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

July 28, 2020

#5E29133-BG7

NMOCD District 1
1625 N. French Dr
Hobbs, New Mexico 88240

SUBJECT: Remediation Closure Report for the Thistle Unit 99H Release (1RP-5110), Lea County, New Mexico

To Whom it May Concern:

On behalf of Devon Energy Production Co. LP, 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 Thistle Unit 99H site. The site is in Unit Letter C, Section 22, Township 23S, Range 33E, Lea County, New Mexico, on state 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.

Table 1: Release Information and Closure Criteria			
Name	Thistle Unit 99H	Company	Devon Energy Production Co. LP (6137)
API Number	30-025-44416	Location	(32.296395, -103.563271)
Incident Number	1RP-5110		
Estimated Date of Release	6/26/2018	Date Reported to NMOCD	6/27/2018
Land Owner	State	Reported To	NMOCD, SLO
Source of Release	Suction Manifold		
Released Volume	12 barrels	Released Material	Fresh Water w/ Biocide and Scale Inhibitor
Recovered Volume	0 barrels	Net Release	12 barrels
NMOCD Closure Criteria	<50 feet to groundwater		
SMA Response Dates	5/27/2020, 7/1 and 7/15/2020		

1.0 Background

On June 26, 2018, a release was discovered at the Thistle Unit 99H during fracturing operations a 6" clamp on the suction manifold of the fluid end came loose and caused the release. Initial response activities were conducted by Devon Energy, and included source elimination and containment activities, no fluids was recovered. 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 Thistle Unit 99H is located approximately 25 miles northwest of Jal, New Mexico on State land at an elevation of approximately 3715 feet above mean sea level (amsl).

Based upon New Mexico Office of the State Engineer (Appendix B), depth to groundwater in the area is estimated to be 383 feet below grade surface (bgs). There are no 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/; accessed 7/22/2020). The nearest water well with groundwater data (C-03582) is located 1.26 miles northeast of the release and had first encountered depth to groundwater of 18 feet bgs; however, the elevational difference between the surface elevation of the release and groundwater elevation at water well (C-03585) is greater than 90 feet. SMA used this data, as well as data from seven other water wells in the surrounding area to calculate the potential depth to groundwater (Table 4). Based on this data, groundwater is estimated to be at 383 feet bgs.

The nearest significant watercourse is un-named intermittent draw, located approximately 2000 feet to the northeast. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it Choose an item. 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 less than 50 feet bgs, due to the fact that no water wells are within ½ mile of the release. The site has been restored to meet the standards of Table I of 19.15.29.12 NMAC.

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 July 1, 2020, SMA personnel arrived on site in response to the release associated with Thistle Unit 99H. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area.

A total of six (6) sample locations (SL1-SL6) were investigated using a hand-auger, to a depth of one-foot bgs. A total of ten 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; motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D, RCRA 8 Metals TCLP, VOA EPA Method 8260, Semi-VOA EPA Method 8270,and RCI

As summarized in Table 3, results indicated that an area approximately 160 square yards had been impacted concerning TPH and chlorides.

From July 13 to July 15, 2020, SMA returned to the site to guide the excavation of contaminated soil. SMA guided the excavation activities by collecting soil samples for field screening. Samples were

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. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met. NMOCD was notified on July 13, 2020 that closure samples were expected to be collected in two (2) business days.

On July 15, 2020, SMA conducted confirmation sampling of the walls and base of the excavation, which measured approximately 43 feet by 33 feet by 1 foot bgs. The area around initial sample locations (SL3 – SL6) was excavated to a depth of one (1) foot bgs.

Confirmation samples were comprised of five-point composites of the base (CS1-CS3) and walls (SW1-SW3).

A total of six (6) 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. 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.

Figure 3A shows the extent of the excavation and sample locations. Laboratory results are summarized in Table 3. Laboratory reports are included in Appendix D.

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 Northern Delaware Basin Landfill near Jal, 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 505-320-8975 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:

Ashley Maxwell
Project Manager

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Site Map
Figure 2: Surface Water Protection Map
Figure 3: Site and Sample Location Map
Figure 3A: Final Excavation and Confirmation Sample Map

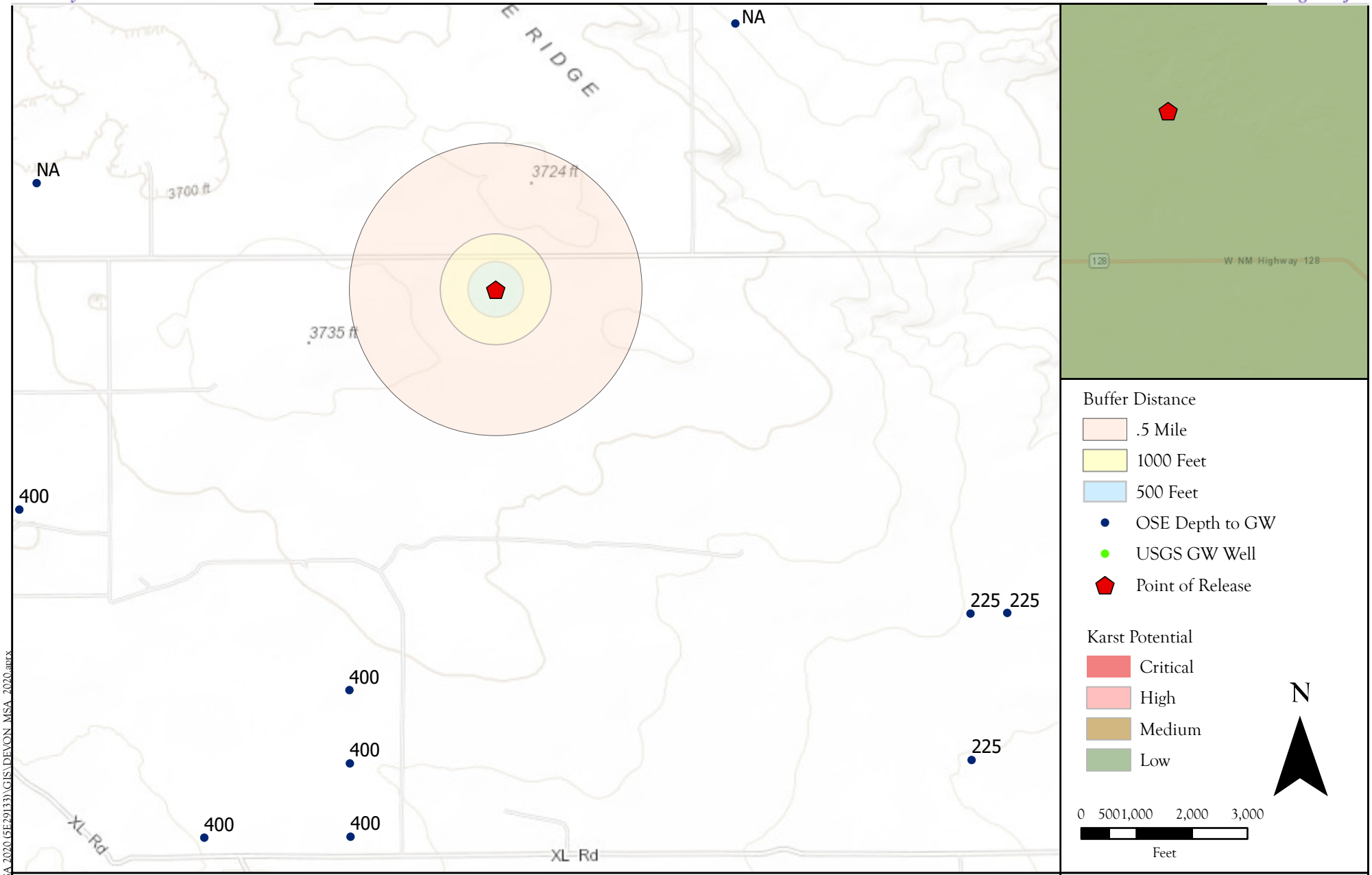
Tables:

Table 2: NMOCD Closure Criteria Justification
Table 3: Summary of Sample Results
Table 4: Potential Depth to Groundwater

Appendices:

Appendix A: Form C141
Appendix B: NMOSE Wells Report
Appendix C: Sampling Protocol, Field Notes & Photo Log
Appendix D: Laboratory Analytical Reports

FIGURES



Site Map
Thistle Unit 99H - Devon Energy
UL: C S: 22 T: 23S R: 33E, Lea County, New Mexico

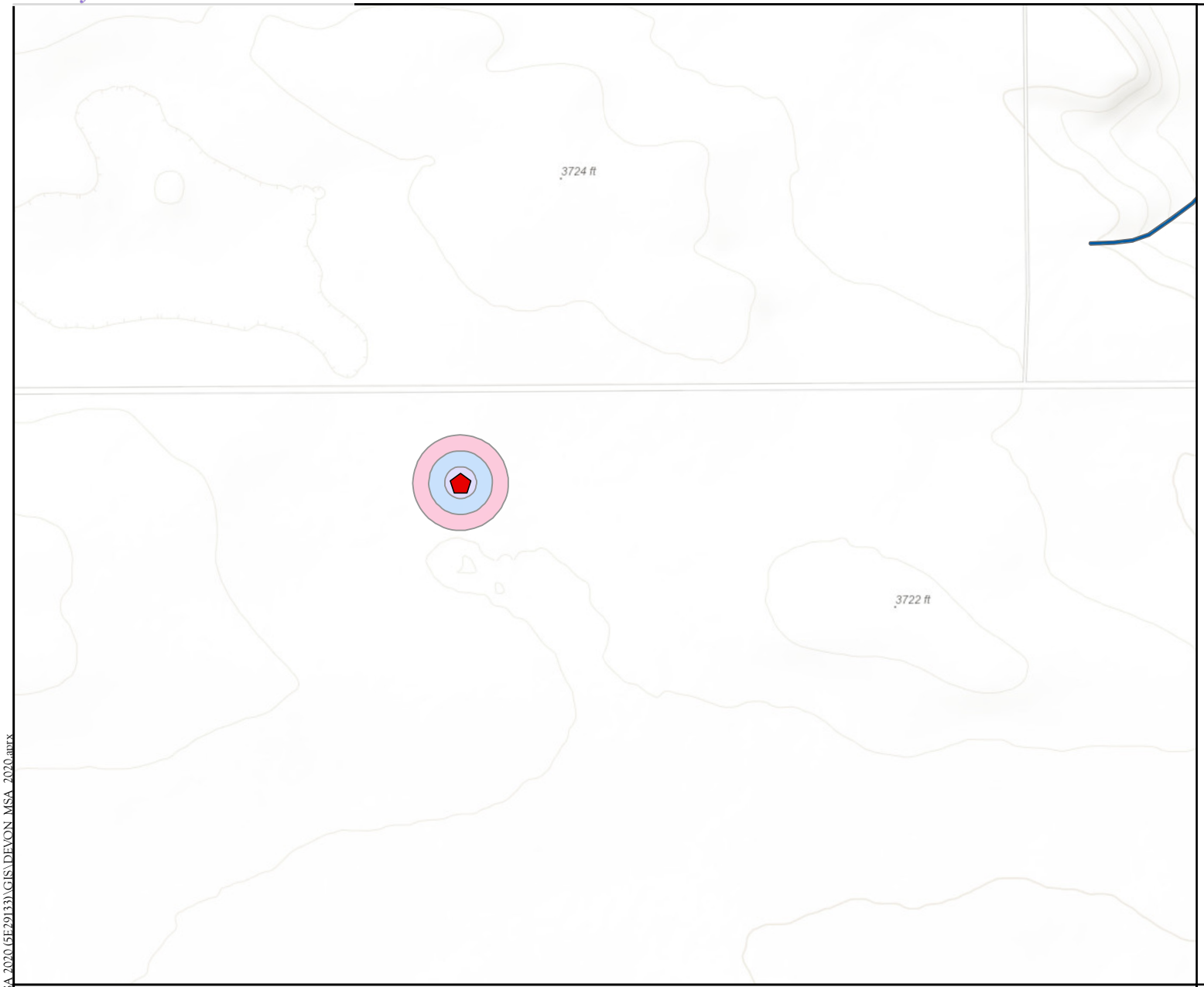
Figure 1

\\192.168.22.10\Projects\5.Devon MSA 2020\(5E29133)\GIS\DEVON_MSA_2020.aprx
Date Saved: 3/16/2020

Revisions
By: Date: Descr:
By: Date: Descr:

Drawn Lynn A. Acosta
Date 3/16/2020
Checked
Approved

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



Buffer Distance
- 300 Feet
- 200 Feet
- 100 Feet
- Springs & Seeps
- Streams & Canals
- Rivers
- Flowlines SENM
- NM Wetlands
- Lakes & Playas
- FEMA Flood Zones 2011
- Point of Release

N

0 305 610 1,220 1,830

Feet

Surface Water Protection Map
Thistle Unit 99H- Devon Energy
UL: C S: 22 T: 23S R: 33E Lea County, New Mexico

Figure 2

\\192.168.22.10\Projects\5-Devon MSA 2020 (5E29133)\GIS\DEVON_MSA_2020.aprx
Date Saved: 3/16/2020

Revisions
By: Date: Descr:
By: Date: Descr:

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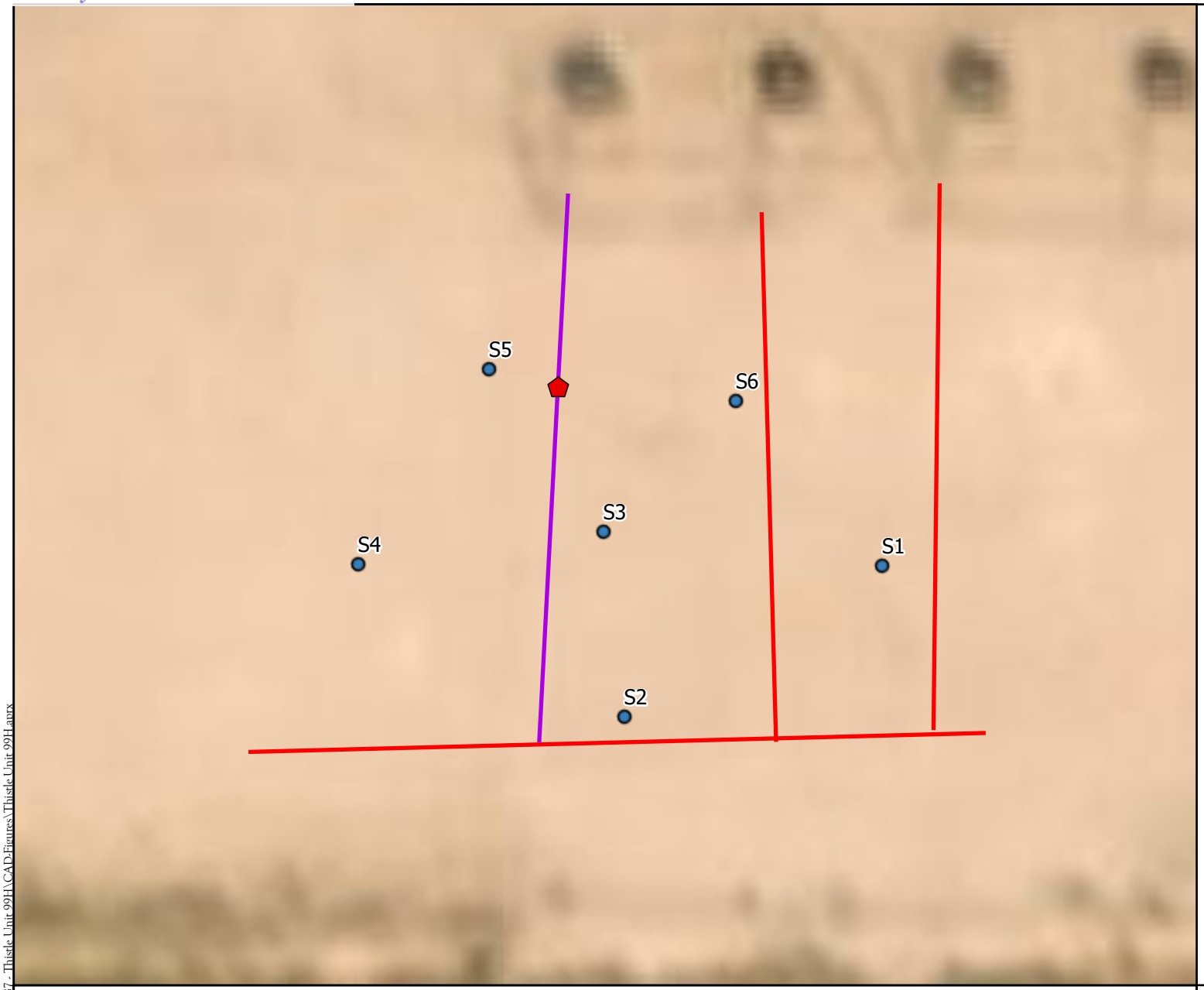

Legend

- Electrical Lines
- Petroleum Flowline
- Initial Soil Samples
- Point of Release

N

0 5 10 20 30

Feet

Site and Sample Location Map
Thistle 99H - Devon Energy Production Co.
UL: C S: 22 T: 23S R: 33E- Lea County, New Mexico

Figure 3

P:\5-Devon MSA 2020 (5E29133)\RG7 - Thistle Unit 99H\CAD\Figures\Thistle Unit 99H.aprx
Date Saved: 6/22/2020

Revisions
By: Date: Descr:
By: Date: Descr:

Drawn Lynn A. Acosta
Date 6/22/2020
Checked
Approved

SMA
201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
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Legend

- Electrical Lines
- Petroleum Flowline
- 1' Excavation
- Confirmation Samples
- Sidewall Samples
- Point of Release

N

0 5 10 20 30

Feet

Final Excavation and Confirmation Sample Map
Thistle 99H - Devon Energy Production Co.
UL: C S: 22 T: 23S R: 33E- Lea County, New Mexico

Figure 3A

P:\5-Devon MSA 2020 (5E29133)\Devon-Backlog Projects\BG7 - Thistle Unit 99H\QLD\CAD Figures\Thistle Unit 99H.aprx
Date Saved: 7/22/2020

Revisions
By: Date: Descr:
By: Date: Descr:

Drawn Lynn A. Acosta
Date 7/28/2020
Checked
Approved

SMA

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

Table 2:
NMOCD Closure Criteria

Devon Energy Production Company
Thistle Unit 99H
1RP-5110

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	370	New Mexico Office of the State Engineer
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	N/A	United States Geological Survey Topo Map
Hortizontal Distance to Nearest Significant Watercourse (ft)	2,000	United States Geological Survey Topo Map

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		**Closure Criteria (units in mg/kg)**				
		Chloride *numerical limit or background, whichever is greater	**TPH**	**GRO + DRO**	**BTEX**	**Benzene**
< 50' BGS	X	600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		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					
Water Well or Water Source						
<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					
Human and Other Areas						
<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 3:
Summary of Sample Results

Devon Energy Production Company
Thistle Unit #99
1RP-5110

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action/ Action Taken	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	GRO + DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria				50	10					100	600
Initial Sampling Event											
SL1	5/27/2020	Surface	In-Situ	<0.219	<0.024	<4.9	15	15	64	79	560
SL2		Surface	In-Situ	<0.224	<0.025	<5.0	<9.6	<14.6	47	47	<60
SL3	5/27/2020	Surface	Excavate	<0.024	<0.025	<5.0	230	230	370	600	5200
	7/1/2020	1	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	64
SL4	5/27/2020	Surface	Excavate	<0.221	<0.025	<5	45	45	200	245	120
	7/1/2020	1	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	-
SL5	5/27/2020	Surface	Excavate	<0.220	<0.024	<4.9	53	53	200	253	1200
	7/1/2020	1	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	240
SL6	5/27/2020	Surface	Excavate	<0.219	<0.024	<4.9	760	760	2700	3460	2400
	7/1/2020	1	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	48
Confirmation Sampling Event											
CS1	7/15/2020	1	In-Situ	<0.300	<0.050	<10.0	10.6	10.6	<10.0	10.6	80
CS2		1	In-Situ	<0.300	<0.050	<10.0	<10.0	<20.0	<10.0	<30.0	64
CS3		1	In-Situ	<0.300	<0.050	<10.0	<10.0	<20.0	<10.0	<30.0	80
SW1		0-1	In-Situ	<0.300	<0.050	<10.0	<10.0	<20.0	<10.0	<30.0	112
SW2		0-1	In-Situ	<0.300	<0.050	<10.0	<10.0	<20.0	<10.0	<30.0	80
SW3		0-1	In-Situ	<0.300	<0.050	<10.0	<10.0	<20.0	<10.0	<30.0	96

"--" = Not Analyzed

SMA #

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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Devon Energy Production Co. LP (6137)	Contact: Danny Velo, Completions Foreman
Address: PO Box 250, Artesia, NM 88211	Telephone No. 575-703-3360
Facility Name: Thistle Unit 99H	Facility Type: Oil

Surface Owner: State	Mineral Owner: State	API No. 30-025-44416

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	22	23S	33E					Lea

Latitude__32.296395_N_____ **Longitude**__-103.563271__W_____ NAD83

NATURE OF RELEASE

Type of Release: Fresh Water with Biocide and Scale Inhibitor	Volume of Release: 12 barrels	Volume Recovered: 0 barrels
Source of Release: Suction Manifold	Date and Hour of Occurrence: 6/26/18 @ 3:57 AM MST	Date and Hour of Discovery: 6/26/18 @ 3:57 AM MST
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD: Olivia Yu & Christina Hernandez SLO: Ryan Mann	
By Whom? Mike Shoemaker, Devon EHS Professional	Date and Hour: 6/26/18 @ 5:09 PM MST	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

RECEIVED
By CHernandez at 9:23 am, Jul 02, 2018

Describe Cause of Problem and Remedial Action Taken.*
During fracturing operations a 6" clamp on the suction manifold of the fluid end came loose and caused the release. The job was stopped and the clamp was replaced.

Describe Area Affected and Cleanup Action Taken.*
Approximately 12 bbls of mixed fluid (1/10 gal of biocide, 1/10 gal of scale inhibitor, and the remainder of the mixture is freshwater) was released. No fluids were recovered. An environmental contractor will be contacted to assist with delineation and remediation efforts.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Denise Menoud

Printed Name: Denise Menoud

Title: Admin Field Support

E-mail Address: denise.menoud@dvn.com

Date: 6/27/2018 Phone: 575-746-5544

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: CH

Approval Date: 7/2/2018 Expiration Date:

Conditions of Approval:
See attached directive

Attached ☑

1RP-5110 pCH1818334659
nCH1818333932

* Attach Additional Sheets If Necessary

Thistle Unit 99H

Spill 6/26/18

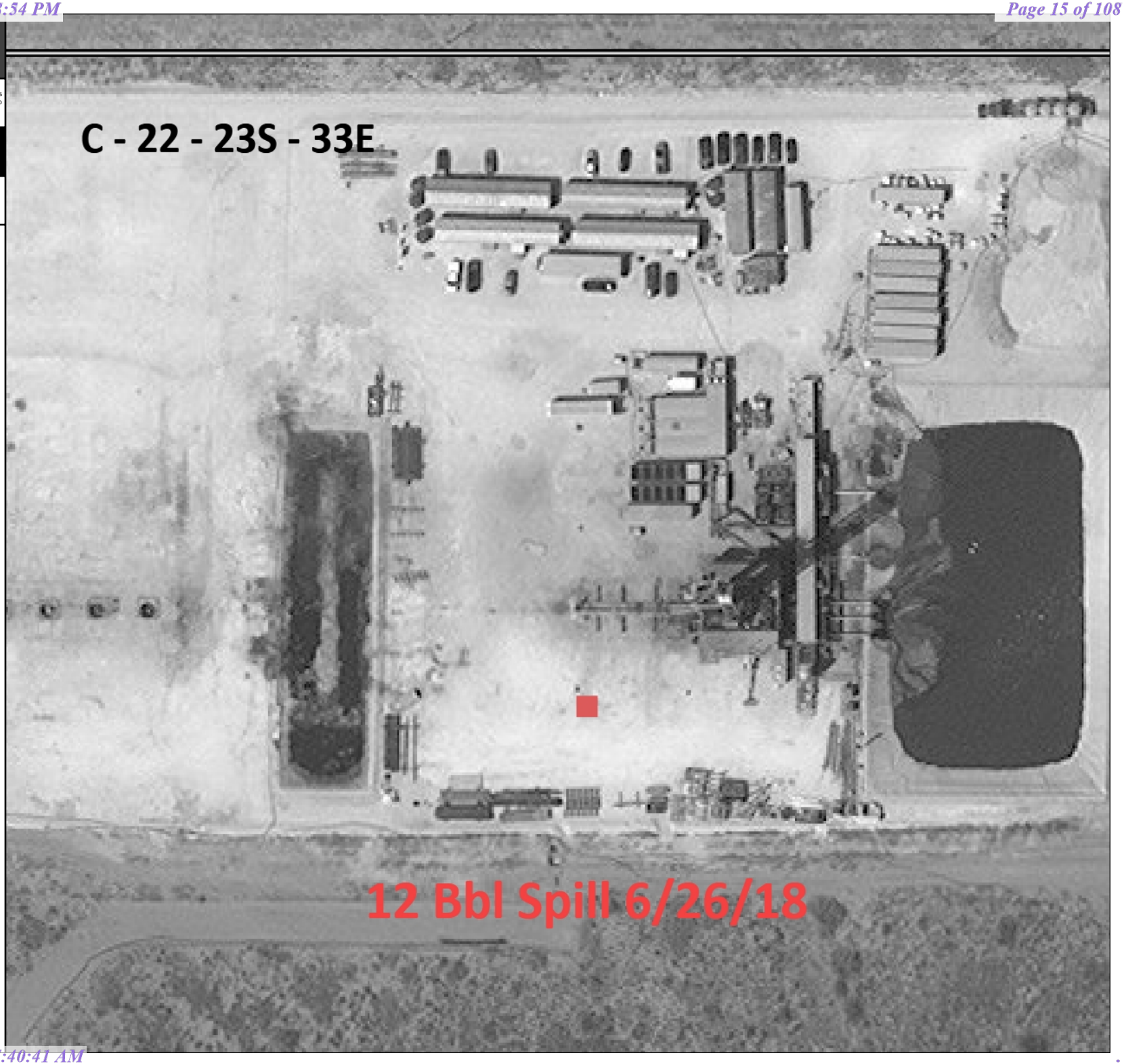
devon

This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Menoud
Map is current as of: 28-Jun-2018

N

Miles
0 0.00 0.01 0.02 1: 889



Operator/Responsible Party,

The OCD has received the form C-141 you provided on _6/28/2018_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-5110__ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _8/2/2018_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

State of New Mexico
Oil Conservation Division

Incident ID	nCH1818333932
District RP	1RP-5110
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?	225 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ 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 ½-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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nCH1818333932
District RP	1RP-5110
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 7/29/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nCH1818333932
District RP	1RP-5110
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 7/29/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Incident ID	nCH1818333932
District RP	1RP-5110
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: Tom Bynum Title: EHS Consultant

Signature: Tom Bynum Date: 7/29/2020

email: tom.bynum@dvn.com Telephone: 575-748-0176

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: Brittany Hall Date: 09/14/2022

Printed Name: Brittany Hall Title: Environmental Specialist

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 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 03582 POD1		C	LE	4	1	1	14	23S	33E	636583	3575666	1968	590		
C 02278		CUB	LE	3	4	2	28	23S	33E	634484	3571989*	2343	650	400	250
C 02280		CUB	LE	3	2	4	28	23S	33E	634489	3571586*	2725	650	400	250
C 02277		CUB	LE	2	3	4	20	23S	33E	632663	3572970*	2885	550	400	150
C 02281		CUB	LE	3	4	4	28	23S	33E	634495	3571183*	3111	545	400	145
C 02283		CUB	LE	4	2	2	26	23S	33E	637896	3572431*	3159	325	225	100
C 02282		CUB	LE	3	1	1	25	23S	33E	638098	3572436*	3326	325	225	100
C 02279		CUB	LE	3	4	3	28	23S	33E	633691	3571173*	3412	650	400	250

Average Depth to Water: **350 feet**

Minimum Depth: **225 feet**

Maximum Depth: **400 feet**

Record Count: 8

UTMNAD83 Radius Search (in meters):

Easting (X): 635275.36 **Northing (Y):** 3574195.344 **Radius:** 3500

***UTM location was derived from PLSS - see Help**

3/16/20 3:42 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

APPENDIX C

SAMPLING PROTOCOL, FIELD NOTES & PHOTO LOG

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

Sampling Protocol

Representatives from SMA chose the Judgmental Sampling Method as described in EPA's Final Sampling Guidance for SW-846, 2002 to adequately quantify contaminant concentrations on Thistle Unit 99H Location. The utility of this particular method functions on the sufficient knowledge of the contaminant, which we possess. This design is also useful when identifying the composition of a release, which we have documented. In addition, this sampling design was chosen for this project because of the locations uniform soil type, and the several operational considerations (such as the liner within the battery and the construction of a new facility) that precluded the implementation of a different statistical design.

The confirmation samples were collected in laboratory supplied containers in accordance with this sampling protocol, immediately placed on ice and sent under standard chain-of-custody protocols to Cardinal Laboratories in Hobbs, New Mexico for analysis. A total of six (6) 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.

Sampling Analysis Field Quality Assurance Procedures

A unique sample numbering was used to identify each sample collected and designated for on-site and off-site laboratory analysis. The purpose of this numbering scheme was to provide a tracking system for the retrieval of analytical and field data on each sample. Sample identification numbers were recorded on sample labels or tags, field notes, chain-of-custody records (COC) and all other applicable documentation used during the project. Sample labels were affixed to all sample containers during sampling activities. Information was recorded on each sample container label at the time of sample collection. The information recorded on the labels were as follows: sample identification number; sample type (discrete or composite); site name and area/location number; analysis to be performed; type of chemical preservative present in container; date and time of sample collection; and sample collector's name and initials. All samples were packed in ice in an approved rigid body container, custody sealed signed and shipped to the appropriate laboratory via insured currier service.

COC procedures implemented for the project provided documentation of the handling of each sample from the time of collection until completion of laboratory analysis. A COC form serves as a legal record of possession of the sample. A sample is considered to be under custody if one or more of the following criteria are met: the sample is in the sampler's possession; the sample is in the sampler's view after being in possession; the sample was in the sampler's possession and then was placed into a locked area to prevent tampering; and/or the sample is in a designated secure area. Custody was documented throughout the project field sampling activities by a chain-of custody form initiated each day during which samples are collected. Container custody seals placed on either individual samples or on the rigid body container were used to ensure that no sample tampering occurs between the time the samples are placed into the containers and the time the containers are opened for analysis at the laboratory. Container custody seals were signed and dated by the individual responsible for completing the COC form contained within the container.

Field Screening

Location Name: Thistle 99H

Date: 7/13/20

Sample Name:	Soil Type:	Depth (BGS)	Collection Time:	EC (ppm)	Temp (°C)	PID Reading	PF
BS 1	red sand	1'	11:49	0.10	30.4	1.9	
SW1	" "	0-1'	11:51	0.16	30.1	1.3	
SW2	" "	0-1'	11:54	0.17	30.4	1.2	
SW3	" "	0-1'	11:56	0.27	30.8	1.5	
SW4	" "	0-1'	11:59	0.13	29.7	1.0	
~~CS1 BS2~~	" "	1'	12:01	0.15	30.5	1.0	
SW5	" "	0-1'	12:05	0.16	30.7	1.2	
SW6	" "	0-1'	12:09	0.12	30.9	1.0	
SW7	" "	0-1'	12:11	0.22	30.8	1.4	

Field Screening

Location Name: Thistle 99H

Date: 7/15/20

Sample Name:	Soil Type:	Depth (BGS)	Collection Time:	EC (ppm)	Temp (°C)	PID Reading	PF
CS1	red sand	~~0~~ 1'	9:04	0.16	33.6	3.1	
SW1	red sand	0-1'	9:06	0.13/443	33.1	2.4	
SW2	red sand	0-1'	9:17	0.09/357	32.5	23	
SW3	red sand	0-1'	12:59	0.12	30.0		
CS2	red sand	1'	1:05	0.09	28.8		
CS3	red sand	1'	1:10	0.09	29.7		

APPENDIX D

LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 11, 2020

Ashley Maxwell

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

RE: Thistle Unit 99H OrderNo.: 2005B79

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/28/2020 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 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 1
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:33:00 AM
Lab ID: 2005B79-001 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	560	60		mg/Kg	20	6/3/2020 9:46:08 AM	52848
MERCURY, TCLP						Analyst: **ags**	
Mercury	ND	0.020		mg/L	1	6/2/2020 1:54:20 PM	52820
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**	
Arsenic	ND	5.0		mg/L	1	6/2/2020 12:09:19 PM	52801
Barium	ND	100		mg/L	1	6/2/2020 12:09:19 PM	52801
Cadmium	ND	1.0		mg/L	1	6/2/2020 12:09:19 PM	52801
Chromium	ND	5.0		mg/L	1	6/2/2020 12:09:19 PM	52801
Lead	ND	5.0		mg/L	1	6/2/2020 12:09:19 PM	52801
Selenium	ND	1.0		mg/L	1	6/2/2020 12:09:19 PM	52801
Silver	ND	5.0		mg/L	1	6/2/2020 12:09:19 PM	52801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	15	9.5		mg/Kg	1	5/30/2020 7:16:25 PM	52782
Motor Oil Range Organics (MRO)	64	47		mg/Kg	1	5/30/2020 7:16:25 PM	52782
Surr: DNOP	82.2	55.1-146		%Rec	1	5/30/2020 7:16:25 PM	52782
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2020 9:03:42 PM	52747
Surr: BFB	81.1	66.6-105		%Rec	1	5/29/2020 9:03:42 PM	52747
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Acenaphthylene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Aniline	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Anthracene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Azobenzene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Benz(a)anthracene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Benzo(a)pyrene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Benzo(b)fluoranthene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Benzo(g,h,i)perylene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Benzo(k)fluoranthene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Benzoic acid	ND	2.9	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Benzyl alcohol	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Bis(2-chloroethoxy)methane	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Bis(2-chloroethyl)ether	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Bis(2-chloroisopropyl)ether	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Bis(2-ethylhexyl)phthalate	ND	2.9	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
4-Bromophenyl phenyl ether	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Butyl benzyl phthalate	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806

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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 1
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:33:00 AM
Lab ID: 2005B79-001 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
4-Chloro-3-methylphenol	ND	2.9	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
4-Chloroaniline	ND	2.9	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2-Chloronaphthalene	ND	1.4	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2-Chlorophenol	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
4-Chlorophenyl phenyl ether	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Chrysene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Di-n-butyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Di-n-octyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Dibenz(a,h)anthracene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Dibenzofuran	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
1,2-Dichlorobenzene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
1,3-Dichlorobenzene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
1,4-Dichlorobenzene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
3,3´-Dichlorobenzidine	ND	1.4	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Diethyl phthalate	ND	2.9	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Dimethyl phthalate	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2,4-Dichlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2,4-Dimethylphenol	ND	1.7	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
4,6-Dinitro-2-methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2,4-Dinitrophenol	ND	2.9	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2,4-Dinitrotoluene	ND	2.9	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2,6-Dinitrotoluene	ND	2.9	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Fluoranthene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Fluorene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Hexachlorobenzene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Hexachlorobutadiene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Hexachlorocyclopentadiene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Hexachloroethane	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Indeno(1,2,3-cd)pyrene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Isophorone	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
1-Methylnaphthalene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2-Methylnaphthalene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2-Methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
3+4-Methylphenol	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
N-Nitrosodi-n-propylamine	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
N-Nitrosodiphenylamine	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Naphthalene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2-Nitroaniline	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 1
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:33:00 AM
Lab ID: 2005B79-001 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3-Nitroaniline	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
4-Nitroaniline	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Nitrobenzene	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2-Nitrophenol	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
4-Nitrophenol	ND	1.4	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Pentachlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Phenanthrene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Phenol	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Pyrene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Pyridine	ND	2.3	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
1,2,4-Trichlorobenzene	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2,4,5-Trichlorophenol	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
2,4,6-Trichlorophenol	ND	1.2	D	mg/Kg	1	6/3/2020 1:23:25 PM	52806
Surr: 2-Fluorophenol	71.5	26.7-85.9	D	%Rec	1	6/3/2020 1:23:25 PM	52806
Surr: Phenol-d5	73.1	18.5-101	D	%Rec	1	6/3/2020 1:23:25 PM	52806
Surr: 2,4,6-Tribromophenol	69.2	35.8-85.6	D	%Rec	1	6/3/2020 1:23:25 PM	52806
Surr: Nitrobenzene-d5	81.2	40.8-95.2	D	%Rec	1	6/3/2020 1:23:25 PM	52806
Surr: 2-Fluorobiphenyl	78.8	34.7-85.2	D	%Rec	1	6/3/2020 1:23:25 PM	52806
Surr: 4-Terphenyl-d14	80.9	37.4-91.3	D	%Rec	1	6/3/2020 1:23:25 PM	52806
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.024		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Toluene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Ethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Naphthalene	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1-Methylnaphthalene	ND	0.19		mg/Kg	1	5/30/2020 6:09:42 PM	52747
2-Methylnaphthalene	ND	0.19		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Acetone	ND	0.73		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Bromobenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Bromodichloromethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Bromoform	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Bromomethane	ND	0.15		mg/Kg	1	5/30/2020 6:09:42 PM	52747
2-Butanone	ND	0.49		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Carbon disulfide	ND	0.49		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Carbon tetrachloride	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 1
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:33:00 AM
Lab ID: 2005B79-001 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Chloroethane	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Chloroform	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Chloromethane	ND	0.15		mg/Kg	1	5/30/2020 6:09:42 PM	52747
2-Chlorotoluene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
4-Chlorotoluene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
cis-1,2-DCE	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2-Dibromo-3-chloropropane	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Dibromochloromethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Dibromomethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,1-Dichloroethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,1-Dichloroethene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2-Dichloropropane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,3-Dichloropropane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
2,2-Dichloropropane	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,1-Dichloropropene	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Hexachlorobutadiene	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
2-Hexanone	ND	0.49		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Isopropylbenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
4-Isopropyltoluene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Methylene chloride	ND	0.15		mg/Kg	1	5/30/2020 6:09:42 PM	52747
n-Butylbenzene	ND	0.15		mg/Kg	1	5/30/2020 6:09:42 PM	52747
n-Propylbenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
sec-Butylbenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Styrene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
tert-Butylbenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
trans-1,2-DCE	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2,3-Trichlorobenzene	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 1
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:33:00 AM
Lab ID: 2005B79-001 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Trichlorofluoromethane	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
1,2,3-Trichloropropane	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Vinyl chloride	ND	0.049		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Xylenes, Total	ND	0.097		mg/Kg	1	5/30/2020 6:09:42 PM	52747
Surr: Dibromofluoromethane	98.7	70-130		%Rec	1	5/30/2020 6:09:42 PM	52747
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%Rec	1	5/30/2020 6:09:42 PM	52747
Surr: Toluene-d8	99.5	70-130		%Rec	1	5/30/2020 6:09:42 PM	52747
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	5/30/2020 6:09:42 PM	52747

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Qualifiers:

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 2
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:34:00 AM
Lab ID: 2005B79-002 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	6/3/2020 10:23:10 AM	52848
MERCURY, TCLP						Analyst: **ags**	
Mercury	ND	0.020		mg/L	1	6/2/2020 2:06:07 PM	52820
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**	
Arsenic	ND	5.0		mg/L	1	6/2/2020 12:11:16 PM	52801
Barium	ND	100		mg/L	1	6/2/2020 12:11:16 PM	52801
Cadmium	ND	1.0		mg/L	1	6/2/2020 12:11:16 PM	52801
Chromium	ND	5.0		mg/L	1	6/2/2020 12:11:16 PM	52801
Lead	ND	5.0		mg/L	1	6/2/2020 12:11:16 PM	52801
Selenium	ND	1.0		mg/L	1	6/2/2020 12:11:16 PM	52801
Silver	ND	5.0		mg/L	1	6/2/2020 12:11:16 PM	52801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/30/2020 7:40:37 PM	52782
Motor Oil Range Organics (MRO)	47	47		mg/Kg	1	5/30/2020 7:40:37 PM	52782
Surr: DNOP	89.0	55.1-146		%Rec	1	5/30/2020 7:40:37 PM	52782
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2020 10:14:15 PM	52747
Surr: BFB	82.7	66.6-105		%Rec	1	5/29/2020 10:14:15 PM	52747
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Acenaphthylene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Aniline	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Azobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Benz(a)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Benzo(a)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Benzo(b)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Benzo(g,h,i)perylene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Benzo(k)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Benzoic acid	ND	2.7	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Benzyl alcohol	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Bis(2-chloroethoxy)methane	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Bis(2-chloroethyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Bis(2-chloroisopropyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Bis(2-ethylhexyl)phthalate	ND	2.7	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
4-Bromophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Butyl benzyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806

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

Qualifiers:

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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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 2
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:34:00 AM
Lab ID: 2005B79-002 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
4-Chloro-3-methylphenol	ND	2.7	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
4-Chloroaniline	ND	2.7	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2-Chloronaphthalene	ND	1.4	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2-Chlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
4-Chlorophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Chrysene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Di-n-butyl phthalate	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Di-n-octyl phthalate	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Dibenz(a,h)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Dibenzofuran	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
1,2-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
1,3-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
1,4-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
3,3´-Dichlorobenzidine	ND	1.4	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Diethyl phthalate	ND	2.7	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Dimethyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2,4-Dichlorophenol	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2,4-Dimethylphenol	ND	1.6	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
4,6-Dinitro-2-methylphenol	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2,4-Dinitrophenol	ND	2.7	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2,4-Dinitrotoluene	ND	2.7	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2,6-Dinitrotoluene	ND	2.7	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Fluorene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Hexachlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Hexachlorobutadiene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Hexachlorocyclopentadiene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Hexachloroethane	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Indeno(1,2,3-cd)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Isophorone	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
1-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2-Methylphenol	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
3+4-Methylphenol	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
N-Nitrosodi-n-propylamine	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
N-Nitrosodiphenylamine	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Naphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 2
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:34:00 AM
Lab ID: 2005B79-002 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
4-Nitroaniline	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Nitrobenzene	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2-Nitrophenol	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
4-Nitrophenol	ND	1.4	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Pentachlorophenol	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Phenanthrene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Phenol	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Pyridine	ND	2.2	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
1,2,4-Trichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2,4,5-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
2,4,6-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 1:52:33 PM	52806
Surr: 2-Fluorophenol	53.3	26.7-85.9	D	%Rec	1	6/3/2020 1:52:33 PM	52806
Surr: Phenol-d5	58.4	18.5-101	D	%Rec	1	6/3/2020 1:52:33 PM	52806
Surr: 2,4,6-Tribromophenol	50.4	35.8-85.6	D	%Rec	1	6/3/2020 1:52:33 PM	52806
Surr: Nitrobenzene-d5	58.0	40.8-95.2	D	%Rec	1	6/3/2020 1:52:33 PM	52806
Surr: 2-Fluorobiphenyl	56.2	34.7-85.2	D	%Rec	1	6/3/2020 1:52:33 PM	52806
Surr: 4-Terphenyl-d14	64.4	37.4-91.3	D	%Rec	1	6/3/2020 1:52:33 PM	52806
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Toluene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Ethylbenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Naphthalene	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1-Methylnaphthalene	ND	0.20		mg/Kg	1	5/30/2020 6:39:01 PM	52747
2-Methylnaphthalene	ND	0.20		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Acetone	ND	0.74		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Bromobenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Bromodichloromethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Bromoform	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Bromomethane	ND	0.15		mg/Kg	1	5/30/2020 6:39:01 PM	52747
2-Butanone	ND	0.50		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Carbon disulfide	ND	0.50		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Carbon tetrachloride	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 2
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:34:00 AM
Lab ID: 2005B79-002 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Chloroethane	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Chloroform	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Chloromethane	ND	0.15		mg/Kg	1	5/30/2020 6:39:01 PM	52747
2-Chlorotoluene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
4-Chlorotoluene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
cis-1,2-DCE	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Dibromochloromethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Dibromomethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,1-Dichloroethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,1-Dichloroethene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2-Dichloropropane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,3-Dichloropropane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
2,2-Dichloropropane	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,1-Dichloropropene	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Hexachlorobutadiene	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
2-Hexanone	ND	0.50		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Isopropylbenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
4-Isopropyltoluene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Methylene chloride	ND	0.15		mg/Kg	1	5/30/2020 6:39:01 PM	52747
n-Butylbenzene	ND	0.15		mg/Kg	1	5/30/2020 6:39:01 PM	52747
n-Propylbenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
sec-Butylbenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Styrene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
tert-Butylbenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
trans-1,2-DCE	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747

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
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Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 2
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:34:00 AM
Lab ID: 2005B79-002 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Trichlorofluoromethane	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Vinyl chloride	ND	0.050		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Xylenes, Total	ND	0.099		mg/Kg	1	5/30/2020 6:39:01 PM	52747
Surr: Dibromofluoromethane	94.0	70-130		%Rec	1	5/30/2020 6:39:01 PM	52747
Surr: 1,2-Dichloroethane-d4	93.0	70-130		%Rec	1	5/30/2020 6:39:01 PM	52747
Surr: Toluene-d8	97.6	70-130		%Rec	1	5/30/2020 6:39:01 PM	52747
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	1	5/30/2020 6:39:01 PM	52747

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 3
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:35:00 AM
Lab ID: 2005B79-003 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	5200	300		mg/Kg	100	6/5/2020 2:40:24 AM	52848
MERCURY, TCLP						Analyst: **ags**	
Mercury	ND	0.020		mg/L	1	6/2/2020 2:08:28 PM	52820
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**	
Arsenic	ND	5.0		mg/L	1	6/2/2020 12:13:13 PM	52801
Barium	ND	100		mg/L	1	6/2/2020 12:13:13 PM	52801
Cadmium	ND	1.0		mg/L	1	6/2/2020 12:13:13 PM	52801
Chromium	ND	5.0		mg/L	1	6/2/2020 12:13:13 PM	52801
Lead	ND	5.0		mg/L	1	6/2/2020 12:13:13 PM	52801
Selenium	ND	1.0		mg/L	1	6/2/2020 12:13:13 PM	52801
Silver	ND	5.0		mg/L	1	6/2/2020 12:13:13 PM	52801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	230	9.6		mg/Kg	1	5/30/2020 8:04:44 PM	52782
Motor Oil Range Organics (MRO)	370	48		mg/Kg	1	5/30/2020 8:04:44 PM	52782
Surr: DNOP	94.9	55.1-146		%Rec	1	5/30/2020 8:04:44 PM	52782
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/29/2020 10:37:47 PM	52747
Surr: BFB	80.2	66.6-105		%Rec	1	5/29/2020 10:37:47 PM	52747
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Acenaphthylene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Aniline	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Azobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Benz(a)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Benzo(a)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Benzo(b)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Benzo(g,h,i)perylene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Benzo(k)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Benzoic acid	ND	2.9	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Benzyl alcohol	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Bis(2-chloroethoxy)methane	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Bis(2-chloroethyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Bis(2-chloroisopropyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Bis(2-ethylhexyl)phthalate	ND	2.9	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
4-Bromophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Butyl benzyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806

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Qualifiers:

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B	Analyte detected in the associated Method Blank
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ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
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Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 3
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:35:00 AM
Lab ID: 2005B79-003 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
4-Chloro-3-methylphenol	ND	2.9	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
4-Chloroaniline	ND	2.9	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2-Chloronaphthalene	ND	1.4	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2-Chlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
4-Chlorophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Chrysene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Di-n-butyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Di-n-octyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Dibenz(a,h)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Dibenzofuran	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
1,2-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
1,3-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
1,4-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
3,3´-Dichlorobenzidine	ND	1.4	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Diethyl phthalate	ND	2.9	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Dimethyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2,4-Dichlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2,4-Dimethylphenol	ND	1.7	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
4,6-Dinitro-2-methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2,4-Dinitrophenol	ND	2.9	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2,4-Dinitrotoluene	ND	2.9	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2,6-Dinitrotoluene	ND	2.9	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Fluorene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Hexachlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Hexachlorobutadiene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Hexachlorocyclopentadiene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Hexachloroethane	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Indeno(1,2,3-cd)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Isophorone	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
1-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2-Methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
3+4-Methylphenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
N-Nitrosodi-n-propylamine	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
N-Nitrosodiphenylamine	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Naphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806

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
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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 3
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:35:00 AM
Lab ID: 2005B79-003 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
4-Nitroaniline	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Nitrobenzene	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2-Nitrophenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
4-Nitrophenol	ND	1.4	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Pentachlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Phenanthrene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Phenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Pyridine	ND	2.3	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
1,2,4-Trichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2,4,5-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
2,4,6-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:21:47 PM	52806
Surr: 2-Fluorophenol	88.7	26.7-85.9	SD	%Rec	1	6/3/2020 2:21:47 PM	52806
Surr: Phenol-d5	92.8	18.5-101	D	%Rec	1	6/3/2020 2:21:47 PM	52806
Surr: 2,4,6-Tribromophenol	80.8	35.8-85.6	D	%Rec	1	6/3/2020 2:21:47 PM	52806
Surr: Nitrobenzene-d5	106	40.8-95.2	SD	%Rec	1	6/3/2020 2:21:47 PM	52806
Surr: 2-Fluorobiphenyl	89.8	34.7-85.2	SD	%Rec	1	6/3/2020 2:21:47 PM	52806
Surr: 4-Terphenyl-d14	90.3	37.4-91.3	D	%Rec	1	6/3/2020 2:21:47 PM	52806
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Toluene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Ethylbenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Naphthalene	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1-Methylnaphthalene	ND	0.20		mg/Kg	1	5/30/2020 7:08:16 PM	52747
2-Methylnaphthalene	ND	0.20		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Acetone	ND	0.74		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Bromobenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Bromodichloromethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Bromoform	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Bromomethane	ND	0.15		mg/Kg	1	5/30/2020 7:08:16 PM	52747
2-Butanone	ND	0.50		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Carbon disulfide	ND	0.50		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Carbon tetrachloride	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 3
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:35:00 AM
Lab ID: 2005B79-003 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Chloroethane	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Chloroform	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Chloromethane	ND	0.15		mg/Kg	1	5/30/2020 7:08:16 PM	52747
2-Chlorotoluene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
4-Chlorotoluene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
cis-1,2-DCE	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Dibromochloromethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Dibromomethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,1-Dichloroethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,1-Dichloroethene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2-Dichloropropane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,3-Dichloropropane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
2,2-Dichloropropane	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,1-Dichloropropene	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Hexachlorobutadiene	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
2-Hexanone	ND	0.50		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Isopropylbenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
4-Isopropyltoluene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Methylene chloride	ND	0.15		mg/Kg	1	5/30/2020 7:08:16 PM	52747
n-Butylbenzene	ND	0.15		mg/Kg	1	5/30/2020 7:08:16 PM	52747
n-Propylbenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
sec-Butylbenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Styrene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
tert-Butylbenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
trans-1,2-DCE	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747

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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
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Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 3
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:35:00 AM
Lab ID: 2005B79-003 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Trichlorofluoromethane	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Vinyl chloride	ND	0.050		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Xylenes, Total	ND	0.099		mg/Kg	1	5/30/2020 7:08:16 PM	52747
Surr: Dibromofluoromethane	93.2	70-130		%Rec	1	5/30/2020 7:08:16 PM	52747
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%Rec	1	5/30/2020 7:08:16 PM	52747
Surr: Toluene-d8	98.2	70-130		%Rec	1	5/30/2020 7:08:16 PM	52747
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	5/30/2020 7:08:16 PM	52747

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Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 4
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:37:00 AM
Lab ID: 2005B79-004 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	120	60		mg/Kg	20	6/3/2020 10:47:52 AM	52848
MERCURY, TCLP						Analyst: **ags**	
Mercury	ND	0.020		mg/L	1	6/2/2020 2:10:50 PM	52820
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**	
Arsenic	ND	5.0		mg/L	1	6/2/2020 12:15:11 PM	52801
Barium	ND	100		mg/L	1	6/2/2020 12:15:11 PM	52801
Cadmium	ND	1.0		mg/L	1	6/2/2020 12:15:11 PM	52801
Chromium	ND	5.0		mg/L	1	6/2/2020 12:15:11 PM	52801
Lead	ND	5.0		mg/L	1	6/2/2020 12:15:11 PM	52801
Selenium	ND	1.0		mg/L	1	6/2/2020 12:15:11 PM	52801
Silver	ND	5.0		mg/L	1	6/2/2020 12:15:11 PM	52801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	45	9.2		mg/Kg	1	5/30/2020 8:28:45 PM	52782
Motor Oil Range Organics (MRO)	200	46		mg/Kg	1	5/30/2020 8:28:45 PM	52782
Surr: DNOP	95.1	55.1-146		%Rec	1	5/30/2020 8:28:45 PM	52782
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2020 11:01:11 PM	52747
Surr: BFB	81.2	66.6-105		%Rec	1	5/29/2020 11:01:11 PM	52747
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Acenaphthylene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Aniline	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Azobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Benz(a)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Benzo(a)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Benzo(b)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Benzo(g,h,i)perylene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Benzo(k)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Benzoic acid	ND	2.8	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Benzyl alcohol	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Bis(2-chloroethoxy)methane	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Bis(2-chloroethyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Bis(2-chloroisopropyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Bis(2-ethylhexyl)phthalate	ND	2.8	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
4-Bromophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Butyl benzyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806

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ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 4
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:37:00 AM
Lab ID: 2005B79-004 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
4-Chloro-3-methylphenol	ND	2.8	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
4-Chloroaniline	ND	2.8	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2-Chloronaphthalene	ND	1.4	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2-Chlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
4-Chlorophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Chrysene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Di-n-butyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Di-n-octyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Dibenz(a,h)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Dibenzofuran	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
1,2-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
1,3-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
1,4-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
3,3´-Dichlorobenzidine	ND	1.4	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Diethyl phthalate	ND	2.8	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Dimethyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2,4-Dichlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2,4-Dimethylphenol	ND	1.7	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
4,6-Dinitro-2-methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2,4-Dinitrophenol	ND	2.8	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2,4-Dinitrotoluene	ND	2.8	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2,6-Dinitrotoluene	ND	2.8	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Fluorene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Hexachlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Hexachlorobutadiene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Hexachlorocyclopentadiene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Hexachloroethane	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Indeno(1,2,3-cd)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Isophorone	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
1-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2-Methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
3+4-Methylphenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
N-Nitrosodi-n-propylamine	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
N-Nitrosodiphenylamine	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Naphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806

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Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 4
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:37:00 AM
Lab ID: 2005B79-004 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
4-Nitroaniline	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Nitrobenzene	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2-Nitrophenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
4-Nitrophenol	ND	1.4	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Pentachlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Phenanthrene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Phenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Pyridine	ND	2.3	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
1,2,4-Trichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2,4,5-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
2,4,6-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 2:50:54 PM	52806
Surr: 2-Fluorophenol	69.7	26.7-85.9	D	%Rec	1	6/3/2020 2:50:54 PM	52806
Surr: Phenol-d5	71.6	18.5-101	D	%Rec	1	6/3/2020 2:50:54 PM	52806
Surr: 2,4,6-Tribromophenol	73.7	35.8-85.6	D	%Rec	1	6/3/2020 2:50:54 PM	52806
Surr: Nitrobenzene-d5	78.2	40.8-95.2	D	%Rec	1	6/3/2020 2:50:54 PM	52806
Surr: 2-Fluorobiphenyl	79.5	34.7-85.2	D	%Rec	1	6/3/2020 2:50:54 PM	52806
Surr: 4-Terphenyl-d14	89.3	37.4-91.3	D	%Rec	1	6/3/2020 2:50:54 PM	52806
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.025		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Toluene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Ethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Naphthalene	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1-Methylnaphthalene	ND	0.20		mg/Kg	1	5/30/2020 7:37:32 PM	52747
2-Methylnaphthalene	ND	0.20		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Acetone	ND	0.74		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Bromobenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Bromodichloromethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Bromoform	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Bromomethane	ND	0.15		mg/Kg	1	5/30/2020 7:37:32 PM	52747
2-Butanone	ND	0.49		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Carbon disulfide	ND	0.49		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Carbon tetrachloride	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747

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

Qualifiers:

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PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 4
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:37:00 AM
Lab ID: 2005B79-004 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Chloroethane	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Chloroform	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Chloromethane	ND	0.15		mg/Kg	1	5/30/2020 7:37:32 PM	52747
2-Chlorotoluene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
4-Chlorotoluene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
cis-1,2-DCE	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2-Dibromo-3-chloropropane	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Dibromochloromethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Dibromomethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,1-Dichloroethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,1-Dichloroethene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2-Dichloropropane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,3-Dichloropropane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
2,2-Dichloropropane	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,1-Dichloropropene	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Hexachlorobutadiene	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
2-Hexanone	ND	0.49		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Isopropylbenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
4-Isopropyltoluene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Methylene chloride	ND	0.15		mg/Kg	1	5/30/2020 7:37:32 PM	52747
n-Butylbenzene	ND	0.15		mg/Kg	1	5/30/2020 7:37:32 PM	52747
n-Propylbenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
sec-Butylbenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Styrene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
tert-Butylbenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
trans-1,2-DCE	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2,3-Trichlorobenzene	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 4
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:37:00 AM
Lab ID: 2005B79-004 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Trichlorofluoromethane	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
1,2,3-Trichloropropane	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Vinyl chloride	ND	0.049		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Xylenes, Total	ND	0.098		mg/Kg	1	5/30/2020 7:37:32 PM	52747
Surr: Dibromofluoromethane	102	70-130		%Rec	1	5/30/2020 7:37:32 PM	52747
Surr: 1,2-Dichloroethane-d4	97.1	70-130		%Rec	1	5/30/2020 7:37:32 PM	52747
Surr: Toluene-d8	99.7	70-130		%Rec	1	5/30/2020 7:37:32 PM	52747
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	5/30/2020 7:37:32 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 5
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:38:00 AM
Lab ID: 2005B79-005 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	1200	60		mg/Kg	20	6/3/2020 11:00:12 AM	52848
MERCURY, TCLP						Analyst: **ags**	
Mercury	ND	0.020		mg/L	1	6/2/2020 2:13:11 PM	52820
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**	
Arsenic	ND	5.0		mg/L	1	6/2/2020 12:23:04 PM	52801
Barium	ND	100		mg/L	1	6/2/2020 12:23:04 PM	52801
Cadmium	ND	1.0		mg/L	1	6/2/2020 12:23:04 PM	52801
Chromium	ND	5.0		mg/L	1	6/2/2020 12:23:04 PM	52801
Lead	ND	5.0		mg/L	1	6/2/2020 12:23:04 PM	52801
Selenium	ND	1.0		mg/L	1	6/2/2020 12:23:04 PM	52801
Silver	ND	5.0		mg/L	1	6/2/2020 12:23:04 PM	52801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	53	9.5		mg/Kg	1	5/30/2020 8:52:43 PM	52782
Motor Oil Range Organics (MRO)	200	48		mg/Kg	1	5/30/2020 8:52:43 PM	52782
Surr: DNOP	98.1	55.1-146		%Rec	1	5/30/2020 8:52:43 PM	52782
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2020 11:24:39 PM	52747
Surr: BFB	79.9	66.6-105		%Rec	1	5/29/2020 11:24:39 PM	52747
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Acenaphthylene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Aniline	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Azobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Benz(a)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Benzo(a)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Benzo(b)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Benzo(g,h,i)perylene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Benzo(k)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Benzoic acid	ND	2.8	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Benzyl alcohol	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Bis(2-chloroethoxy)methane	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Bis(2-chloroethyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Bis(2-chloroisopropyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Bis(2-ethylhexyl)phthalate	ND	2.8	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
4-Bromophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Butyl benzyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806

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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 5
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:38:00 AM
Lab ID: 2005B79-005 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
4-Chloro-3-methylphenol	ND	2.8	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
4-Chloroaniline	ND	2.8	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2-Chloronaphthalene	ND	1.4	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2-Chlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
4-Chlorophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Chrysene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Di-n-butyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Di-n-octyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Dibenz(a,h)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Dibenzofuran	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
1,2-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
1,3-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
1,4-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
3,3´-Dichlorobenzidine	ND	1.4	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Diethyl phthalate	ND	2.8	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Dimethyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2,4-Dichlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2,4-Dimethylphenol	ND	1.7	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
4,6-Dinitro-2-methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2,4-Dinitrophenol	ND	2.8	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2,4-Dinitrotoluene	ND	2.8	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2,6-Dinitrotoluene	ND	2.8	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Fluorene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Hexachlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Hexachlorobutadiene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Hexachlorocyclopentadiene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Hexachloroethane	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Indeno(1,2,3-cd)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Isophorone	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
1-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2-Methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
3+4-Methylphenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
N-Nitrosodi-n-propylamine	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
N-Nitrosodiphenylamine	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Naphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 5
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:38:00 AM
Lab ID: 2005B79-005 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
4-Nitroaniline	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Nitrobenzene	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2-Nitrophenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
4-Nitrophenol	ND	1.4	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Pentachlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Phenanthrene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Phenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Pyridine	ND	2.3	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
1,2,4-Trichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2,4,5-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
2,4,6-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:20:15 PM	52806
Surr: 2-Fluorophenol	73.9	26.7-85.9	D	%Rec	1	6/3/2020 3:20:15 PM	52806
Surr: Phenol-d5	75.6	18.5-101	D	%Rec	1	6/3/2020 3:20:15 PM	52806
Surr: 2,4,6-Tribromophenol	73.5	35.8-85.6	D	%Rec	1	6/3/2020 3:20:15 PM	52806
Surr: Nitrobenzene-d5	87.7	40.8-95.2	D	%Rec	1	6/3/2020 3:20:15 PM	52806
Surr: 2-Fluorobiphenyl	85.7	34.7-85.2	SD	%Rec	1	6/3/2020 3:20:15 PM	52806
Surr: 4-Terphenyl-d14	73.4	37.4-91.3	D	%Rec	1	6/3/2020 3:20:15 PM	52806
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.024		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Toluene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Ethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Naphthalene	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1-Methylnaphthalene	ND	0.20		mg/Kg	1	5/30/2020 8:06:58 PM	52747
2-Methylnaphthalene	ND	0.20		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Acetone	ND	0.73		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Bromobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Bromodichloromethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Bromoform	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Bromomethane	ND	0.15		mg/Kg	1	5/30/2020 8:06:58 PM	52747
2-Butanone	ND	0.49		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Carbon disulfide	ND	0.49		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Carbon tetrachloride	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 5
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:38:00 AM
Lab ID: 2005B79-005 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Chloroethane	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Chloroform	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Chloromethane	ND	0.15		mg/Kg	1	5/30/2020 8:06:58 PM	52747
2-Chlorotoluene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
4-Chlorotoluene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
cis-1,2-DCE	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2-Dibromo-3-chloropropane	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Dibromochloromethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Dibromomethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,1-Dichloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,1-Dichloroethene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2-Dichloropropane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,3-Dichloropropane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
2,2-Dichloropropane	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,1-Dichloropropene	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Hexachlorobutadiene	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
2-Hexanone	ND	0.49		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Isopropylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
4-Isopropyltoluene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Methylene chloride	ND	0.15		mg/Kg	1	5/30/2020 8:06:58 PM	52747
n-Butylbenzene	ND	0.15		mg/Kg	1	5/30/2020 8:06:58 PM	52747
n-Propylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
sec-Butylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Styrene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
tert-Butylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
trans-1,2-DCE	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2,3-Trichlorobenzene	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 5
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:38:00 AM
Lab ID: 2005B79-005 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Trichlorofluoromethane	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
1,2,3-Trichloropropane	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Vinyl chloride	ND	0.049		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Xylenes, Total	ND	0.098		mg/Kg	1	5/30/2020 8:06:58 PM	52747
Surr: Dibromofluoromethane	99.2	70-130		%Rec	1	5/30/2020 8:06:58 PM	52747
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	5/30/2020 8:06:58 PM	52747
Surr: Toluene-d8	98.0	70-130		%Rec	1	5/30/2020 8:06:58 PM	52747
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	5/30/2020 8:06:58 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 6
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:40:00 AM
Lab ID: 2005B79-006 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	2400	150		mg/Kg	50	6/5/2020 2:52:49 AM	52848
MERCURY, TCLP						Analyst: **ags**	
Mercury	ND	0.020		mg/L	1	6/2/2020 2:15:33 PM	52820
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**	
Arsenic	ND	5.0		mg/L	1	6/2/2020 12:25:04 PM	52801
Barium	ND	100		mg/L	1	6/2/2020 12:25:04 PM	52801
Cadmium	ND	1.0		mg/L	1	6/2/2020 12:25:04 PM	52801
Chromium	ND	5.0		mg/L	1	6/2/2020 12:25:04 PM	52801
Lead	ND	5.0		mg/L	1	6/2/2020 12:25:04 PM	52801
Selenium	ND	1.0		mg/L	1	6/2/2020 12:25:04 PM	52801
Silver	ND	5.0		mg/L	1	6/2/2020 12:25:04 PM	52801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	760	93		mg/Kg	10	5/30/2020 9:16:39 PM	52782
Motor Oil Range Organics (MRO)	2700	460		mg/Kg	10	5/30/2020 9:16:39 PM	52782
Surr: DNOP	0	55.1-146	S	%Rec	10	5/30/2020 9:16:39 PM	52782
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/29/2020 11:48:18 PM	52747
Surr: BFB	79.1	66.6-105		%Rec	1	5/29/2020 11:48:18 PM	52747
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Acenaphthylene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Aniline	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Azobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Benz(a)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Benzo(a)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Benzo(b)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Benzo(g,h,i)perylene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Benzo(k)fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Benzoic acid	ND	2.9	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Benzyl alcohol	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Bis(2-chloroethoxy)methane	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Bis(2-chloroethyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Bis(2-chloroisopropyl)ether	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Bis(2-ethylhexyl)phthalate	ND	2.9	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
4-Bromophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Butyl benzyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806

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 Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Client Sample ID:** SL 6
Project: Thistle Unit 99H **Collection Date:** 5/27/2020 9:40:00 AM
Lab ID: 2005B79-006 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
4-Chloro-3-methylphenol	ND	2.9	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
4-Chloroaniline	ND	2.9	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2-Chloronaphthalene	ND	1.4	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2-Chlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
4-Chlorophenyl phenyl ether	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Chrysene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Di-n-butyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Di-n-octyl phthalate	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Dibenz(a,h)anthracene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Dibenzofuran	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
1,2-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
1,3-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
1,4-Dichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
3,3´-Dichlorobenzidine	ND	1.4	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Diethyl phthalate	ND	2.9	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Dimethyl phthalate	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2,4-Dichlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2,4-Dimethylphenol	ND	1.7	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
4,6-Dinitro-2-methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2,4-Dinitrophenol	ND	2.9	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2,4-Dinitrotoluene	ND	2.9	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2,6-Dinitrotoluene	ND	2.9	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Fluoranthene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Fluorene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Hexachlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Hexachlorobutadiene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Hexachlorocyclopentadiene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Hexachloroethane	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Indeno(1,2,3-cd)pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Isophorone	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
1-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2-Methylnaphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2-Methylphenol	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
3+4-Methylphenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
N-Nitrosodi-n-propylamine	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
N-Nitrosodiphenylamine	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Naphthalene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 6
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:40:00 AM
Lab ID: 2005B79-006 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3-Nitroaniline	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
4-Nitroaniline	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Nitrobenzene	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2-Nitrophenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
4-Nitrophenol	ND	1.4	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Pentachlorophenol	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Phenanthrene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Phenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Pyrene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Pyridine	ND	2.3	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
1,2,4-Trichlorobenzene	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2,4,5-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
2,4,6-Trichlorophenol	ND	1.1	D	mg/Kg	1	6/3/2020 3:49:45 PM	52806
Surr: 2-Fluorophenol	50.0	26.7-85.9	D	%Rec	1	6/3/2020 3:49:45 PM	52806
Surr: Phenol-d5	52.1	18.5-101	D	%Rec	1	6/3/2020 3:49:45 PM	52806
Surr: 2,4,6-Tribromophenol	50.0	35.8-85.6	D	%Rec	1	6/3/2020 3:49:45 PM	52806
Surr: Nitrobenzene-d5	60.9	40.8-95.2	D	%Rec	1	6/3/2020 3:49:45 PM	52806
Surr: 2-Fluorobiphenyl	56.8	34.7-85.2	D	%Rec	1	6/3/2020 3:49:45 PM	52806
Surr: 4-Terphenyl-d14	44.9	37.4-91.3	D	%Rec	1	6/3/2020 3:49:45 PM	52806
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.024		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Toluene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Ethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Naphthalene	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1-Methylnaphthalene	ND	0.19		mg/Kg	1	5/30/2020 8:36:08 PM	52747
2-Methylnaphthalene	ND	0.19		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Acetone	ND	0.73		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Bromobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Bromodichloromethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Bromoform	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Bromomethane	ND	0.15		mg/Kg	1	5/30/2020 8:36:08 PM	52747
2-Butanone	ND	0.49		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Carbon disulfide	ND	0.49		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Carbon tetrachloride	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 6
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:40:00 AM
Lab ID: 2005B79-006 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Chloroethane	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Chloroform	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Chloromethane	ND	0.15		mg/Kg	1	5/30/2020 8:36:08 PM	52747
2-Chlorotoluene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
4-Chlorotoluene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
cis-1,2-DCE	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2-Dibromo-3-chloropropane	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Dibromochloromethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Dibromomethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,1-Dichloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,1-Dichloroethene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2-Dichloropropane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,3-Dichloropropane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
2,2-Dichloropropane	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,1-Dichloropropene	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Hexachlorobutadiene	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
2-Hexanone	ND	0.49		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Isopropylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
4-Isopropyltoluene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Methylene chloride	ND	0.15		mg/Kg	1	5/30/2020 8:36:08 PM	52747
n-Butylbenzene	ND	0.15		mg/Kg	1	5/30/2020 8:36:08 PM	52747
n-Propylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
sec-Butylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Styrene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
tert-Butylbenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
trans-1,2-DCE	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2,3-Trichlorobenzene	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2005B79**
Date Reported: **6/11/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SL 6
Project: Thistle Unit 99H
Collection Date: 5/27/2020 9:40:00 AM
Lab ID: 2005B79-006 **Matrix:** SOIL **Received Date:** 5/28/2020 11:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Trichlorofluoromethane	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
1,2,3-Trichloropropane	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Vinyl chloride	ND	0.049		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Xylenes, Total	ND	0.097		mg/Kg	1	5/30/2020 8:36:08 PM	52747
Surr: Dibromofluoromethane	101	70-130		%Rec	1	5/30/2020 8:36:08 PM	52747
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%Rec	1	5/30/2020 8:36:08 PM	52747
Surr: Toluene-d8	93.9	70-130		%Rec	1	5/30/2020 8:36:08 PM	52747
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	5/30/2020 8:36:08 PM	52747

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

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National Center for Testing & Innovation

ANALYTICAL REPORT

June 10, 2020

Hall Environmental Analysis Laboratory

Sample Delivery Group:	L1223140
Samples Received:	05/29/2020
Project Number:	
Description:	

Report To: Jackie Bolte
4901 Hawkins NE
Albuquerque, NM 87109

Entire Report Reviewed By: John V Hawkins

John Hawkins
Project Manager

TABLE OF CONTENTS

Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 4

Sr: Sample Results 5

2005B79-001B SL 1 L1223140-01 5

2005B79-002B SL 2 L1223140-02 6

2005B79-003B SL 3 L1223140-03 7

2005B79-004B SL 4 L1223140-04 8

2005B79-005B SL 5 L1223140-05 9

2005B79-006B SL 6 L1223140-06 10

Qc: Quality Control Summary 11

Wet Chemistry by Method 9012 B 11

Wet Chemistry by Method 9034-9030B 12

Wet Chemistry by Method 9045D 13

Wet Chemistry by Method D93/1010A 14

Gl: Glossary of Terms 15

Al: Accreditations & Locations 16

Sc: Sample Chain of Custody 17

2005B79-001B SL 1 L1223140-01 Solid

Collected by | Collected date/time 05/27/20 09:33 | Received date/time 05/29/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012 B	WG1486296	1	06/03/20 10:43	06/03/20 18:44	JER	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1486549	1	06/04/20 00:58	06/04/20 00:58	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1485690	1	06/04/20 11:00	06/04/20 11:50	JIC	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1486146	1	06/04/20 15:00	06/04/20 15:00	LRP	Mt. Juliet, TN

2005B79-002B SL 2 L1223140-02 Solid

Collected by | Collected date/time 05/27/20 09:34 | Received date/time 05/29/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012 B	WG1486296	1	06/03/20 10:43	06/03/20 18:45	JER	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1486549	1	06/04/20 00:58	06/04/20 00:58	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1485690	1	06/04/20 11:00	06/04/20 11:50	JIC	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1486146	1	06/04/20 15:00	06/04/20 15:00	LRP	Mt. Juliet, TN

2005B79-003B SL 3 L1223140-03 Solid

Collected by | Collected date/time 05/27/20 09:35 | Received date/time 05/29/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012 B	WG1486296	1	06/03/20 10:43	06/03/20 18:46	JER	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1486549	1	06/04/20 00:58	06/04/20 00:58	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1485690	1	06/04/20 11:00	06/04/20 11:50	JIC	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1486146	1	06/04/20 15:00	06/04/20 15:00	LRP	Mt. Juliet, TN

2005B79-004B SL 4 L1223140-04 Solid

Collected by | Collected date/time 05/27/20 09:37 | Received date/time 05/29/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012 B	WG1486296	1	06/03/20 10:43	06/03/20 18:47	JER	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1486549	1	06/04/20 00:58	06/04/20 00:58	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1485690	1	06/04/20 11:00	06/04/20 11:50	JIC	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1486146	1	06/04/20 15:00	06/04/20 15:00	LRP	Mt. Juliet, TN

2005B79-005B SL 5 L1223140-05 Solid

Collected by | Collected date/time 05/27/20 09:38 | Received date/time 05/29/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012 B	WG1486296	1	06/03/20 10:43	06/03/20 18:50	JER	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1486549	1	06/04/20 00:58	06/04/20 00:58	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1485690	1	06/04/20 11:00	06/04/20 11:50	JIC	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1486146	1	06/04/20 15:00	06/04/20 15:00	LRP	Mt. Juliet, TN

2005B79-006B SL 6 L1223140-06 Solid

Collected by | Collected date/time 05/27/20 09:40 | Received date/time 05/29/20 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012 B	WG1486296	1	06/03/20 10:43	06/03/20 18:51	JER	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1486549	1	06/04/20 00:58	06/04/20 00:58	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1485690	1	06/04/20 11:00	06/04/20 11:50	JIC	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1486146	1	06/04/20 15:00	06/04/20 15:00	LRP	Mt. Juliet, TN

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

John Hawkins
Project Manager

Project Narrative

All Reactive Cyanide results reported in the attached report were determined as totals using method 9012B.
All Reactive Sulfide results reported in the attached report were determined as totals using method 9034/9030B.

Sample Delivery Group (SDG) Narrative

Sample quantity was not sufficient to complete analysis per recommended method guidelines for the following samples.

Lab Sample ID	Project Sample ID	Method
L1223140-01	2005B79-001B SL 1	D93/1010A
L1223140-02	2005B79-002B SL 2	D93/1010A
L1223140-03	2005B79-003B SL 3	D93/1010A
L1223140-04	2005B79-004B SL 4	D93/1010A
L1223140-05	2005B79-005B SL 5	D93/1010A
L1223140-06	2005B79-006B SL 6	D93/1010A

Wet Chemistry by Method 9012 B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.250	1	06/03/2020 18:44	WG1486296

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		25.0	1	06/04/2020 00:58	WG1486549

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	8.20	T8	1	06/04/2020 11:50	WG1485690

Sample Narrative:

L1223140-01 WG1485690: 8.2 at 21.9C

Wet Chemistry by Method D93/1010A

Analyte	Result Deg. F	Qualifier	Dilution	Analysis date / time	Batch
Ignitability	DNI at 170		1	06/04/2020 15:00	WG1486146

Wet Chemistry by Method 9012 B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.250	1	06/03/2020 18:45	WG1486296

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		25.0	1	06/04/2020 00:58	WG1486549

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	8.62	T8	1	06/04/2020 11:50	WG1485690

Sample Narrative:

L1223140-02 WG1485690: 8.62 at 21.8C

Wet Chemistry by Method D93/1010A

Analyte	Result Deg. F	Qualifier	Dilution	Analysis date / time	Batch
Ignitability	DNI at 170		1	06/04/2020 15:00	WG1486146

Wet Chemistry by Method 9012 B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Reactive Cyanide	ND		0.250	1	06/03/2020 18:46	WG1486296

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Reactive Sulfide	ND		25.0	1	06/04/2020 00:58	WG1486549

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	7.84	T8	1	06/04/2020 11:50	WG1485690

Sample Narrative:

L1223140-03 WG1485690: 7.84 at 22C

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	Deg. F			date / time	
Ignitability	DNI at 170		1	06/04/2020 15:00	WG1486146

Wet Chemistry by Method 9012 B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.250	1	06/03/2020 18:47	WG1486296

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		25.0	1	06/04/2020 00:58	WG1486549

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	8.22	T8	1	06/04/2020 11:50	WG1485690

Sample Narrative:

L1223140-04 WG1485690: 8.22 at 21.9C

Wet Chemistry by Method D93/1010A

Analyte	Result Deg. F	Qualifier	Dilution	Analysis date / time	Batch
Ignitability	DNI at 170		1	06/04/2020 15:00	WG1486146

Wet Chemistry by Method 9012 B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.250	1	06/03/2020 18:50	WG1486296

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		25.0	1	06/04/2020 00:58	WG1486549

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	7.93	T8	1	06/04/2020 11:50	WG1485690

Sample Narrative:

L1223140-05 WG1485690: 7.93 at 22.3C

Wet Chemistry by Method D93/1010A

Analyte	Result Deg. F	Qualifier	Dilution	Analysis date / time	Batch
Ignitability	DNI at 170		1	06/04/2020 15:00	WG1486146

Wet Chemistry by Method 9012 B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.250	1	06/03/2020 18:51	WG1486296

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		25.0	1	06/04/2020 00:58	WG1486549

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	7.88	T8	1	06/04/2020 11:50	WG1485690

Sample Narrative:

L1223140-06 WG1485690: 7.88 at 21.8C

Wet Chemistry by Method D93/1010A

Analyte	Result Deg. F	Qualifier	Dilution	Analysis date / time	Batch
Ignitability	DNI at 170		1	06/04/2020 15:00	WG1486146

Method Blank (MB)

(MB) R3534729-1 06/03/20 18:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Reactive Cyanide	U		0.0390	0.250

L1222522-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1222522-03 06/03/20 18:39 • (DUP) R3534729-5 06/03/20 18:40

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Cyanide	ND	ND	1	0.000		20

L1223615-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1223615-01 06/03/20 18:56 • (DUP) R3534729-8 06/03/20 18:57

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Cyanide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3534729-2 06/03/20 18:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Cyanide	2.50	2.50	100	85.0-115	

L1221842-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1221842-14 06/03/20 18:34 • (MS) R3534729-3 06/03/20 18:35 • (MSD) R3534729-4 06/03/20 18:38

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Reactive Cyanide	1.67	ND	1.56	1.90	83.4	104	1	75.0-125			19.7	20

L1222522-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1222522-03 06/03/20 18:39 • (MS) R3534729-6 06/03/20 18:41 • (MSD) R3534729-7 06/03/20 18:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Reactive Cyanide	1.67	ND	1.40	1.50	84.3	90.2	1	75.0-125			6.77	20

Method Blank (MB)

(MB) R3534800-1 06/04/20 00:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Reactive Sulfide	U		7.63	25.0

L1223140-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1223140-01 06/04/20 00:58 • (DUP) R3534800-3 06/04/20 00:58

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Sulfide	ND	ND	1	0.000		20

L1224490-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1224490-06 06/04/20 00:58 • (DUP) R3534800-6 06/04/20 00:58

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Sulfide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3534800-2 06/04/20 00:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Sulfide	100	87.8	87.8	70.0-130	

L1223293-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1223293-02 06/04/20 00:58 • (MS) R3534800-4 06/04/20 00:58 • (MSD) R3534800-5 06/04/20 00:58

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Reactive Sulfide	100	ND	93.1	92.3	93.1	92.3	1	70.0-130			0.867	20

L1224490-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1224490-12 06/04/20 11:50 • (DUP) R3534981-3 06/04/20 11:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	8.68	8.65	1	0.346		1

Sample Narrative:

OS: 8.68 at 22.4C

DUP: 8.65 at 19.8C

Laboratory Control Sample (LCS)

(LCS) R3534981-1 06/04/20 11:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.02 at 21.8C

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

(LCS) R3535128-1 06/04/20 15:00 • (LCSD) R3535128-2 06/04/20 15:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	Deg. F	Deg. F	Deg. F	%	%	%			%	%
Ignitability	124	126	128	102	103	95.6-104			1.58	10

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.

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

State Accreditations

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

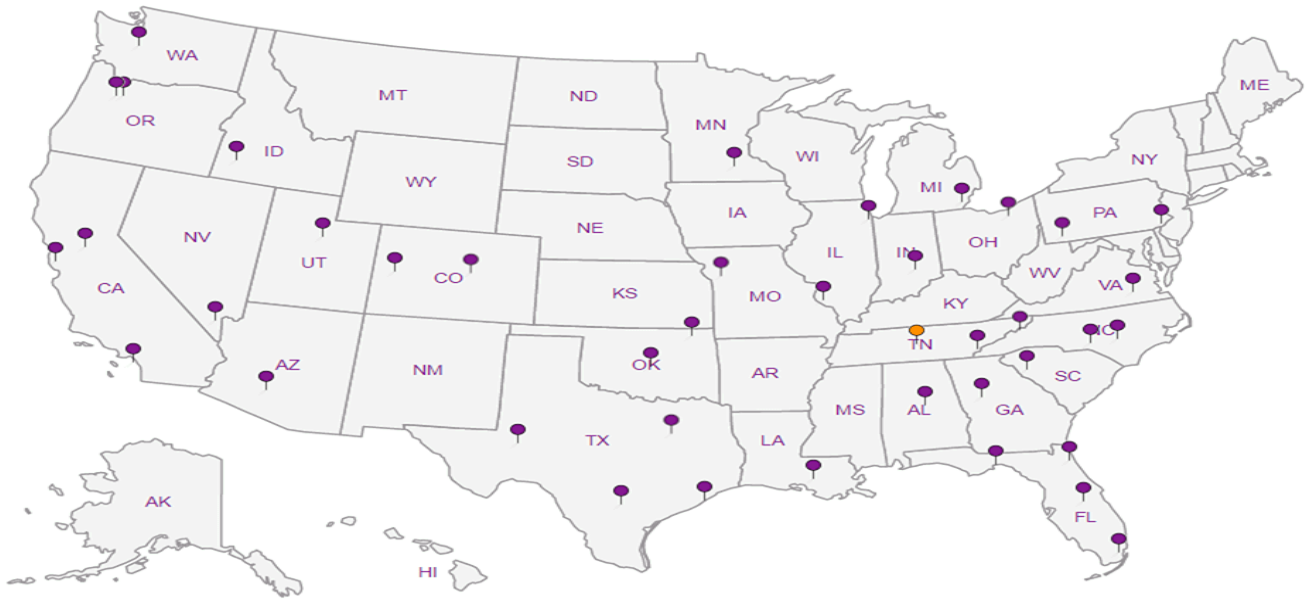
Third Party Federal Accreditations

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

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

Our Locations

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



ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRATOR:	Pace TN	COMPANY: PACE TN	PHONE: (800) 767-5859	FAX: (615) 758-5859	
ADDRESS:	12065 Lebanon Rd		ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP:	Mt. Juliet, TN 37122				

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2005B79-001B	SL 1	4OZGU	Soil	5/27/2020 9:33:00 AM	1	Soil RCI **Rush Due 06/04** 1223/40.01
2	2005B79-002B	SL 2	4OZGU	Soil	5/27/2020 9:34:00 AM	1	Soil RCI **Rush Due 06/04** 02
3	2005B79-003B	SL 3	4OZGU	Soil	5/27/2020 9:35:00 AM	1	Soil RCI **Rush Due 06/04** 03
4	2005B79-004B	SL 4	4OZGU	Soil	5/27/2020 9:37:00 AM	1	Soil RCI **Rush Due 06/04** 04
5	2005B79-005B	SL 5	4OZGU	Soil	5/27/2020 9:38:00 AM	1	Soil RCI **Rush Due 06/04** 05
6	2005B79-006B	SL 6	4OZGU	Soil	5/27/2020 9:40:00 AM	1	Soil RCI **Rush Due 06/04** 06

D151

MP A2
.81.3=1.1
RAD SCREEN: <0.5 mR/hr

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: IO	Date: 5/28/2020	Time: 11:50 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 29	Time: 0900

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____

Pace Analytical National Center for Testing & Innovation Cooler Receipt Form		
Client: HALLIBURTON	723140	
Cooler Received/Opened On: 5 / 19 / 20 Temperature:	1.1	
Received By: JOEY BRENT		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

SUB CONTRATOR:	Pace TN	COMPANY: PACE TN	PHONE: (800) 767-5859	FAX:	(615) 758-5859
ADDRESS:	12065 Lebanon Rd		ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP:	Mt. Juliet, TN 37122				

L1223140 AV 6/5/20

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2005B79-001B	SL 1	4OZGU	Soil	5/27/2020 9:33:00 AM	1	Soil RCI **Rush Due 06/04** 1225869-01
2	2005B79-002B	SL 2	4OZGU	Soil	5/27/2020 9:34:00 AM	1	Soil RCI **Rush Due 06/04** 02
3	2005B79-003B	SL 3	4OZGU	Soil	5/27/2020 9:35:00 AM	1	Soil RCI **Rush Due 06/04** 03
4	2005B79-004B	SL 4	4OZGU	Soil	5/27/2020 9:37:00 AM	1	Soil RCI **Rush Due 06/04** 04
5	2005B79-005B	SL 5	4OZGU	Soil	5/27/2020 9:38:00 AM	1	Soil RCI **Rush Due 06/04** 05
6	2005B79-006B	SL 6	4OZGU	Soil	5/27/2020 9:40:00 AM	1	Soil RCI **Rush Due 06/04** 06

ASAP
HS 6/4/20

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

1749 9998 5736 Total NoTB J006

Relinquished By:	Date: 5/28/2020	Time: 11:50 AM	Received By:	Date:	Time:
Relinquished By: Additional Volume Sent	Date: 6/4/20	Time: 1230	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: A Pappas 6-5-20	Date:	Time: 0845

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples 1.9-1-1.8 AV Attempt to Cool ? _____
Comments: _____

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	Hallowan	# 125869
Cooler Received/Opened On: 6 / 5 / 20	Temperature:	1.8
Received By: Michael Pappas		
Signature: M Pappas		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?	✓		
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **MB-52848** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **52848** RunNo: **69354**
Prep Date: **6/3/2020** Analysis Date: **6/3/2020** SeqNo: **2406628** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-52848** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **52848** RunNo: **69354**
Prep Date: **6/3/2020** Analysis Date: **6/3/2020** SeqNo: **2406629** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

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 Quanitative 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#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **LCS-52782** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **52782** RunNo: **69266**
Prep Date: **5/30/2020** Analysis Date: **5/30/2020** SeqNo: **2401111** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	87.7	70	130			
Surr: DNOP	4.1		5.000		81.5	55.1	146			

Sample ID: **MB-52782** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **52782** RunNo: **69266**
Prep Date: **5/30/2020** Analysis Date: **5/30/2020** SeqNo: **2401112** Units: **mg/Kg**

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	8.5		10.00		85.4	55.1	146			

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 Quanitative 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#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **lcs-52747**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **52747**	RunNo: **69259**
Prep Date: **5/28/2020**	Analysis Date: **5/29/2020**	SeqNo: **2400554** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.2	80	120			
Surr: BFB	940		1000		94.1	66.6	105			

Sample ID: **mb-52747**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **52747**	RunNo: **69259**
Prep Date: **5/28/2020**	Analysis Date: **5/29/2020**	SeqNo: **2400555** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.3	66.6	105			

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **mb-52747**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS**	Batch ID: **52747**	RunNo: **69273**
Prep Date: **5/28/2020**	Analysis Date: **5/30/2020**	SeqNo: **2400963** Units: **mg/Kg**

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								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **mb-52747** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS** Batch ID: **52747** RunNo: **69273**
Prep Date: **5/28/2020** Analysis Date: **5/30/2020** SeqNo: **2400963** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.46		0.5000		91.5	70	130			
Surr: 1,2-Dichloroethane-d4	0.46		0.5000		92.9	70	130			
Surr: Toluene-d8	0.48		0.5000		95.7	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.1	70	130			

Sample ID: **lcs-52747** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS** Batch ID: **52747** RunNo: **69273**
Prep Date: **5/28/2020** Analysis Date: **5/30/2020** SeqNo: **2400964** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	87.1	70	130			
Toluene	0.98	0.050	1.000	0	97.6	70	130			
Ethylbenzene	1.1	0.050	1.000	0	106	70	130			

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 Quanitative 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#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **lcs-52747** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS** Batch ID: **52747** RunNo: **69273**
Prep Date: **5/28/2020** Analysis Date: **5/30/2020** SeqNo: **2400964** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.92	0.050	1.000	0	92.1	70	130			
1,2,4-Trimethylbenzene	0.87	0.050	1.000	0	87.4	70	130			
1,3,5-Trimethylbenzene	0.92	0.050	1.000	0	91.8	70	130			
Naphthalene	0.94	0.10	1.000	0	93.9	70	130			
Xylenes, Total	2.9	0.10	3.000	0	98.0	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		91.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.45		0.5000		89.2	70	130			
Surr: Toluene-d8	0.49		0.5000		97.0	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.6	70	130			

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 Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **lcs-52806** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS** Batch ID: **52806** RunNo: **69379**
Prep Date: **6/1/2020** Analysis Date: **6/3/2020** SeqNo: **2406043** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.2	0.20	1.670	0	69.5	46	89.5			
4-Chloro-3-methylphenol	2.3	0.50	3.330	0	70.5	44.1	101			
2-Chlorophenol	2.2	0.20	3.330	0	65.9	47	91			
1,4-Dichlorobenzene	0.98	0.20	1.670	0	58.9	41.4	85.8			
2,4-Dinitrotoluene	1.1	0.50	1.670	0	63.3	37.4	82			
N-Nitrosodi-n-propylamine	1.1	0.20	1.670	0	64.4	47.8	92.9			
4-Nitrophenol	2.5	0.25	3.330	0	74.0	45	94.3			
Pentachlorophenol	1.9	0.40	3.330	0	57.1	31.7	76.9			
Phenol	2.3	0.20	3.330	0	68.5	49.4	92.5			
Pyrene	1.2	0.20	1.670	0	69.9	52.9	82.7			
1,2,4-Trichlorobenzene	1.1	0.20	1.670	0	67.7	43.6	98.1			
Surr: 2-Fluorophenol	2.2		3.330		67.4	26.7	85.9			
Surr: Phenol-d5	2.2		3.330		67.5	18.5	101			
Surr: 2,4,6-Tribromophenol	2.2		3.330		66.1	35.8	85.6			
Surr: Nitrobenzene-d5	1.2		1.670		74.8	40.8	95.2			
Surr: 2-Fluorobiphenyl	1.2		1.670		73.4	34.7	85.2			
Surr: 4-Terphenyl-d14	1.3		1.670		80.2	37.4	91.3			

Sample ID: **mb-52806** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBS** Batch ID: **52806** RunNo: **69379**
Prep Date: **6/1/2020** Analysis Date: **6/3/2020** SeqNo: **2406044** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Aniline	ND	0.20								
Anthracene	ND	0.20								
Azobenzene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Benzoic acid	ND	0.50								
Benzyl alcohol	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.50								

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 Quanitative 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#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **mb-52806**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBS**	Batch ID: **52806**	RunNo: **69379**
Prep Date: **6/1/2020**	Analysis Date: **6/3/2020**	SeqNo: **2406044** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Carbazole	ND	0.20								
4-Chloro-3-methylphenol	ND	0.50								
4-Chloroaniline	ND	0.50								
2-Chloronaphthalene	ND	0.25								
2-Chlorophenol	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
Chrysene	ND	0.20								
Di-n-butyl phthalate	ND	0.40								
Di-n-octyl phthalate	ND	0.40								
Dibenz(a,h)anthracene	ND	0.20								
Dibenzofuran	ND	0.20								
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.25								
Diethyl phthalate	ND	0.50								
Dimethyl phthalate	ND	0.20								
2,4-Dichlorophenol	ND	0.40								
2,4-Dimethylphenol	ND	0.30								
4,6-Dinitro-2-methylphenol	ND	0.40								
2,4-Dinitrophenol	ND	0.50								
2,4-Dinitrotoluene	ND	0.50								
2,6-Dinitrotoluene	ND	0.50								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Hexachlorobenzene	ND	0.20								
Hexachlorobutadiene	ND	0.20								
Hexachlorocyclopentadiene	ND	0.20								
Hexachloroethane	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Isophorone	ND	0.40								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.40								
3+4-Methylphenol	ND	0.20								
N-Nitrosodi-n-propylamine	ND	0.20								
N-Nitrosodiphenylamine	ND	0.20								

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 Quanitative 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#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **mb-52806** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBS** Batch ID: **52806** RunNo: **69379**
Prep Date: **6/1/2020** Analysis Date: **6/3/2020** SeqNo: **2406044** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.20								
2-Nitroaniline	ND	0.20								
3-Nitroaniline	ND	0.20								
4-Nitroaniline	ND	0.40								
Nitrobenzene	ND	0.40								
2-Nitrophenol	ND	0.20								
4-Nitrophenol	ND	0.25								
Pentachlorophenol	ND	0.40								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	0.40								
1,2,4-Trichlorobenzene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
Surr: 2-Fluorophenol	2.0		3.330		59.5	26.7	85.9			
Surr: Phenol-d5	2.0		3.330		61.5	18.5	101			
Surr: 2,4,6-Tribromophenol	2.1		3.330		63.3	35.8	85.6			
Surr: Nitrobenzene-d5	1.2		1.670		70.6	40.8	95.2			
Surr: 2-Fluorobiphenyl	1.1		1.670		67.2	34.7	85.2			
Surr: 4-Terphenyl-d14	1.2		1.670		71.4	37.4	91.3			

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 Quanitative 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#: **2005B79**

11-Jun-20

Client: Souder, Miller & Associates

Project: Thistle Unit 99H

Sample ID: **MB-52820**	SampType: **MBLK**	TestCode: **MERCURY, TCLP**							
Client ID: **PBW**	Batch ID: **52820**	RunNo: **69324**							
Prep Date: **6/2/2020**	Analysis Date: **6/2/2020**	SeqNo: **2404006**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID: **LLLCS-52820**	SampType: **LCSLL**	TestCode: **MERCURY, TCLP**							
Client ID: **BatchQC**	Batch ID: **52820**	RunNo: **69324**							
Prep Date: **6/2/2020**	Analysis Date: **6/2/2020**	SeqNo: **2404007**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.0001500	0	59.1	50	150			

Sample ID: **LCS-52820**	SampType: **LCS**	TestCode: **MERCURY, TCLP**							
Client ID: **LCSW**	Batch ID: **52820**	RunNo: **69324**							
Prep Date: **6/2/2020**	Analysis Date: **6/2/2020**	SeqNo: **2404008**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	103	80	120			

Sample ID: **TCLP#4647**	SampType: **MBLK**	TestCode: **MERCURY, TCLP**							
Client ID: **PBW**	Batch ID: **52820**	RunNo: **69324**							
Prep Date: **6/2/2020**	Analysis Date: **6/2/2020**	SeqNo: **2404009**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID: **2005B79-001AMS**	SampType: **MS**	TestCode: **MERCURY, TCLP**							
Client ID: **SL 1**	Batch ID: **52820**	RunNo: **69324**							
Prep Date: **6/2/2020**	Analysis Date: **6/2/2020**	SeqNo: **2404014**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	92.3	75	125			

Sample ID: **2005B79-001AMSD**	SampType: **MSD**	TestCode: **MERCURY, TCLP**							
Client ID: **SL 1**	Batch ID: **52820**	RunNo: **69324**							
Prep Date: **6/2/2020**	Analysis Date: **6/2/2020**	SeqNo: **2404015**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	97.6	75	125	0	20	

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 Quanitative 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#: **2005B79**
11-Jun-20

Client: Souder, Miller & Associates
Project: Thistle Unit 99H

Sample ID: **MB-52801** SampType: **MBLK** TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **PBW** Batch ID: **52801** RunNo: **69318**
Prep Date: **6/1/2020** Analysis Date: **6/2/2020** SeqNo: **2403946** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Barium	ND	100								
Cadmium	ND	1.0								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID: **LCS-52801** SampType: **LCS** TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **LCSW** Batch ID: **52801** RunNo: **69318**
Prep Date: **6/1/2020** Analysis Date: **6/2/2020** SeqNo: **2403947** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	100	80	120			
Barium	ND	100	0.5000	0	97.7	80	120			
Cadmium	ND	1.0	0.5000	0	100	80	120			
Chromium	ND	5.0	0.5000	0	96.7	80	120			
Lead	ND	5.0	0.5000	0	94.8	80	120			
Selenium	ND	1.0	0.5000	0	106	80	120			
Silver	ND	5.0	0.1000	0	103	80	120			

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 Quanitative 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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: **2005B79** RcptNo: **1**

Received By: **Emily Mocho** **5/27/2020 11:00:00 AM**

Completed By: **Isaiah Ortiz** **5/28/2020 11:33:42 AM** I-OX

Reviewed By: DAD 5/28/20

Chain of Custody

1. Is Chain of Custody 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? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
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? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: EM 5/28/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ 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	1.1	Good	Not Present			

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☑ Rush 5 day tat

Project Name: Thistle Unit #911

Project #: 20845005

Project Manager: Ashley Maxwell

Sampler: CHA

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): -0.9 - 0.2 = -1.1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2003879	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCT
5/27/20	933	Soil	SL 1	4oz	NA	-001	X	X				X	X	X			X
	934		SL 2			-002											
	935		SL 3			-003											
	937		SL 4			-004											
	938		SL 5			-005											
	940		SL 6			-006											

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
					5/27/20	1445
5/27/20	1900		Ekm courier		5/28/20	11:00

Remarks: Direct Bill Devon

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

CARDINAL Laboratories

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

July 07, 2020

ASHLEY MAXWELL

SOUDER MILLER AND ASSOCIATES

201 S. HALAGUENO

CARLSBAD, NM 88220

RE: THISTLE UNIT 99H

Enclosed are the results of analyses for samples received by the laboratory on 07/02/20 8:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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.

Cardinal Laboratories is accreditated 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,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	07/02/2020	Sampling Date:	07/01/2020
Reported:	07/07/2020	Sampling Type:	Soil
Project Name:	THISTLE UNIT 99H	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY - JAL, NM		

Sample ID: SL 3 (H001738-01)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	07/06/2020	ND	416	104	400	0.00	

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	07/03/2020	ND	207	103	200	2.16	
DRO >C10-C28*	<10.0	10.0	07/03/2020	ND	224	112	200	0.916	
EXT DRO >C28-C36	<10.0	10.0	07/03/2020	ND					

Surrogate: 1-Chlorooctane	*95.4 %*	*44.3-144*
Surrogate: 1-Chlorooctadecane	*101 %*	*42.2-156*

Sample ID: SL 4 (H001738-02)

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	07/03/2020	ND	207	103	200	2.16	
DRO >C10-C28*	<10.0	10.0	07/03/2020	ND	224	112	200	0.916	
EXT DRO >C28-C36	<10.0	10.0	07/03/2020	ND					

Surrogate: 1-Chlorooctane	*101 %*	*44.3-144*
Surrogate: 1-Chlorooctadecane	*106 %*	*42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	07/02/2020	Sampling Date:	07/01/2020
Reported:	07/07/2020	Sampling Type:	Soil
Project Name:	THISTLE UNIT 99H	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY - JAL, NM		

Sample ID: SL 5 (H001738-03)

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	07/06/2020	ND	416	104	400	0.00	

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	07/03/2020	ND	207	103	200	2.16	
DRO >C10-C28*	<10.0	10.0	07/03/2020	ND	224	112	200	0.916	
EXT DRO >C28-C36	<10.0	10.0	07/03/2020	ND					

Surrogate: 1-Chlorooctane	*95.0 %*	*44.3-144*
Surrogate: 1-Chlorooctadecane	*101 %*	*42.2-156*

Sample ID: SL 6 (H001738-04)

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	07/06/2020	ND	416	104	400	0.00	

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	07/03/2020	ND	207	103	200	2.16	
DRO >C10-C28*	<10.0	10.0	07/03/2020	ND	224	112	200	0.916	
EXT DRO >C28-C36	<10.0	10.0	07/03/2020	ND					

Surrogate: 1-Chlorooctane	*89.6 %*	*44.3-144*
Surrogate: 1-Chlorooctadecane	*93.8 %*	*42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Sadler Miller 3 Associates	**BILL TO**	
Project Manager:	Ashley Maxwell	P.O. #:	208450055
Address:	201 S. Halaqueno St	Company:	Devon Energy
City:	Carlsbad State: NM Zip: 88220	Attn:	Lupe Carrasco
Phone #:	(575) 516-7469 Fax #:	Address:	7-Rivers Hwy
Project #:	Project Owner: Devon Energy	City:	Artesia
Project Name:	Thistle Unit #99H	State:	NM Zip: 88210
Project Location:	Jal, NM	Phone #:	
Sampler Name:	LA	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH (8015)	Cl-
H001738																
1	SLX3	G	1			X					X		7/1/20	956	X	X
2	SL4	|	1			|					|		|	1009	X	
3	SL5	|	1			|					|		|	1019	X	X
4	SL6	|	1			|					|		|	1031	X	X

Relinquished By:	Date: 7/1/20 Time: 0845	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool ☐ Yes ☐ No (12.9°C) Intact ☐ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: email Results Lynn.acosta@sadlermiller.com	

CARDINAL Laboratories

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

July 21, 2020

LYNN A ACOSTA

SOUDER MILLER AND ASSOCIATES

201 S. HALAGUENO

CARLSBAD, NM 88220

RE: THISTLE UNIT #99H

Enclosed are the results of analyses for samples received by the laboratory on 07/16/20 15:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-20-13. 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.

Cardinal Laboratories is accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

SOUDER MILLER AND ASSOCIATES
LYNN A ACOSTA
201 S. HALAGUENO
CARLSBAD NM, 88220
Fax To: NONE

Received:	07/16/2020	Sampling Date:	07/15/2020
Reported:	07/21/2020	Sampling Type:	Soil
Project Name:	THISTLE UNIT #99H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY - JAL, NM		

Sample ID: CS 1 (H001861-01)

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	07/17/2020	ND	1.92	96.2	2.00	3.21	
Toluene*	<0.050	0.050	07/17/2020	ND	1.92	95.9	2.00	3.86	
Ethylbenzene*	<0.050	0.050	07/17/2020	ND	1.94	96.9	2.00	3.43	
Total Xylenes*	<0.150	0.150	07/17/2020	ND	5.57	92.9	6.00	3.84	
Total BTEX	<0.300	0.300	07/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.4 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	07/20/2020	ND	432	108	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	07/17/2020	ND	197	98.4	200	5.32	
DRO >C10-C28*	**10.6**	10.0	07/17/2020	ND	218	109	200	5.43	
EXT DRO >C28-C36	<10.0	10.0	07/17/2020	ND					

Surrogate: 1-Chlorooctane *99.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *108 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

SOUDER MILLER AND ASSOCIATES
LYNN A ACOSTA
201 S. HALAGUENO
CARLSBAD NM, 88220
Fax To: NONE

Received:	07/16/2020	Sampling Date:	07/15/2020
Reported:	07/21/2020	Sampling Type:	Soil
Project Name:	THISTLE UNIT #99H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY - JAL, NM		

Sample ID: CS 2 (H001861-02)

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	07/17/2020	ND	1.92	96.2	2.00	3.21	
Toluene*	<0.050	0.050	07/17/2020	ND	1.92	95.9	2.00	3.86	
Ethylbenzene*	<0.050	0.050	07/17/2020	ND	1.94	96.9	2.00	3.43	
Total Xylenes*	<0.150	0.150	07/17/2020	ND	5.57	92.9	6.00	3.84	
Total BTEX	<0.300	0.300	07/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	07/20/2020	ND	432	108	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	07/17/2020	ND	197	98.4	200	5.32	
DRO >C10-C28*	<10.0	10.0	07/17/2020	ND	218	109	200	5.43	
EXT DRO >C28-C36	<10.0	10.0	07/17/2020	ND					

Surrogate: 1-Chlorooctane *94.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *102 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

SOUDER MILLER AND ASSOCIATES
LYNN A ACOSTA
201 S. HALAGUENO
CARLSBAD NM, 88220
Fax To: NONE

Received:	07/16/2020	Sampling Date:	07/15/2020
Reported:	07/21/2020	Sampling Type:	Soil
Project Name:	THISTLE UNIT #99H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY - JAL, NM		

Sample ID: CS 3 (H001861-03)

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	07/17/2020	ND	1.90	95.0	2.00	2.56	
Toluene*	<0.050	0.050	07/17/2020	ND	1.91	95.6	2.00	2.56	
Ethylbenzene*	<0.050	0.050	07/17/2020	ND	1.92	96.1	2.00	2.85	
Total Xylenes*	<0.150	0.150	07/17/2020	ND	5.55	92.5	6.00	2.84	
Total BTEX	<0.300	0.300	07/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.8 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	07/20/2020	ND	416	104	400	0.00	

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	07/17/2020	ND	209	105	200	2.37	
DRO >C10-C28*	<10.0	10.0	07/17/2020	ND	228	114	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	07/17/2020	ND					

Surrogate: 1-Chlorooctane *104 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *113 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

SOUDER MILLER AND ASSOCIATES
LYNN A ACOSTA
201 S. HALAGUENO
CARLSBAD NM, 88220
Fax To: NONE

Received:	07/16/2020	Sampling Date:	07/15/2020
Reported:	07/21/2020	Sampling Type:	Soil
Project Name:	THISTLE UNIT #99H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY - JAL, NM		

Sample ID: SW 1 (H001861-04)

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	07/17/2020	ND	1.90	95.0	2.00	2.56	
Toluene*	<0.050	0.050	07/17/2020	ND	1.91	95.6	2.00	2.56	
Ethylbenzene*	<0.050	0.050	07/17/2020	ND	1.92	96.1	2.00	2.85	
Total Xylenes*	<0.150	0.150	07/17/2020	ND	5.55	92.5	6.00	2.84	
Total BTEX	<0.300	0.300	07/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	07/20/2020	ND	416	104	400	0.00	

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	07/17/2020	ND	209	105	200	2.37	
DRO >C10-C28*	<10.0	10.0	07/17/2020	ND	228	114	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	07/17/2020	ND					

Surrogate: 1-Chlorooctane *105 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *115 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

SOUDER MILLER AND ASSOCIATES
LYNN A ACOSTA
201 S. HALAGUENO
CARLSBAD NM, 88220
Fax To: NONE

Received:	07/16/2020	Sampling Date:	07/15/2020
Reported:	07/21/2020	Sampling Type:	Soil
Project Name:	THISTLE UNIT #99H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY - JAL, NM		

Sample ID: SW 2 (H001861-05)

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	07/17/2020	ND	1.90	95.0	2.00	2.56	
Toluene*	<0.050	0.050	07/17/2020	ND	1.91	95.6	2.00	2.56	
Ethylbenzene*	<0.050	0.050	07/17/2020	ND	1.92	96.1	2.00	2.85	
Total Xylenes*	<0.150	0.150	07/17/2020	ND	5.55	92.5	6.00	2.84	
Total BTEX	<0.300	0.300	07/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	07/20/2020	ND	416	104	400	0.00	

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	07/17/2020	ND	209	105	200	2.37	
DRO >C10-C28*	<10.0	10.0	07/17/2020	ND	228	114	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	07/17/2020	ND					

Surrogate: 1-Chlorooctane *104 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *113 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

SOUDER MILLER AND ASSOCIATES
LYNN A ACOSTA
201 S. HALAGUENO
CARLSBAD NM, 88220
Fax To: NONE

Received:	07/16/2020	Sampling Date:	07/15/2020
Reported:	07/21/2020	Sampling Type:	Soil
Project Name:	THISTLE UNIT #99H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	DEVON ENERGY - JAL, NM		

Sample ID: SW 3 (H001861-06)

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	07/17/2020	ND	1.90	95.0	2.00	2.56	
Toluene*	<0.050	0.050	07/17/2020	ND	1.91	95.6	2.00	2.56	
Ethylbenzene*	<0.050	0.050	07/17/2020	ND	1.92	96.1	2.00	2.85	
Total Xylenes*	<0.150	0.150	07/17/2020	ND	5.55	92.5	6.00	2.84	
Total BTEX	<0.300	0.300	07/17/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	07/20/2020	ND	416	104	400	0.00	

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	07/17/2020	ND	209	105	200	2.37	
DRO >C10-C28*	<10.0	10.0	07/17/2020	ND	228	114	200	0.662	
EXT DRO >C28-C36	<10.0	10.0	07/17/2020	ND					

Surrogate: 1-Chlorooctane *107 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *117 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Souder Miller & Associates	**BILL TO**		
Project Manager: Lynn A. Acosta	P.O. #: 20845005		
Address: 201 S. Halagueno St.	Company: Devon Energy		
City: Carlsbad State: NM Zip: 88220	Attn: Lupe Carrasco		
Phone #: (505) 516-7469 Fax #:	Address: 7 Rivers Hwy		
Project #: Project Owner: Devon Energy	City: Artesia		
Project Name: Thistle Unit #99H	State: NM Zip: 88210		
Project Location: Jal, NM	Phone #:		
Sampler Name: LAA/AHL	Fax #:		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX (8021)	TPH 8015 (DRO, MRO, GRO)	Cl-								
H00/8261																									
1	CS1	C				X					X		7/15/20	9:04	X	X	X								
2	CS2													10:05											
3	CS3													1:10											
4	SW1													9:06											
5	SW2													9:17											
6	SW3													12:59											

Relinquished By:	Date: 7/15/20	Received By:	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
	Time: 1520		Fax Result: ☐ Yes ☐ No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email Results: Lynn.acosta@soudermiller.com	
	Time:		Email Invoice: Lupecarrasco@dvn.com	
Delivered By: (Circle One)	Sample Condition: Cool ☑ Yes ☐ No, Intact ☐ Yes ☐ No	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: 5.6°	#113	TO.		

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 9447

CONDITIONS

Operator: Pima Environmental Services, LLC 5614 N Lovington Hwy Hobbs, NM 88240	OGRID: 329999
	Action Number: 9447
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	9/14/2022