

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	2RP-5425
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Matador Resources	OGRID 228937
Contact Name: John Hurt	Contact Telephone 972-371-5200
Contact email: JHurt@matadorresources.com	Incident # (assigned by OCD)
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

Location of Release Source

Latitude 32.21153397

Longitude -104.17421768
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Marathon Black River 15-10 Waterline	Site Type: ROW
Date Release Discovered: 4/20/2019	API# (if applicable) N/A

Unit Letter	Section	Township	Range	County
O&P	15	24S	27E	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 225 bbls	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

Carbon plug on the meter run blew out

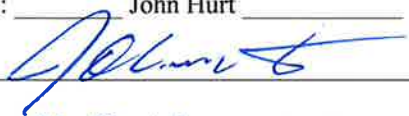
State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? >25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA (Melodie Sanjari) to NMOCD District II on 4/21/2019 via email.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>John Hurt</u>	Title: <u>RES Specialist</u>
Signature: 	Date: <u>7/19/19</u>
email: <u>JHurt@matadorresources.com</u>	Telephone: <u>972-371-5200</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

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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?	<u>70</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 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.

State of New Mexico
Oil Conservation Division

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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: John Hurt Title: RES Specialist

Signature:  Date: 7/19/19

email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: _____ Date: _____

Incident ID	
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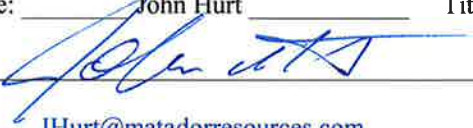
Closure

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: John Hurt Title: RES Specialist
Signature:  Date: 7/19/19
email: JHurt@matadorresources.com Telephone: 972-371-5200

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



July 3, 2019

#5E27961-BG11

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

SUBJECT: Remediation Closure Report for the Matador Black River 15-10 Waterline Release (2RP-5425), Malaga, New Mexico

To Whom it May Concern:

On behalf of Matador Resources, Souder, Miller & Associates (SMA) has prepared this Remediation Closure Report that describes the remediation of a release related to oil and gas production activities at the Matador Black River 15-10 Waterline Right of Way (ROW). The site is in Units O & P, Section 15, Township 24S, Range 27E, Eddy 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 information regarding the release.

Table 1: Release Information and Closure Criteria			
Name	Black River 15-10 Waterline	Company	Matador Resources
API Number	N/A	Location	32.21153397 -104.17421768
Incident Number	2RP-5425		
Estimated Date of Release	4/20/2019	Date Reported to NMOCD	4/21/2019
Surface Owner	State	Reported To	NMOCD & NMSLO
Source of Release	Carbon Plug on the Meter Reader		
Released Volume	225 bbls	Released Material	Produced Water
Recovered Volume	--	Net Release	225 bbls
NMOCD Closure Criteria	51-100 feet to groundwater		
SMA Response Dates	4/23/2019, 5/6/2019, 6/10/2019 – 6/11/2019		

1.0 Background

On April 20, 2019, a release was discovered at the site due to failure on a carbon plug on a meter reader. Initial response activities were conducted by operator, and included source elimination and site stabilization activities. Figures 1 and 2 illustrate the vicinity and site location, and Figures 3a and 3b illustrate the release location, sample points and closure sample points. The C-141 forms are included in Appendix A.

2.0 Site Information and Closure Criteria

The Marathon Black River 15-10 ROW is located approximately five miles west of Malaga, New Mexico on State land at an elevation of approximately 3239 feet above mean sea level (amsl).

Based upon the New Mexico Office of the State Engineer (NMOSE) online water well database, the United States Geological Survey (USGS) online water well database (Appendix B) and SMA's local knowledge, depth to groundwater in the area is estimated to be 70 feet below grade surface (bgs). There are no known water sources within ½-mile of the location, according to the NMOSE online water well database (https://gis.ose.state.nm.us/gisapps/ose_pod_locations/; accessed 4/30/2019). The nearest significant watercourse is a Canal #3798, located approximately 1300 feet to the southeast. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Since the release occurred in an otherwise undeveloped right-of-way, and not an "exploration, development, production or storage site", NMOCD requires the top four feet to be remediated to reclamation standard (19.15.29.13.D(1) NMAC). However, all other closure criteria for this site is for between 51-100 ft bgs. Pertinent well data is attached in Appendix B.

3.0 Release Characterization and Remediation Activities

On April 23 and May 6, 2019, SMA personnel arrived on site in response to the release associated with the Black River 15-10 ROW. SMA performed site delineation activities by collecting soil samples around the release site and throughout the visibly stained area. Soil samples were field screened for chloride using an electrical conductivity (EC) meter.

A total of eight sample locations (L1-L7 & BG1) were investigated using a hand-auger, to depths up to two feet bgs. Sample locations L2 and L7 represent the area affected by surficial overspray. A minimum of two samples were collected at each sampling location and field-screened using the method above. A total of twelve samples were collected for laboratory analysis for a combination of 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. Table 3 itemizes the samples and field-screening results as well as identifying any variances from the typical specification of two samples per boring. Locations for all samples are depicted on Figure 3a.

Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix C).

On June 10th and June 11th 2019, SMA returned to the site to oversee 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. The walls and base were excavated until field screening results indicated that the NMOCD Closure Criteria would be met.

On June 11, 2019, SMA conducted confirmation sampling of the walls and base of the excavation. The areas around sample locations L1, L4 and L6 were excavated to two feet bgs, the areas around sample

locations L2 and L7 were excavated to 0.5 feet bgs, the area around sample location L3 was excavated to 2.5 feet and the area around sample location L5 was excavated to one foot.

The confirmation samples were collected from within the excavation in accordance with a systematic sampling approach, as defined by SW846 using Gilbert, 1987 equation 5.2.3 for Stratified Random Sampling (Appendix C). This systematic method meets the EPAs data quality assessment standards (DQA) for composite sampling. Confirmation samples were comprised of five-point composites of the base (BH1-BH5) and walls (SW1 - SW8). A photo log of the open excavation can be found in Appendix E.

A total of thirteen samples were collected for laboratory analysis for total chloride using EPA Method 300.0; BTEX using EPA Method 8021B; and 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 Hall Environmental Analysis Laboratory in Albuquerque, New Mexico (Appendix D).

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

In addition to meeting the applicable Closure Criteria, the top four (4) feet meet the requirements of 19.15.29.12.B(3) NMAC. 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 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 Melodie R. Sanjari at 574-370-9782 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Melodie Sanjari
Staff Scientist



Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Surface Water Radius Map

Figure 3a: Site and Sample Location Map with Excavation Depths

Figure 3b: Closure Sample Location Map

Tables:

Table 2: NMOCD Closure Criteria Justification

Table 3: Summary of Sample Results

Appendices:

Appendix A: C141 Forms

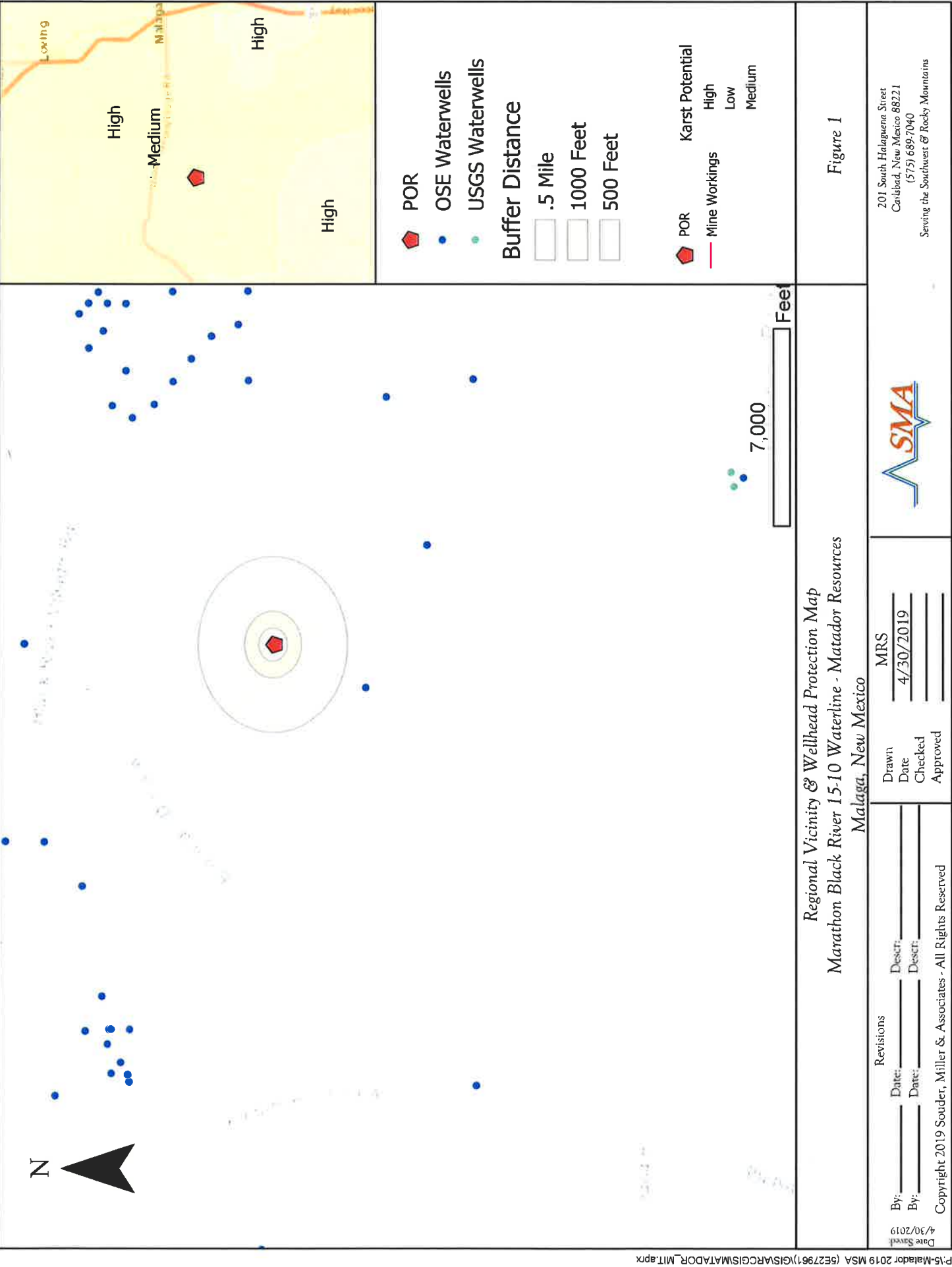
Appendix B: NMOSE Wells Report

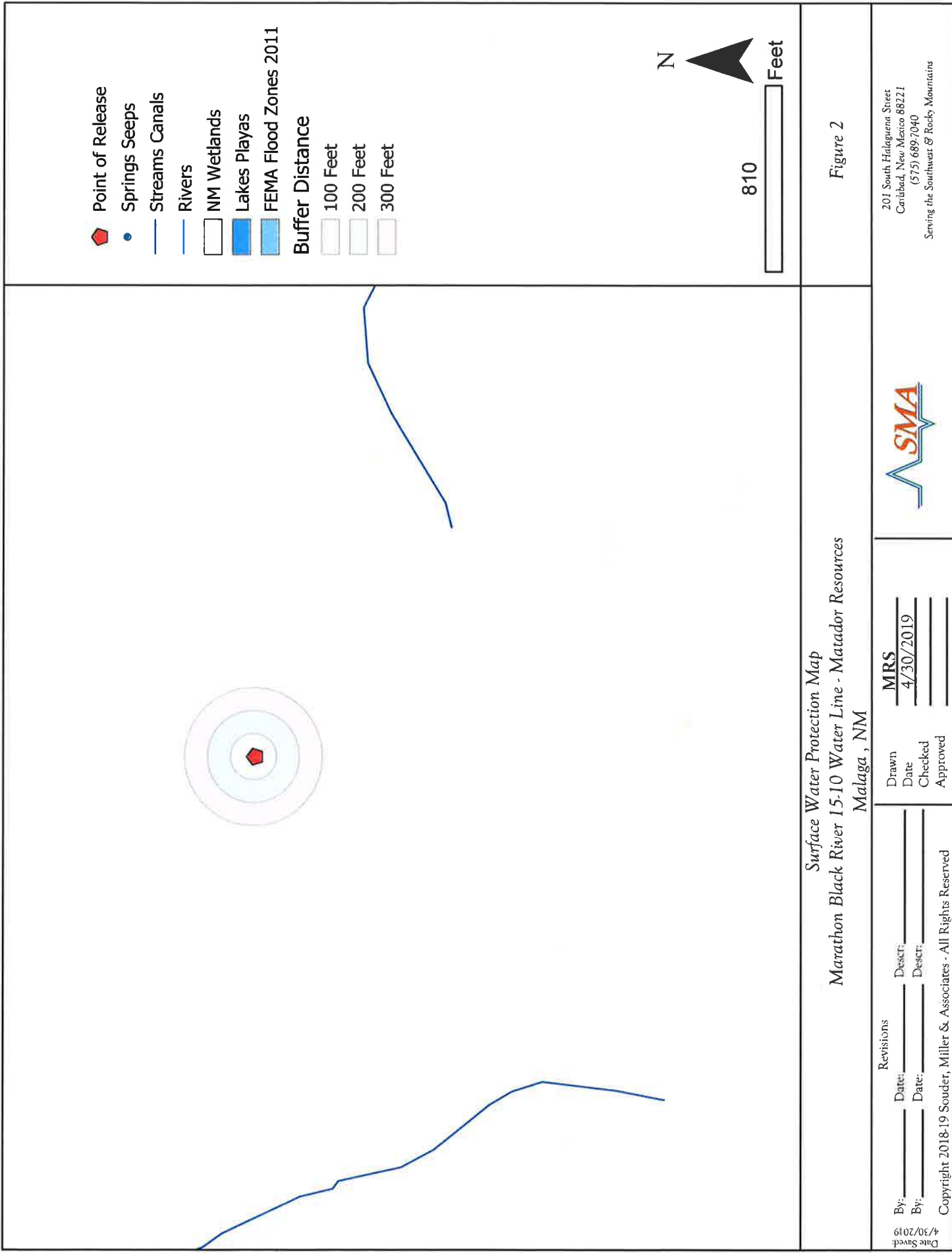
Appendix C: VSP Sampling Protocol

Appendix D: Laboratory Analytical Reports

Appendix E: Photo Log

FIGURES





Surface Water Protection Map
Marathon Black River 15-10 Water Line - Matador Resources
Malaga, NM

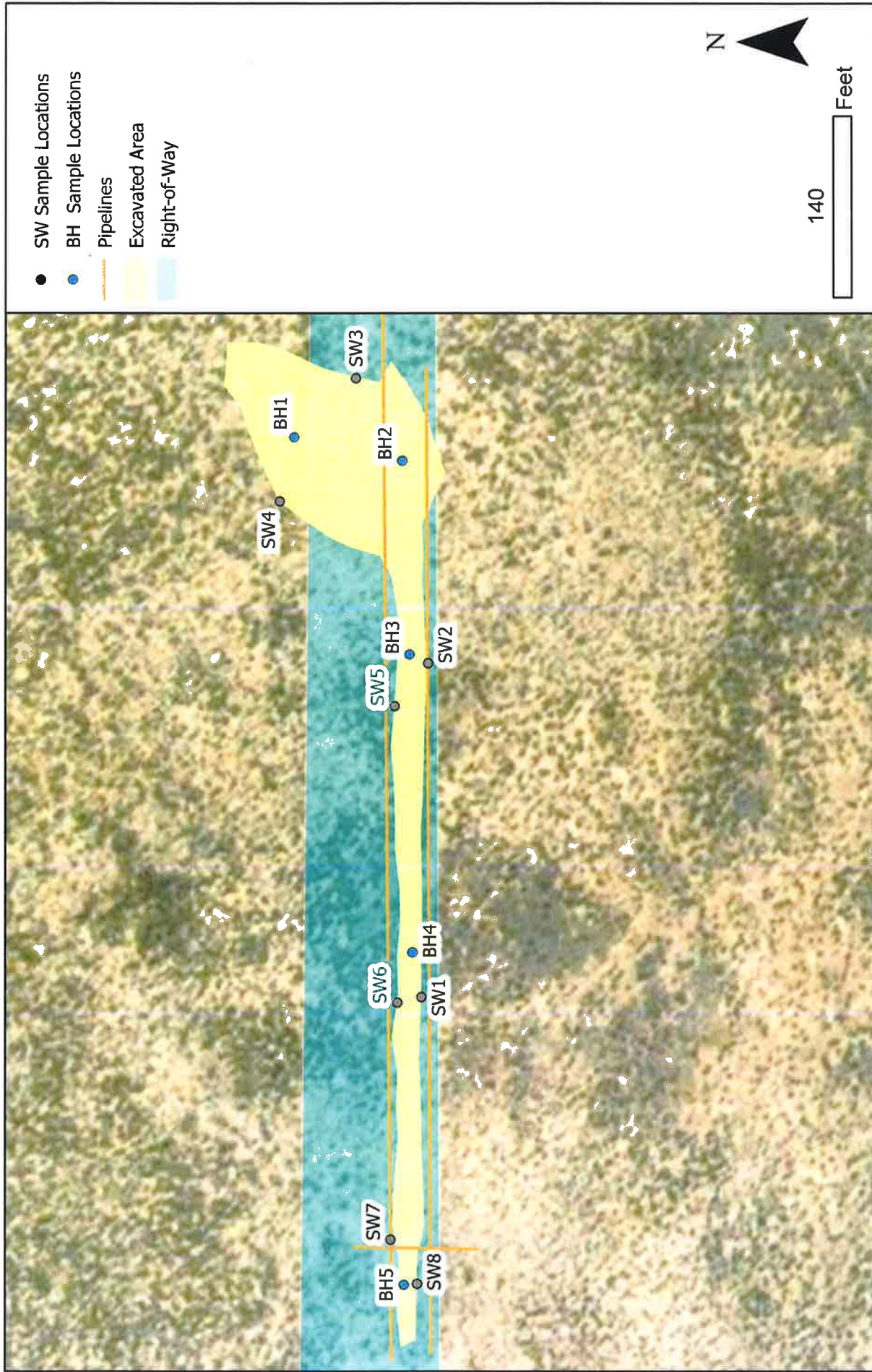
Figure 2

Date Saved: 4/30/2019	Revisions		Drawn Date	Checked Approved	MRS 4/30/2019
	By: _____	Descr: _____			
	By: _____	Descr: _____			




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





Closure Sample Location Map
Marathon Black River 15-10 ROW- Matador Resources
Malaga New Mexico

Date Saved: 6/6/2019 By: _____ Date: _____ Descr: _____ By: _____ Date: _____ Descr: _____ Copyright 2018-19 Souder, Miller & Associates - All Rights Reserved	Revisions	Drawn _____ Date _____ Checked _____ Approved _____ 6/12/2019		201 South Halagueno Street Carlsbad, New Mexico 86221 (575) 689-7040 Serving the Southwest & Rocky Mountains
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TABLES

Table 2:
NMOCD Closure Criteria

Matador Resources
Black River 15-10 Waterline

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	70	NMOCD & OSE
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)	1300' & 1890'	Canal #3298 (below) & Stream 3875 (finger of Black River)
Horizontal Distance to Nearest Significant Watercourse (ft)	1300'	Northwest of Canal #3798 (7125' South of Black River)

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		600	100		50	10
51' to 100'	x	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 (med. Karst)					
within a 100-year floodplain?	no					

Table 3:
Summary of Sample Results

Matador Resources
Black River 15-10 Waterline

Sample ID	Sample Date	Depth (feet bgs)	Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg	Field screening mg/kg
NMOCD Closure Criteria for Top 4 Feet				50	10	1000			100	600	
INITIAL SAMPLING											
L1	4/23/2019	0.5	excavated	--	--	--	--	--	--	--	7030
	4/23/2019	1	excavated	<0.217	<0.024	<4.8	<9.8	<49	<63.6	2200	2020
	4/23/2019	2	excavated	--	--	--	--	--	--	400	590
L2	4/23/2019	0.5	excavated	<0.221	<0.025	<4.9	<9.8	<49	<63.7	330	360
	4/23/2019	1	in-situ	--	--	--	--	--	--	--	550
	4/23/2019	2	in-situ	--	--	--	--	--	--	--	560
L3	4/23/2019	0.5	excavated	--	--	--	--	--	--	--	8130
	4/23/2019	1	excavated	--	--	<4.8	<9.5	<47	<52.3	7900	6800
	4/23/2019	2	excavated	--	--	--	--	--	--	910	1300
	5/6/2019	2.5	excavated	--	--	--	--	--	--	82	<120
L4	4/23/2019	0.5	excavated	--	--	--	--	--	--	--	9370
	4/23/2019	1	excavated	<0.225	<0.025	<5.0	<9.8	<49	<63.8	4900	6640
	4/23/2019	2	excavated	--	--	--	--	--	--	630	2370
L5	4/23/2019	0.5	excavated	<0.225	<0.025	<5.0	<10	<50	<65	<60	270
	4/23/2019	1	in-situ	--	--	--	--	--	--	--	255
	4/23/2019	2	in-situ	--	--	--	--	--	--	--	200
L6	4/23/2019	0.5	excavated	--	--	--	--	--	--	--	5440
	4/23/2019	1	excavated	--	--	<4.9	<9.7	<49	<63.6	2000	2240
	4/23/2019	2	excavated	--	--	--	--	--	--	<60	290
L7	4/23/2019	0.5	excavated	--	--	<4.9	<9.6	<48	<62.5	<60	180
	4/23/2019	1	in-situ	--	--	--	--	--	--	--	160
	4/23/2019	2	in-situ	--	--	--	--	--	--	--	160
BG1	4/23/2019	1	--	--	--	--	--	--	--	--	<120
CLOSURE SAMPLING											
BH1	6/11/2019	0.5	--	<0.224	<0.025	<5.0	<9.7	<48	<62.7	<60	<130
BH2	6/11/2019	2	--	<0.221	<0.025	<4.9	<9.8	<49	<63.7	130	150
BH3	6/10/2019	2.5	--	<0.225	<0.025	<5.0	<9.6	<48	<62.6	<60	<130
BH4	6/10/2019	2	--	<0.219	<0.024	<4.9	<9.5	<47	<61.4	520	550
BH5	6/10/2019	2	--	<0.224	<0.025	<5.0	<9.6	<48	<62.6	79	310
SW1	6/10/2019	sidewall	--	<0.225	<0.025	<5.0	<9.6	<48	<62.6	290	490
SW2	6/10/2019	sidewall	--	<0.225	<0.025	<5.0	11	<50	11	390	450
SW3	6/11/2019	sidewall	--	<0.225	<0.025	<5.0	<10	<50	<65	330	330
SW4	6/11/2019	sidewall	--	<0.224	<0.025	<5.0	<9.8	<49	<63.8	290	300
SW5	6/10/2019	sidewall	--	<0.221	<0.025	<4.9	<9.6	<48	<62.5	<60	<130
SW6	6/10/2019	sidewall	--	<0.222	<0.025	<4.9	<10	<50	<64.9	440	530
SW7	6/10/2019	sidewall	--	<0.224	<0.025	<5.0	<9.9	<49	<63.9	75	200
SW8	6/10/2019	sidewall	--	<0.222	<0.025	<4.9	<9.9	<50	<64.8	<60	<130

"--" = Not Analyzed

* = per Reclamation Standard (19.15.29.13.D(1) NMAC)

APPENDIX A
FORM C141

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Matador Resources	OGRID 228937
Contact Name: John Hurt	Contact Telephone 972-371-5200
Contact email: JHurt@matadorresources.com	Incident # (assigned by OCD)
Contact mailing address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240	

Location of Release Source

Latitude 32.21153397

Longitude -104.17421768
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Marathon Black River 15-10 Waterline	Site Type: ROW
Date Release Discovered: 4/20/2019	API# (if applicable) N/A

Unit Letter	Section	Township	Range	County
O&P	15	24S	27E	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 225 bbls	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
Carbon plug on the meter run blew out


State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? >25 bbls
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by SMA (Melodie Sanjari) to NMOCD District II on 4/21/2019 via email.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>John Hurt</u>	Title: <u>RES Specialist</u>
Signature: 	Date: <u>5/2/19</u>
email: <u>JHurt@matadorresources.com</u>	Telephone: <u>972-371-5200</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

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 Sub-Code		Q Q Q							X	Y	Distance	Depth Well	Depth Water	Water Column	
	basin	County	64	16	4	Sec	Tws	Rng								
C 01452	C	ED				22	24S	27E	577435	3563175*		1078	95	70	25	
C 00347	CUB	ED		1	1	13	24S	27E	580010	3565479*		2544	60	30	30	
C 03147	C	ED	3	3	3	12	24S	27E	579885	3565715		2571	140			
C 04147 POD1	CUB	ED	4	1	3	24	24S	27E	580101	3562969		2582	35			
C 01943	C	ED			1	13	24S	27E	580221	3565275*		2637	30	25	5	
C 00342	C	CUB	ED		4	1	13	24S	27E	580432	3565080*		2761	2565		
C 03260 POD1	C	ED	3	3	3	12	24S	27E	579995	3565935		2792	80	56	24	
C 03260 POD2	O	C	ED	1	3	3	12	24S	27E	580100	3565984		2905	80	56	24
C 03145	C	ED	3	1	4	13	24S	27E	580749	3564579*		2954	103	40	63	
C 00850	C	ED			2	3	09	24S	27E	575595	3566223*		3020	108	35	73
C 00821	C	ED			3	2	09	24S	27E	575996	3566635*		3057	97	50	47
C 01721	C	ED				1	25	24S	27E	580271	3562033*		3258	170		
C 02976	C	ED	4	2	3	12	24S	27E	580519	3566195*		3366	57	27	30	
C 00364	C	CUB	ED		1	2	09	24S	27E	575997	3567043*		3393	2270		
C 03037	C	ED	4	3	4	12	24S	27E	580930	3565795*		3502	116	25	91	
C 01366	CUB	ED			4	08	24S	27E	574590	3566003*		3708	60	35	25	
C 03740 POD1	C	ED	4	4	4	12	24S	27E	581283	3565795		3819	340			
C 00631	C	ED	3	3	4	08	24S	27E	574288	3565701*		3845	50	24	26	
C 00516	CUB	ED	1	3	4	08	24S	27E	574288	3565901*		3929	105	36	69	
C 00516 CLW201016	O	CUB	ED	1	3	4	08	24S	27E	574288	3565901*		3929	62		
C 00516 CLW308590	O	CUB	ED	1	3	4	08	24S	27E	574288	3565901*		3929	105	36	69
C 00516 S	CUB	ED	1	3	4	08	24S	27E	574288	3565901		3929	50	17	33	

*UTM location was derived from PLSS - see Help

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

Average Depth to Water: **37 feet**

Minimum Depth: **17 feet**

Maximum Depth: **70 feet**

Record Count: 22

UTMNAD83 Radius Search (in meters):

Easting (X): 577821.1

Northing (Y): 3564182

Radius: 4000



USGS Home
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Search USGS

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:


Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#) 

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320959104093001

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 320959104093001 25S.27E.02.21211

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°09'59", Longitude 104°09'30" NAD27

Land-surface elevation 3,145.0 feet above NGVD29

This well is completed in the Azotea Tongue of Seven Rivers Formation (313AZOT) local aquifer.

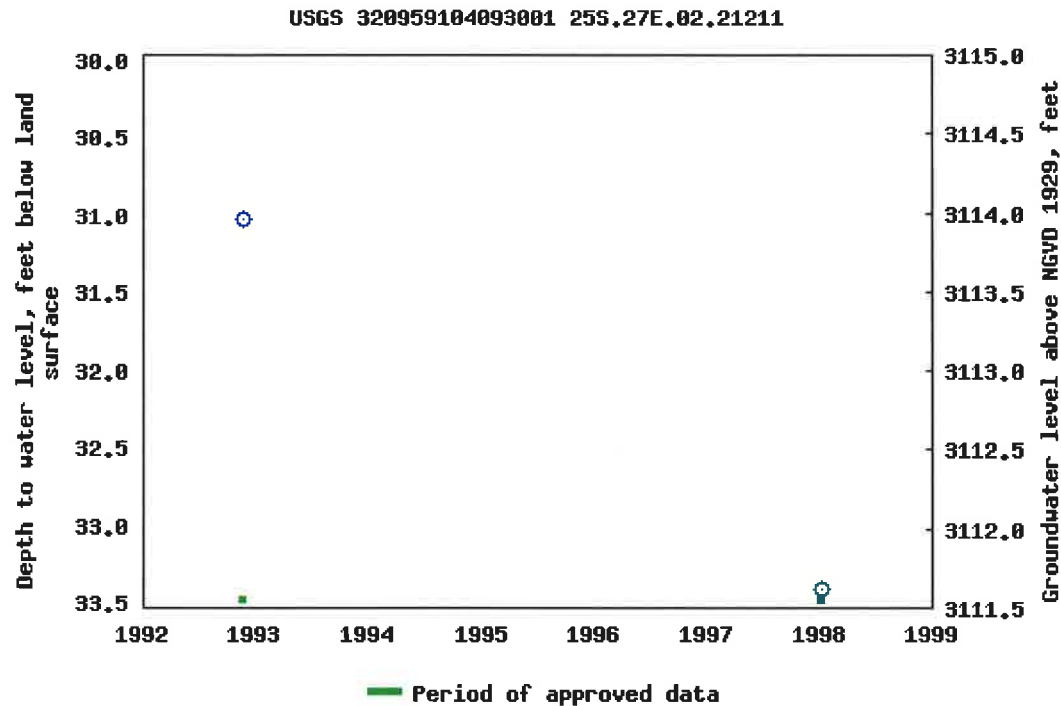
Output formats

[Table of data](#)

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Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-04-30 13:18:27 EDT

0.99 0.9 nadww01



APPENDIX C
VSP SAMPLING PROTOCOL

VSP Sample Design Report for Using Stratified Sampling to Estimate the Population Proportion

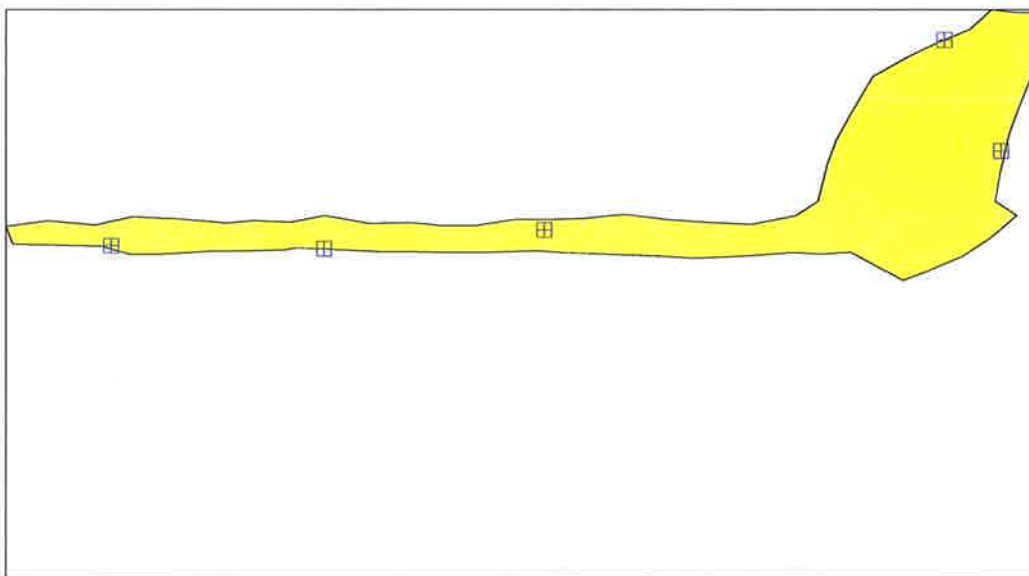
Summary

This report summarizes the stratified sampling design used, associated statistical assumptions, as well as general guidelines for conducting post-sampling data analysis. Sampling plan components presented here include how many sampling locations to choose and where within the sampling area to collect those samples. The type of medium to sample (i.e., soil, groundwater, etc.) and how to analyze the samples (in-situ, fixed laboratory, etc.) are addressed in other sections of the sampling plan. It is important to note that the decision for sample size calculation is determined for the combined strata, rather than any individual strata.

The following table summarizes the proportion stratified sampling design developed. A figure that shows sampling locations in the field and a table that lists sampling location coordinates are also provided below.

SUMMARY OF SAMPLING DESIGN	
Primary Objective of Design	Estimate the population proportion of all strata combined
Criteria for Determining Total Number of Samples	Achieve pre-specified precision of the estimated proportion for specified stratum costs, but no restriction on total costs
Sample Placement (Location) in the Field	Random sampling within grids within each stratum
Formula for calculating number of sampling locations	From Gilbert (1987, page 51)
Method for calculating number of sampling locations in each stratum	Optimal Allocation
Calculated total number of samples	5
Stratum 1	5
Total area of all strata	3352.45 ft ²

^a Including measurement analyses and fixed overhead costs. See the Cost of Sampling section for an explanation of the costs presented here.



Area: Area 1

X Coord	Y Coord	Label	Value	Type	Historical	Sample Area
-11596804.5105	3791112.5827			Random in Grid		
-11596755.7195	3791111.9270			Random in Grid		
-11596705.2505	3791116.1968			Random in Grid		
-11596600.0888	3791134.2321			Random in Grid		
-11596613.1274	3791159.6474			Random in Grid		

Primary Sampling Objective

The primary purpose of sampling at this site is to estimate the proportion for the entire site, i.e., for all strata combined, such that the estimated proportion has the minimum possible standard deviation under the condition that the sampling and measurement costs cannot exceed a specified amount. Preexisting information was used to divide the site into 1 non-overlapping strata that were expected to be more homogeneous internally than for the entire site (all strata combined). The expected variability of values within each stratum was estimated or approximated, and the stratum weights, W_h , were determined so that the total number of samples could be allocated appropriately among the strata.

Number of Total Samples: Calculation Equation and Inputs

The total number of samples is computed to achieve the pre-specified precision of the estimated population proportion for specified stratum costs, but no restriction on total costs. *Note that the calculation is for the total number of samples, i.e., for combined strata, rather than individual strata.*

The formula used to calculate the total number of samples is:

$$n = \frac{\left(\sum_{h=1}^L W_h \sqrt{P_h(1-P_h)} \sqrt{c_h} \right) \sum_{h=1}^L \frac{W_h \sqrt{P_h(1-P_h)}}{\sqrt{c_h}}}{V + \frac{1}{N} \sum_{h=1}^L W_h P_h (1-P_h)}$$

where

L is the number of strata, $h=1,2,\dots,L$,

P_h is the estimated proportion of measurements in stratum h ,

$W_h = N_h / N$ is the weight associated with stratum h ,

N_h is the total number of possible sampling locations (units) in stratum h ,

N is the total number of possible units in all strata combined, $N = \sum_{h=1}^L N_h$

V is the pre-specified variance or precision, and

c_h is the cost of collecting and measuring a sample in stratum h .

The values of these inputs that result in the calculated number of sampling locations are:

Parameter	Stratum
	1
P_h	0.2
c_h	
W_h	3352.45

Parameter	Input Value
V	1

Allocation of Samples to Strata

The total number of samples is allocated to the individual strata on an optimal basis using the formula:

$$n_h = n \frac{N_h \sqrt{P_h(1-P_h)} / \sqrt{C_h}}{\sum_{h=1}^L N_h \sqrt{P_h(1-P_h)} / \sqrt{C_h}}$$

where

n_h is the number of samples allocated to stratum h ,

L is the number of strata,

N_h is the total number of units in stratum h ,

P_h is the proportion in stratum h ,

C_h is the cost per population unit in stratum h .

n is the total number of units sampled in all strata,
$$n = \sum_{h=1}^L n_h$$

Using this formula, the number of samples allocated to each stratum is:

Stratum	Number of Samples
1	5
Total Samples	5

Method for Determining Sampling Locations

Five methods for determining sample locations are provided in VSP: 1) simple random sampling, 2) random sampling within grids, 3) systematic sampling with a random start, 4) systematic sampling with a fixed start and 5) adaptive grid sampling. One may use a different method for each stratum, based on the conceptual site model and decision to be made for a given stratum. For this site, sample locations were chosen using random sampling within grids in each stratum.

Locating the sample points using a random sampling within grids method combines appealing aspects of both the random and the systematic grid methods. It provides data that are separated by many distances, providing information about the spatial structure of the potential contamination. It also ensures good coverage of the entire site, although not as completely as if systematic grid sampling were performed.

Statistical Assumptions

The assumptions associated with the formulas for computing the number of samples are:

1. The estimated stratum proportions, P_h , are reasonable and representative of the stratum populations being sampled.
2. The sampling locations are selected using simple random sampling.
3. The stratum costs, C_h , and the fixed cost C_0 , are accurate.

The first and third assumptions will be assessed in a post data collection analysis. The second assumption, although not strictly valid for strata where systematic grid sampling was used rather than simple random sampling, is not expected to significantly affect conclusions of the study because (1) the gridded sample locations were selected based on a random start and (2) any patterns of contamination in the field that may exist are not expected to coincide with the regularity of the grid sampling pattern.

Recommended Data Analysis Activities

Post data collection activities generally follow those outlined in EPA's Guidance for Data Quality Assessment (EPA, 2000). The data analysts will become familiar with the context of the problem and goals for data collection and assessment. The data will be verified and validated before being subjected to statistical or other analyses. Graphical and analytical tools will be used to verify to the extent possible the assumptions of any statistical analyses that are performed as well as to achieve a general understanding of the data. The data will be assessed to determine whether they are adequate in both quality and quantity to support the primary objective of sampling.

Estimates for the proportion of the population values will be calculated using the formulas appropriate for stratified sampling; these formulas are found in EPA QA/G-5S (EPA, 2001). Results of the exploratory and quantitative assessments of the data will be reported, along with conclusions that may be supported by them.

This report was automatically produced* by Visual Sample Plan (VSP) software version 7.11b.

This design was last modified 6/4/2019 3:26:45 PM.

Software and documentation available at <http://vsp.pnnl.gov>

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* - The report contents may have been modified or reformatted by end-user of software.

APPENDIX D
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*

May 09, 2019

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

RE: Black River ROW (BR-ROW)

OrderNo.: 1904C24

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 14 sample(s) on 4/25/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued May 2, 2019.

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. 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. All samples are reported as received unless otherwise indicated.

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

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 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates**Client Sample ID:** L1-1'**Project:** Black River ROW (BR-ROW)**Collection Date:** 4/23/2019 7:00:00 AM**Lab ID:** 1904C24-001**Matrix:** SOIL**Received Date:** 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	2200	150		mg/Kg	50	5/2/2019 2:38:04 AM	44629
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/30/2019 1:06:21 AM	44564
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/30/2019 1:06:21 AM	44564
Surr: DNOP	89.2	70-130		%Rec	1	4/30/2019 1:06:21 AM	44564
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/27/2019 5:27:11 PM	44546
Surr: BFB	90.7	73.8-119		%Rec	1	4/27/2019 5:27:11 PM	44546
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	4/27/2019 5:27:11 PM	44546
Toluene	ND	0.048		mg/Kg	1	4/27/2019 5:27:11 PM	44546
Ethylbenzene	ND	0.048		mg/Kg	1	4/27/2019 5:27:11 PM	44546
Xylenes, Total	ND	0.097		mg/Kg	1	4/27/2019 5:27:11 PM	44546
Surr: 4-Bromofluorobenzene	89.7	80-120		%Rec	1	4/27/2019 5:27:11 PM	44546

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: L1-2'

Project: Black River ROW (BR-ROW)

Collection Date: 4/23/2019 7:10:00 AM

Lab ID: 1904C24-002

Matrix: SOIL

Received Date: 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	400	60		mg/Kg	20	4/30/2019 11:31:44 PM	44629

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: L2-0.5'

Project: Black River ROW (BR-ROW)

Collection Date: 4/23/2019 7:30:00 AM

Lab ID: 1904C24-003

Matrix: SOIL

Received Date: 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	330	60		mg/Kg	20	4/30/2019 11:44:09 PM	44629
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/30/2019 1:28:45 AM	44564
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/30/2019 1:28:45 AM	44564
Surr: DNOP	85.7	70-130		%Rec	1	4/30/2019 1:28:45 AM	44564
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/27/2019 5:50:45 PM	44546
Surr: BFB	88.3	73.8-119		%Rec	1	4/27/2019 5:50:45 PM	44546
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	4/27/2019 5:50:45 PM	44546
Toluene	ND	0.049		mg/Kg	1	4/27/2019 5:50:45 PM	44546
Ethylbenzene	ND	0.049		mg/Kg	1	4/27/2019 5:50:45 PM	44546
Xylenes, Total	ND	0.098		mg/Kg	1	4/27/2019 5:50:45 PM	44546
Surr: 4-Bromofluorobenzene	86.7	80-120		%Rec	1	4/27/2019 5:50:45 PM	44546

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

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

Analytical Report

Lab Order 1904C24

Date Reported: 5/9/2019

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller & Associates**Client Sample ID:** L3-1'**Project:** Black River ROW (BR-ROW)**Collection Date:** 4/23/2019 8:00:00 AM**Lab ID:** 1904C24-005**Matrix:** SOIL**Received Date:** 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	7900	300		mg/Kg	100	5/2/2019 2:50:28 AM	44629
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/7/2019 3:23:18 PM	44736
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/7/2019 3:23:18 PM	44736
Surr: DNOP	96.2	70-130		%Rec	1	5/7/2019 3:23:18 PM	44736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/7/2019 6:03:52 PM	44737
Surr: BFB	99.1	73.8-119		%Rec	1	5/7/2019 6:03:52 PM	44737

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-2'

Project: Black River ROW (BR-ROW)

Collection Date: 4/23/2019 8:10:00 AM

Lab ID: 1904C24-006

Matrix: SOIL

Received Date: 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	910	60		mg/Kg	20	5/1/2019 12:08:59 AM	44629

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates**Client Sample ID:** L4-1'**Project:** Black River ROW (BR-ROW)**Collection Date:** 4/23/2019 8:20:00 AM**Lab ID:** 1904C24-007**Matrix:** SOIL**Received Date:** 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	4900	150		mg/Kg	50	5/2/2019 3:02:52 AM	44629
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/7/2019 3:45:23 PM	44736
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/7/2019 3:45:23 PM	44736
Surr: DNOP	98.9	70-130		%Rec	1	5/7/2019 3:45:23 PM	44736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/7/2019 6:27:14 PM	44737
Surr: BFB	94.1	73.8-119		%Rec	1	5/7/2019 6:27:14 PM	44737
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	5/7/2019 6:27:14 PM	44737
Toluene	ND	0.050		mg/Kg	1	5/7/2019 6:27:14 PM	44737
Ethylbenzene	ND	0.050		mg/Kg	1	5/7/2019 6:27:14 PM	44737
Xylenes, Total	ND	0.10		mg/Kg	1	5/7/2019 6:27:14 PM	44737
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	5/7/2019 6:27:14 PM	44737

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: L4-2'

Project: Black River ROW (BR-ROW)

Collection Date: 4/23/2019 8:30:00 AM

Lab ID: 1904C24-008

Matrix: SOIL

Received Date: 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	630	60		mg/Kg	20	5/1/2019 12:33:48 AM	44629

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: L5-0.5'

Project: Black River ROW (BR-ROW)

Collection Date: 4/23/2019 8:45:00 AM

Lab ID: 1904C24-009

Matrix: SOIL

Received Date: 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	5/1/2019 12:46:12 AM	44629
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/30/2019 1:50:56 AM	44564
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/30/2019 1:50:56 AM	44564
Surr: DNOP	89.9	70-130		%Rec	1	4/30/2019 1:50:56 AM	44564
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/27/2019 6:14:02 PM	44546
Surr: BFB	87.1	73.8-119		%Rec	1	4/27/2019 6:14:02 PM	44546
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	4/27/2019 6:14:02 PM	44546
Toluene	ND	0.050		mg/Kg	1	4/27/2019 6:14:02 PM	44546
Ethylbenzene	ND	0.050		mg/Kg	1	4/27/2019 6:14:02 PM	44546
Xylenes, Total	ND	0.10		mg/Kg	1	4/27/2019 6:14:02 PM	44546
Surr: 4-Bromofluorobenzene	86.2	80-120		%Rec	1	4/27/2019 6:14:02 PM	44546

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: L6-1'

Project: Black River ROW (BR-ROW)

Collection Date: 4/23/2019 9:00:00 AM

Lab ID: 1904C24-011

Matrix: SOIL

Received Date: 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	2000	60		mg/Kg	20	5/1/2019 1:23:27 AM	44629
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/7/2019 4:07:22 PM	44736
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/7/2019 4:07:22 PM	44736
Surr: DNOP	103	70-130		%Rec	1	5/7/2019 4:07:22 PM	44736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/7/2019 6:50:38 PM	44737
Surr: BFB	93.9	73.8-119		%Rec	1	5/7/2019 6:50:38 PM	44737

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

Qualifiers:

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: L6-2'

Project: Black River ROW (BR-ROW)

Collection Date: 4/23/2019 9:05:00 AM

Lab ID: 1904C24-012

Matrix: SOIL

Received Date: 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	5/1/2019 1:35:52 AM	44629

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

Qualifiers:

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates**Client Sample ID:** L7-0.5'**Project:** Black River ROW (BR-ROW)**Collection Date:** 4/23/2019 9:30:00 AM**Lab ID:** 1904C24-013**Matrix:** SOIL**Received Date:** 4/25/2019 9:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	5/1/2019 1:48:16 AM	44629
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	5/7/2019 4:29:32 PM	44736
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/7/2019 4:29:32 PM	44736
Surr: DNOP	84.7	70-130		%Rec	1	5/7/2019 4:29:32 PM	44736
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/7/2019 7:14:01 PM	44737
Surr: BFB	93.1	73.8-119		%Rec	1	5/7/2019 7:14:01 PM	44737

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

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904C24

09-May-19

Client: Souder, Miller & Associates
Project: Black River ROW (BR-ROW)

Sample ID: MB-44629	SampType: MBLK	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 44629	RunNo: 59543
Prep Date: 4/30/2019	Analysis Date: 4/30/2019	SeqNo: 2006282 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-44629	SampType: LCS	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 44629	RunNo: 59543
Prep Date: 4/30/2019	Analysis Date: 4/30/2019	SeqNo: 2006283 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14	1.5 15.00 0 96.5 90 110

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904C24

09-May-19

Client: Souder, Miller & Associates
Project: Black River ROW (BR-ROW)

Sample ID: LCS-44564	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 44564	RunNo: 59489								
Prep Date: 4/26/2019	Analysis Date: 4/29/2019	SeqNo: 2004951 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	107	63.9	124			
Surr: DNOP	5.2		5.000		105	70	130			

Sample ID: MB-44564	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 44564	RunNo: 59489								
Prep Date: 4/26/2019	Analysis Date: 4/29/2019	SeqNo: 2004952 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	11		10.00		108	70	130			

Sample ID: LCS-44584	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 44584	RunNo: 59489								
Prep Date: 4/29/2019	Analysis Date: 4/30/2019	SeqNo: 2005373 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		101	70	130			

Sample ID: MB-44584	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 44584	RunNo: 59489								
Prep Date: 4/29/2019	Analysis Date: 4/30/2019	SeqNo: 2005374 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	14		10.00		135	70	130			S

Sample ID: LCS-44736	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 44736	RunNo: 59674								
Prep Date: 5/6/2019	Analysis Date: 5/7/2019	SeqNo: 2012068 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.9	63.9	124			
Surr: DNOP	4.0		5.000		79.8	70	130			

Sample ID: MB-44736	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 44736	RunNo: 59674								
Prep Date: 5/6/2019	Analysis Date: 5/7/2019	SeqNo: 2012069 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904C24

09-May-19

Client: Souder, Miller & Associates
Project: Black River ROW (BR-ROW)

Sample ID: MB-44736	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 44736	RunNo: 59674								
Prep Date: 5/6/2019	Analysis Date: 5/7/2019	SeqNo: 2012069		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.0	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 Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904C24

09-May-19

Client: Souder, Miller & Associates
Project: Black River ROW (BR-ROW)

Sample ID: MB-44546	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 44546	RunNo: 59477								
Prep Date: 4/25/2019	Analysis Date: 4/27/2019	SeqNo: 2003610 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		89.5	73.8	119			

Sample ID: LCS-44546	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 44546	RunNo: 59477								
Prep Date: 4/25/2019	Analysis Date: 4/27/2019	SeqNo: 2003611 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	80.1	123			
Surr: BFB	1000		1000		103	73.8	119			

Sample ID: LCS-44737	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 44737	RunNo: 59701								
Prep Date: 5/6/2019	Analysis Date: 5/7/2019	SeqNo: 2012808 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	98.8	80.1	123			
Surr: BFB	1100		1000		106	73.8	119			

Sample ID: MB-44737	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 44737	RunNo: 59701								
Prep Date: 5/6/2019	Analysis Date: 5/7/2019	SeqNo: 2014347 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	930		1000		92.8	73.8	119			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1904C24

09-May-19

Client: Souder, Miller & Associates
Project: Black River ROW (BR-ROW)

Sample ID: MB-44546	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 44546	RunNo: 59477								
Prep Date: 4/25/2019	Analysis Date: 4/27/2019	SeqNo: 2003656 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	0.89		1.000		88.7	80	120			

Sample ID: LCS-44546	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 44546		RunNo: 59477							
Prep Date: 4/25/2019	Analysis Date: 4/27/2019		SeqNo: 2003657		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.2	80	120			
Toluene	0.95	0.050	1.000	0	94.7	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.4	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.8	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.3	80	120			

Sample ID: LCS-44737	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 44737	RunNo: 59701								
Prep Date: 5/6/2019	Analysis Date: 5/7/2019	SeqNo: 2014350			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	80.8	80	120			
Toluene	0.84	0.050	1.000	0	84.2	80	120			
Ethylbenzene	0.84	0.050	1.000	0	84.2	80	120			
Xylenes, Total	2.5	0.10	3.000	0	84.2	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.2	80	120			

Sample ID: MB-44737		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS		Batch ID: 44737		RunNo: 59701						
Prep Date: 5/6/2019		Analysis Date: 5/7/2019		SeqNo: 2014353			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	0.93		1.000		92.5	80	120			

Qualifiers:

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



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: 1904C24

RcptNo: 1

Received By: Erin Melendrez 4/25/2019 9:20:00 AM

Completed By: Leah Baca 4/25/2019 11:22:17 AM

Reviewed By: ENM

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 $>0^{\circ}\text{C}$ 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
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 ☐ Adjusted? ☐
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 (<2 or >12 unless noted)
- Checked by: JJC 4-25-19

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	4.9	Good	Yes			

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 Saturday

Project Name:

Black River Row (B2-Row)

Project #:

Project Manager:

Meredith Sanjar

Sampler: MSR

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including CF): 7.60C

Container Type and # for

Preservative Type

HEAL No. 1904C24

BTEX

TPH: 8015D (GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

CF, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Analysis Request

MTBE / TMB's (8021)

Remarks:

Matador

Per Method - 0.14

the following tests:

-5 - TPH

-7 - BTEX - TPH

-11 - TPH

-12 - TPH

-13 - TPH

-14 - TPH

-15 - TPH

-16 - TPH

-17 - TPH

-18 - TPH

-19 - TPH

-20 - TPH

-21 - TPH

-22 - TPH

-23 - TPH

-24 - TPH

-25 - TPH

-26 - TPH

-27 - TPH

-28 - TPH

-29 - TPH

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Chain-of-Custody Record

Client:

SMA Carlsbad.

Mailing Address:

Back River Row (BP - Row)

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Project Manager:

Melodie Semjan

Sampler:

WPS.

On Ice:

☒ Yes ☐ No

of Coolers:

Cooler Temp (including CF): 2.6°

Date

Time

Matrix

Sample Name

4/23

9:30

Qc1

67-0.5'

4

9:45

4

67-4'

Container Type and #

402

Preservative Type

HEAL No.

1904C24

-013

-014

Date:

Time:

Relinquished by:

Time:

Relinquished by:

Time:

Received by:

Time:

Via:

Date:

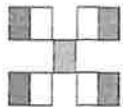
Received by:

Time:

Remarks:

Material

2/2



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTX / MTBE / TMBs (8021)
TPH:8015D(GRO / DRO / MRO)
8081 Pesticides/8082 PCBs
EDB (Method 504.1)
PAHs by 8310 or 8270SIMS
RCRA 8 Metals
Cl, F, Br, NO₃, NO₂, PO₄, SO₄
8260 (VOA)
8270 (Semi-VOA)
Total Coliform (Present/Absent)

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



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

May 10, 2019

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

RE: Black River 15-10

OrderNo.: 1905377

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/8/2019 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1905377

Date Reported: 5/10/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: L3-2.5

Project: Black River 15-10

Collection Date: 5/6/2019 2:00:00 PM

Lab ID: 1905377-001

Matrix: SOIL

Received Date: 5/8/2019 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	82	60		mg/Kg	20	5/9/2019 11:23:55 PM	44837

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1905377

10-May-19

Client: Souder, Miller & Associates

Project: Black River 15-10

Sample ID: MB-44837	SampType: mbk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 44837	RunNo: 59766								
Prep Date: 5/9/2019	Analysis Date: 5/9/2019	SeqNo: 2016270		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-44837	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 44837	RunNo: 59766								
Prep Date: 5/9/2019	Analysis Date: 5/9/2019	SeqNo: 2016271		Units: mg/Kg						
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	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		



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: 1905377

RcptNo: 1

Received By: Isaiah Ortiz

5/8/2019 8:50:00 AM

Completed By: Isaiah Ortiz

5/8/2019 10:01:02 AM

Reviewed By:

LB: DAD 5/8/19

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 $>0^{\circ}\text{C}$ 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
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: Adjusted? (<2 or >12 unless noted)
Checked by: DAD 5/8/19

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record

Client: SMA-Consbad.

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard

☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Project Manager:

Meedie Sanjari

Sampler: NRS

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including CF): 2.3°C

Container Type and #

402.

Preservative Type

HEAL No
1905377

-001

Sample Name

L3-2.5'

Date

5/6 2:00

Time

Matrix

Date: 5/6.

Relinquished by: M Sanjari

Date: 5/6/19

Relinquished by: [Signature]

Received by: [Signature]

Date: 5/6/19

Time: 1500

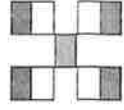
Via: air

Date: 5/6/19

Time: 0850

Remarks:

Matador.



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMBs (8021)
TPH:8015D(GRO / DRO / MRO)
8081 Pesticides/8082 PCBs
EDB (Method 504.1)
PAHs by 8310 or 8270SIMS
RCRA 8 Metals
Cl, F, Br, NO₃, NO₂, PO₄, SO₄
8260 (VOA)
8270 (Semi-VOA)
Total Coliform (Present/Absent)



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

June 24, 2019

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

RE: Black River

OrderNo.: 1906781

Dear Melodie Sanjari:

Hall Environmental Analysis Laboratory received 14 sample(s) on 6/14/2019 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,

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 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SW1

Project: Black River

Collection Date: 6/10/2019 11:00:00 AM

Lab ID: 1906781-001

Matrix: SOIL

Received Date: 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	290	60		mg/Kg	20	6/20/2019 1:02:08 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/19/2019 4:12:27 PM	45657
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/19/2019 4:12:27 PM	45657
Surr: DNOP	101	70-130		%Rec	1	6/19/2019 4:12:27 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 9:24:04 PM	45608
Surr: BFB	89.3	73.8-119		%Rec	1	6/17/2019 9:24:04 PM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/17/2019 9:24:04 PM	45608
Toluene	ND	0.050		mg/Kg	1	6/17/2019 9:24:04 PM	45608
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 9:24:04 PM	45608
Xylenes, Total	ND	0.10		mg/Kg	1	6/17/2019 9:24:04 PM	45608
Surr: 4-Bromofluorobenzene	97.2	80-120		%Rec	1	6/17/2019 9:24:04 PM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates**Client Sample ID:** SW2**Project:** Black River**Collection Date:** 6/10/2019 2:00:00 PM**Lab ID:** 1906781-002**Matrix:** SOIL**Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	390	60		mg/Kg	20	6/20/2019 1:14:32 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	11	9.9		mg/Kg	1	6/19/2019 5:19:12 PM	45657
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/19/2019 5:19:12 PM	45657
Surr: DNOP	108	70-130		%Rec	1	6/19/2019 5:19:12 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 9:47:33 PM	45608
Surr: BFB	90.4	73.8-119		%Rec	1	6/17/2019 9:47:33 PM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/17/2019 9:47:33 PM	45608
Toluene	ND	0.050		mg/Kg	1	6/17/2019 9:47:33 PM	45608
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 9:47:33 PM	45608
Xylenes, Total	ND	0.10		mg/Kg	1	6/17/2019 9:47:33 PM	45608
Surr: 4-Bromofluorobenzene	98.1	80-120		%Rec	1	6/17/2019 9:47:33 PM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates**Client Sample ID:** SW3**Project:** Black River**Collection Date:** 6/11/2019 11:15:00 AM**Lab ID:** 1906781-003**Matrix:** SOIL**Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	330	60		mg/Kg	20	6/20/2019 1:26:57 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/19/2019 5:41:32 PM	45657
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/19/2019 5:41:32 PM	45657
Surr: DNOP	93.7	70-130		%Rec	1	6/19/2019 5:41:32 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 10:35:11 PM	45608
Surr: BFB	97.0	73.8-119		%Rec	1	6/17/2019 10:35:11 PM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/17/2019 10:35:11 PM	45608
Toluene	ND	0.050		mg/Kg	1	6/17/2019 10:35:11 PM	45608
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 10:35:11 PM	45608
Xylenes, Total	ND	0.10		mg/Kg	1	6/17/2019 10:35:11 PM	45608
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	6/17/2019 10:35:11 PM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SW4

Project: Black River

Collection Date: 6/11/2019 2:25:00 PM

Lab ID: 1906781-004

Matrix: SOIL

Received Date: 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	290	60		mg/Kg	20	6/20/2019 1:39:21 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/19/2019 6:03:57 PM	45657
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/19/2019 6:03:57 PM	45657
Surr: DNOP	109	70-130		%Rec	1	6/19/2019 6:03:57 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/17/2019 10:58:54 PM	45608
Surr: BFB	99.6	73.8-119		%Rec	1	6/17/2019 10:58:54 PM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/17/2019 10:58:54 PM	45608
Toluene	ND	0.050		mg/Kg	1	6/17/2019 10:58:54 PM	45608
Ethylbenzene	ND	0.050		mg/Kg	1	6/17/2019 10:58:54 PM	45608
Xylenes, Total	ND	0.099		mg/Kg	1	6/17/2019 10:58:54 PM	45608
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	6/17/2019 10:58:54 PM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates**Client Sample ID:** SW5**Project:** Black River**Collection Date:** 6/10/2019 3:00:00 PM**Lab ID:** 1906781-005**Matrix:** SOIL**Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/20/2019 2:16:36 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/19/2019 6:26:14 PM	45657
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/19/2019 6:26:14 PM	45657
Surr: DNOP	128	70-130		%Rec	1	6/19/2019 6:26:14 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/17/2019 11:22:36 PM	45608
Surr: BFB	96.2	73.8-119		%Rec	1	6/17/2019 11:22:36 PM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/17/2019 11:22:36 PM	45608
Toluene	ND	0.049		mg/Kg	1	6/17/2019 11:22:36 PM	45608
Ethylbenzene	ND	0.049		mg/Kg	1	6/17/2019 11:22:36 PM	45608
Xylenes, Total	ND	0.098		mg/Kg	1	6/17/2019 11:22:36 PM	45608
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/17/2019 11:22:36 PM	45608

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

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

Analytical Report

Lab Order 1906781

Date Reported: 6/24/2019

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller & Associates**Client Sample ID:** SW6**Project:** Black River**Collection Date:** 6/10/2019 11:50:00 AM**Lab ID:** 1906781-006**Matrix:** SOIL**Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	440	60		mg/Kg	20	6/20/2019 2:29:00 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/19/2019 6:48:32 PM	45657
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/19/2019 6:48:32 PM	45657
Surr: DNOP	133	70-130	S	%Rec	1	6/19/2019 6:48:32 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/17/2019 11:46:13 PM	45608
Surr: BFB	95.3	73.8-119		%Rec	1	6/17/2019 11:46:13 PM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/17/2019 11:46:13 PM	45608
Toluene	ND	0.049		mg/Kg	1	6/17/2019 11:46:13 PM	45608
Ethylbenzene	ND	0.049		mg/Kg	1	6/17/2019 11:46:13 PM	45608
Xylenes, Total	ND	0.099		mg/Kg	1	6/17/2019 11:46:13 PM	45608
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/17/2019 11:46:13 PM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates**Client Sample ID:** SW7**Project:** Black River**Collection Date:** 6/10/2019 10:30:00 AM**Lab ID:** 1906781-007**Matrix:** SOIL**Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	75	60		mg/Kg	20	6/20/2019 3:06:14 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/19/2019 7:10:47 PM	45657
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/19/2019 7:10:47 PM	45657
Surr: DNOP	121	70-130		%Rec	1	6/19/2019 7:10:47 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/18/2019 12:09:59 AM	45608
Surr: BFB	94.4	73.8-119		%Rec	1	6/18/2019 12:09:59 AM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/18/2019 12:09:59 AM	45608
Toluene	ND	0.050		mg/Kg	1	6/18/2019 12:09:59 AM	45608
Ethylbenzene	ND	0.050		mg/Kg	1	6/18/2019 12:09:59 AM	45608
Xylenes, Total	ND	0.099		mg/Kg	1	6/18/2019 12:09:59 AM	45608
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/18/2019 12:09:59 AM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: SW8

Project: Black River

Collection Date: 6/10/2019 10:35:00 AM

Lab ID: 1906781-008

Matrix: SOIL

Received Date: 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/20/2019 3:18:39 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/19/2019 7:33:11 PM	45657
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/19/2019 7:33:11 PM	45657
Surr: DNOP	112	70-130		%Rec	1	6/19/2019 7:33:11 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/18/2019 12:33:49 AM	45608
Surr: BFB	95.2	73.8-119		%Rec	1	6/18/2019 12:33:49 AM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/18/2019 12:33:49 AM	45608
Toluene	ND	0.049		mg/Kg	1	6/18/2019 12:33:49 AM	45608
Ethylbenzene	ND	0.049		mg/Kg	1	6/18/2019 12:33:49 AM	45608
Xylenes, Total	ND	0.099		mg/Kg	1	6/18/2019 12:33:49 AM	45608
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/18/2019 12:33:49 AM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates**Client Sample ID:** BH1-0.5**Project:** Black River**Collection Date:** 6/11/2019 4:00:00 PM**Lab ID:** 1906781-009**Matrix:** SOIL**Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/20/2019 3:31:03 PM	45691
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/19/2019 7:55:17 PM	45657
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/19/2019 7:55:17 PM	45657
Surr: DNOP	86.2	70-130		%Rec	1	6/19/2019 7:55:17 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/18/2019 12:57:34 AM	45608
Surr: BFB	93.1	73.8-119		%Rec	1	6/18/2019 12:57:34 AM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/18/2019 12:57:34 AM	45608
Toluene	ND	0.050		mg/Kg	1	6/18/2019 12:57:34 AM	45608
Ethylbenzene	ND	0.050		mg/Kg	1	6/18/2019 12:57:34 AM	45608
Xylenes, Total	ND	0.099		mg/Kg	1	6/18/2019 12:57:34 AM	45608
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/18/2019 12:57:34 AM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: BH2-2

Project: Black River

Collection Date: 6/11/2019 10:00:00 AM

Lab ID: 1906781-010

Matrix: SOIL

Received Date: 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	130	60		mg/Kg	20	6/20/2019 4:08:16 PM	45694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/19/2019 8:17:30 PM	45657
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/19/2019 8:17:30 PM	45657
Surr: DNOP	101	70-130		%Rec	1	6/19/2019 8:17:30 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/18/2019 1:21:20 AM	45608
Surr: BFB	93.4	73.8-119		%Rec	1	6/18/2019 1:21:20 AM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/18/2019 1:21:20 AM	45608
Toluene	ND	0.049		mg/Kg	1	6/18/2019 1:21:20 AM	45608
Ethylbenzene	ND	0.049		mg/Kg	1	6/18/2019 1:21:20 AM	45608
Xylenes, Total	ND	0.098		mg/Kg	1	6/18/2019 1:21:20 AM	45608
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/18/2019 1:21:20 AM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: BH3-2.5

Project: Black River

Collection Date: 6/10/2019 4:00:00 PM

Lab ID: 1906781-011

Matrix: SOIL

Received Date: 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	ND	60		mg/Kg	20	6/20/2019 5:10:19 PM	45694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/19/2019 8:39:34 PM	45657
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/19/2019 8:39:34 PM	45657
Surr: DNOP	88.6	70-130		%Rec	1	6/19/2019 8:39:34 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/18/2019 1:45:10 AM	45608
Surr: BFB	95.7	73.8-119		%Rec	1	6/18/2019 1:45:10 AM	45608
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/18/2019 1:45:10 AM	45608
Toluene	ND	0.050		mg/Kg	1	6/18/2019 1:45:10 AM	45608
Ethylbenzene	ND	0.050		mg/Kg	1	6/18/2019 1:45:10 AM	45608
Xylenes, Total	ND	0.10		mg/Kg	1	6/18/2019 1:45:10 AM	45608
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/18/2019 1:45:10 AM	45608

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1906781

Date Reported: 6/24/2019

CLIENT: Souder, Miller & Associates

Client Sample ID: BH4-2

Project: Black River

Collection Date: 6/10/2019 11:30:00 AM

Lab ID: 1906781-012

Matrix: SOIL

Received Date: 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	520	60		mg/Kg	20	6/20/2019 5:22:43 PM	45694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/19/2019 9:01:51 PM	45657
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/19/2019 9:01:51 PM	45657
Surr: DNOP	76.5	70-130		%Rec	1	6/19/2019 9:01:51 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/18/2019 2:56:16 AM	45609
Surr: BFB	98.1	73.8-119		%Rec	1	6/18/2019 2:56:16 AM	45609
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	6/18/2019 2:56:16 AM	45609
Toluene	ND	0.049		mg/Kg	1	6/18/2019 2:56:16 AM	45609
Ethylbenzene	ND	0.049		mg/Kg	1	6/18/2019 2:56:16 AM	45609
Xylenes, Total	ND	0.097		mg/Kg	1	6/18/2019 2:56:16 AM	45609
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	6/18/2019 2:56:16 AM	45609

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

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

Analytical Report

Lab Order 1906781

Date Reported: 6/24/2019

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Souder, Miller & Associates**Client Sample ID:** BH5-2**Project:** Black River**Collection Date:** 6/10/2019 10:00:00 AM**Lab ID:** 1906781-013**Matrix:** SOIL**Received Date:** 6/14/2019 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	79	60		mg/Kg	20	6/20/2019 5:35:08 PM	45694
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/19/2019 9:24:03 PM	45657
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/19/2019 9:24:03 PM	45657
Surr: DNOP	82.2	70-130		%Rec	1	6/19/2019 9:24:03 PM	45657
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/18/2019 5:01:33 AM	45609
Surr: BFB	108	73.8-119		%Rec	1	6/18/2019 5:01:33 AM	45609
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	6/18/2019 5:01:33 AM	45609
Toluene	ND	0.050		mg/Kg	1	6/18/2019 5:01:33 AM	45609
Ethylbenzene	ND	0.050		mg/Kg	1	6/18/2019 5:01:33 AM	45609
Xylenes, Total	ND	0.099		mg/Kg	1	6/18/2019 5:01:33 AM	45609
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	6/18/2019 5:01:33 AM	45609

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906781

24-Jun-19

Client: Souder, Miller & Associates

Project: Black River

Sample ID: MB-45691	SampType: mbk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45691	RunNo: 60817								
Prep Date: 6/19/2019	Analysis Date: 6/20/2019	SeqNo: 2058577 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45691	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45691	RunNo: 60817								
Prep Date: 6/19/2019	Analysis Date: 6/20/2019	SeqNo: 2058578 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID: MB-45694	SampType: mbk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 45694	RunNo: 60817								
Prep Date: 6/19/2019	Analysis Date: 6/20/2019	SeqNo: 2058607 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-45694	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 45694	RunNo: 60817								
Prep Date: 6/19/2019	Analysis Date: 6/20/2019	SeqNo: 2058608 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906781

24-Jun-19

Client: Souder, Miller & Associates

Project: Black River

Sample ID: LCS-45657	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 45657	RunNo: 60748								
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2056813 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.4	63.9	124			
Surr: DNOP	4.8		5.000		96.0	70	130			

Sample ID: MB-45657	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 45657	RunNo: 60748								
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2056814 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	15		10.00		146	70	130			S

Sample ID: 1906781-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SW1	Batch ID: 45657	RunNo: 60748								
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2057616 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	9.5	47.53	0	78.1	57	142			
Surr: DNOP	3.3		4.753		70.5	70	130			

Sample ID: 1906781-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: SW1	Batch ID: 45657	RunNo: 60748								
Prep Date: 6/18/2019	Analysis Date: 6/19/2019	SeqNo: 2057617 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	49.90	0	75.2	57	142	1.07	20	
Surr: DNOP	3.6		4.990		72.9	70	130	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
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906781

24-Jun-19

Client: Souder, Miller & Associates

Project: Black River

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: G60694	RunNo: 60694								
Prep Date:	Analysis Date: 6/17/2019	SeqNo: 2053941 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		94.6	73.8	119			

Sample ID: 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: G60694	RunNo: 60694								
Prep Date:	Analysis Date: 6/17/2019	SeqNo: 2053942 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		106	73.8	119			

Sample ID: MB-45608	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45608	RunNo: 60694								
Prep Date: 6/14/2019	Analysis Date: 6/17/2019	SeqNo: 2053945 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	920		1000		91.6	73.8	119			

Sample ID: LCS-45608	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45608	RunNo: 60694								
Prep Date: 6/14/2019	Analysis Date: 6/17/2019	SeqNo: 2053946 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.0	80.1	123			
Surr: BFB	1100		1000		108	73.8	119			

Sample ID: MB-45609	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 45609	RunNo: 60694								
Prep Date: 6/14/2019	Analysis Date: 6/18/2019	SeqNo: 2053970 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	950		1000		95.4	73.8	119			

Sample ID: LCS-45609	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 45609	RunNo: 60694								
Prep Date: 6/14/2019	Analysis Date: 6/18/2019	SeqNo: 2053971 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.9	80.1	123			
Surr: BFB	1100		1000		108	73.8	119			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906781

24-Jun-19

Client: Souder, Miller & Associates

Project: Black River

Sample ID: 1906781-012AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH4-2		Batch ID: 45609		RunNo: 60694						
Prep Date: 6/14/2019		Analysis Date: 6/18/2019		SeqNo: 2053973		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	24.85	0	118	69.1	142			
Surr: BFB	1100		994.0		115	73.8	119			

Sample ID: 1906781-012AMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH4-2		Batch ID: 45609		RunNo: 60694						
Prep Date: 6/14/2019		Analysis Date: 6/18/2019		SeqNo: 2053974		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.8	24.20	0	116	69.1	142	4.29	20	
Surr: BFB	1100		968.1		113	73.8	119	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906781

24-Jun-19

Client: Souder, Miller & Associates

Project: Black River

Sample ID: RB	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: B60694	RunNo: 60694								
Prep Date:	Analysis Date: 6/17/2019	SeqNo: 2053990 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		99.4	80	120			

Sample ID: 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: B60694	RunNo: 60694								
Prep Date:	Analysis Date: 6/17/2019	SeqNo: 2053991 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID: MB-45608	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45608	RunNo: 60694								
Prep Date: 6/14/2019	Analysis Date: 6/17/2019	SeqNo: 2053994 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	0.99		1.000		99.3	80	120			

Sample ID: LCS-45608	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 45608	RunNo: 60694								
Prep Date: 6/14/2019	Analysis Date: 6/17/2019	SeqNo: 2053995 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	80	120			
Toluene	1.1	0.050	1.000	0	107	80	120			
Ethylbenzene	1.1	0.050	1.000	0	110	80	120			
Xylenes, Total	3.3	0.10	3.000	0	110	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Sample ID: MB-45609	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45609	RunNo: 60694								
Prep Date: 6/14/2019	Analysis Date: 6/18/2019	SeqNo: 2054019 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								

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1906781

24-Jun-19

Client: Souder, Miller & Associates

Project: Black River

Sample ID: MB-45609	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 45609	RunNo: 60694								
Prep Date: 6/14/2019	Analysis Date: 6/18/2019	SeqNo: 2054019 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID: LCS-45609	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 45609			RunNo: 60694						
Prep Date: 6/14/2019	Analysis Date: 6/18/2019			SeqNo: 2054020			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.1	0.050	1.000	0	106	80	120			
Ethylbenzene	1.1	0.050	1.000	0	107	80	120			
Xylenes, Total	3.2	0.10	3.000	0	108	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: 1906781-013AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BH5-2	Batch ID: 45609		RunNo: 60694							
Prep Date: 6/14/2019	Analysis Date: 6/18/2019		SeqNo: 2054022		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.024	0.9615	0	96.7	63.9	127			
Toluene	0.98	0.048	0.9615	0.005885	101	69.9	131			
Ethylbenzene	1.0	0.048	0.9615	0	104	71	132			
Xylenes, Total	3.0	0.096	2.885	0.01932	104	71.8	131			
Surr: 4-Bromofluorobenzene	1.0		0.9615		106	80	120			

Sample ID: 1906781-013AMSD		SampType: MSD		TestCode: EPA Method 8021B: Volatiles						
Client ID: BH5-2		Batch ID: 45609		RunNo: 60694						
Prep Date: 6/14/2019		Analysis Date: 6/18/2019		SeqNo: 2054023		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9737	0	94.4	63.9	127	1.16	20	
Toluene	0.97	0.049	0.9737	0.005885	98.6	69.9	131	1.48	20	
Ethylbenzene	0.97	0.049	0.9737	0	99.3	71	132	2.89	20	
Xylenes, Total	2.9	0.097	2.921	0.01932	99.2	71.8	131	2.98	20	
Surr: 4-Bromofluorobenzene	1.0		0.9737		107	80	120	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
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

Sample Log-In Check List

Client Name: **SMA-CARLSBAD**

Work Order Number: **1906781**

RcptNo: **1**

Received By: **Jevon Campisi**

6/14/2019 9:00:00 AM

Completed By: **Isalah Ortiz**

6/14/2019 11:16:39 AM

Reviewed By: **LPB**

6/14/19

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
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:

**IO
6/14/19**

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Yes			
2	2.3	Good	Yes			

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

Project Name:

Black River

Project #:

Project Manager:

Melodie Sanjari

Sampler: MRS

On Ice: ☒ Yes ☐ No

of Coolers: 2

Cooler Temp (including CF): Remarks

Container Type and #

Preservative Type

HEAL No.

402

-001

-002

-003

-004

-005

-006

-007

-008

-009

-010

-011

-012

Received by:

Date:

Time:

6/13/19 15:00

Relinquished by:

Date:

Time:

6/13/19 19:00

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
BTEX / MTBE / TMB's (8021)								

6/10 11:00	SW1	402	-001					
6/10 2:00	SW2		-002					
6/11 11:15	SW3		-003					
6/11 2:45	SW4		-004					
6/10 3:00	SW5		-005					
6/10 11:05	SW6		-006					
6/10 10:30	SW7		-007					
6/10 10:35	SW8		-008					
6/11 4:00	BH1-6.5'		-009					
6/11 10:00	BH2-2'		-010					
6/10 4:00	BH3-2.5'		-011					
6/10 11:30	BH4-2'		-012					

Remarks: Matador. 1/2
 ① 5.10 - 0.20F = 4.90
 ② 2.50 - 0.20F = 2.30

APPENDIX E

PHOTO LOG



