141</b>	SampType: <b>LCS</b>	TestCode: <b>625_ALL</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73670</b>						
Client ID: <b>LCS02</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842774</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isophorone	0.0474	0.00400	0.05000	0	94.7	47	180	0.04544	4.15	56	
Nitrobenzene	0.0418	0.00400	0.05000	0	83.7	54	158	0.03988	4.77	37	
N-Nitrosodi-n-propylamine	0.0404	0.00400	0.05000	0	80.9	14	198	0.03808	6.02	52	
N-Nitrosodiphenylamine	0.0431	0.00400	0.05000	0	86.2	71	120	0.04187	2.86	40	
Pentachlorophenol	0.0350	0.00400	0.05000	0	69.9	38	152	0.03386	3.21	52	
Phenol	0.0205	0.00800	0.05000	0	41.0	17	120	0.01917	6.76	39	
Surr: 2,4,6-Tribromophenol	0.0219		0.03000		73.2	74	120		0	40	S
Surr: 2-Fluorobiphenyl	0.0182		0.02000		91.0	63	111		0	40	
Surr: 2-Fluorophenol	0.0180		0.03000		59.8	40	71		0	40	
Surr: Nitrobenzene-d5	0.0175		0.02000		87.3	67	104		0	40	
Surr: Phenol-d5	0.0115		0.03000		38.2	27	58		0	40	
Surr: Terphenyl-d14	0.0217		0.02000		108	55	123		0	40	

Sample ID: <b>LCS-28141</b>	SampType: <b>LCS</b>	TestCode: <b>625_ALL</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73670</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842775</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	0.0337	0.00400	0.05000	0	67.5	57	130				
1,3-Dinitrobenzene	0.0417	0.00400	0.05000	0	83.4	79	120				
2,4,5-Trichlorophenol	0.0449	0.00800	0.05000	0	89.8	65	120				
2,4,6-Trichlorophenol	0.0438	0.00800	0.05000	0	87.7	52	129				
2,4-Dichlorophenol	0.0412	0.00800	0.05000	0	82.3	53	122				
2,4-Dimethylphenol	0.0426	0.00800	0.05000	0	85.3	42	120				
2,4-Dinitrophenol	0.0455	0.0200	0.05000	0	91.1	5	173				
2,4-Dinitrotoluene	0.0410	0.00400	0.05000	0	82.1	48	127				

<b>Qualifiers:</b>	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	M Matrix Interference
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	RL Reporting Limit
	S Spike Recovery outside accepted recovery limits	SDL Sample detection limit	U Analyte not detected
	W Sample container temperature is out of limit as specified at testcode		





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 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: <b>LCS-28141</b>	SampType: <b>LCS</b>	TestCode: <b>625_ALL</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73670</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842775</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	0.0449	0.00400	0.05000	0	89.9	68	137				
2-Chloronaphthalene	0.0373	0.00400	0.05000	0	74.7	65	120				
2-Chlorophenol	0.0388	0.00800	0.05000	0	77.5	36	120				
2-Nitroaniline	0.0445	0.00400	0.05000	0	89.0	80	120				
3,3'-Dichlorobenzidine	0.0710	0.00400	0.1000	0	71.0	8	213				
3-Nitroaniline	0.0358	0.00400	0.05000	0	71.6	68	101				
4-Chloroaniline	0.0371	0.00400	0.05000	0	74.2	65	107				
4-Nitroaniline	0.0450	0.00400	0.05000	0	89.9	78	120				
4-Nitrophenol	0.0213	0.0200	0.05000	0	42.6	13	129				
Aniline	0.0331	0.00400	0.05000	0	66.2	39	101				
Bis(2-chloroethyl)ether	0.0378	0.00400	0.05000	0	75.7	43	126				
Bis(2-chloroisopropyl)ether	0.0402	0.00400	0.05000	0	80.4	63	139				
Bis(2-ethylhexyl)phthalate	0.0473	0.00400	0.05000	0	94.6	29	137				
Butyl benzyl phthalate	0.0468	0.00400	0.05000	0	93.7	5	140				
Dibenzofuran	0.0428	0.00400	0.05000	0	85.6	81	120				
Diethyl phthalate	0.0435	0.00400	0.05000	0	87.0	5	120				
Dimethyl phthalate	0.0444	0.00400	0.05000	0	88.8	5	120				
Di-n-octyl phthalate	0.0504	0.00400	0.05000	0	101	19	132				
Hexachlorobenzene	0.0357	0.00400	0.05000	0	71.4	8	142				
Hexachlorobutadiene	0.0313	0.00400	0.05000	0	62.5	38	120				
Hexachlorocyclopentadiene	0.0371	0.00400	0.05000	0	74.1	10	116				
Hexachloroethane	0.0301	0.00400	0.05000	0	60.2	55	120				
Isophorone	0.0454	0.00400	0.05000	0	90.9	47	180				
Nitrobenzene	0.0399	0.00400	0.05000	0	79.8	54	158				
N-Nitrosodi-n-propylamine	0.0381	0.00400	0.05000	0	76.2	14	198				
N-Nitrosodiphenylamine	0.0419	0.00400	0.05000	0	83.7	71	120				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28141

Sample ID: <b>LCS-28141</b>	SampType: <b>LCS</b>	TestCode: <b>625_ALL</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73670</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28141</b>	TestNo: <b>SW8270C</b>	<b>E625/SW3510</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842775</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Pentachlorophenol	0.0339	0.00400	0.05000	0	67.7	38	152				
Phenol	0.0192	0.00800	0.05000	0	38.3	17	120				
Surr: 2,4,6-Tribromophenol	0.0226		0.03000		75.3	74	120				
Surr: 2-Fluorobiphenyl	0.0184		0.02000		92.1	63	111				
Surr: 2-Fluorophenol	0.0178		0.03000		59.3	40	71				
Surr: Nitrobenzene-d5	0.0176		0.02000		87.8	67	104				
Surr: Phenol-d5	0.0113		0.03000		37.8	27	58				
Surr: Terphenyl-d14	0.0223		0.02000		112	55	123				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28142

Sample ID: <b>LCS-D-28142</b>	SampType: <b>LCS</b>	TestCode: <b>8015_DO_W_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73635</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28142</b>	TestNo: <b>SW8015B</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842143</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) 1.71 0.135 1.787 0 95.9 70 130  
 Surr: 4-Terphenyl-d14 0.0605 0.05956 102 51.4 146

Sample ID: <b>LCSD-D-28142</b>	SampType: <b>LCSD</b>	TestCode: <b>8015_DO_W_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73635</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>28142</b>	TestNo: <b>SW8015B</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842144</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range) 1.75 0.137 1.804 0 97.2 70 130 1.714 2.27 14.1  
 Surr: 4-Terphenyl-d14 0.0383 0.06013 63.7 51.4 146 0 40

Sample ID: <b>LCSD-M-28142</b>	SampType: <b>LCSD</b>	TestCode: <b>8015_DO_W_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73635</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>28142</b>	TestNo: <b>SW8015B</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842145</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range) 1.55 0.124 1.773 0 87.3 70 130 1.373 11.9 23.2  
 Surr: 4-Terphenyl-d14 0.0744 0.05910 126 51.4 146 0 40

Sample ID: <b>LCS-M-28142</b>	SampType: <b>LCS</b>	TestCode: <b>8015_DO_W_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73635</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28142</b>	TestNo: <b>SW8015B</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842146</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Oil Range) 1.37 0.126 1.804 0 76.1 70 130

<b>Qualifiers:</b>	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	M Matrix Interference
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	RL Reporting Limit
	S Spike Recovery outside accepted recovery limits	SDL Sample detection limit	U Analyte not detected
	W Sample container temperature is out of limit as specified at testcode		



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28142

Sample ID: <b>LCS-M-28142</b>	SampType: <b>LCS</b>	TestCode: <b>8015_DO_W_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73635</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28142</b>	TestNo: <b>SW8015B</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842146</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Terphenyl-d14      0.0457      0.06013      76.0      51.4      146

Sample ID: <b>MB-28142</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_DO_W_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73635</b>						
Client ID: <b>PBW</b>	Batch ID: <b>28142</b>	TestNo: <b>SW8015B</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842147</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Diesel Range)      0.0501      0.137      J

TPH (Oil Range)      < 0.127      0.127

Surr: 4-Terphenyl-d14      0.0520      0.06038      86.1      51.4      146

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28146

Sample ID: <b>MB-28146</b>	SampType: <b>MBLK</b>	TestCode: <b>8270_W_LVI_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73636</b>						
Client ID: <b>PBW</b>	Batch ID: <b>28146</b>	TestNo: <b>SW8270C</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842148</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	< 0.000519	0.000519									
Acenaphthene	< 0.00104	0.00104									
Acenaphthylene	< 0.00104	0.00104									
Anthracene	0.0000425	0.00104									J
Benzo(a)anthracene	< 0.000519	0.000519									
Benzo(a)pyrene	< 0.000176	0.000176									
Benzo(b)fluoranthene	< 0.000519	0.000519									
Benzo(k)fluoranthene	< 0.000519	0.000519									
Chrysene	< 0.000519	0.000519									
Dibenz(a,h)anthracene	< 0.00104	0.00104									
Fluoranthene	< 0.00104	0.00104									
Fluorene	< 0.000622	0.000622									
Indeno(1,2,3-cd)pyrene	< 0.000519	0.000519									
Naphthalene	< 0.00104	0.00104									
Phenanthrene	0.0000394	0.00104									J
Pyrene	< 0.00104	0.00104									
Surr: 4-Terphenyl-d14	0.00275		0.002375		116	49.2	161				

Sample ID: <b>LCSD-28146</b>	SampType: <b>LCSD</b>	TestCode: <b>8270_W_LVI_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73636</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>28146</b>	TestNo: <b>SW8270C</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842153</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	0.00239	0.000521	0.002382	0	101	60.8	127	0.002603	8.33	40	
Acenaphthene	0.00251	0.00104	0.002386	0	105	72.5	121	0.002676	6.26	40	
Acenaphthylene	0.00240	0.00104	0.002386	0	100	65.7	128	0.002362	1.51	40	

<b>Qualifiers:</b>	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	M Matrix Interference
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	RL Reporting Limit
	S Spike Recovery outside accepted recovery limits	SDL Sample detection limit	U Analyte not detected
	W Sample container temperature is out of limit as specified at testcode		



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28146

Sample ID: <b>LCS-28146</b>	SampType: <b>LCS</b>	TestCode: <b>8270_W_LVI_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73636</b>						
Client ID: <b>LCS02</b>	Batch ID: <b>28146</b>	TestNo: <b>SW8270C</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842153</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anthracene	0.00230	0.00104	0.002386	0	96.3	73.4	120	0.002219	3.49	40	
Benzo(a)anthracene	0.00264	0.000521	0.002386	0	111	69	121	0.002624	0.641	40	
Benzo(a)pyrene	0.00236	0.000177	0.002386	0	98.8	70.6	120	0.002326	1.38	40	
Benzo(b)fluoranthene	0.00286	0.000521	0.002386	0	120	65.3	127	0.002691	5.96	40	
Benzo(k)fluoranthene	0.00266	0.000521	0.002386	0	111	68.6	125	0.002614	1.65	40	
Chrysene	0.00260	0.000521	0.002386	0	109	74.4	120	0.002541	2.39	40	
Dibenz(a,h)anthracene	0.00273	0.00104	0.002386	0	114	66.4	126	0.002789	2.31	40	
Fluoranthene	0.00282	0.00104	0.002386	0	118	70.7	121	0.002391	16.4	40	
Fluorene	0.00255	0.000625	0.002386	0	107	62.5	134	0.002731	6.90	40	
Indeno(1,2,3-cd)pyrene	0.00254	0.000521	0.002386	0	107	66.9	120	0.002480	2.49	40	
Naphthalene	0.00245	0.00104	0.002386	0	102	63.5	137	0.002279	7.03	40	
Phenanthrene	0.00253	0.00104	0.002386	0	106	74.1	118	0.002560	1.18	40	
Pyrene	0.00283	0.00104	0.002386	0	119	73.2	120	0.002744	3.23	40	
Surr: 4-Terphenyl-d14	0.00258		0.002386		108	49.2	161		0	40	

Sample ID: <b>LCS-28146</b>	SampType: <b>LCS</b>	TestCode: <b>8270_W_LVI_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73636</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28146</b>	TestNo: <b>SW8270C</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842154</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	0.00260	0.000523	0.002393	0	109	60.8	127				
Acenaphthene	0.00268	0.00105	0.002398	0	112	72.5	121				
Acenaphthylene	0.00236	0.00105	0.002398	0	98.5	65.7	128				
Anthracene	0.00222	0.00105	0.002398	0	92.6	73.4	120				
Benzo(a)anthracene	0.00262	0.000523	0.002398	0	109	69	121				
Benzo(a)pyrene	0.00233	0.000178	0.002398	0	97.0	70.6	120				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28146

Sample ID: <b>LCS-28146</b>	SampType: <b>LCS</b>	TestCode: <b>8270_W_LVI_</b>	Units: <b>mg/L</b>	Prep Date: <b>10/25/2018</b>	RunNo: <b>73636</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28146</b>	TestNo: <b>SW8270C</b>	<b>SW3511</b>	Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842154</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(b)fluoranthene	0.00269	0.000523	0.002398	0	112	65.3	127				
Benzo(k)fluoranthene	0.00261	0.000523	0.002398	0	109	68.6	125				
Chrysene	0.00254	0.000523	0.002398	0	106	74.4	120				
Dibenz(a,h)anthracene	0.00279	0.00105	0.002398	0	116	66.4	126				
Fluoranthene	0.00239	0.00105	0.002398	0	99.7	70.7	121				
Fluorene	0.00273	0.000628	0.002398	0	114	62.5	134				
Indeno(1,2,3-cd)pyrene	0.00248	0.000523	0.002398	0	103	66.9	120				
Naphthalene	0.00228	0.00105	0.002398	0	95.1	63.5	137				
Phenanthrene	0.00256	0.00105	0.002398	0	107	74.1	118				
Pyrene	0.00274	0.00105	0.002398	0	114	73.2	120				
Surr: 4-Terphenyl-d14	0.00261		0.002398		109	49.2	161				

**Qualifiers:**  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits  
 W Sample container temperature is out of limit as specified at testcode

J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits  
 SDL Sample detection limit

M Matrix Interference  
 RL Reporting Limit  
 U Analyte not detected



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 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28160

Sample ID: <b>MB-28160</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_W</b>	Units: <b>mg/L</b>	Prep Date: <b>10/29/2018</b>	RunNo: <b>73708</b>						
Client ID: <b>PBW</b>	Batch ID: <b>28160</b>	TestNo: <b>SW6010B</b>		Analysis Date: <b>10/30/2018</b>	SeqNo: <b>1843572</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 0.0100	0.0100									
Barium	< 0.0100	0.0100									
Cadmium	< 0.00500	0.00500									
Chromium	< 0.0100	0.0100									
Lead	< 0.0100	0.0100									
Selenium	0.0137	0.0200									J
Silver	0.000800	0.00500									J
Sodium	< 10.0	10.0									

Sample ID: <b>LCS-28160</b>	SampType: <b>LCS</b>	TestCode: <b>6010_W</b>	Units: <b>mg/L</b>	Prep Date: <b>10/29/2018</b>	RunNo: <b>73708</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28160</b>	TestNo: <b>SW6010B</b>		Analysis Date: <b>10/30/2018</b>	SeqNo: <b>1843573</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.490	0.0100	0.5000	0	98.0	80	120				
Barium	0.489	0.0100	0.5000	0	97.9	80	120				
Cadmium	0.482	0.00500	0.5000	0	96.4	80	120				
Chromium	0.485	0.0100	0.5000	0	96.9	80	120				
Lead	0.488	0.0100	0.5000	0	97.5	80	120				
Selenium	0.500	0.0200	0.5000	0	100	80	120				
Silver	0.0956	0.00500	0.1000	0	95.6	80	120				
Sodium	50.0	10.0	50.00	0	100	80	120				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				





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# QC SUMMARY REPORT

WO#: **18100983**  
**09-Nov-18**

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28160

Sample ID: <b>LCSD-28160</b>	SampType: <b>LCSD</b>	TestCode: <b>6010_W</b>	Units: <b>mg/L</b>	Prep Date: <b>10/29/2018</b>	RunNo: <b>73708</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>28160</b>	TestNo: <b>SW6010B</b>		Analysis Date: <b>10/30/2018</b>	SeqNo: <b>1843574</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.501	0.0100	0.5000	0	100	80	120	0.4901	2.14	20	
Barium	0.495	0.0100	0.5000	0	99.0	80	120	0.4893	1.12	20	
Cadmium	0.486	0.00500	0.5000	0	97.2	80	120	0.4822	0.785	20	
Chromium	0.489	0.0100	0.5000	0	97.9	80	120	0.4846	0.965	20	
Lead	0.496	0.0100	0.5000	0	99.2	80	120	0.4877	1.67	20	
Selenium	0.507	0.0200	0.5000	0	101	80	120	0.5002	1.43	20	
Silver	0.0963	0.00500	0.1000	0	96.3	80	120	0.09560	0.730	20	
Sodium	47.1	10.0	50.00	0	94.2	80	120	50.01	6.01	20	

Sample ID: <b>18100889-003AMS</b>	SampType: <b>MS</b>	TestCode: <b>6010_W</b>	Units: <b>mg/L</b>	Prep Date: <b>10/29/2018</b>	RunNo: <b>73708</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>28160</b>	TestNo: <b>SW6010B</b>		Analysis Date: <b>10/30/2018</b>	SeqNo: <b>1843578</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.514	0.0100	0.5000	0	103	75	125				
Barium	1.27	0.0100	0.5000	0.8521	83.8	75	125				
Cadmium	0.509	0.00500	0.5000	0.003600	101	75	125				
Chromium	0.481	0.0100	0.5000	0.01060	94.0	75	125				
Lead	0.446	0.0100	0.5000	0.005300	88.1	75	125				
Selenium	0.658	0.0200	0.5000	0.1699	97.7	75	125				
Silver	0.108	0.00500	0.1000	0	108	75	125				
Sodium	11,700	10.0	50.00	11,850	-280	75	125				S

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28160

Sample ID: 18100889-003AMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 10/29/2018	RunNo: 73708
Client ID: ZZZZZZ	Batch ID: 28160	TestNo: SW6010B		Analysis Date: 10/30/2018	SeqNo: 1843581

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.522	0.0100	0.5000	0	104	75	125	0.5143	1.39	20	
Barium	1.38	0.0100	0.5000	0.8521	107	75	125	1.271	8.58	20	
Cadmium	0.514	0.00500	0.5000	0.003600	102	75	125	0.5093	0.860	20	
Chromium	0.489	0.0100	0.5000	0.01060	95.7	75	125	0.4806	1.79	20	
Lead	0.448	0.0100	0.5000	0.005300	88.6	75	125	0.4457	0.537	20	
Selenium	0.691	0.0200	0.5000	0.1699	104	75	125	0.6584	4.89	20	
Silver	0.108	0.00500	0.1000	0	108	75	125	0.1076	0.464	20	
Sodium	11,700	10.0	50.00	11,850	-300	75	125	11,710	0.0854	20	S

**NOTES:**

S - Analyte concentration in native sample was too high for accurate spike recovery(ies). The method is in control as indicated by the laboratory control sample (LCS).

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: **18100983**  
**09-Nov-18**

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28171

Sample ID: <b>MB-28171</b>	SampType: <b>MBLK</b>	TestCode: <b>HG_W_7470A</b>	Units: <b>mg/L</b>	Prep Date: <b>10/30/2018</b>	RunNo: <b>73705</b>						
Client ID: <b>PBW</b>	Batch ID: <b>28171</b>	TestNo: <b>SW7470A</b>		Analysis Date: <b>10/30/2018</b>	SeqNo: <b>1843431</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	< 0.000200	0.000200									

Sample ID: <b>LCS-28171</b>	SampType: <b>LCS</b>	TestCode: <b>HG_W_7470A</b>	Units: <b>mg/L</b>	Prep Date: <b>10/30/2018</b>	RunNo: <b>73705</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>28171</b>	TestNo: <b>SW7470A</b>		Analysis Date: <b>10/30/2018</b>	SeqNo: <b>1843432</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0101	0.000200	0.01000	0	101	80	120				

Sample ID: <b>LCSD-28171</b>	SampType: <b>LCSD</b>	TestCode: <b>HG_W_7470A</b>	Units: <b>mg/L</b>	Prep Date: <b>10/30/2018</b>	RunNo: <b>73705</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>28171</b>	TestNo: <b>SW7470A</b>		Analysis Date: <b>10/30/2018</b>	SeqNo: <b>1843433</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00917	0.000200	0.01000	0	91.7	80	120	0.01008	9.38	20	

Sample ID: <b>18100983-001DMS</b>	SampType: <b>MS</b>	TestCode: <b>HG_W_7470A</b>	Units: <b>mg/L</b>	Prep Date: <b>10/30/2018</b>	RunNo: <b>73705</b>						
Client ID: <b>9312 Z Tommie Nite</b>	Batch ID: <b>28171</b>	TestNo: <b>SW7470A</b>		Analysis Date: <b>10/30/2018</b>	SeqNo: <b>1843435</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0102	0.000200	0.01000	0	102	75	125				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** 28171

Sample ID: 18100983-001DMSD	SampType: MSD	TestCode: HG_W_7470A	Units: mg/L	Prep Date: 10/30/2018	RunNo: 73705						
Client ID: 9312 Z Tommie Nite	Batch ID: 28171	TestNo: SW7470A		Analysis Date: 10/30/2018	SeqNo: 1843436						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0104	0.000200	0.01000	0	104	75	125	0.01021	2.09	20	

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode

- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- SDL Sample detection limit

- M Matrix Interference
- RL Reporting Limit
- U Analyte not detected



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# QC SUMMARY REPORT

WO#: **18100983**  
**09-Nov-18**

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73610

Sample ID: <b>MB-R73610</b>	SampType: <b>MBLK</b>	TestCode: <b>TDS_2540C</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73610</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R73610</b>	TestNo: <b>SM2540C</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842735</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) < 20.0 20.0

Sample ID: <b>LCS-R73610</b>	SampType: <b>LCS</b>	TestCode: <b>TDS_2540C</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73610</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>R73610</b>	TestNo: <b>SM2540C</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842736</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 992 20.0 1,000 0 99.2 85 115

Sample ID: <b>LCSD-R73610</b>	SampType: <b>LCSD</b>	TestCode: <b>TDS_2540C</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73610</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>R73610</b>	TestNo: <b>SM2540C</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842737</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 991 20.0 1,000 0 99.1 85 115 992.0 0.101 10

Sample ID: <b>18100836-001BDUP</b>	SampType: <b>DUP</b>	TestCode: <b>TDS_2540C</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73610</b>						
Client ID: <b>ZZZZZ</b>	Batch ID: <b>R73610</b>	TestNo: <b>SM2540C</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842740</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filterable) 15,800 2,000 16,000 1.26 10

<b>Qualifiers:</b>	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	M Matrix Interference
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	RL Reporting Limit
	S Spike Recovery outside accepted recovery limits	SDL Sample detection limit	U Analyte not detected
	W Sample container temperature is out of limit as specified at testcode		



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73610

Sample ID: 18100836-001BDUP	SampType: DUP	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 73610						
Client ID: ZZZZZZ	Batch ID: R73610	TestNo: SM2540C		Analysis Date: 10/26/2018	SeqNo: 1842740						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 18100944-001EDUP	SampType: DUP	TestCode: TDS_2540C	Units: mg/L	Prep Date:	RunNo: 73610						
Client ID: ZZZZZZ	Batch ID: R73610	TestNo: SM2540C		Analysis Date: 10/26/2018	SeqNo: 1842744						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filterable)	501	20.0						402.0	21.9	10	R

**NOTES:**  
 R - High RPD due to suspected sample non-homogeneity. The method is in control as indicated by the LCS/LCSD.

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73621

Sample ID: <b>MB</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_W_REC</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73621</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R73621</b>	TestNo: <b>SW8260B</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1841780</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	< 0.00500	0.00500									
1,1,1-Trichloroethane	< 0.00500	0.00500									
1,1,2,2-Tetrachloroethane	< 0.000500	0.000500									
1,1,2-Trichloroethane	< 0.00500	0.00500									
1,1-Dichloroethane	< 0.00500	0.00500									
1,1-Dichloroethene	< 0.00500	0.00500									
1,2-Dibromo-3-chloropropane	< 0.00500	0.00500									
1,2-Dichlorobenzene	< 0.0200	0.0200									
1,2-Dichloroethane	< 0.00500	0.00500									
1,2-Dichloroethene, Total	< 0.00600	0.00600									
1,2-Dichloropropane	< 0.00500	0.00500									
1,3-Dichlorobenzene	< 0.0100	0.0100									
1,4-Dichlorobenzene	< 0.0200	0.0200									
2-Butanone	< 0.0100	0.0100									
4-Methyl-2-pentanone	< 0.0100	0.0100									
Acetone	< 0.0100	0.0100									
Benzene	< 0.00500	0.00500									
Bromodichloromethane	< 0.00500	0.00500									
Bromoform	< 0.00500	0.00500									
Bromomethane	< 0.00500	0.00500									
Carbon disulfide	< 0.0100	0.0100									
Carbon tetrachloride	< 0.00500	0.00500									
Chlorobenzene	< 0.00500	0.00500									
Chlorodibromomethane	< 0.00500	0.00500									
Chloroethane	< 0.0100	0.0100									
Chloroform	< 0.00500	0.00500									

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73621

Sample ID: <b>MB</b>	SampType: <b>MBLK</b>	TestCode: <b>8260_W_REC</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73621</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R73621</b>	TestNo: <b>SW8260B</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1841780</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloromethane	< 0.00500	0.00500									
cis-1,2-Dichloroethene	< 0.00300	0.00300									
cis-1,3-Dichloropropene	< 0.00200	0.00200									
Ethylbenzene	< 0.00500	0.00500									
Isobutyl alcohol	< 0.100	0.100									
Methyl tert-butyl ether	< 0.00500	0.00500									
Methylene chloride	< 0.00500	0.00500									
Styrene	< 0.00500	0.00500									
Tetrachloroethene	< 0.00500	0.00500									
Toluene	< 0.00500	0.00500									
trans-1,2-Dichloroethene	< 0.00300	0.00300									
trans-1,3-Dichloropropene	< 0.00200	0.00200									
Trichloroethene	< 0.00500	0.00500									
Trichlorofluoromethane	< 0.00500	0.00500									
Vinyl chloride	< 0.00200	0.00200									
Xylenes, Total	< 0.0150	0.0150									
Surr: 4-Bromofluorobenzene	0.0318		0.03000		106	65.1	136				
Surr: Dibromofluoromethane	0.0300		0.03000		100	40.4	143				
Surr: Toluene-d8	0.0316		0.03000		105	58.2	127				

Sample ID: <b>LCSD 17221A-8</b>	SampType: <b>LCSD</b>	TestCode: <b>8260_W_REC</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73621</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>R73621</b>	TestNo: <b>SW8260B</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1841780</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1,2-Tetrachloroethane	0.0502	0.00500	0.05000	0	100	73.4	120	0.04782	4.76	20	
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<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				





Element Materials Technology Lafayette  
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 TEL: (337) 235-0483 FAX: (337) 233-6540  
 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983

09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73621

Sample ID: LCSD 17221A-8	SampType: LCSD	TestCode: 8260_W_REC	Units: mg/L	Prep Date:	RunNo: 73621						
Client ID: LCSS02	Batch ID: R73621	TestNo: SW8260B		Analysis Date: 10/26/2018	SeqNo: 1841783						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.0518	0.00500	0.05000	0	104	64.5	127	0.05056	2.36	20	
1,1,2,2-Tetrachloroethane	0.0544	0.000500	0.05000	0	109	63.6	120	0.04956	9.31	20	
1,1,2-Trichloroethane	0.0491	0.00500	0.05000	0	98.1	74.9	120	0.04757	3.10	20	
1,1-Dichloroethane	0.0506	0.00500	0.05000	0	101	67.9	123	0.04958	2.06	20	
1,1-Dichloroethene	0.0464	0.00500	0.05000	0	92.7	60.3	135	0.04570	1.46	20	
1,2-Dibromo-3-chloropropane	0.0570	0.00500	0.05000	0	114	56.6	132	0.05029	12.6	20	
1,2-Dichlorobenzene	0.0505	0.0200	0.05000	0	101	76.4	120	0.04798	5.18	20	
1,2-Dichloroethane	0.0489	0.00500	0.05000	0	97.8	67.5	124	0.04791	2.02	20	
1,2-Dichloroethene, Total	0.104	0.00600	0.1000	0	104	72.5	122	0.1034	1.06	20	
1,2-Dichloropropane	0.0506	0.00500	0.05000	0	101	77.2	120	0.04791	5.56	20	
1,3-Dichlorobenzene	0.0501	0.0100	0.05000	0	100	75.1	120	0.04848	3.29	20	
1,4-Dichlorobenzene	0.0495	0.0200	0.05000	0	99.0	76.1	120	0.04750	4.08	20	
2-Butanone	0.0542	0.0100	0.05000	0	108	61	127	0.05086	6.40	20	
4-Methyl-2-pentanone	0.0508	0.0100	0.05000	0	102	54.1	129	0.04510	11.8	20	
Acetone	0.101	0.0100	0.1000	0	101	52.1	135	0.08874	13.0	20	
Benzene	0.0537	0.00500	0.05000	0	107	67.8	125	0.05174	3.68	20	
Bromodichloromethane	0.0487	0.00500	0.05000	0	97.4	72	120	0.04701	3.57	20	
Bromoform	0.0511	0.00500	0.05000	0	102	70.4	121	0.04795	6.36	20	
Bromomethane	0.0447	0.00500	0.05000	0	89.4	41.6	157	0.04567	2.19	20	
Carbon disulfide	0.0479	0.0100	0.05000	0	95.8	52.2	135	0.04782	0.188	20	
Carbon tetrachloride	0.0491	0.00500	0.05000	0	98.3	65.6	125	0.04834	1.62	20	
Chlorobenzene	0.0486	0.00500	0.05000	0	97.1	74.5	120	0.04675	3.80	20	
Chlorodibromomethane	0.0510	0.00500	0.05000	0	102	75	120	0.04892	4.20	20	
Chloroethane	0.0427	0.0100	0.05000	0	85.5	49.5	146	0.04190	1.98	20	
Chloroform	0.0504	0.00500	0.05000	0	101	71	120	0.04960	1.68	20	
Chloromethane	0.0509	0.00500	0.05000	0	102	45.8	145	0.04771	6.55	20	

**Qualifiers:**  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 S Spike Recovery outside accepted recovery limits  
 W Sample container temperature is out of limit as specified at testcode

J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits  
 SDL Sample detection limit

M Matrix Interference  
 RL Reporting Limit  
 U Analyte not detected



Element Materials Technology Lafayette  
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 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73621

Sample ID:	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
<b>LCS D 17221A-8</b>	<b>LCS D</b>	<b>8260_W_REC</b>	<b>mg/L</b>		<b>73621</b>						
Client ID:	Batch ID:	TestNo:	Analysis Date:	SeqNo:							
<b>LCS S02</b>	<b>R73621</b>	<b>SW8260B</b>	<b>10/26/2018</b>	<b>1841783</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene	0.0544	0.00300	0.05000	0	109	73.8	124	0.05342	1.73	20	
cis-1,3-Dichloropropene	0.0540	0.00200	0.05000	0	108	80	120	0.05236	3.03	20	
Ethylbenzene	0.0549	0.00500	0.05000	0	110	76.9	118	0.05200	5.43	20	
Isobutyl alcohol	0.619	0.100	0.5000	0	124	70	130	0.5071	19.8	20	
Methyl tert-butyl ether	0.0534	0.00500	0.05000	0	107	62.6	134	0.04877	9.04	20	
Methylene chloride	0.0494	0.00500	0.05000	0	98.9	65.8	125	0.04716	4.70	20	
Styrene	0.0485	0.00500	0.05000	0	97.0	79	120	0.04552	6.32	20	
Tetrachloroethene	0.0489	0.00500	0.05000	0	97.8	68.6	152	0.04704	3.92	20	
Toluene	0.0494	0.00500	0.05000	0	98.9	73.3	120	0.04792	3.14	20	
trans-1,2-Dichloroethene	0.0502	0.00300	0.05000	0	100	67.7	124	0.04993	0.480	20	
trans-1,3-Dichloropropene	0.0539	0.00200	0.05000	0	108	79.6	121	0.05235	2.84	20	
Trichloroethene	0.0495	0.00500	0.05000	0	99.0	74.5	124	0.04779	3.52	20	
Trichlorofluoromethane	0.0452	0.00500	0.05000	0	90.4	45.2	142	0.04456	1.43	20	
Vinyl chloride	0.0498	0.00200	0.05000	0	99.7	37.4	174	0.04777	4.24	20	
Xylenes, Total	0.145	0.0150	0.1500	0	96.7	80	120	0.1382	4.87	20	
Surr: 4-Bromofluorobenzene	0.0375		0.03000		125	65.1	136		0	20	
Surr: Dibromofluoromethane	0.0281		0.03000		93.8	40.4	143		0	20	
Surr: Toluene-d8	0.0311		0.03000		104	58.2	127		0	20	

Sample ID:	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
<b>LCS S 17221A-80</b>	<b>LCS S</b>	<b>8260_W_REC</b>	<b>mg/L</b>		<b>73621</b>						
Client ID:	Batch ID:	TestNo:	Analysis Date:	SeqNo:							
<b>LCS W</b>	<b>R73621</b>	<b>SW8260B</b>	<b>10/26/2018</b>	<b>1841784</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.0478	0.00500	0.05000	0	95.6	73.4	120				
1,1,1-Trichloroethane	0.0506	0.00500	0.05000	0	101	64.5	127				

<b>Qualifiers:</b>	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	M Matrix Interference
	ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	RL Reporting Limit
	S Spike Recovery outside accepted recovery limits	SDL Sample detection limit	U Analyte not detected
	W Sample container temperature is out of limit as specified at testcode		



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 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73621

Sample ID:	SampType:	TestCode:	Units:	Prep Date:	RunNo:						
LCS 17221A-80	LCS	8260_W_REC	mg/L		73621						
Client ID:	Batch ID:	TestNo:	Analysis Date:	SeqNo:							
LCSW	R73621	SW8260B	10/26/2018	1841784							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	0.0496	0.000500	0.05000	0	99.1	63.6	120				
1,1,2-Trichloroethane	0.0476	0.00500	0.05000	0	95.1	74.9	120				
1,1-Dichloroethane	0.0496	0.00500	0.05000	0	99.2	67.9	123				
1,1-Dichloroethene	0.0457	0.00500	0.05000	0	91.4	60.3	135				
1,2-Dibromo-3-chloropropane	0.0503	0.00500	0.05000	0	101	56.6	132				
1,2-Dichlorobenzene	0.0480	0.0200	0.05000	0	96.0	76.4	120				
1,2-Dichloroethane	0.0479	0.00500	0.05000	0	95.8	67.5	124				
1,2-Dichloroethene, Total	0.103	0.00600	0.1000	0	103	72.5	122				
1,2-Dichloropropane	0.0479	0.00500	0.05000	0	95.8	77.2	120				
1,3-Dichlorobenzene	0.0485	0.0100	0.05000	0	97.0	75.1	120				
1,4-Dichlorobenzene	0.0475	0.0200	0.05000	0	95.0	76.1	120				
2-Butanone	0.0509	0.0100	0.05000	0	102	61	127				
4-Methyl-2-pentanone	0.0451	0.0100	0.05000	0	90.2	54.1	129				
Acetone	0.0887	0.0100	0.1000	0	88.7	52.1	135				
Benzene	0.0517	0.00500	0.05000	0	103	67.8	125				
Bromodichloromethane	0.0470	0.00500	0.05000	0	94.0	72	120				
Bromoform	0.0480	0.00500	0.05000	0	95.9	70.4	121				
Bromomethane	0.0457	0.00500	0.05000	0	91.3	41.6	157				
Carbon disulfide	0.0478	0.0100	0.05000	0	95.6	52.2	135				
Carbon tetrachloride	0.0483	0.00500	0.05000	0	96.7	65.6	125				
Chlorobenzene	0.0468	0.00500	0.05000	0	93.5	74.5	120				
Chlorodibromomethane	0.0489	0.00500	0.05000	0	97.8	75	120				
Chloroethane	0.0419	0.0100	0.05000	0	83.8	49.5	146				
Chloroform	0.0496	0.00500	0.05000	0	99.2	71	120				
Chloromethane	0.0477	0.00500	0.05000	0	95.4	45.8	145				
cis-1,2-Dichloroethene	0.0534	0.00300	0.05000	0	107	73.8	124				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73621

Sample ID: <b>LCS 17221A-80</b>	SampType: <b>LCS</b>	TestCode: <b>8260_W_REC</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73621</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>R73621</b>	TestNo: <b>SW8260B</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1841784</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	0.0524	0.00200	0.05000	0	105	80	120				
Ethylbenzene	0.0520	0.00500	0.05000	0	104	76.9	118				
Isobutyl alcohol	0.507	0.100	0.5000	0	101	70	130				
Methyl tert-butyl ether	0.0488	0.00500	0.05000	0	97.5	62.6	134				
Methylene chloride	0.0472	0.00500	0.05000	0	94.3	65.8	125				
Styrene	0.0455	0.00500	0.05000	0	91.0	79	120				
Tetrachloroethene	0.0470	0.00500	0.05000	0	94.1	68.6	152				
Toluene	0.0479	0.00500	0.05000	0	95.8	73.3	120				
trans-1,2-Dichloroethene	0.0499	0.00300	0.05000	0	99.9	67.7	124				
trans-1,3-Dichloropropene	0.0524	0.00200	0.05000	0	105	79.6	121				
Trichloroethene	0.0478	0.00500	0.05000	0	95.6	74.5	124				
Trichlorofluoromethane	0.0446	0.00500	0.05000	0	89.1	45.2	142				
Vinyl chloride	0.0478	0.00200	0.05000	0	95.5	37.4	174				
Xylenes, Total	0.138	0.0150	0.1500	0	92.1	80	120				
Surr: 4-Bromofluorobenzene	0.0351		0.03000		117	65.1	136				
Surr: Dibromofluoromethane	0.0285		0.03000		95.1	40.4	143				
Surr: Toluene-d8	0.0307		0.03000		102	58.2	127				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73629

Sample ID: <b>GAS LCS</b>	SampType: <b>LCS</b>	TestCode: <b>8015_G_W</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73629</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>R73629</b>	TestNo: <b>SW8015B</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842008</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) 11.2 0.150 12.50 0 89.7 80 130

Sample ID: <b>GAS LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>8015_G_W</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73629</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>R73629</b>	TestNo: <b>SW8015B</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842009</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) 11.6 0.150 12.50 0 92.9 80 130 11.21 3.50 20

Sample ID: <b>MBLK</b>	SampType: <b>MBLK</b>	TestCode: <b>8015_G_W</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73629</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R73629</b>	TestNo: <b>SW8015B</b>		Analysis Date: <b>10/26/2018</b>	SeqNo: <b>1842010</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TPH (Gasoline Range) 0.100 0.150  
 Surr: alpha, alpha, alpha-Trifluorotoluene 0.0524 0.05000 105 70 130 J

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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# QC SUMMARY REPORT

WO#: **18100983**  
**09-Nov-18**

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73728

Sample ID: <b>MBLK</b>	SampType: <b>MBLK</b>	TestCode: <b>9056_W</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73728</b>						
Client ID: <b>PBW</b>	Batch ID: <b>R73728</b>	TestNo: <b>SW9056A</b>		Analysis Date: <b>10/31/2018</b>	SeqNo: <b>1844502</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.0513	0.250									J

Sample ID: <b>LCS</b>	SampType: <b>LCS</b>	TestCode: <b>9056_W</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73728</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>R73728</b>	TestNo: <b>SW9056A</b>		Analysis Date: <b>10/31/2018</b>	SeqNo: <b>1844503</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.90	0.250	10.00	0	99.0	80	120				

Sample ID: <b>LCSD</b>	SampType: <b>LCSD</b>	TestCode: <b>9056_W</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73728</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>R73728</b>	TestNo: <b>SW9056A</b>		Analysis Date: <b>10/31/2018</b>	SeqNo: <b>1844504</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	9.87	0.250	10.00	0	98.7	80	120	9.897	0.241	15	

Sample ID: <b>18100982-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>9056_W</b>	Units: <b>mg/L</b>	Prep Date:	RunNo: <b>73728</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>R73728</b>	TestNo: <b>SW9056A</b>		Analysis Date: <b>10/31/2018</b>	SeqNo: <b>1844506</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	74,900	1,250	25,000	51,590	93.2	80	120				

<b>Qualifiers:</b>	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Matrix Interference
	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
	S	Spike Recovery outside accepted recovery limits	SDL	Sample detection limit	U	Analyte not detected
	W	Sample container temperature is out of limit as specified at testcode				



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 Website: www.element.com

# QC SUMMARY REPORT

WO#: 18100983  
 09-Nov-18

**Client:** Approach Environmental, LLC

**Project:** Approach Environmental - LDNR Residential

**BatchID:** R73728

Sample ID: 18100982-001AMSD	SampType: MSD	TestCode: 9056_W	Units: mg/L	Prep Date:	RunNo: 73728						
Client ID: ZZZZZZ	Batch ID: R73728	TestNo: SW9056A		Analysis Date: 10/31/2018	SeqNo: 1844507						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	75,200	1,250	25,000	51,590	94.4	80	120	74,900	0.382	15	

**Qualifiers:**

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits
- W Sample container temperature is out of limit as specified at testcode

- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- SDL Sample detection limit

- M Matrix Interference
- RL Reporting Limit
- U Analyte not detected



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## Sample Log-In Check List

Client Name: **APPROACH\_ENVIRONM** Work Order Number: **18100983** RcptNo: **1**

Logged by:	<b>Tammy Thibodeaux</b>	<b>10/26/2018 9:00:00 AM</b>	<i>Tammy Thibodeaux</i>
Completed By:	<b>Tammy Thibodeaux</b>	<b>10/26/2018 9:12:27 AM</b>	<i>Tammy Thibodeaux</i>
Reviewed By:	<b>Caitlin Duplantis</b>	<b>10/26/2018 1:08:45 PM</b>	<i>Caitlin Duplantis</i>

### Chain of Custody

1. Is Chain of Custody complete? Yes  No  Not Present   
 2. How was the sample delivered? FedEx

### Log In

3. Coolers are present? Yes  No  NA   
 4. Shipping container/cooler in good condition? Yes  No   
 Custody seals intact on shipping container/cooler? Yes  No  Not Present   
 No. Seal Date: Signed By:  
 5. Was an attempt made to cool the samples? Yes  No  NA   
 6. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA   
 7. Sample(s) in proper container(s)? Yes  No   
 8. Sufficient sample volume for indicated test(s)? Yes  No   
 9. Are samples (except VOA and ONG) properly preserved? Yes  No   
 10. Was preservative added to bottles? Yes  No  NA   
 11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes  No  No VOA Vials   
 12. Were any sample containers received broken? Yes  No   
 13. Does paperwork match bottle labels? Yes  No   
 (Note discrepancies on chain of custody)  
 14. Are matrices correctly identified on Chain of Custody? Yes  No   
 15. Is it clear what analyses were requested? Yes  No   
 16. Were all holding times able to be met? Yes  No   
 (If no, notify customer for authorization.)

### Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:  
 Improper error correction(s) made by client  
 Added information to Trip Blank as per sample received.

### Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good	Not Present			



# ANALYTICAL RESULTS

PERFORMED BY

**GCAL, LLC**  
7979 Innovation Park Dr.  
Baton Rouge, LA 70820

Report Date 11/08/2018

GCAL Report 218103055



**Project 18100983**

<b><i>Deliver To</i></b>	<b><i>Additional Recipients</i></b>
Annie Reedy	Caitlin Duplantis, Element Materials Technology
Element Materials Technology	Cristina Thibeaux, Element Materials Technology
2417 W Pinhook Rd	Rhonda David, Element Materials Technology
Lafayette, LA 70508	Buffy Hudson, Element Materials Technology
800-737-2378	



## Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

### Common Abbreviations that may be Utilized in this Report

<b>ND</b>	Indicates the result was Not Detected at the specified reporting limit
<b>NO</b>	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
<b>DO</b>	Indicates the result was Diluted Out
<b>MI</b>	Indicates the result was subject to Matrix Interference
<b>TNTC</b>	Indicates the result was Too Numerous To Count
<b>SUBC</b>	Indicates the analysis was Sub-Contracted
<b>FLD</b>	Indicates the analysis was performed in the Field
<b>DL</b>	Detection Limit
<b>LOD</b>	Limit of Detection
<b>LOQ</b>	Limit of Quantitation
<b>RE</b>	Re-analysis
<b>CF</b>	HPLC or GC Confirmation
<b>00:01</b>	Reported as a time equivalent to 12:00 AM

### Reporting Flags that may be Utilized in this Report

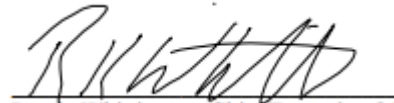
<b>J or I</b>	Indicates the result is between the MDL and LOQ
<b>J</b>	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
<b>U</b>	Indicates the compound was analyzed for but not detected
<b>B or V</b>	Indicates the analyte was detected in the associated Method Blank
<b>Q</b>	Indicates a non-compliant QC Result (See Q Flag Application Report)
<b>*</b>	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
<b>E</b>	Organics - The result is estimated because it exceeded the instrument calibration range
<b>E</b>	Metals - % difference for the serial dilution is > 10%
<b>L</b>	Reporting Limits adjusted to meet risk-based limit.
<b>P</b>	RPD between primary and confirmation result is greater than 40
<b>DL</b>	Diluted analysis – when appended to Client Sample ID

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature  
GCAL Report 218103055

## Certifications

Certification	Certification Number
DOD ELAP	L16-398-R5
Alabama	01955
Arkansas	18-062-0
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

## Case Narrative

**Client:** Element Materials Technology      **Report:** 218103055

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

**No anomalies were found for the analyzed sample(s).**

## Sample Summary

<b>GCAL ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Collect Date/Time</b>	<b>Receive Date/Time</b>
21810305501	9312 Z Tommie Niten	Water	10/25/2018 15:45	10/30/2018 13:23

## Sample Results

<b>9312 Z Tommie Niten</b>	Collect Date	10/25/2018 15:45	GCAL ID	21810305501
	Receive Date	10/30/2018 13:23	Matrix	Water

**EPA RSK-175**

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	30	11/08/2018 17:15	JAR	647639

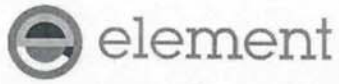
CAS#	Parameter	Result	LOQ	Units
74-82-8	Methane	712	60.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
115-07-1	Propene	40.50	Diluted Out	ug/L	0*	40 - 143

## GC Volatiles QC Summary

<b>Analytical Batch</b> 647639		Client ID GCAL ID Sample Type Prep Date Analysis Date Matrix	MB647639 1866851 MB NA 11/08/2018 16:03 Water	LCS647639 1866852 LCS NA 11/08/2018 16:09 Water			
<b>EPA RSK-175</b>		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R
Methane	74-82-8	ND	2.00	17.5	14.1	81	39 - 120
<b>Surrogate</b> Propene	115-07-1	25.3	62	40.5	16.8	41	40 - 143



CHAIN OF CUSTODY RECORD

Omega COCID 7740 PAGE: 1 OF: 1

**ADDRESS**  
 Element Materials Technology  
 Lafayette  
 2417 W. Pinhook Road  
 Lafayette, LA 70508-3344  
 TEL: (337) 235-0483  
 FAX: (337) 233-6540  
 Website: www.element.com

SUB CONTRATOR: <b>GCAL</b>		COMPANY: <b>Gulf Coast</b>		SPECIAL INSTRUCTIONS / COMMENTS: dissolved methane by RSK175/////PO ELA 01972PO			
ADDRESS: <b>7979 GSRI Avenue</b>							
CITY, STATE, ZIP: <b>Baton Rouge, LA 70820</b>							
PHONE: <b>(225) 769-4900</b>		FAX: <b>(225) 767-5717</b>					
ACCOUNT #:		EMAIL:					
ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Methanol Preserved Weights HOT Sample Notation, Additional Sample Description.
1	18100983-001G METHANE_SUB (RSK-175)	9312 Z Tommie Nit	VOAU	Water	10/25/2018 3:45:00 PM	2	

Client ID: 4462 - Element Materials Technology  
 SDG: 218103055  
 PM: JLM



Relinquished By: <i>[Signature]</i>	Date: <i>10-24-18</i>	Time: <i>1530</i>	Received By: <i>[Signature]</i>	Date: <i>10-24-18</i>	Time: <i>1530</i>	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE  FOR LAB USE ONLY Temp of samples: <i>2.35°C</i> Attempt to Cool? _____ Comments: <i>41CPM</i>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By: <i>[Signature]</i>	Date: <i>10-30-18</i>	Time: <i>1323</i>	Received By: <i>[Signature]</i>	Date: <i>10-30-18</i>	Time: <i>1323</i>	
TAT:    Standard <input type="checkbox"/> RUSH <input type="checkbox"/> Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/> Note: RUSH requests will incur surcharges!						





# SAMPLE RECEIVING CHECKLIST



SAMPLE DELIVERY GROUP 218103055			CHECKLIST		YES	NO
<b>Client</b> PM JLM 4462 - Element Materials Technology	<b>Transport Method</b> CUST		Samples received with proper thermal preservation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
			Radioactivity is <1600 cpm? If no, record cpm value in notes section.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>Profile Number</b> 271810	<b>Received By</b> Reese, Sean M		COC relinquished and complete (including sampleIDs, collect times, and sampler)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
			All containers received in good condition and within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>Line Item(s)</b> 1 - Water	<b>Receive Date(s)</b> 10/30/18		All sample labels and containers received match the chain of custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
			Preservative added to any containers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
			If received, was headspace for VOC water containers < 6mm?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
			Samples collected in containers provided by GCAL?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
COOLERS			DISCREPANCIES	LAB PRESERVATIONS		
<b>Airbill</b>	<b>Thermometer ID:</b> E29	<b>Temp °C</b>  2.3	None	None		
<b>NOTES</b>						

