

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: BIYA Operators, Inc.	Contact: Jubal Terry
Address: 1789 W. Littleton Blvd., Littleton CO 80120	Telephone No. (303) 797-5417
Facility Name: 185 flow line	Facility Type: Flow line

Surface Owner: Ute Mountain Ute Tribe	Mineral Owner: Ute Mountain Ute Tribe	API No.
---------------------------------------	---------------------------------------	---------

#### LOCATION OF RELEASE

Unit Letter L	Section 35	Township 31N	Range 16W	Feet from the	North/South Line 1780 FSL	Feet from the	East/West Line 1,122 FWL	County San Juan County
------------------	---------------	-----------------	--------------	---------------	------------------------------	---------------	-----------------------------	---------------------------

Latitude 36.855170 Longitude -108.499555 NAD83

#### NATURE OF RELEASE

Type of Release: Oil	Volume of Release	Volume Recovered
Source of Release Flow Line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery Unknown
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. Unknown	

If a Watercourse was Impacted, Describe Fully.\*

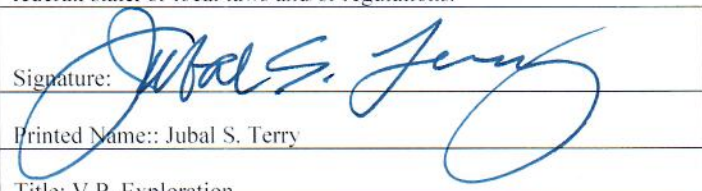
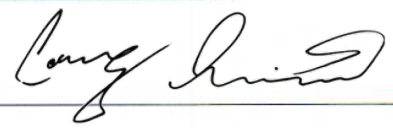
Describe Cause of Problem and Remedial Action Taken.\*

An unreported release from the flowline from the previous operator. From Google earth it appears the release occurred prior to 6/2011. All loose contaminated soils have been removed: The stained hard sandstone was dug up using a track hoe. This material was trucked off site to a waste management facility.

Describe Area Affected and Cleanup Action Taken.\*

The release is 270' north of the "B" manifold at the HGU lease. All contaminated soils have been removed and taken to an offsite land farm. Nine cores were taken to determine the extent and depth of contamination. All flow lines that came through this ROW to the Manifold were flushed and capped. A work plan was submitted and approved by the BLM with input from the Ute Mountain Ute Tribe and the BIA and was implemented. Pending approval to continue excavation, this area has been fenced and covered with netting until excavation can be completed..

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: 		OIL CONSERVATION DIVISION	
Printed Name: Jubal S. Terry		Approved by Environmental Specialist: 	
Title: V.P. Exploration		Approval Date: 9/13/17	Expiration Date:
E-mail Address: jterry@diversifiedresourcesinc.com		Conditions of Approval:	
Date: 7/27/2017	Phone: (303) 797-5417	Attached <input checked="" type="checkbox"/>	
SEE ATTACHED			

\* Attach Additional Sheets If Necessary

NCS1725638584

Operator/Responsible Party,

7/27/17

The OCD has received the form C-141 you provided on 7/27/17 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 19.15.29.11 NMAC has been assigned.

**Please refer to this case number in all future correspondence.**

NCS1725638584

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 III office in Aztec on or before n/a 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<sub>6</sub> thru C<sub>36</sub>), 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<sub>6</sub> thru C<sub>36</sub>), 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



# SOIL REMEDIATION WORK PLAN

FOR

BIYA OPERATORS, INC.

185 LINE LEAK

SECTION 35, T31N R16W, NMPM

SAN JUAN COUNTY, NM



Prepared for:  
BIYA Operators, Inc.  
1789 West Littleton Blvd.  
Littleton, CO 80120

Prepared by:  
Souder, Miller & Associates  
401 W Broadway  
Farmington, NM 87401  
505-325-7535

April 24, 2017  
SMA Reference  
5124920 BG10



**Souder, Miller & Associates**  
*Engineering ♦ Environmental ♦ Surveying*

401 W. Broadway ♦ Farmington, NM 87401  
(505) 325-7535 ♦ fax (505) 326-0045 ♦ [www.soudermiller.com](http://www.soudermiller.com)

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Appendix A: Laboratory Analytical Reports

## **1.0 Introduction**

Souder, Miller & Associates (SMA) is pleased to submit this work plan for excavation and remediation at the BIYA Operators, Inc., 185 Line Leak release site. The site is located in Unit L (NW ¼ SW ¼), Section 35, Township 31 North, Range 16 West; GPS: 36.855174°, -108.499632°, in San Juan County, New Mexico on Ute Mountain Ute tribal lands.

## **2.0 Site Ranking and Land Jurisdiction**

The 185 Line Leak release is located on Ute Mountain Ute tribal land with an elevation of approximately 5,525 feet above sea level. After evaluation of the site using aerial photography and topographic maps and review of ground water information provided by Colin Larrick, Water Quality Program Manager, Ute Mountain Ute Tribe, depth to groundwater is estimated to be less than 50 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well database for water wells in the vicinity of the release. No wells are located within a 1000 foot radius of the site. The physical location of this release is within the jurisdiction of Ute Mountain Ute tribal land.

This release location has been assigned soil remediation standards of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons (TPH).

## **3.0 Assessment and Initial Results**

On November 18, 2016 and November 19, 2016 SMA personnel guided Mo-Te Drilling, Inc. onsite utilizing a drill rig to collect soil boring samples. Sample locations are noted on Figure 1, Site Details and Sample Location Map. All samples were collected and processed per NMOC soil sampling procedures. The laboratory samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for Benzene and Total BTEX using EPA Method 8021B, DRO and GRO by EPA Method 8015D, and total Chlorides using EPA Method 300.0.

The results allowed vertical and lateral delineation of impacted soils. Delineation results indicate that affected soil is present at sixteen (16) feet bgs. Figure 1 demonstrates the contamination extents and proposed area of excavation.

## **4.0 Soil Remediation Work Plan**

Collin Larrick, Ute Mountain Ute Tribe, will review submitted remediation and reclamation plans. Mr. Larrick may request certifying, through the Ute Mountain Ute Tribe's Clean Water Act 401 authority, and the Army Corps of Engineers (ACOE), Clean Water Act Section 404 permits for in-channel disturbance for the purposes of reclamation by BIYA. The Ute Mountain Ute Tribe requests that the site be remediated and reclaimed within 30 days of issued ACOE or Tribal Permit.

SMA recommends excavation of impacted soils to remediate the site. Upon approval from the Ute Mountain Ute Tribe and with approval from area utilities owners via 811, BIYA Operators, Inc. will guide the excavation activities, following the extents demonstrated in Figure 1, removing hydrocarbon impacted soil and rock. Excavation will continue to occur to sufficient to removal the impacted materials to the requirements listed in Section 2.0 as indicated by the sample results in

Table 1. Affected soils will be removed from these areas, at which time SMA will be contacted to conduct closure sampling, which will be collected at the final depth of excavation and sidewalls.

Excavated material spoils are to be placed on a liner and within a bermed or fenced area. All excavated material is to be transported for disposal at an approved facility within 10 days of excavation commencing. Excavated material is not to remain on location more than 10 consecutive days. The open excavated areas will remain fenced when excavation activities are not occurring to limit access by cattle and wildlife.

## **5.0 Revegetation Plan**

The Ute Mountain Ute Tribe has issued a deadline for reclamation to occur within 30 days of issued ACOE or Tribal Permit. Seed will be planted at one quarter to one-half-inch deep using a disc type or similar rangeland drill sufficient to accommodate variations in seed sizes. If broadcast, seeding rates should be doubled. Seeding can be accomplished as early as May given all dirt work for the location is stabilized. Soil in this area will be tilled to reduce compaction.

Seed-bed preparation will be performed to provide a hospitable environment for germinating seed by breaking up impermeable soil layers that have formed and increasing void spaces for air and water. Ground shall be roughed-up prior to planting by raking harrowing or other methods.

Seed shall be broadcast with a “cyclone” hand seeder or similar broadcast seeder to facilitate an even spread. After seed is broadcast, ground shall be raked or dragged, to help bury it and improve soil contact and provide texture.

Mulch will be placed to prevent loss of moisture and seed to wind.

Mulching shall be accomplished by using one of these following methods:

- a) weed free straw (2 tons/ac;kg/ha)
- b) wood residues (sawdust, wood chips, bar (2tons/ac;kg/ha)
- c) hydro-mulching (1,500 lb/ac;kg/ha)
- d) composted manure (5 tons/ac;kg/ha)
- e) excelsior blanket
- f) straw jute

Livestock will be temporarily fenced out of any seeded area, as they will otherwise greatly reduce possibility of successful revegetation. Probability of successful seeding will be considerably increased if fencing remains until reclamation is stable, and plant s have grown well enough to withstand grazing. Stabilization would occur after a minimum of two full summer growing seasons after planting.

## **6.0 Conclusions and Recommendations**

This site has been assigned soil remediation standards of: 10 ppm (mg/kg) Benzene, 50 ppm total BTEX, and 100 ppm TPH.

Benzene, 50 ppm total BTEX, and 100 ppm TPH. The release consisted of produced and associated petroleum found during the initial assessment and delineation.

After the soil remediation work plan is approved by the Ute Mountain Ute Tribe, SMA will begin the planned soil remediation activities on site.

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

Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES

A handwritten signature in black ink, appearing to be 'AM' or 'Ashley Maxwell'.

Ashley Maxwell  
Staff Scientist

A handwritten signature in blue ink, clearly legible as 'Shawna Chubbuck'.

Shawna Chubbuck  
Senior Scientist



FIGURE 1  
SITE MAP

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX	Method 300.0 Chloride
NMOCD Guidelines				100		10 ppm	50 ppm	
11/18/2016	11:02	SB1-7	7	7.5	15	0.28	0.75	46
11/18/2016	11:40	SB1-15	15	15	<9.8	0.61	1.81	<30
11/18/2016	12:23	SB2-7	7	<4.7	<9.8	0.037	0.12	120
11/18/2016	12:58	SB2-15	15	17	<9.2	0.71	2.01	35
11/18/2016	13:25	SB3-5	5	<4.9	11	0.043	0.15	<30
11/18/2016	14:40	SB3-10	10	<4.7	<9.6	<0.024	0.057	<30
11/18/2016	14:34	SB4-5	5	<4.7	<9.6	0.10	0.26	<30
11/18/2016	15:09	SB4-10	10	14	<10	0.59	1.59	190
11/18/2016	15:34	SB5-4	4	<4.8	<10	0.096	0.286	<30
11/18/2016	15:51	SB5-7	7	<4.9	<9.7	0.12	0.31	38
11/18/2016	15:54	SB5-10	10	<4.9	<9.4	0.18	0.47	40
11/18/2016	16:17	SB6-5	5	<4.9	<9.7	0.07	0.17	<30
11/18/2016	16:39	SB6-10	10	14	32	0.37	0.86	38
11/19/2016	9:45	SB7-7	7	<5.0	<9.9	<0.025	<0.050	160
11/19/2016	10:10	SB7-15	15	12	150	-	-	-
11/19/2016	10:44	SB8-5	5	<4.6	<9.7	0.037	0.11	<30
11/19/2016	11:22	SB8-10	10	9.5	<10	0.42	1.18	<30
11/19/2016	11:50	SB9-3	3	5100	13000	-	-	-
11/19/2016	12:49	SB9-16	16	95	820	-	-	-
11/19/2016	13:23	SB9-21	21	<5.0	31	0.053	0.15	41
11/19/2016	13:27	SB9-25	25	5	<9.2	0.18	0.52	<30

Red indicates that laboratory detection limit exceeded at least one screening level/standard

Soil Boring ID	Latitude	Longitude
SB1	36.8551	-108.49983
SB2	36.85509	-108.49969
SB3	36.58816	-108.49937
SB4	36.85531	-108.49944
SB5	36.85524	-108.49935
SB6	36.85534	-108.49958
SB7	36.85532	-108.49966
SB8	36.85528	-108.49979
SB9	36.85516	-108.49964

16' BELOW CURRENT SURFACE

17' BELOW CURRENT SURFACE

20' BELOW CURRENT SURFACE

25' BELOW CURRENT SURFACE

20' BELOW CURRENT SURFACE

21' BELOW CURRENT SURFACE

RECOMMENDED AREA  
OF EXCAVATION

LEGEND

BOREHOLE LOCATION



SCALE: 1" = 20'

SOUDER, MILLER & ASSOCIATES

SMA  
Engineering  
Environmental  
Surveying

401 West Broadway Avenue  
Farmington, NM 87401-5907  
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Serving the Southwest & Rocky Mountains  
www.soudermiller.com

WATERFLOW, NEW MEXICO

EXCAVATION MAP

BIYA

Designed AP	Drawn DJB	Checked RSA
Date: February 2017		
Scale: Horiz: 1" = 20'		Vert: N/A
Project No: 5124920		

FIGURE 1

Description

Date

Rev #

TABLE 1  
SUMMARY OF LABORATORY  
ANALYSES

185 Line Leak  
Summary of Laboratory Analysis  
Results in mg/Kg

185 Line Leak  
Contamination Delineation  
2/24/2017

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX	Method 300.0 Chlorides
NMOCD Guidelines				100		10 ppm	50 ppm	
11/18/2016	11:02	SB1-7	7	7.5	15	0.28	0.75	46
11/18/2016	11:40	SB1-15	15	15	<9.8	0.61	1.81	<30
11/18/2016	12:23	SB2-7	7	<4.7	<9.8	0.037	0.12	120
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11/18/2016	14:34	SB4-5	5	<4.7	<9.6	0.10	0.26	<30
11/18/2016	15:09	SB4-10	10	14	<10	0.59	1.59	190
11/18/2016	15:34	SB5-4	4	<4.8	<10	0.096	0.286	<30
11/18/2016	15:51	SB5-7	7	<4.9	<9.7	0.12	0.31	38
11/18/2016	15:54	SB5-10	10	<4.9	<9.4	0.18	0.47	40
11/18/2016	16:17	SB6-5	5	<4.9	<9.7	0.07	0.17	<30
11/18/2016	16:39	SB6-10	10	14	32	0.37	0.86	38
11/19/2016	9:45	SB7-7	7	<5.0	<9.9	<0.025	<0.050	160
11/19/2016	10:10	SB7-15	15	<b>12</b>	<b>150</b>	-	-	-
11/19/2016	10:44	SB8-5	5	<4.6	<9.7	0.037	0.11	<30
11/19/2016	11:22	SB8-10	10	9.5	<10	0.42	1.18	<30
11/19/2016	11:50	SB9-3	3	<b>5100</b>	<b>13000</b>	-	-	-
11/19/2016	12:49	SB9-16	16	<b>95</b>	<b>820</b>	-	-	-
11/19/2016	13:23	SB9-21	21	<5.0	31	0.053	0.15	41
11/19/2016	13:27	SB9-25	25	5	<9.2	0.18	0.52	<30

**Red** indicates that laboratory detection limit exceeded at least one screening level/standard



APPENDIX A  
LABORATORY ANALYTICAL  
REPORTS





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

December 08, 2016

Ashley Maxwell  
Souder, Miller and Associates  
401 W. Broadway  
Farmington, NM 87401  
TEL: (505) 325-5667  
FAX (505) 327-1496

RE: BIYA 185 Line Leak

OrderNo.: 1611C33

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 21 sample(s) on 11/23/2016 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB7-7

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/19/2016 9:45:00 AM

**Lab ID:** 1611C33-001

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	160	30		mg/Kg	20	12/2/2016 6:41:05 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/29/2016 1:31:13 PM	28850
Surr: DNOP	94.5	70-130		%Rec	1	11/29/2016 1:31:13 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/28/2016 11:05:35 AM	28847
Surr: BFB	96.2	68.3-144		%Rec	1	11/28/2016 11:05:35 AM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.025		mg/Kg	1	12/1/2016 12:19:19 PM	28847
Toluene	ND	0.050		mg/Kg	1	12/1/2016 12:19:19 PM	28847
Ethylbenzene	ND	0.050		mg/Kg	1	12/1/2016 12:19:19 PM	28847
Xylenes, Total	ND	0.10		mg/Kg	1	12/1/2016 12:19:19 PM	28847
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/1/2016 12:19:19 PM	28847
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	12/1/2016 12:19:19 PM	28847
Surr: Dibromofluoromethane	116	70-130		%Rec	1	12/1/2016 12:19:19 PM	28847
Surr: Toluene-d8	96.6	70-130		%Rec	1	12/1/2016 12:19:19 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB7-15

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/19/2016 10:10:00 AM

**Lab ID:** 1611C33-002

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	150	9.9		mg/Kg	1	11/29/2016 2:40:29 PM	28850
Surr: DNOP	93.2	70-130		%Rec	1	11/29/2016 2:40:29 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	12	4.9		mg/Kg	1	11/28/2016 12:16:03 PM	28847
Surr: BFB	93.7	68.3-144		%Rec	1	11/28/2016 12:16:03 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB8-5

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/19/2016 10:44:00 AM

**Lab ID:** 1611C33-003

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	12/2/2016 6:53:30 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/29/2016 3:03:36 PM	28850
Surr: DNOP	97.9	70-130		%Rec	1	11/29/2016 3:03:36 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/28/2016 1:26:36 PM	28847
Surr: BFB	97.5	68.3-144		%Rec	1	11/28/2016 1:26:36 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.037	0.023		mg/Kg	1	12/1/2016 12:48:05 PM	28847
Toluene	0.073	0.046		mg/Kg	1	12/1/2016 12:48:05 PM	28847
Ethylbenzene	ND	0.046		mg/Kg	1	12/1/2016 12:48:05 PM	28847
Xylenes, Total	ND	0.093		mg/Kg	1	12/1/2016 12:48:05 PM	28847
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	12/1/2016 12:48:05 PM	28847
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	12/1/2016 12:48:05 PM	28847
Surr: Dibromofluoromethane	120	70-130		%Rec	1	12/1/2016 12:48:05 PM	28847
Surr: Toluene-d8	97.3	70-130		%Rec	1	12/1/2016 12:48:05 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB8-10

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/19/2016 11:22:00 AM

**Lab ID:** 1611C33-004

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	12/2/2016 7:30:44 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/29/2016 3:26:34 PM	28850
Surr: DNOP	98.8	70-130		%Rec	1	11/29/2016 3:26:34 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	9.5	4.9		mg/Kg	1	11/28/2016 1:50:02 PM	28847
Surr: BFB	95.6	68.3-144		%Rec	1	11/28/2016 1:50:02 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.42	0.025		mg/Kg	1	12/1/2016 1:16:59 PM	28847
Toluene	0.76	0.049		mg/Kg	1	12/1/2016 1:16:59 PM	28847
Ethylbenzene	ND	0.049		mg/Kg	1	12/1/2016 1:16:59 PM	28847
Xylenes, Total	0.22	0.098		mg/Kg	1	12/1/2016 1:16:59 PM	28847
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/1/2016 1:16:59 PM	28847
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	1	12/1/2016 1:16:59 PM	28847
Surr: Dibromofluoromethane	108	70-130		%Rec	1	12/1/2016 1:16:59 PM	28847
Surr: Toluene-d8	97.9	70-130		%Rec	1	12/1/2016 1:16:59 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB9-3

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/19/2016 11:50:00 AM

**Lab ID:** 1611C33-005

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	13000	490		mg/Kg	50	11/29/2016 3:49:39 PM	28850
Surr: DNOP	0	70-130	S	%Rec	50	11/29/2016 3:49:39 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5100	470		mg/Kg	100	11/28/2016 2:13:36 PM	28847
Surr: BFB	228	68.3-144	S	%Rec	100	11/28/2016 2:13:36 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB9-16

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/19/2016 12:49:00 PM

**Lab ID:** 1611C33-006

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	820	96		mg/Kg	10	11/29/2016 4:12:42 PM	28850
Surr: DNOP	0	70-130	S	%Rec	10	11/29/2016 4:12:42 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	95	4.9		mg/Kg	1	11/28/2016 2:37:16 PM	28847
Surr: BFB	644	68.3-144	S	%Rec	1	11/28/2016 2:37:16 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB9-21

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/19/2016 1:23:00 PM

**Lab ID:** 1611C33-007

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	41	30		mg/Kg	20	12/2/2016 7:43:09 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	31	9.6		mg/Kg	1	11/29/2016 4:35:56 PM	28850
Surr: DNOP	99.0	70-130		%Rec	1	11/29/2016 4:35:56 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/28/2016 3:00:51 PM	28847
Surr: BFB	104	68.3-144		%Rec	1	11/28/2016 3:00:51 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.053	0.025		mg/Kg	1	12/1/2016 1:45:51 PM	28847
Toluene	0.10	0.050		mg/Kg	1	12/1/2016 1:45:51 PM	28847
Ethylbenzene	ND	0.050		mg/Kg	1	12/1/2016 1:45:51 PM	28847
Xylenes, Total	ND	0.099		mg/Kg	1	12/1/2016 1:45:51 PM	28847
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	12/1/2016 1:45:51 PM	28847
Surr: 4-Bromofluorobenzene	90.6	70-130		%Rec	1	12/1/2016 1:45:51 PM	28847
Surr: Dibromofluoromethane	115	70-130		%Rec	1	12/1/2016 1:45:51 PM	28847
Surr: Toluene-d8	97.8	70-130		%Rec	1	12/1/2016 1:45:51 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB9-25

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/19/2016 1:27:00 PM

**Lab ID:** 1611C33-008

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	12/2/2016 8:20:23 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	11/29/2016 4:58:59 PM	28850
Surr: DNOP	93.0	70-130		%Rec	1	11/29/2016 4:58:59 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5.0	4.9		mg/Kg	1	11/28/2016 3:48:04 PM	28847
Surr: BFB	100	68.3-144		%Rec	1	11/28/2016 3:48:04 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.18	0.025		mg/Kg	1	12/1/2016 2:14:44 PM	28847
Toluene	0.34	0.049		mg/Kg	1	12/1/2016 2:14:44 PM	28847
Ethylbenzene	ND	0.049		mg/Kg	1	12/1/2016 2:14:44 PM	28847
Xylenes, Total	0.13	0.098		mg/Kg	1	12/1/2016 2:14:44 PM	28847
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/1/2016 2:14:44 PM	28847
Surr: 4-Bromofluorobenzene	91.4	70-130		%Rec	1	12/1/2016 2:14:44 PM	28847
Surr: Dibromofluoromethane	113	70-130		%Rec	1	12/1/2016 2:14:44 PM	28847
Surr: Toluene-d8	95.2	70-130		%Rec	1	12/1/2016 2:14:44 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB5-10

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 3:54:00 PM

**Lab ID:** 1611C33-009

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	40	30		mg/Kg	20	12/2/2016 8:32:47 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	11/29/2016 5:22:09 PM	28850
Surr: DNOP	95.3	70-130		%Rec	1	11/29/2016 5:22:09 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/28/2016 4:11:28 PM	28847
Surr: BFB	95.4	68.3-144		%Rec	1	11/28/2016 4:11:28 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.18	0.025		mg/Kg	1	12/1/2016 2:43:35 PM	28847
Toluene	0.29	0.049		mg/Kg	1	12/1/2016 2:43:35 PM	28847
Ethylbenzene	ND	0.049		mg/Kg	1	12/1/2016 2:43:35 PM	28847
Xylenes, Total	ND	0.098		mg/Kg	1	12/1/2016 2:43:35 PM	28847
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	12/1/2016 2:43:35 PM	28847
Surr: 4-Bromofluorobenzene	89.8	70-130		%Rec	1	12/1/2016 2:43:35 PM	28847
Surr: Dibromofluoromethane	116	70-130		%Rec	1	12/1/2016 2:43:35 PM	28847
Surr: Toluene-d8	95.2	70-130		%Rec	1	12/1/2016 2:43:35 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB1-7

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 11:02:00 AM

**Lab ID:** 1611C33-010

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	46	30		mg/Kg	20	12/2/2016 8:45:11 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	15	9.8		mg/Kg	1	11/29/2016 5:45:12 PM	28850
Surr: DNOP	97.9	70-130		%Rec	1	11/29/2016 5:45:12 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	7.5	4.7		mg/Kg	1	11/28/2016 6:08:23 PM	28847
Surr: BFB	96.6	68.3-144		%Rec	1	11/28/2016 6:08:23 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.28	0.023		mg/Kg	1	12/1/2016 3:12:28 PM	28847
Toluene	0.47	0.047		mg/Kg	1	12/1/2016 3:12:28 PM	28847
Ethylbenzene	ND	0.047		mg/Kg	1	12/1/2016 3:12:28 PM	28847
Xylenes, Total	0.15	0.094		mg/Kg	1	12/1/2016 3:12:28 PM	28847
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/1/2016 3:12:28 PM	28847
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	12/1/2016 3:12:28 PM	28847
Surr: Dibromofluoromethane	113	70-130		%Rec	1	12/1/2016 3:12:28 PM	28847
Surr: Toluene-d8	97.8	70-130		%Rec	1	12/1/2016 3:12:28 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB1-15

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 11:40:00 AM

**Lab ID:** 1611C33-011

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	12/2/2016 8:57:36 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/29/2016 6:08:25 PM	28850
Surr: DNOP	91.7	70-130		%Rec	1	11/29/2016 6:08:25 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	15	4.8		mg/Kg	1	11/28/2016 6:31:47 PM	28847
Surr: BFB	93.9	68.3-144		%Rec	1	11/28/2016 6:31:47 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.61	0.024		mg/Kg	1	12/1/2016 3:41:18 PM	28847
Toluene	1.2	0.048		mg/Kg	1	12/1/2016 3:41:18 PM	28847
Ethylbenzene	0.089	0.048		mg/Kg	1	12/1/2016 3:41:18 PM	28847
Xylenes, Total	0.41	0.097		mg/Kg	1	12/1/2016 3:41:18 PM	28847
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%Rec	1	12/1/2016 3:41:18 PM	28847
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	12/1/2016 3:41:18 PM	28847
Surr: Dibromofluoromethane	107	70-130		%Rec	1	12/1/2016 3:41:18 PM	28847
Surr: Toluene-d8	97.2	70-130		%Rec	1	12/1/2016 3:41:18 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB2-7

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 12:23:00 PM

**Lab ID:** 1611C33-012

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	120	30		mg/Kg	20	12/2/2016 9:10:01 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/29/2016 6:31:14 PM	28850
Surr: DNOP	98.6	70-130		%Rec	1	11/29/2016 6:31:14 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/28/2016 6:55:09 PM	28847
Surr: BFB	94.5	68.3-144		%Rec	1	11/28/2016 6:55:09 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.037	0.023		mg/Kg	1	12/1/2016 4:10:13 PM	28847
Toluene	0.086	0.047		mg/Kg	1	12/1/2016 4:10:13 PM	28847
Ethylbenzene	ND	0.047		mg/Kg	1	12/1/2016 4:10:13 PM	28847
Xylenes, Total	ND	0.094		mg/Kg	1	12/1/2016 4:10:13 PM	28847
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/1/2016 4:10:13 PM	28847
Surr: 4-Bromofluorobenzene	91.9	70-130		%Rec	1	12/1/2016 4:10:13 PM	28847
Surr: Dibromofluoromethane	114	70-130		%Rec	1	12/1/2016 4:10:13 PM	28847
Surr: Toluene-d8	97.9	70-130		%Rec	1	12/1/2016 4:10:13 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB2-15

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 12:58:00 PM

**Lab ID:** 1611C33-013

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	35	30		mg/Kg	20	12/2/2016 9:22:25 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	11/29/2016 6:54:12 PM	28850
Surr: DNOP	96.5	70-130		%Rec	1	11/29/2016 6:54:12 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	17	4.6		mg/Kg	1	11/28/2016 7:18:31 PM	28847
Surr: BFB	94.8	68.3-144		%Rec	1	11/28/2016 7:18:31 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.71	0.023		mg/Kg	1	12/1/2016 4:39:09 PM	28847
Toluene	1.3	0.046		mg/Kg	1	12/1/2016 4:39:09 PM	28847
Ethylbenzene	0.090	0.046		mg/Kg	1	12/1/2016 4:39:09 PM	28847
Xylenes, Total	0.41	0.092		mg/Kg	1	12/1/2016 4:39:09 PM	28847
Surr: 1,2-Dichloroethane-d4	98.4	70-130		%Rec	1	12/1/2016 4:39:09 PM	28847
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	12/1/2016 4:39:09 PM	28847
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/1/2016 4:39:09 PM	28847
Surr: Toluene-d8	97.2	70-130		%Rec	1	12/1/2016 4:39:09 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB3-5

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 1:25:00 PM

**Lab ID:** 1611C33-014

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	12/2/2016 9:34:50 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	11	10		mg/Kg	1	11/29/2016 7:16:56 PM	28850
Surr: DNOP	93.2	70-130		%Rec	1	11/29/2016 7:16:56 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/28/2016 7:41:47 PM	28847
Surr: BFB	92.3	68.3-144		%Rec	1	11/28/2016 7:41:47 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.043	0.025		mg/Kg	1	12/1/2016 5:07:56 PM	28847
Toluene	0.11	0.049		mg/Kg	1	12/1/2016 5:07:56 PM	28847
Ethylbenzene	ND	0.049		mg/Kg	1	12/1/2016 5:07:56 PM	28847
Xylenes, Total	ND	0.099		mg/Kg	1	12/1/2016 5:07:56 PM	28847
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/1/2016 5:07:56 PM	28847
Surr: 4-Bromofluorobenzene	91.6	70-130		%Rec	1	12/1/2016 5:07:56 PM	28847
Surr: Dibromofluoromethane	116	70-130		%Rec	1	12/1/2016 5:07:56 PM	28847
Surr: Toluene-d8	96.2	70-130		%Rec	1	12/1/2016 5:07:56 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB3-10

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 2:04:00 PM

**Lab ID:** 1611C33-015

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	12/2/2016 9:47:15 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	11/29/2016 8:02:27 PM	28850
Surr: DNOP	90.3	70-130		%Rec	1	11/29/2016 8:02:27 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/28/2016 8:05:05 PM	28847
Surr: BFB	92.8	68.3-144		%Rec	1	11/28/2016 8:05:05 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	ND	0.024		mg/Kg	1	12/1/2016 5:36:44 PM	28847
Toluene	0.057	0.047		mg/Kg	1	12/1/2016 5:36:44 PM	28847
Ethylbenzene	ND	0.047		mg/Kg	1	12/1/2016 5:36:44 PM	28847
Xylenes, Total	ND	0.095		mg/Kg	1	12/1/2016 5:36:44 PM	28847
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	12/1/2016 5:36:44 PM	28847
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	12/1/2016 5:36:44 PM	28847
Surr: Dibromofluoromethane	113	70-130		%Rec	1	12/1/2016 5:36:44 PM	28847
Surr: Toluene-d8	97.4	70-130		%Rec	1	12/1/2016 5:36:44 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB4-5

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 2:34:00 PM

**Lab ID:** 1611C33-016

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	470	30		mg/Kg	20	12/2/2016 9:59:40 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	11/29/2016 8:25:15 PM	28850
Surr: DNOP	98.0	70-130		%Rec	1	11/29/2016 8:25:15 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/28/2016 8:28:23 PM	28847
Surr: BFB	92.8	68.3-144		%Rec	1	11/28/2016 8:28:23 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.10	0.023		mg/Kg	1	12/1/2016 6:05:43 PM	28847
Toluene	0.16	0.047		mg/Kg	1	12/1/2016 6:05:43 PM	28847
Ethylbenzene	ND	0.047		mg/Kg	1	12/1/2016 6:05:43 PM	28847
Xylenes, Total	ND	0.094		mg/Kg	1	12/1/2016 6:05:43 PM	28847
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/1/2016 6:05:43 PM	28847
Surr: 4-Bromofluorobenzene	88.8	70-130		%Rec	1	12/1/2016 6:05:43 PM	28847
Surr: Dibromofluoromethane	119	70-130		%Rec	1	12/1/2016 6:05:43 PM	28847
Surr: Toluene-d8	92.8	70-130		%Rec	1	12/1/2016 6:05:43 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB4-10

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 3:09:00 PM

**Lab ID:** 1611C33-017

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	190	30		mg/Kg	20	12/2/2016 10:12:04 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/29/2016 8:47:52 PM	28850
Surr: DNOP	98.5	70-130		%Rec	1	11/29/2016 8:47:52 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	14	5.0		mg/Kg	1	11/28/2016 8:51:38 PM	28847
Surr: BFB	93.0	68.3-144		%Rec	1	11/28/2016 8:51:38 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.59	0.025		mg/Kg	1	12/1/2016 6:34:38 PM	28847
Toluene	1.0	0.050		mg/Kg	1	12/1/2016 6:34:38 PM	28847
Ethylbenzene	0.069	0.050		mg/Kg	1	12/1/2016 6:34:38 PM	28847
Xylenes, Total	0.32	0.099		mg/Kg	1	12/1/2016 6:34:38 PM	28847
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	12/1/2016 6:34:38 PM	28847
Surr: 4-Bromofluorobenzene	90.6	70-130		%Rec	1	12/1/2016 6:34:38 PM	28847
Surr: Dibromofluoromethane	110	70-130		%Rec	1	12/1/2016 6:34:38 PM	28847
Surr: Toluene-d8	95.7	70-130		%Rec	1	12/1/2016 6:34:38 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB5-4

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 3:34:00 PM

**Lab ID:** 1611C33-018

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	12/2/2016 10:49:18 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/29/2016 9:10:44 PM	28850
Surr: DNOP	96.1	70-130		%Rec	1	11/29/2016 9:10:44 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/28/2016 9:14:57 PM	28847
Surr: BFB	93.4	68.3-144		%Rec	1	11/28/2016 9:14:57 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.096	0.024		mg/Kg	1	12/1/2016 7:03:31 PM	28847
Toluene	0.19	0.048		mg/Kg	1	12/1/2016 7:03:31 PM	28847
Ethylbenzene	ND	0.048		mg/Kg	1	12/1/2016 7:03:31 PM	28847
Xylenes, Total	ND	0.096		mg/Kg	1	12/1/2016 7:03:31 PM	28847
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/1/2016 7:03:31 PM	28847
Surr: 4-Bromofluorobenzene	88.5	70-130		%Rec	1	12/1/2016 7:03:31 PM	28847
Surr: Dibromofluoromethane	112	70-130		%Rec	1	12/1/2016 7:03:31 PM	28847
Surr: Toluene-d8	96.2	70-130		%Rec	1	12/1/2016 7:03:31 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB5-7

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 3:51:00 PM

**Lab ID:** 1611C33-019

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	38	30		mg/Kg	20	12/2/2016 11:01:43 PM	28989
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/29/2016 9:33:23 PM	28850
Surr: DNOP	95.2	70-130		%Rec	1	11/29/2016 9:33:23 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/28/2016 9:38:17 PM	28847
Surr: BFB	93.8	68.3-144		%Rec	1	11/28/2016 9:38:17 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.12	0.025		mg/Kg	1	12/1/2016 7:32:27 PM	28847
Toluene	0.19	0.049		mg/Kg	1	12/1/2016 7:32:27 PM	28847
Ethylbenzene	ND	0.049		mg/Kg	1	12/1/2016 7:32:27 PM	28847
Xylenes, Total	ND	0.098		mg/Kg	1	12/1/2016 7:32:27 PM	28847
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/1/2016 7:32:27 PM	28847
Surr: 4-Bromofluorobenzene	88.9	70-130		%Rec	1	12/1/2016 7:32:27 PM	28847
Surr: Dibromofluoromethane	115	70-130		%Rec	1	12/1/2016 7:32:27 PM	28847
Surr: Toluene-d8	97.7	70-130		%Rec	1	12/1/2016 7:32:27 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB6-5

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 4:17:00 PM

**Lab ID:** 1611C33-020

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	ND	30		mg/Kg	20	12/5/2016 2:15:29 PM	28994
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/29/2016 9:56:12 PM	28850
Surr: DNOP	102	70-130		%Rec	1	11/29/2016 9:56:12 PM	28850
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/28/2016 11:11:17 PM	28847
Surr: BFB	94.6	68.3-144		%Rec	1	11/28/2016 11:11:17 PM	28847
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>AG</b>
Benzene	0.070	0.024		mg/Kg	1	12/1/2016 8:01:11 PM	28847
Toluene	0.11	0.049		mg/Kg	1	12/1/2016 8:01:11 PM	28847
Ethylbenzene	ND	0.049		mg/Kg	1	12/1/2016 8:01:11 PM	28847
Xylenes, Total	ND	0.098		mg/Kg	1	12/1/2016 8:01:11 PM	28847
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	12/1/2016 8:01:11 PM	28847
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	12/1/2016 8:01:11 PM	28847
Surr: Dibromofluoromethane	114	70-130		%Rec	1	12/1/2016 8:01:11 PM	28847
Surr: Toluene-d8	98.8	70-130		%Rec	1	12/1/2016 8:01:11 PM	28847

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611C33

Date Reported: 12/8/2016

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SB6-10

**Project:** BIYA 185 Line Leak

**Collection Date:** 11/18/2016 4:39:00 PM

**Lab ID:** 1611C33-021

**Matrix:** SOIL

**Received Date:** 11/23/2016 7:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	38	30		mg/Kg	20	12/5/2016 2:52:44 PM	28994
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	32	10		mg/Kg	1	11/29/2016 11:04:19 PM	28851
Surr: DNOP	105	70-130		%Rec	1	11/29/2016 11:04:19 PM	28851
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	14	4.8		mg/Kg	1	11/28/2016 2:01:41 PM	28848
Surr: BFB	96.7	68.3-144		%Rec	1	11/28/2016 2:01:41 PM	28848
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.37	0.024		mg/Kg	1	11/28/2016 2:01:41 PM	28848
Toluene	0.49	0.048		mg/Kg	1	11/28/2016 2:01:41 PM	28848
Ethylbenzene	ND	0.048		mg/Kg	1	11/28/2016 2:01:41 PM	28848
Xylenes, Total	0.12	0.096		mg/Kg	1	11/28/2016 2:01:41 PM	28848
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	11/28/2016 2:01:41 PM	28848

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C33

08-Dec-16

Client: Souder, Miller and Associates

Project: BIYA 185 Line Leak

Sample ID	<b>MB-28989</b>		SampType: <b>MBLK</b>		TestCode: <b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>		Batch ID: <b>28989</b>		RunNo: <b>39134</b>					
Prep Date:	<b>12/2/2016</b>		Analysis Date: <b>12/2/2016</b>		SeqNo: <b>1224235</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-28989</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>		Batch ID: <b>28989</b>		RunNo: <b>39134</b>					
Prep Date:	<b>12/2/2016</b>		Analysis Date: <b>12/2/2016</b>		SeqNo: <b>1224236</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	90	110			

Sample ID	<b>MB-28994</b>		SampType: <b>mblk</b>		TestCode: <b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>		Batch ID: <b>28994</b>		RunNo: <b>39175</b>					
Prep Date:	<b>12/5/2016</b>		Analysis Date: <b>12/5/2016</b>		SeqNo: <b>1225529</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-28994</b>		SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>		Batch ID: <b>28994</b>		RunNo: <b>39175</b>					
Prep Date:	<b>12/5/2016</b>		Analysis Date: <b>12/5/2016</b>		SeqNo: <b>1225530</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	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  
R RPD outside accepted recovery limits  
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 Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C33

08-Dec-16

Client: Souder, Miller and Associates

Project: BIYA 185 Line Leak

Sample ID	LCS-28850		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 28850		RunNo: 39005					
Prep Date:	11/23/2016		Analysis Date: 11/29/2016		SeqNo: 1220400		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	62.6	124			
Surr: DNOP	4.6		5.000		92.6	70	130			

Sample ID	MB-28850		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 28850		RunNo: 39005					
Prep Date:	11/23/2016		Analysis Date: 11/29/2016		SeqNo: 1220401		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.3		10.00		92.7	70	130			

Sample ID	1611C33-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SB7-7		Batch ID: 28850		RunNo: 39005					
Prep Date:	11/23/2016		Analysis Date: 11/29/2016		SeqNo: 1220530		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.9	49.31	5.162	87.5	51.6	130			
Surr: DNOP	4.4		4.931		89.9	70	130			

Sample ID	1611C33-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	SB7-7		Batch ID:	28850		RunNo:	39005				
Prep Date:	11/23/2016		Analysis Date:	11/29/2016		SeqNo:	1220531		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	50	9.5	47.26	5.162	94.4	51.6	130	3.01	20		
Surr: DNOP	4.5		4.726		95.5	70	130	0	0		

Sample ID	1611C33-021AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SB6-10		Batch ID: 28851		RunNo: 39005					
Prep Date:	11/23/2016		Analysis Date: 11/29/2016		SeqNo: 1220905		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	59	9.8	49.02	31.95	54.9	51.6	130			
Surr: DNOP	4.7		4.902		96.3	70	130			

Sample ID	1611C33-021AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	SB6-10		Batch ID:	28851		RunNo:	39005				
Prep Date:	11/23/2016		Analysis Date:	11/29/2016		SeqNo:	1220906		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

### 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                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C33

08-Dec-16

Client: Souder, Miller and Associates

Project: BIYA 185 Line Leak

Sample ID	1611C33-021AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SB6-10	Batch ID:	28851	RunNo:	39005					
Prep Date:	11/23/2016	Analysis Date:	11/29/2016	SeqNo:	1220906	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	60	9.7	48.50	31.95	58.2	51.6	130	2.16	20	
Surr: DNOP	4.5		4.850		92.4	70	130	0	0	

Sample ID	LCS-28851	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	28851	RunNo:	39005					
Prep Date:	11/23/2016	Analysis Date:	11/29/2016	SeqNo:	1220914	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	62.6	124			
Surr: DNOP	4.6		5.000		92.5	70	130			

Sample ID	MB-28851	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	28851	RunNo:	39005					
Prep Date:	11/23/2016	Analysis Date:	11/29/2016	SeqNo:	1220915	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.8		10.00		97.6	70	130			

### Qualifiers:

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D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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 Detection Limit  
W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C33

08-Dec-16

Client: Souder, Miller and Associates

Project: BIYA 185 Line Leak

Sample ID	MB-28848		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 28848		RunNo: 38984					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219303		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	910		1000		91.5	68.3	144			

Sample ID	LCS-28848		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 28848		RunNo: 38984					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219304		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.8	74.6	123			
Surr: BFB	990		1000		99.0	68.3	144			

Sample ID	1611C33-021AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	SB6-10		Batch ID: 28848		RunNo: 38984					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219314		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.93	14.08	48.1	61.3	150			S
Surr: BFB	1000		997.0		100	68.3	144			

Sample ID	1611C33-021AMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	SB6-10		Batch ID: 28848		RunNo: 38984					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219315		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	36	4.8	24.13	14.08	91.8	61.3	150	32.6	20	R
Surr: BFB	980		965.3		102	68.3	144	0	0	

Sample ID	MB-28847		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 28847		RunNo: 38983					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219357		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	890		1000		88.9	68.3	144			

Sample ID	LCS-28847		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	28847		RunNo:	38983				
Prep Date:	11/23/2016		Analysis Date:	11/28/2016		SeqNo:	1219358		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

### Qualifiers:

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D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
R RPD outside accepted recovery limits  
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 Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C33

08-Dec-16

Client: Souder, Miller and Associates

Project: BIYA 185 Line Leak

Sample ID	<b>LCS-28847</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>		Batch ID: <b>28847</b>		RunNo: <b>38983</b>					
Prep Date:	<b>11/23/2016</b>		Analysis Date: <b>11/28/2016</b>		SeqNo: <b>1219358</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.1	74.6	123			
Surr: BFB	960		1000		96.3	68.3	144			

Sample ID	<b>1611C33-001AMS</b>		SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>SB7-7</b>		Batch ID: <b>28847</b>		RunNo: <b>38983</b>					
Prep Date:	<b>11/23/2016</b>		Analysis Date: <b>11/28/2016</b>		SeqNo: <b>1219362</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.43	1.244	93.5	61.3	150			
Surr: BFB	940		937.2		100	68.3	144			

Sample ID	<b>1611C33-001AMSD</b>		SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>SB7-7</b>		Batch ID: <b>28847</b>		RunNo: <b>38983</b>					
Prep Date:	<b>11/23/2016</b>		Analysis Date: <b>11/28/2016</b>		SeqNo: <b>1219363</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.39	1.244	111	61.3	150	20.0	20	
Surr: BFB	970		975.6		99.2	68.3	144	0	0	

### 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  
R RPD outside accepted recovery limits  
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 Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C33

08-Dec-16

Client: Souder, Miller and Associates

Project: BIYA 185 Line Leak

Sample ID	MB-28848		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 28848		RunNo: 38984					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219341		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								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	80	120			

Sample ID	LCS-28848		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 28848		RunNo: 38984					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219342		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.9	75.2	115			
Toluene	0.94	0.050	1.000	0	94.3	80.7	112			
Ethylbenzene	0.88	0.050	1.000	0	87.9	78.9	117			
Xylenes, Total	2.6	0.10	3.000	0	88.3	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID	MB-28847		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 28847		RunNo: 38983					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219387		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	LCS-28847		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 28847		RunNo: 38983					
Prep Date:	11/23/2016		Analysis Date: 11/28/2016		SeqNo: 1219388		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		114	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  
R RPD outside accepted recovery limits  
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 Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C33

08-Dec-16

Client: Souder, Miller and Associates

Project: BIYA 185 Line Leak

Sample ID	lcs-28847		SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS		Batch ID: 28847		RunNo: 39098					
Prep Date:	11/23/2016		Analysis Date: 12/1/2016		SeqNo: 1222991		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.1	70	130			
Toluene	0.93	0.050	1.000	0	93.5	70	130			
Ethylbenzene	0.97	0.050	1.000	0	97.5	70	130			
Xylenes, Total	3.1	0.10	3.000	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		89.3	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		114	70	130			
Surr: Toluene-d8	0.47		0.5000		93.8	70	130			

Sample ID	mb-28847		SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List					
Client ID:	PBS		Batch ID: 28847		RunNo: 39098					
Prep Date:	11/23/2016		Analysis Date: 12/1/2016		SeqNo: 1222992		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								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.8	70	130			
Surr: Dibromofluoromethane	0.60		0.5000		120	70	130			
Surr: Toluene-d8	0.49		0.5000		97.4	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
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



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Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: SMA-FARM

Work Order Number: 1611C33

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

11/23/2016 7:40:00 AM

Completed By: Lindsay Mangin

11/23/2016 8:02:59 AM

Reviewed By:

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. 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: \_\_\_\_\_

### Special Handling (if applicable)

16. 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: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			



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TPH (Method 418.1)  
EDB (Method 504.1)  
PAH's (8310 or 8270 SIMS)  
RCRA 8 Metals  
Anions ( $F^-$ ,  $Cl^-$ ,  $NO_3^-$ ,  $NO_2^-$ ,  $PO_4^{3-}$ ,  $SO_4^{2-}$ )  
8081 Pesticides / 8082 PCB's  
8260B (VOA)  
8270 (Semi-VOA)  
*300.0 Chlorides / set*  
*(note)*

possibility. Any sub-contracted data will be clearly notated on the analytical report.

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.