



Souder, Miller & Associates ♦ 201 S. Halagueno St. ♦ Carlsbad, NM 88220  
(575) 689-8801

May 8, 2020

NMOCD District 2  
Ms. Victoria Venegas  
811 S. First St., Artesia, NM 88210

5E29133-BG11

SUBJECT: Remediation Closure Report for the Fighting Okra 18 CTB 4 Release, Carlsbad, Lea County, New Mexico

Dear Ms. Venegas:

On behalf of Devon Energy Production Company, Souder, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes the remediation of a release of liquids related to oil and gas production activities at the Fighting Okra 18 CTB 4 site. The site is in Unit C, Section 18, Township 26S, Range 34E, Lea County, New Mexico, on federal land. Figure 1 illustrates the vicinity and site location on an USGS 7.5 minute quadrangle map.

Table 1 summarizes release information and Closure Criteria.

<b>Table 1: Release Information and Closure Criteria</b>			
Name	Fighting Okra 18 CTB 4	Company	Devon Energy Production Company
API Number	N/A	Location	32.047988, -103.509655
Incident Number	TBD		
Estimated Date of Release	2/26/2020	Date Reported to NMOCD	2/26/2020
Landowner	Federal	Reported To	NMOCD, BLM, MNSLO
Source of Release	Dump line of a three-phase separator developed a hole causing fluid to release onto the pad.		
Released Volume	5 bbls 40 bbls	Released Material	Crude Oil & Produced Water
Recovered Volume	35 bbls	Net Release	10 bbls
NMOCD Closure Criteria	>100 feet to groundwater		
SMA Response Dates	3/5/2020, 4/20- 21/2020		

## **1.0 Background**

On February 26, 2020, a release was discovered at the Fighting Okra 18 CTB 4 site resulting from a 3-phase separator developing a hole that caused the fluids to release. These contaminants remained on location. Initial response was conducted by Devon personnel, which included source elimination and containment activities, also a vacuum truck was on location which recovered approximately 30 barrels of fluid, that were hauled to and properly disposed of at R360 Environmental Solutions near Hobbs, NM. Figure 1 illustrates the vicinity and site location; Figure 2 illustrates the release location. The C-141 form is included in Appendix A.

## **2.0 Site Information and Closure Criteria**

The Fighting Okra 18 CTB 4 is located approximately 20 miles to the south west of Jal, New Mexico on Federal (BLM) land at an elevation of approximately 3,364 feet above mean sea level (amsl).

Based upon water well data (Appendix B), depth to groundwater in the area is estimated to be 196 feet below grade surface (bgs). There is one known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database ([https://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](https://gis.ose.state.nm.us/gisapps/ose_pod_locations/); accessed 3/3/2020). The nearest significant watercourse is a manmade pond, located approximately 3700 feet to the north west. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of greater than 100 feet bgs. To the extent possible, the site has been restored to meet the standards of Table I of 19.15.29.12 NMAC. On behalf of Devon, SMA is also requesting deferral for the area of the tank battery due to oil and gas operations equipment and above ground pipelines presenting a safety issue. This soil will remain in place until site abandonment.

Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data is attached in Appendix B.

## **3.0 Release Characterization and Remediation Activities**

On March 5, 2020, SMA personnel arrived on site in response to the release associated with Fighting Okra 18 CTB 4. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area. Soil samples were field screened for chloride using an electrical conductivity (EC) meter and for hydrocarbon impacts using a calibrated MiniRAE 3000 photoionization detector (PID) equipped with a 10.6 eV lamp and/or for hydrocarbon impacts using a Dextsil® PetroFLAG TPH Analyzer.

A total of six (6) sample locations (S1-S6) were investigated using a hand-auger, collecting samples every six inches until reaching a depth of two (2) feet bgs. A minimum of two samples were collected at each sampling location and field-screened using the methods above. A total of twenty-four (24) samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D.

As summarized in Table 3, results indicated that an area approximately 80 feet by 60 feet by 2 feet deep had been impacted.

Fighting Okra 18 CTB 4 Remediation Closure Report  
May 8, 2020

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On April 20 and 21, 2020, SMA returned to the site to guide the excavation activities of the contaminated soil. Due to presence of site equipment and aboveground pipelines, excavation was limited to two areas, SMA guided excavation by collecting soil samples for field screening. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met. NMOCD was notified on April 17, 2020 that closure samples were expected to be collected in the referenced two (2) business days.

The first excavation area, represented by samples S1-S4, measured approximately 10 x 34 x 3 feet. Confirmation samples were comprised of five-point composites of the base (CS1- CS4) and walls (SW1-SW4). The second area, represented by samples (CS5, CS6) were collected from the area. In addition, six (6) delineation samples were also collected. Horizontal delineation samples are represented by sidewall samples SW1- SW4, and vertical delineation samples to two feet depth and represented by samples S7 and S8.

A total of seventeen (17) samples were collected for laboratory analysis. Laboratory samples were collected in accordance with the sampling protocol included in Appendix C. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Cardinal Laboratories, located in Hobbs, New Mexico (Appendix D). One sample (CS6) was delivered to Hall Laboratories, located in Albuquerque, New Mexico.

SMA is requesting remediation deferral for the areas represented by soil samples S5, S6, S7, S8, SW1 and SW2 due the proximity of oil and gas operations equipment. Samples S5, S8, SW1, and SW2 were collected underneath separator, S6 from below heater treater, and S7 from adjacent to the above ground pipelines. Any excavation past two (2) feet in depth would compromise the stability of the equipment. The containment has been delineated and does not cause imminent risk to human health, the environment or groundwater. The soil will remain in place until the site location's abandonment and pad reclamation requirement activities.

Figure 3 shows the extent of the excavation, sample locations, and the request deferral area. Laboratory results are summarized in Tables 3a and 3b. Laboratory reports are included in Appendix D.

Samples CS5 and SW3 will be addressed during plug and abandon activities. Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported and disposed of at R360 Environmental Solutions located near Hobbs, NM, an NMOCD permitted disposal facility.

## **5.0 Scope and Limitations**

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this closure report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either Ashley Maxwell at 505-320-9241 or Shawna Chubbuck at 505-325-7535.

Fighting Okra 18 CTB 4 Remediation Closure Report  
May 8, 2020

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Submitted by:  
SOUDER, MILLER & ASSOCIATES



Ashley Maxwell  
Project Manager

Reviewed by:



Shawna Chubbuck  
Senior Scientist

Fighting Okra 18 CTB 4 Remediation Closure Report  
May 8, 2020

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**ATTACHMENTS:**

**Figures:**

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Surface Water Radius Map

Figure 3: Site and Sample Location Map

**Tables:**

Table 2: NMOCD Closure Criteria Justification

Table 3a: Summary of Initial Sample Results

Table 3b: Summary of Closure Sample Results

**Appendices:**

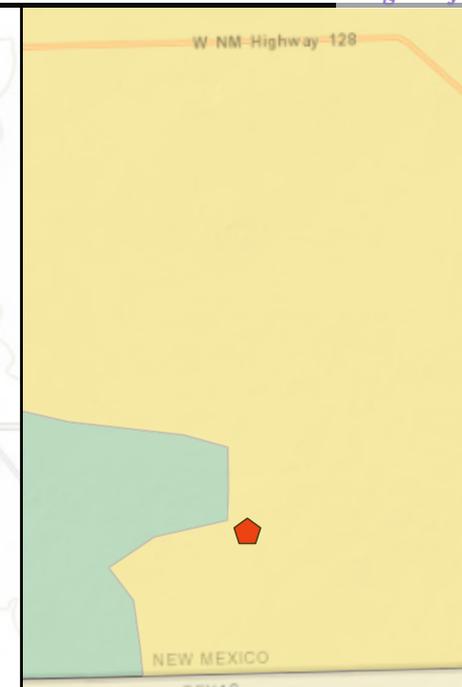
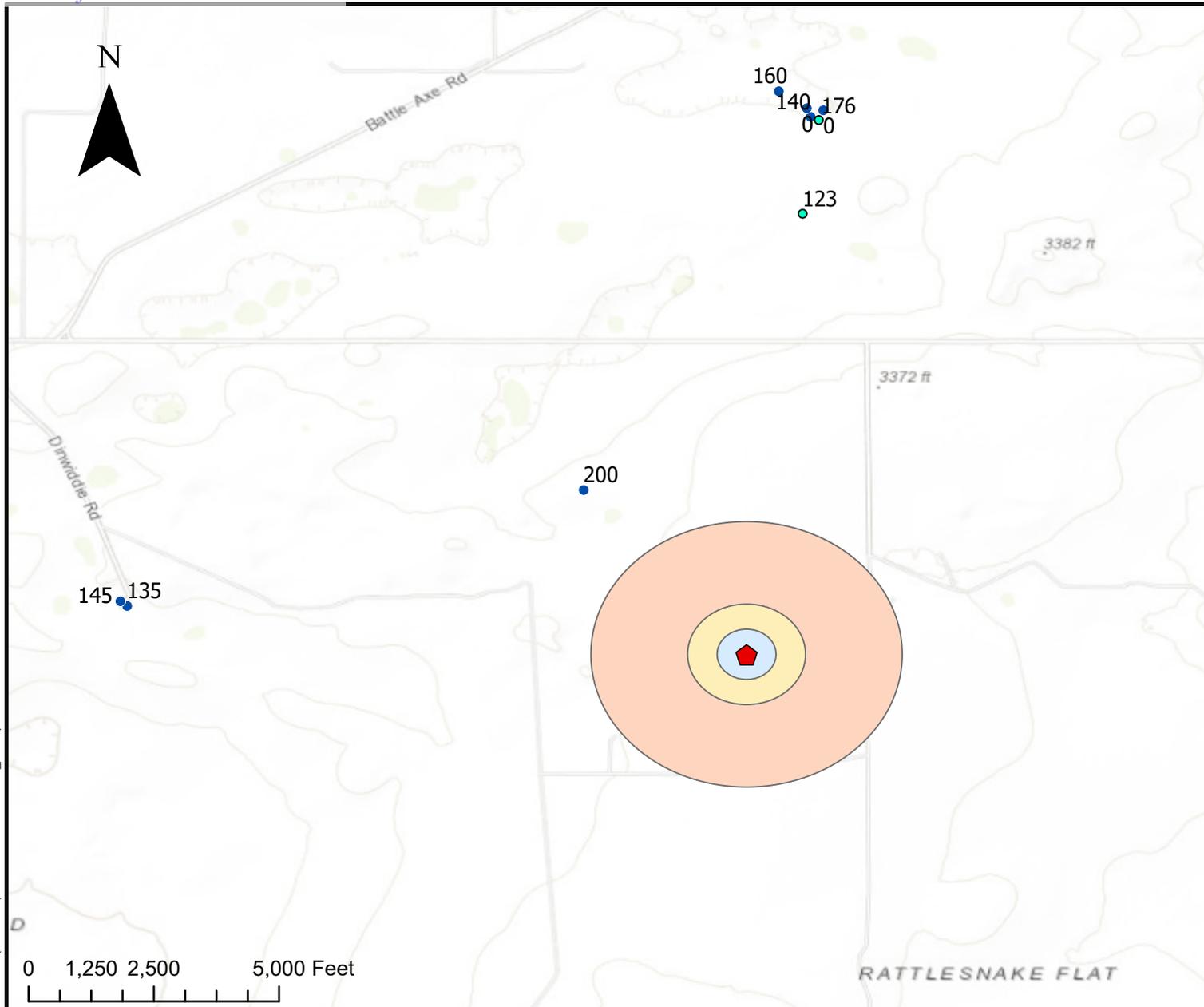
Appendix A: Form C141

Appendix B: NMOSE Wells Report

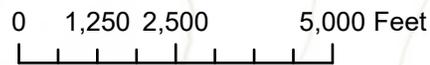
Appendix C: Sampling Protocol and Field Notes

Appendix D: Laboratory Analytical Reports

# FIGURES



Legend		Karst Potential	
	POR		High
	USGS Wells		Medium
	OSE Wells		Low
	.5 Mile		
	1000 Feet		
	500 Feet		



Regional Vicinity & Wellhead Protection Map  
 Fighting Okra 18 CTB 4 - Devon Energy  
 UL: C S: 18 T: 26S R: 34E Lea County, New Mexico

Figure 1

\\192.168.22.10\Projects\5-Devon\MSA 2019 (5E28017)\GIS\ARCGIS\DEVON\_MIT.aprx

Revisions		
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By: _____	Date: _____	Descr: _____

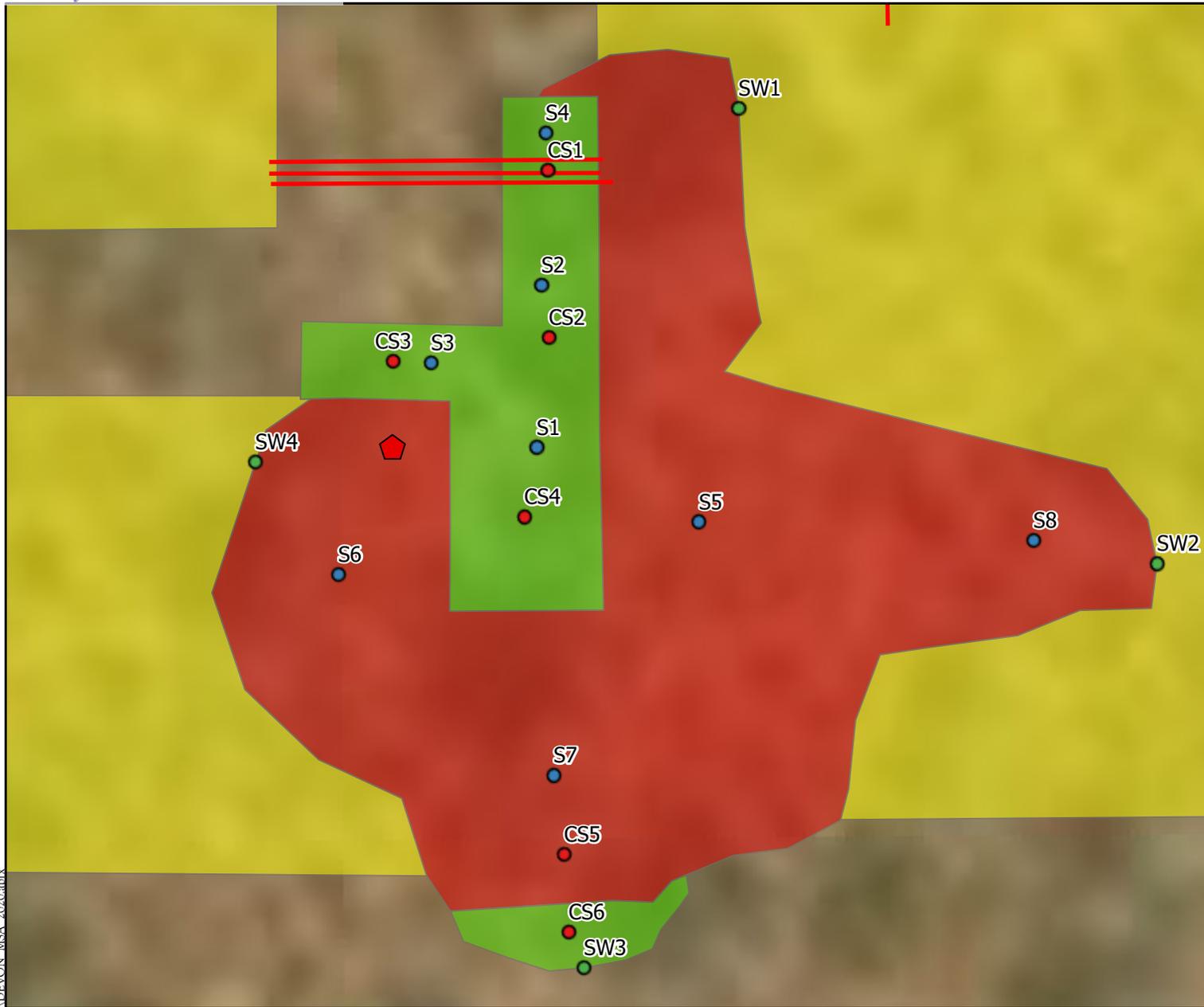
Date Saved: 11/12/2019  
 Copyright 2019 Souder, Miller & Associates - All Rights Reserved

Drawn	Lynn A. Acosta
Date	2/29/2020
Checked	_____
Approved	_____



201 South Halaguena Street  
 Carlsbad, New Mexico 88221  
 (575) 689-7040  
 Serving the Southwest & Rocky Mountains

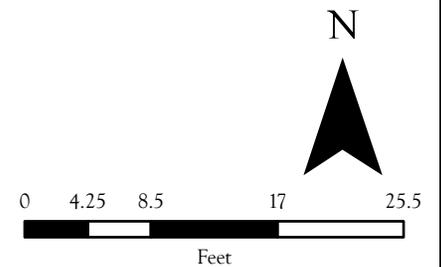




- Pipeline
- Equipment
- Deferral Area
- Excavation

### Sample Points

- Bottom Hole Closure Samples
- Side Wall Samples
- Initial Soil Samples
- ⬠ Point of Release



Site and Sample Location Map  
 Fighting Okra 18 CTB 4 - Devon Energy  
 UL: C S: 18 T: 26S R: 34E Lea County, New Mexico

Figure 3

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Drawn Sebastian Orozco  
 Date 5/8/2020  
 Checked \_\_\_\_\_  
 Approved \_\_\_\_\_



201 South Halaguena Street  
 Carlsbad, New Mexico 88221  
 (575) 689-7040  
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# TABLES

Table 2:  
NMOCD Closure Criteria

Devon Energy  
Fighting Okra 18 CTB 4

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes				
Depth to Groundwater (feet bgs)	151.6	New Mexico Office of the State Engineer				
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)	NA	USGS Topographic Map				
Horizontal Distance to Nearest Significant Watercourse (ft)	4,852	Unnamed Playa				
<b>Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)</b>						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'	X	20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	No	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	No					
<b>Water Well or Water Source</b>						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	No					
<1000' from fresh water well or spring?	No					
<b>Human and Other Areas</b>						
<300' from an occupied permanent residence, school, hospital, institution or church?	No					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	No					
<100' from wetland?	No					
within area overlying a subsurface mine	No					
within an unstable area?	No					
within a 100-year floodplain?	No					

SMA #

Table 3a:  
Summary of Initial Sample Results

Devon Energy  
Fighting Okra 18 CTB 4

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action/ Action Taken	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria				50	10	1000			2500	20000
S1	3/5/2020	0.5	Excavated	126	3.3	1,700	8,000	2,300	12,000	860
		1		6.719	0.059	140	430	130	700	1900
		1.5		<0.222	<0.025	<4.9	<9.3	<47	<61.2	280
		2		<0.224	<0.025	<5.0	<9.1	<45	<59.1	<60
S2	3/5/2020	0.5	Excavated	107.7	1.5	1,700	8,600	2,500	12,800	<60
		1		0.323	<0.023	<4.6	37	<45	37	<60
		1.5		<0.212	<0.024	<4.7	15	<48	15	<60
		2		<0.222	<0.025	<4.9	<9.2	<46	<60.1	<60
S3	3/5/2020	0.5	Excavated	335	12	5,300	22,000	5,800	33,100	<60
		1		0.17	<0.025	<4.9	17	<49	17	<60
		1.5		0.746	<0.024	18	110	<50	128	<60
		2		0.501	<0.024	11	360	120	491	<60
S4	3/5/2020	0.5	Excavated	260.8	5.8	3,900	19,000	5,400	28,300	<60
		1		151.2	4.2	2,500	4,700	1,400	8,600	<60
		1.5		37.33	0.63	690	4,300	1,300	6,290	<60
		2		0.14	<0.024	<4.9	130	68	198	<60
S5	3/5/2020	0.5	in-situ	89.1	1.5	1,300	7,500	2,200	11,000	6800
		1		19.398	0.098	290	2,100	760	3,150	3000
		1.5		<0.224	<0.025	<5.0	23	<45	23	1900
		2		0.1	<0.024	<4.8	80	<42	80	140
S6	3/5/2020	0.5	in-situ	251.1	6.1	3,000	14,000	4,300	21,300	230
		1		51.82	0.52	810	4,700	1,400	6,910	99
		1.5		0.655	<0.025	14	130	66	210	<60
		2		<0.221	<0.025	<4.9	18	<45	18	<60

"-" = Not Analyzed

Table 3b:  
Summary of Closure Sample Results

Devon Energy  
Fighting Okra 18 CTB 4

Sample ID	Sample Date	Depth of Sample (feet bgs)	Action Taken	Method 8021B		Method 8015D				Method 300.0
				BTEX	Benzene	GRO	DRO	MRO	Total TPH	Cl-
				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMOCD Closure Criteria (>4 ft)				50	10	1,000			2,500	<b>20,000</b>
CS1	4/21/2020	3.0	In-situ	<0.300	<0.050	<10.0	35.4	<10.0	35.4	32.0
CS2	4/21/2020	3.0		<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	<16.0
CS3	4/21/2020	3.0		<0.300	<0.050	<10.0	10.3	<10.0	10.3	<16.0
CS4	4/21/2020	3.0		<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	48.0
CS5	4/21/2020	0.5		<0.300	<0.050	<10.0	389	32.9	421.9	3,200
CS6	4/21/2020	0.5		<0.19	<0.021	<4.2	64	50	114	89
SW1	4/21/2020	0-3.0		<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	288
SW2	4/21/2020	0-3.0		0.459	<0.050	<10.0	368	80.9	448.9	352
SW3	4/21/2020	0-3.0		<0.300	<0.050	<10.0	63.7	14.4	78.1	2,400
SW4	4/21/2020	0-3.0		<0.300	<0.050	<10.0	76.2	<10.0	76.2	64.0
S7	4/21/2020	Surface		10.7	0.063	<b>328</b>	<b>13,330</b>	<b>2,770</b>	<b>16,428</b>	<b>23,200</b>
		1.0		2.76	<0.050	34.8	683	1010	1,727.8	6,160
		1.5		<0.0300	<0.050	<10.0	<10.0	<10.0	<30.0	704
		2.0		<0.300	<0.050	<10.0	<10.0	<10.0	<30.0	128
S8	4/21/2020	Surface	<b>75.0</b>	0.226	<b>2,500</b>	<b>14,200</b>	<b>2,140</b>	<b>18,840</b>	208	
		1.0	3.19	<0.050	<b>121</b>	<b>1,030</b>	<b>118</b>	<b>1,269.0</b>	32	
		2.0	<0.0300	<0.050	<10.0	11.9	<10.0	11.9	32.0	

"-" = Not Analyzed

BG: Background sample

# APPENDIX A

## FORM C141

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural  
Resources Department  
  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

### Location of Release Source

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

State of New Mexico  
 Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: _____ Title: _____ Signature: <u>Kendra DeHoyos</u> Date: _____ email: _____ Telephone: _____
<b><u>OCD Only</u></b>  Received by: _____ Date: _____

Incident ID	NRM2005959104
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	151.6 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist:** *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	NRM2005959104
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Lupe Carrasco Title: EHS Professional

Signature: *Lupe Carrasco* Date: \_\_\_\_\_

email: Lupe.Carrasco@dvn.com Telephone: 575-748-0165

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	NRM2005959104
District RP	
Facility ID	
Application ID	

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Lupe Carrasco Title: EHS Professional  
 Signature: *Lupe Carrasco* Date: \_\_\_\_\_  
 email: Lupe.Carrasco@dvn.com Telephone: 575-748-0165

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

# APPENDIX B

## NMOSE WELLS REPORT



## New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,

C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 6	Q 4	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">C 02295</a>	CUB	LE	2	2	4	12	26S	33E	639850	3547710*	1303	250	200	50		
<a href="#">C 02293</a>	CUB	LE	2	2	1	14	26S	33E	637501	3546975	3213	200	135	65		
<a href="#">C 02294</a>	CUB	LE	4	4	3	11	26S	33E	637465	3547003	3250	200	145	55		
<a href="#">C 02292 POD1</a>	CUB	LE	4	1	2	06	26S	34E	640992	3549987	3274	200	140	60		
<a href="#">C 03442 POD1</a>	C	LE	4	1	2	06	26S	34E	641056	3550028	3321	251				
<a href="#">C 03441 POD1</a>	C	LE	4	1	2	06	26S	34E	640971	3550039	3325	250				
<a href="#">C 02291</a>	CUB	LE	1	1	2	06	26S	34E	640825	3550140*	3417	220	160	60		

Average Depth to Water: **156 feet**  
 Minimum Depth: **135 feet**  
 Maximum Depth: **200 feet**

**Record Count: 7**

**UTM NAD83 Radius Search (in meters):**

**Easting (X):** 640704

**Northing (Y):** 3546725

**Radius:** 4000

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/29/20 2:35 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

# APPENDIX C PHOTOGRAPHS

120

150

180

210

167°S (T) 32°2'50"N, 103°30'37"W ±19ft ▲ 3366ft



**devon**

**FIGHTING OKRA 18 CTB 4**

**SEC. 18-T26S-R34E 975' FNL & 2460' FWL**

**LEA COUNTY, NEW MEXICO**

**LAT. N 32°02' 32.864" LONG. W 103°30' 34.550"**

**DEVON CORPORATE CONTACT: 800-361-3377**

357°N (T) 32°2'53"N, 103°30'35"W ±29ft ▲ 3365ft



0 240 270 300 330

282°W (T) 32°2'53"N, 103°30'34"W ±45ft ▲ 3366ft



0 150 180 210 240  
192°S (T) ● 32°2'54"N, 103°30'34"W ±13ft ▲ 3366ft



90

120

150

180

210

240

☉ 162°S (T) ● 32°2'54"N, 103°30'35"W ±13ft ▲ 3370ft





☉ 185°S (T) ● 32°2'54"N, 103°30'34"W ±13ft ▲ 3366ft





60

90

120

150

☉ 103°E (T) ● 32°2'54"N, 103°30'34"W ±36ft ▲ 3366ft



120 150 180 210 240

☉ 182°S (T) ● 32°2'54"N, 103°30'34"W ±16ft ▲ 3366ft



60

90

120

150

180

111°E (T) 32°2'54"N, 103°30'35"W ±22ft ▲ 3366ft



330

0

30

60

19°N (T) 32°2'53"N, 103°30'35"W ±13ft ▲ 3364ft



270

300

330

0

30

60

W

NNW

N

NE

☼ 351°N (T) ● 32°2'53"N, 103°30'34"W ±42ft ▲ 3365ft



6°N (T) ● 32°2'53"N, 103°30'34"W ±19ft ▲ 3366ft



APPENDIX D  
LABORATORY ANALYTICAL  
REPORTS

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S1-6"

Project: Fighting Okra

Collection Date: 3/5/2020 12:58:00 PM

Lab ID: 2003327-001

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	860	60		mg/Kg	20	3/11/2020 3:05:45 PM	51019
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	8000	98		mg/Kg	10	3/10/2020 6:22:46 PM	50974
Motor Oil Range Organics (MRO)	2300	490		mg/Kg	10	3/10/2020 6:22:46 PM	50974
Surr: DNOP	0	55.1-146	S	%Rec	10	3/10/2020 6:22:46 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	1700	480		mg/Kg	100	3/11/2020 5:45:07 PM	50970
Surr: BFB	120	66.6-105	S	%Rec	100	3/11/2020 5:45:07 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	3.3	0.048		mg/Kg	2	3/10/2020 10:53:50 PM	50970
Toluene	32	4.8		mg/Kg	100	3/11/2020 5:45:07 PM	50970
Ethylbenzene	7.9	0.096		mg/Kg	2	3/10/2020 10:53:50 PM	50970
Xylenes, Total	83	9.6		mg/Kg	100	3/11/2020 5:45:07 PM	50970
Surr: 4-Bromofluorobenzene	196	80-120	S	%Rec	2	3/10/2020 10:53:50 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S1-1'

Project: Fighting Okra

Collection Date: 3/5/2020 1:00:00 PM

Lab ID: 2003327-002

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	1900	60		mg/Kg	20	3/11/2020 3:18:06 PM	51019
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	430	9.5		mg/Kg	1	3/10/2020 6:46:58 PM	50974
Motor Oil Range Organics (MRO)	130	48		mg/Kg	1	3/10/2020 6:46:58 PM	50974
Surr: DNOP	107	55.1-146		%Rec	1	3/10/2020 6:46:58 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: RAA
Gasoline Range Organics (GRO)	140	9.3		mg/Kg	2	3/11/2020 6:08:32 PM	50970
Surr: BFB	398	66.6-105	S	%Rec	2	3/11/2020 6:08:32 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	0.059	0.046		mg/Kg	2	3/11/2020 6:08:32 PM	50970
Toluene	1.0	0.093		mg/Kg	2	3/11/2020 6:08:32 PM	50970
Ethylbenzene	0.56	0.093		mg/Kg	2	3/11/2020 6:08:32 PM	50970
Xylenes, Total	5.1	0.19		mg/Kg	2	3/11/2020 6:08:32 PM	50970
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	2	3/11/2020 6:08:32 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S1-1'6"

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 1:05:00 PM

**Lab ID:** 2003327-003

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	280	60		mg/Kg	20	3/11/2020 3:55:08 PM	51019
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/10/2020 7:11:17 PM	50974
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/10/2020 7:11:17 PM	50974
Surr: DNOP	102	55.1-146		%Rec	1	3/10/2020 7:11:17 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/10/2020 11:41:07 PM	50970
Surr: BFB	101	66.6-105		%Rec	1	3/10/2020 11:41:07 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	3/10/2020 11:41:07 PM	50970
Toluene	ND	0.049		mg/Kg	1	3/10/2020 11:41:07 PM	50970
Ethylbenzene	ND	0.049		mg/Kg	1	3/10/2020 11:41:07 PM	50970
Xylenes, Total	ND	0.099		mg/Kg	1	3/10/2020 11:41:07 PM	50970
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	3/10/2020 11:41:07 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S1-2'

Project: Fighting Okra

Collection Date: 3/5/2020 1:10:00 PM

Lab ID: 2003327-004

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 4:07:29 PM	51019
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/10/2020 7:35:33 PM	50974
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/10/2020 7:35:33 PM	50974
Surr: DNOP	100	55.1-146		%Rec	1	3/10/2020 7:35:33 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/11/2020 12:04:49 AM	50970
Surr: BFB	90.1	66.6-105		%Rec	1	3/11/2020 12:04:49 AM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	3/11/2020 12:04:49 AM	50970
Toluene	ND	0.050		mg/Kg	1	3/11/2020 12:04:49 AM	50970
Ethylbenzene	ND	0.050		mg/Kg	1	3/11/2020 12:04:49 AM	50970
Xylenes, Total	ND	0.099		mg/Kg	1	3/11/2020 12:04:49 AM	50970
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	3/11/2020 12:04:49 AM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S2-6"

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 2:16:00 PM

**Lab ID:** 2003327-005

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 4:19:49 PM	51019
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	8600	94		mg/Kg	10	3/10/2020 7:59:53 PM	50974
Motor Oil Range Organics (MRO)	2500	470		mg/Kg	10	3/10/2020 7:59:53 PM	50974
Surr: DNOP	0	55.1-146	S	%Rec	10	3/10/2020 7:59:53 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	1700	96		mg/Kg	20	3/11/2020 6:31:56 PM	50970
Surr: BFB	329	66.6-105	S	%Rec	20	3/11/2020 6:31:56 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	1.5	0.48		mg/Kg	20	3/11/2020 6:31:56 PM	50970
Toluene	23	0.96		mg/Kg	20	3/11/2020 6:31:56 PM	50970
Ethylbenzene	8.2	0.96		mg/Kg	20	3/11/2020 6:31:56 PM	50970
Xylenes, Total	75	1.9		mg/Kg	20	3/11/2020 6:31:56 PM	50970
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	20	3/11/2020 6:31:56 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S2-1'

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 2:18:00 PM

**Lab ID:** 2003327-006

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 4:32:10 PM	51019
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	37	9.1		mg/Kg	1	3/10/2020 8:24:03 PM	50974
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/10/2020 8:24:03 PM	50974
Surr: DNOP	103	55.1-146		%Rec	1	3/10/2020 8:24:03 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/11/2020 7:18:33 PM	50970
Surr: BFB	119	66.6-105	S	%Rec	1	3/11/2020 7:18:33 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	3/11/2020 7:18:33 PM	50970
Toluene	0.063	0.046		mg/Kg	1	3/11/2020 7:18:33 PM	50970
Ethylbenzene	ND	0.046		mg/Kg	1	3/11/2020 7:18:33 PM	50970
Xylenes, Total	0.26	0.093		mg/Kg	1	3/11/2020 7:18:33 PM	50970
Surr: 4-Bromofluorobenzene	94.6	80-120		%Rec	1	3/11/2020 7:18:33 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S2-1'6"

Project: Fighting Okra

Collection Date: 3/5/2020 2:20:00 PM

Lab ID: 2003327-007

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 7:37:19 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	15	9.6		mg/Kg	1	3/10/2020 8:48:21 PM	50974
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/10/2020 8:48:21 PM	50974
Surr: DNOP	102	55.1-146		%Rec	1	3/10/2020 8:48:21 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	3/11/2020 1:15:46 AM	50970
Surr: BFB	86.4	66.6-105		%Rec	1	3/11/2020 1:15:46 AM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	3/11/2020 1:15:46 AM	50970
Toluene	ND	0.047		mg/Kg	1	3/11/2020 1:15:46 AM	50970
Ethylbenzene	ND	0.047		mg/Kg	1	3/11/2020 1:15:46 AM	50970
Xylenes, Total	ND	0.094		mg/Kg	1	3/11/2020 1:15:46 AM	50970
Surr: 4-Bromofluorobenzene	92.1	80-120		%Rec	1	3/11/2020 1:15:46 AM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S2-2'

Project: Fighting Okra

Collection Date: 3/5/2020 2:20:00 PM

Lab ID: 2003327-008

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 7:49:41 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	3/10/2020 9:12:32 PM	50974
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/10/2020 9:12:32 PM	50974
Surr: DNOP	100	55.1-146		%Rec	1	3/10/2020 9:12:32 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/11/2020 1:39:21 AM	50970
Surr: BFB	84.2	66.6-105		%Rec	1	3/11/2020 1:39:21 AM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	3/11/2020 1:39:21 AM	50970
Toluene	ND	0.049		mg/Kg	1	3/11/2020 1:39:21 AM	50970
Ethylbenzene	ND	0.049		mg/Kg	1	3/11/2020 1:39:21 AM	50970
Xylenes, Total	ND	0.099		mg/Kg	1	3/11/2020 1:39:21 AM	50970
Surr: 4-Bromofluorobenzene	89.9	80-120		%Rec	1	3/11/2020 1:39:21 AM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S3-6"

Project: Fighting Okra

Collection Date: 3/5/2020 2:33:00 PM

Lab ID: 2003327-009

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	3/11/2020 8:02:01 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	22000	490		mg/Kg	50	3/12/2020 12:32:44 AM	50974
Motor Oil Range Organics (MRO)	5800	2500		mg/Kg	50	3/12/2020 12:32:44 AM	50974
Surr: DNOP	0	55.1-146	S	%Rec	50	3/12/2020 12:32:44 AM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: RAA
Gasoline Range Organics (GRO)	5300	230		mg/Kg	50	3/11/2020 7:41:49 PM	50970
Surr: BFB	296	66.6-105	S	%Rec	50	3/11/2020 7:41:49 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	12	1.2		mg/Kg	50	3/11/2020 7:41:49 PM	50970
Toluene	100	2.3		mg/Kg	50	3/11/2020 7:41:49 PM	50970
Ethylbenzene	23	2.3		mg/Kg	50	3/11/2020 7:41:49 PM	50970
Xylenes, Total	200	4.7		mg/Kg	50	3/11/2020 7:41:49 PM	50970
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	50	3/11/2020 7:41:49 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S3-1'

Project: Fighting Okra

Collection Date: 3/5/2020 2:36:00 PM

Lab ID: 2003327-010

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 8:14:22 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	17	9.7		mg/Kg	1	3/10/2020 10:00:51 PM	50974
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/10/2020 10:00:51 PM	50974
Surr: DNOP	106	55.1-146		%Rec	1	3/10/2020 10:00:51 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/11/2020 8:05:20 PM	50970
Surr: BFB	104	66.6-105		%Rec	1	3/11/2020 8:05:20 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	3/11/2020 8:05:20 PM	50970
Toluene	ND	0.049		mg/Kg	1	3/11/2020 8:05:20 PM	50970
Ethylbenzene	ND	0.049		mg/Kg	1	3/11/2020 8:05:20 PM	50970
Xylenes, Total	0.17	0.099		mg/Kg	1	3/11/2020 8:05:20 PM	50970
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	1	3/11/2020 8:05:20 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S3-1'6"

Project: Fighting Okra

Collection Date: 3/5/2020 2:40:00 PM

Lab ID: 2003327-011

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 8:51:24 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	110	9.9		mg/Kg	1	3/10/2020 10:25:10 PM	50974
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/10/2020 10:25:10 PM	50974
Surr: DNOP	110	55.1-146		%Rec	1	3/10/2020 10:25:10 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	18	4.7		mg/Kg	1	3/11/2020 8:28:54 PM	50970
Surr: BFB	190	66.6-105	S	%Rec	1	3/11/2020 8:28:54 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	3/11/2020 8:28:54 PM	50970
Toluene	0.073	0.047		mg/Kg	1	3/11/2020 8:28:54 PM	50970
Ethylbenzene	0.073	0.047		mg/Kg	1	3/11/2020 8:28:54 PM	50970
Xylenes, Total	0.60	0.095		mg/Kg	1	3/11/2020 8:28:54 PM	50970
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	3/11/2020 8:28:54 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S3-2'

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 2:43:00 PM

**Lab ID:** 2003327-012

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 9:03:45 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	360	9.7		mg/Kg	1	3/10/2020 10:49:17 PM	50974
Motor Oil Range Organics (MRO)	120	48		mg/Kg	1	3/10/2020 10:49:17 PM	50974
Surr: DNOP	105	55.1-146		%Rec	1	3/10/2020 10:49:17 PM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	11	4.7		mg/Kg	1	3/11/2020 8:52:21 PM	50970
Surr: BFB	147	66.6-105	S	%Rec	1	3/11/2020 8:52:21 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	3/11/2020 8:52:21 PM	50970
Toluene	0.062	0.047		mg/Kg	1	3/11/2020 8:52:21 PM	50970
Ethylbenzene	0.049	0.047		mg/Kg	1	3/11/2020 8:52:21 PM	50970
Xylenes, Total	0.39	0.095		mg/Kg	1	3/11/2020 8:52:21 PM	50970
Surr: 4-Bromofluorobenzene	94.0	80-120		%Rec	1	3/11/2020 8:52:21 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S4-6"

Project: Fighting Okra

Collection Date: 3/5/2020 2:45:00 PM

Lab ID: 2003327-013

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 9:16:05 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	19000	460		mg/Kg	50	3/12/2020 12:56:52 AM	50974
Motor Oil Range Organics (MRO)	5400	2300		mg/Kg	50	3/12/2020 12:56:52 AM	50974
Surr: DNOP	0	55.1-146	S	%Rec	50	3/12/2020 12:56:52 AM	50974
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	3900	240		mg/Kg	50	3/12/2020 10:23:34 PM	50970
Surr: BFB	287	66.6-105	S	%Rec	50	3/12/2020 10:23:34 PM	50970
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	5.8	0.12		mg/Kg	5	3/11/2020 9:15:45 PM	50970
Toluene	68	2.4		mg/Kg	50	3/12/2020 10:23:34 PM	50970
Ethylbenzene	17	0.24		mg/Kg	5	3/11/2020 9:15:45 PM	50970
Xylenes, Total	170	4.8		mg/Kg	50	3/12/2020 10:23:34 PM	50970
Surr: 4-Bromofluorobenzene	184	80-120	S	%Rec	5	3/11/2020 9:15:45 PM	50970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S4-1'

Project: Fighting Okra

Collection Date: 3/5/2020 2:47:00 PM

Lab ID: 2003327-014

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 9:28:26 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	4700	91		mg/Kg	10	3/13/2020 12:58:28 PM	51014
Motor Oil Range Organics (MRO)	1400	460		mg/Kg	10	3/13/2020 12:58:28 PM	51014
Surr: DNOP	0	55.1-146	S	%Rec	10	3/13/2020 12:58:28 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2500	240		mg/Kg	50	3/12/2020 10:47:01 PM	51002
Surr: BFB	221	66.6-105	S	%Rec	50	3/12/2020 10:47:01 PM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	4.2	0.12		mg/Kg	5	3/12/2020 3:10:08 AM	51002
Toluene	37	2.4		mg/Kg	50	3/12/2020 10:47:01 PM	51002
Ethylbenzene	15	0.24		mg/Kg	5	3/12/2020 3:10:08 AM	51002
Xylenes, Total	95	4.7		mg/Kg	50	3/12/2020 10:47:01 PM	51002
Surr: 4-Bromofluorobenzene	212	80-120	S	%Rec	5	3/12/2020 3:10:08 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S4-1'6"

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 2:50:00 PM

**Lab ID:** 2003327-015

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 10:05:28 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	4300	97		mg/Kg	10	3/13/2020 1:42:24 PM	51014
Motor Oil Range Organics (MRO)	1300	480		mg/Kg	10	3/13/2020 1:42:24 PM	51014
Surr: DNOP	0	55.1-146	S	%Rec	10	3/13/2020 1:42:24 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	690	240		mg/Kg	50	3/12/2020 11:10:21 PM	51002
Surr: BFB	130	66.6-105	S	%Rec	50	3/12/2020 11:10:21 PM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	0.63	0.024		mg/Kg	1	3/12/2020 3:33:50 AM	51002
Toluene	7.4	2.4		mg/Kg	50	3/12/2020 11:10:21 PM	51002
Ethylbenzene	4.3	0.049		mg/Kg	1	3/12/2020 3:33:50 AM	51002
Xylenes, Total	25	4.9		mg/Kg	50	3/12/2020 11:10:21 PM	51002
Surr: 4-Bromofluorobenzene	388	80-120	S	%Rec	1	3/12/2020 3:33:50 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S4-2'

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 2:53:00 PM

**Lab ID:** 2003327-016

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	3/11/2020 10:17:49 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	130	9.9		mg/Kg	1	3/13/2020 2:04:29 PM	51014
Motor Oil Range Organics (MRO)	68	49		mg/Kg	1	3/13/2020 2:04:29 PM	51014
Surr: DNOP	104	55.1-146		%Rec	1	3/13/2020 2:04:29 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/12/2020 11:33:48 PM	51002
Surr: BFB	122	66.6-105	S	%Rec	1	3/12/2020 11:33:48 PM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	3/12/2020 11:33:48 PM	51002
Toluene	ND	0.049		mg/Kg	1	3/12/2020 11:33:48 PM	51002
Ethylbenzene	ND	0.049		mg/Kg	1	3/12/2020 11:33:48 PM	51002
Xylenes, Total	0.14	0.098		mg/Kg	1	3/12/2020 11:33:48 PM	51002
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	3/12/2020 11:33:48 PM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S5-6"

Project: Fighting Okra

Collection Date: 3/5/2020 2:57:00 PM

Lab ID: 2003327-017

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	6800	300		mg/Kg	100	3/13/2020 3:24:15 AM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	7500	85		mg/Kg	10	3/12/2020 6:42:53 PM	51014
Motor Oil Range Organics (MRO)	2200	430		mg/Kg	10	3/12/2020 6:42:53 PM	51014
Surr: DNOP	0	55.1-146	S	%Rec	10	3/12/2020 6:42:53 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	1300	230		mg/Kg	50	3/12/2020 11:57:23 PM	51002
Surr: BFB	160	66.6-105	S	%Rec	50	3/12/2020 11:57:23 PM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	1.5	0.023		mg/Kg	1	3/12/2020 4:21:13 AM	51002
Toluene	21	2.3		mg/Kg	50	3/12/2020 11:57:23 PM	51002
Ethylbenzene	6.6	2.3		mg/Kg	50	3/12/2020 11:57:23 PM	51002
Xylenes, Total	60	4.7		mg/Kg	50	3/12/2020 11:57:23 PM	51002
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	50	3/12/2020 11:57:23 PM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S5-1'

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 3:05:00 PM

**Lab ID:** 2003327-018

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	3000	150		mg/Kg	50	3/13/2020 3:36:36 AM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	2100	99		mg/Kg	10	3/13/2020 2:26:26 PM	51014
Motor Oil Range Organics (MRO)	760	490		mg/Kg	10	3/13/2020 2:26:26 PM	51014
Surr: DNOP	0	55.1-146	S	%Rec	10	3/13/2020 2:26:26 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	290	5.0		mg/Kg	1	3/13/2020 12:20:54 AM	51002
Surr: BFB	1110	66.6-105	S	%Rec	1	3/13/2020 12:20:54 AM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.098	0.025		mg/Kg	1	3/13/2020 12:20:54 AM	51002
Toluene	2.8	0.050		mg/Kg	1	3/13/2020 12:20:54 AM	51002
Ethylbenzene	1.5	0.050		mg/Kg	1	3/13/2020 12:20:54 AM	51002
Xylenes, Total	15	1.0		mg/Kg	10	3/13/2020 10:44:57 AM	51002
Surr: 4-Bromofluorobenzene	168	80-120	S	%Rec	1	3/13/2020 12:20:54 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S5-1'6"

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 3:10:00 PM

**Lab ID:** 2003327-019

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	1900	60		mg/Kg	20	3/11/2020 11:19:34 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	23	9.0		mg/Kg	1	3/13/2020 3:10:32 PM	51014
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/13/2020 3:10:32 PM	51014
Surr: DNOP	106	55.1-146		%Rec	1	3/13/2020 3:10:32 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	3/12/2020 5:55:39 AM	51002
Surr: BFB	85.4	66.6-105		%Rec	1	3/12/2020 5:55:39 AM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	3/12/2020 5:55:39 AM	51002
Toluene	ND	0.050		mg/Kg	1	3/12/2020 5:55:39 AM	51002
Ethylbenzene	ND	0.050		mg/Kg	1	3/12/2020 5:55:39 AM	51002
Xylenes, Total	ND	0.099		mg/Kg	1	3/12/2020 5:55:39 AM	51002
Surr: 4-Bromofluorobenzene	89.6	80-120		%Rec	1	3/12/2020 5:55:39 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S5-2'

Project: Fighting Okra

Collection Date: 3/5/2020 3:15:00 PM

Lab ID: 2003327-020

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	140	60		mg/Kg	20	3/11/2020 11:31:55 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	80	8.4		mg/Kg	1	3/13/2020 3:32:41 PM	51014
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	3/13/2020 3:32:41 PM	51014
Surr: DNOP	113	55.1-146		%Rec	1	3/13/2020 3:32:41 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/12/2020 6:19:06 AM	51002
Surr: BFB	93.7	66.6-105		%Rec	1	3/12/2020 6:19:06 AM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	3/12/2020 6:19:06 AM	51002
Toluene	ND	0.048		mg/Kg	1	3/12/2020 6:19:06 AM	51002
Ethylbenzene	ND	0.048		mg/Kg	1	3/12/2020 6:19:06 AM	51002
Xylenes, Total	0.10	0.096		mg/Kg	1	3/12/2020 6:19:06 AM	51002
Surr: 4-Bromofluorobenzene	89.3	80-120		%Rec	1	3/12/2020 6:19:06 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S6-6"

Project: Fighting Okra

Collection Date: 3/5/2020 3:20:00 PM

Lab ID: 2003327-021

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	230	60		mg/Kg	20	3/11/2020 11:44:16 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	14000	480		mg/Kg	50	3/13/2020 3:54:39 PM	51014
Motor Oil Range Organics (MRO)	4300	2400		mg/Kg	50	3/13/2020 3:54:39 PM	51014
Surr: DNOP	0	55.1-146	S	%Rec	50	3/13/2020 3:54:39 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	3000	250		mg/Kg	50	3/13/2020 12:44:20 AM	51002
Surr: BFB	227	66.6-105	S	%Rec	50	3/13/2020 12:44:20 AM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	6.1	0.12		mg/Kg	5	3/12/2020 6:42:38 AM	51002
Toluene	69	2.5		mg/Kg	50	3/13/2020 12:44:20 AM	51002
Ethylbenzene	16	0.25		mg/Kg	5	3/12/2020 6:42:38 AM	51002
Xylenes, Total	160	4.9		mg/Kg	50	3/13/2020 12:44:20 AM	51002
Surr: 4-Bromofluorobenzene	152	80-120	S	%Rec	5	3/12/2020 6:42:38 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S6-1'

Project: Fighting Okra

Collection Date: 3/5/2020 3:30:00 PM

Lab ID: 2003327-022

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	99	60		mg/Kg	20	3/11/2020 11:56:37 PM	51039
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	4700	88		mg/Kg	10	3/13/2020 4:38:39 PM	51014
Motor Oil Range Organics (MRO)	1400	440		mg/Kg	10	3/13/2020 4:38:39 PM	51014
Surr: DNOP	0	55.1-146	S	%Rec	10	3/13/2020 4:38:39 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	810	95		mg/Kg	20	3/13/2020 1:07:50 AM	51002
Surr: BFB	232	66.6-105	S	%Rec	20	3/13/2020 1:07:50 AM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: RAA
Benzene	0.52	0.024		mg/Kg	1	3/12/2020 7:06:11 AM	51002
Toluene	9.8	0.95		mg/Kg	20	3/13/2020 1:07:50 AM	51002
Ethylbenzene	3.5	0.048		mg/Kg	1	3/12/2020 7:06:11 AM	51002
Xylenes, Total	38	1.9		mg/Kg	20	3/13/2020 1:07:50 AM	51002
Surr: 4-Bromofluorobenzene	256	80-120	S	%Rec	1	3/12/2020 7:06:11 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

**Analytical Report**

Lab Order **2003327**

Date Reported:

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** S6-1'6"

**Project:** Fighting Okra

**Collection Date:** 3/5/2020 3:32:00 PM

**Lab ID:** 2003327-023

**Matrix:** SOIL

**Received Date:** 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>CAS</b>
Chloride	ND	60		mg/Kg	20	3/12/2020 12:35:14 PM	51058
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	130	9.7		mg/Kg	1	3/13/2020 5:00:44 PM	51014
Motor Oil Range Organics (MRO)	66	48		mg/Kg	1	3/13/2020 5:00:44 PM	51014
Surr: DNOP	108	55.1-146		%Rec	1	3/13/2020 5:00:44 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	14	5.0		mg/Kg	1	3/13/2020 11:08:32 AM	51002
Surr: BFB	155	66.6-105	S	%Rec	1	3/13/2020 11:08:32 AM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	3/13/2020 11:08:32 AM	51002
Toluene	0.074	0.050		mg/Kg	1	3/13/2020 11:08:32 AM	51002
Ethylbenzene	0.061	0.050		mg/Kg	1	3/13/2020 11:08:32 AM	51002
Xylenes, Total	0.52	0.10		mg/Kg	1	3/13/2020 11:08:32 AM	51002
Surr: 4-Bromofluorobenzene	98.3	80-120		%Rec	1	3/13/2020 11:08:32 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

## Analytical Report

Lab Order 2003327

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S6-2'

Project: Fighting Okra

Collection Date: 3/5/2020 3:35:00 PM

Lab ID: 2003327-024

Matrix: SOIL

Received Date: 3/7/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: CAS
Chloride	ND	60		mg/Kg	20	3/12/2020 12:47:35 PM	51058
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	18	9.0		mg/Kg	1	3/12/2020 9:17:17 PM	51014
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/12/2020 9:17:17 PM	51014
Surr: DNOP	97.7	55.1-146		%Rec	1	3/12/2020 9:17:17 PM	51014
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/13/2020 11:31:59 AM	51002
Surr: BFB	91.7	66.6-105		%Rec	1	3/13/2020 11:31:59 AM	51002
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	3/13/2020 11:31:59 AM	51002
Toluene	ND	0.049		mg/Kg	1	3/13/2020 11:31:59 AM	51002
Ethylbenzene	ND	0.049		mg/Kg	1	3/13/2020 11:31:59 AM	51002
Xylenes, Total	ND	0.098		mg/Kg	1	3/13/2020 11:31:59 AM	51002
Surr: 4-Bromofluorobenzene	94.4	80-120		%Rec	1	3/13/2020 11:31:59 AM	51002

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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April 23, 2020

ASHLEY MAXWELL  
SOUDER MILLER AND ASSOCIATES  
201 S. HALAGUENO  
CARLSBAD, NM 88220

RE: FIGHTING OKRA 18 CTB

Enclosed are the results of analyses for samples received by the laboratory on 04/22/20 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene  
Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/21/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: CS 1 - 3' (H001165-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93	
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86	
Total BTEX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/23/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13	
<b>DRO &gt;C10-C28*</b>	<b>35.4</b>	10.0	04/22/2020	ND	211	105	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND					

Surrogate: 1-Chlorooctane 90.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.5 % 42.2-156

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/21/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: CS 2 - 3' (H001165-02)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93		
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86		
Total BTEX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/23/2020	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13		
DRO >C10-C28*	<10.0	10.0	04/22/2020	ND	211	105	200	2.73		
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND						

Surrogate: 1-Chlorooctane 91.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.9 % 42.2-156

Cardinal Laboratories

\* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/21/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: CS 3 - 3' (H001165-03)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93		
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86		
Total BTEX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/23/2020	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13		
<b>DRO &gt;C10-C28*</b>	<b>10.3</b>	10.0	04/22/2020	ND	211	105	200	2.73		
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND						

Surrogate: 1-Chlorooctane 91.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.0 % 42.2-156

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/21/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: CS 4 - 3' (H001165-04)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93		
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86		
Total BTEX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/23/2020	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13		
DRO >C10-C28*	<10.0	10.0	04/22/2020	ND	211	105	200	2.73		
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND						

Surrogate: 1-Chlorooctane 101 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/21/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: CS 5 - 0-5' (H001165-05)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93	
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86	
Total BTEX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3240	16.0	04/23/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13	
DRO >C10-C28*	389	10.0	04/22/2020	ND	211	105	200	2.73	
EXT DRO >C28-C36	32.9	10.0	04/22/2020	ND					

Surrogate: 1-Chlorooctane 85.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 88.1 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: SW 1 (H001165-06)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93	
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86	
Total BTEX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	04/23/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13	
DRO >C10-C28*	<10.0	10.0	04/22/2020	ND	211	105	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND					

Surrogate: 1-Chlorooctane 79.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 84.2 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: SW 2 (H001165-07)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93	
<b>Toluene*</b>	<b>0.068</b>	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68	
<b>Ethylbenzene*</b>	<b>0.080</b>	0.050	04/22/2020	ND	2.07	103	2.00	6.82	
<b>Total Xylenes*</b>	<b>0.312</b>	0.150	04/22/2020	ND	6.07	101	6.00	6.86	
<b>Total BTEX</b>	<b>0.459</b>	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>352</b>	16.0	04/23/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13	
<b>DRO &gt;C10-C28*</b>	<b>368</b>	10.0	04/22/2020	ND	211	105	200	2.73	
<b>EXT DRO &gt;C28-C36</b>	<b>80.9</b>	10.0	04/22/2020	ND					

Surrogate: 1-Chlorooctane 82.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 86.7 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: SW 3 (H001165-08)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93	
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86	
Total BTEX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2400</b>	16.0	04/23/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13	
<b>DRO &gt;C10-C28*</b>	<b>63.7</b>	10.0	04/22/2020	ND	211	105	200	2.73	
<b>EXT DRO &gt;C28-C36</b>	<b>14.4</b>	10.0	04/22/2020	ND					

Surrogate: 1-Chlorooctane 83.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 86.2 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/21/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: SW 4 (H001165-09)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93	
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86	
Total BTEX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	04/23/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13	
<b>DRO &gt;C10-C28*</b>	<b>76.2</b>	10.0	04/22/2020	ND	211	105	200	2.73	
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND					

Surrogate: 1-Chlorooctane 90.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 100 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: S 7 - SURFACE (H001165-10)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.063</b>	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93	
<b>Toluene*</b>	<b>1.45</b>	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68	
<b>Ethylbenzene*</b>	<b>1.15</b>	0.050	04/22/2020	ND	2.07	103	2.00	6.82	
<b>Total Xylenes*</b>	<b>8.02</b>	0.150	04/22/2020	ND	6.07	101	6.00	6.86	
<b>Total BTEX</b>	<b>10.7</b>	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 216 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>23200</b>	16.0	04/23/2020	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>328</b>	100	04/23/2020	ND	209	104	200	2.13	
<b>DRO &gt;C10-C28*</b>	<b>13300</b>	100	04/23/2020	ND	211	105	200	2.73	
<b>EXT DRO &gt;C28-C36</b>	<b>2770</b>	100	04/23/2020	ND					

Surrogate: 1-Chlorooctane 126 % 44.3-144

Surrogate: 1-Chlorooctadecane 592 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: S 7 - 1' (H001165-11)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93		
<b>Toluene*</b>	<b>0.262</b>	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68		
<b>Ethylbenzene*</b>	<b>0.368</b>	0.050	04/22/2020	ND	2.07	103	2.00	6.82		
<b>Total Xylenes*</b>	<b>2.13</b>	0.150	04/22/2020	ND	6.07	101	6.00	6.86		
<b>Total BTEX</b>	<b>2.76</b>	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 151 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>6160</b>	16.0	04/23/2020	ND	432	108	400	3.64	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>34.8</b>	10.0	04/22/2020	ND	209	104	200	2.13		
<b>DRO &gt;C10-C28*</b>	<b>683</b>	10.0	04/22/2020	ND	211	105	200	2.73		
<b>EXT DRO &gt;C28-C36</b>	<b>101</b>	10.0	04/22/2020	ND						

Surrogate: 1-Chlorooctane 99.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 107 % 42.2-156

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: S 7 - 1.5' (H001165-12)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93		
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86		
Total BTEX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	704	16.0	04/23/2020	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13		
DRO >C10-C28*	<10.0	10.0	04/22/2020	ND	211	105	200	2.73		
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND						

Surrogate: 1-Chlorooctane 94.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 100 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: S 7 - 2' (H001165-13)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93		
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86		
Total BTEX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	04/23/2020	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13		
DRO >C10-C28*	<10.0	10.0	04/22/2020	ND	211	105	200	2.73		
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND						

Surrogate: 1-Chlorooctane 97.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: S 8 - SURFACE (H001165-14)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.226</b>	0.200	04/22/2020	ND	1.95	97.4	2.00	6.93	
<b>Toluene*</b>	<b>10.4</b>	0.200	04/22/2020	ND	1.99	99.5	2.00	6.68	
<b>Ethylbenzene*</b>	<b>7.94</b>	0.200	04/22/2020	ND	2.07	103	2.00	6.82	
<b>Total Xylenes*</b>	<b>56.4</b>	0.600	04/22/2020	ND	6.07	101	6.00	6.86	
<b>Total BTEX</b>	<b>75.0</b>	1.20	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 268 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>208</b>	16.0	04/23/2020	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>2550</b>	100	04/23/2020	ND	209	104	200	2.13	
<b>DRO &gt;C10-C28*</b>	<b>14200</b>	100	04/23/2020	ND	211	105	200	2.73	
<b>EXT DRO &gt;C28-C36</b>	<b>2140</b>	100	04/23/2020	ND					

Surrogate: 1-Chlorooctane 172 % 44.3-144

Surrogate: 1-Chlorooctadecane 473 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: S 8 -1' (H001165-15)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93	
<b>Toluene*</b>	<b>0.267</b>	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68	
<b>Ethylbenzene*</b>	<b>0.273</b>	0.050	04/22/2020	ND	2.07	103	2.00	6.82	
<b>Total Xylenes*</b>	<b>2.65</b>	0.150	04/22/2020	ND	6.07	101	6.00	6.86	
<b>Total BTEX</b>	<b>3.19</b>	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 175 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	04/23/2020	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>121</b>	10.0	04/22/2020	ND	209	104	200	2.13	
<b>DRO &gt;C10-C28*</b>	<b>1030</b>	10.0	04/22/2020	ND	211	105	200	2.73	
<b>EXT DRO &gt;C28-C36</b>	<b>118</b>	10.0	04/22/2020	ND					

Surrogate: 1-Chlorooctane 118 % 44.3-144

Surrogate: 1-Chlorooctadecane 115 % 42.2-156

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

SOUDER MILLER AND ASSOCIATES  
 ASHLEY MAXWELL  
 201 S. HALAGUENO  
 CARLSBAD NM, 88220  
 Fax To: NONE

Received:	04/22/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	FIGHTING OKRA 18 CTB	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY		

**Sample ID: S 8 - 2' (H001165-16)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/22/2020	ND	1.95	97.4	2.00	6.93		
Toluene*	<0.050	0.050	04/22/2020	ND	1.99	99.5	2.00	6.68		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.07	103	2.00	6.82		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.07	101	6.00	6.86		
Total BTEX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>32.0</b>	16.0	04/23/2020	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	04/22/2020	ND	209	104	200	2.13		
<b>DRO &gt;C10-C28*</b>	<b>11.9</b>	10.0	04/22/2020	ND	211	105	200	2.73		
EXT DRO >C28-C36	<10.0	10.0	04/22/2020	ND						

Surrogate: 1-Chlorooctane 98.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**BILL TO**

**ANALYSIS REQUEST**

Company Name: **SMA** P.O. #:

Project Manager: **Ashley Maxwell** Company: **Devon Energy**

Address: **201 S. Halagueño St.** Attn:

City: **Carlsbad** State: **NM** Zip: **88220** Address:

Phone #: Fax #: Project Owner: City:

Project #: Project Name: **Fighting Okra 18 CTB 4** State: Zip:

Project Location: Phone #: Phone #:

Sampler Name: **Sebastian Orozco (50)** Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					DATE	TIME	X	BTEX + <sup>SO</sup> (801)	TPH : 8015D (620 / DR0 / MR0)	CI
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE						
<i>Heelias</i>	CSI-3'	C	1			X					X			
	CS2-3'										X			
	CS3-3'										X			
	CS4-3'										X			
	CS5-0.5'										X			
	SW1							4/20/20	2:48					
	SW2							4/21/20	2:54					
	SW3							4/21/20	3:01					
	SW4							4/20/20	2:21					
	S7-surface		6											

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Relinquished By: *Sebastian Orozco* Date: *4-22-20* Received By: *Robert D. Davis*

Time: \_\_\_\_\_

Relinquished By: *Robert D. Davis* Date: *4-22-20* Received By: *Robert D. Davis*

Time: \_\_\_\_\_

Delivered By: (Circle One) *Robert D. Davis* Time: *4:32-20* Sample Condition: *Intact*

Sampler - UPS - Bus - Other: *#113* *1.3c*  Yes  No

Checked By: *Bill Devon Dinehy* (Initials) *BD*

Phone Result:  Yes  No Add'l Phone #: \_\_\_\_\_

Fax Result:  Yes  No Add'l Fax #: \_\_\_\_\_

REMARKS: *Rush!*



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

101 East Marland, Hobbs, NM 88240  
 (575) 393-2326 FAX (575) 393-2476

**BILL TO**

**ANALYSIS REQUEST**

Company Name: <b>SYMA</b>		P.O. #:	
Project Manager: <b>Ashley Maxwell</b>		Company: <b>Devon Energy</b>	
Address: <b>261 S. Halaguetto St.</b>		Attn:	
City: <b>Carlsbad</b>		Address:	
State: <b>NM</b> Zip: <b>88220</b>		City:	
Phone #:		State:	
Project #:		Zip:	
Project Name: <b>Fighting Okra 1B CTB 4</b>		Phone #:	
Project Location:		Fax #:	
Sampler Name: <b>Sebastian Gomez (SO)</b>		PRESERV.	
FOR LAB USE ONLY		SAMPLING	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	X	X	X
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
<b>#001165</b>														
	<b>S7-1'</b>		<b>6</b>			<b>X</b>				<b>4/26/20</b>	<b>2:10</b>	<b>X</b>	<b>X</b>	<b>X</b>
	<b>S7-1.5'</b>		<b>1</b>								<b>2:17</b>	<b>X</b>	<b>X</b>	<b>X</b>
	<b>S7-2'</b>		<b>1</b>								<b>2:26</b>	<b>X</b>	<b>X</b>	<b>X</b>
	<b>S8-Surface</b>		<b>1</b>								<b>2:28</b>	<b>X</b>	<b>X</b>	<b>X</b>
	<b>S8-1'</b>		<b>1</b>								<b>2:31</b>	<b>X</b>	<b>X</b>	<b>X</b>
	<b>S8-2'</b>		<b>1</b>								<b>2:39</b>	<b>X</b>	<b>X</b>	<b>X</b>

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Reinquished By: **Sebastian Gomez** Date: **6-22-20** Received By: **Bill D**

Reinquished By: **Sebastian Gomez** Date: **6-22-20** Received By: **Bill D**

Delivered By: (Circle One) **UPS** **4-22-20 11:50** **1:55** **1.3i**

Sampler - UPS - Bus - Other: **#113**

Phone Result:  Yes  No  Add'l Phone #:

Fax Result:  Yes  No  Add'l Fax #:

REMARKS: **Rash!**

**Bill Devon Dneatly**



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

April 29, 2020

Ashley Maxwell  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL:  
FAX

RE: Fighting Okra 18 CTB4

OrderNo.: 2004B29

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/28/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 2004B29

Date Reported: 4/29/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: CS6

Project: Fighting Okra 18 CTB4

Collection Date: 4/24/2020 10:31:00 AM

Lab ID: 2004B29-001

Matrix: MEOH (SOIL)

Received Date: 4/28/2020 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	89	60		mg/Kg	20	4/28/2020 12:53:11 PM	52137
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	64	9.1		mg/Kg	1	4/28/2020 12:18:17 PM	52131
Motor Oil Range Organics (MRO)	50	45		mg/Kg	1	4/28/2020 12:18:17 PM	52131
Surr: DNOP	96.2	55.1-146		%Rec	1	4/28/2020 12:18:17 PM	52131
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	4/28/2020 3:10:59 PM	52090
Surr: BFB	108	66.6-105	S	%Rec	1	4/28/2020 3:10:59 PM	52090
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.021		mg/Kg	1	4/28/2020 3:10:59 PM	52090
Toluene	ND	0.042		mg/Kg	1	4/28/2020 3:10:59 PM	52090
Ethylbenzene	ND	0.042		mg/Kg	1	4/28/2020 3:10:59 PM	52090
Xylenes, Total	ND	0.085		mg/Kg	1	4/28/2020 3:10:59 PM	52090
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/28/2020 3:10:59 PM	52090

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2004B29

29-Apr-20

**Client:** Souder, Miller & Associates**Project:** Fighting Okra 18 CTB4

Sample ID: <b>MB-52137</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>52137</b>	RunNo: <b>68494</b>								
Prep Date: <b>4/28/2020</b>	Analysis Date: <b>4/28/2020</b>	SeqNo: <b>2370002</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-52137</b>	SampType: <b>ics</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>52137</b>	RunNo: <b>68494</b>								
Prep Date: <b>4/28/2020</b>	Analysis Date: <b>4/28/2020</b>	SeqNo: <b>2370003</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	90	110			

**Qualifiers:**

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D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2004B29

29-Apr-20

**Client:** Souder, Miller & Associates**Project:** Fighting Okra 18 CTB4

Sample ID: <b>LCS-52131</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>52131</b>		RunNo: <b>68463</b>							
Prep Date: <b>4/28/2020</b>	Analysis Date: <b>4/28/2020</b>		SeqNo: <b>2369456</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.2	70	130			
Surr: DNOP	4.2		5.000		84.2	55.1	146			

Sample ID: <b>MB-52131</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>52131</b>		RunNo: <b>68463</b>							
Prep Date: <b>4/28/2020</b>	Analysis Date: <b>4/28/2020</b>		SeqNo: <b>2369457</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		90.2	55.1	146			

Sample ID: <b>2004B29-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>CS6</b>	Batch ID: <b>52131</b>		RunNo: <b>68463</b>							
Prep Date: <b>4/28/2020</b>	Analysis Date: <b>4/28/2020</b>		SeqNo: <b>2370241</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	140	9.9	49.60	64.47	147	47.4	136			S
Surr: DNOP	5.6		4.960		113	55.1	146			

Sample ID: <b>2004B29-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>CS6</b>	Batch ID: <b>52131</b>		RunNo: <b>68463</b>							
Prep Date: <b>4/28/2020</b>	Analysis Date: <b>4/28/2020</b>		SeqNo: <b>2370242</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	100	9.7	48.59	64.47	81.4	47.4	136	27.6	43.4	
Surr: DNOP	5.2		4.859		108	55.1	146	0	0	

**Qualifiers:**

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D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2004B29

29-Apr-20

**Client:** Souder, Miller & Associates

**Project:** Fighting Okra 18 CTB4

Sample ID: <b>mb-52090</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>52090</b>	RunNo: <b>68490</b>								
Prep Date: <b>4/26/2020</b>	Analysis Date: <b>4/28/2020</b>	SeqNo: <b>2369829</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	66.6	105			

Sample ID: <b>ics-52090</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>52090</b>	RunNo: <b>68490</b>								
Prep Date: <b>4/26/2020</b>	Analysis Date: <b>4/28/2020</b>	SeqNo: <b>2369834</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.1	80	120			
Surr: BFB	1100		1000		111	66.6	105			S

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2004B29

29-Apr-20

**Client:** Souder, Miller & Associates**Project:** Fighting Okra 18 CTB4

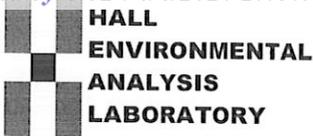
Sample ID: <b>mb-52090</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>52090</b>	RunNo: <b>68490</b>								
Prep Date: <b>4/26/2020</b>	Analysis Date: <b>4/28/2020</b>	SeqNo: <b>2369873</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID: <b>LCS-52090</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>52090</b>	RunNo: <b>68490</b>								
Prep Date: <b>4/26/2020</b>	Analysis Date: <b>4/28/2020</b>	SeqNo: <b>2369874</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	82.6	80	120			
Toluene	0.86	0.050	1.000	0	85.8	80	120			
Ethylbenzene	0.89	0.050	1.000	0	88.7	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.2	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

**Qualifiers:**

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
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B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 2004B29

RcptNo: 1

Received By: Juan Rojas 4/28/2020 9:15:00 AM *Juan Rojas*  
 Completed By: Desiree Dominguez 4/28/2020 8:01:09 AM *DD*  
 Reviewed By: DAD 4/28/20

**Chain of Custody**

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

**Log In**

3. Was an attempt made to cool the samples? Yes  No  NA   
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA   
 5. Sample(s) in proper container(s)? Yes  No   
 6. Sufficient sample volume for indicated test(s)? Yes  No   
 7. Are samples (except VOA and ONG) properly preserved? Yes  No   
 8. Was preservative added to bottles? Yes  No  NA   
 9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes  No  NA   
 10. Were any sample containers received broken? Yes  No   
 11. Does paperwork match bottle labels? Yes  No   
 (Note discrepancies on chain of custody)  
 12. Are matrices correctly identified on Chain of Custody? Yes  No   
 13. Is it clear what analyses were requested? Yes  No   
 14. Were all holding times able to be met? Yes  No   
 (If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: *JR 4/28/20*

**Special Handling (if applicable)**

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

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

16. Additional remarks:

**17. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good	Not Present			

