

May 21, 2019

#5E27961-BG11

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

SUBJECT: Remediation Closure Report for the Marathon 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 Plan that describes the delineation and proposed closure for a release related to oil and gas production activities at the Marathon 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	Marathon 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		
Land 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	>100 feet to groundwater				
SMA Response Dates	4/23/2019 & 5/6/2019				

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 Figure 3 illustrates the release location. The C-141 form is 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 108 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.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for groundwater depth of greater than 100 feet bgs. Pertinent well data is attached in Appendix B.

3.0 Release Characterization Activities and Findings

On April 23 & May 6, 2019, SMA personnel arrived on site in response to the release associated with the Marathon 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 3.

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).

Laboratory analysis indicates that there was no impact that exceeded the NMOCD Closure Criteria for this location. SMA recommends closure of the release, as the contamination meets closure criteria and does not cause an imminent risk to human health, the environment, or groundwater.

4.0 Scope and Limitations

The scope of our services included: assessment sampling; verifying release stabilization, regulatory liaison, and preparing this remediation plan. 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.

Marathon Black River 15-10 Waterline Remediation Plan (2RP-5425), May 21, 2019

If there are any questions regarding this report, please contact either Melodie Sanjari 574-370-9782 or Shawna Chubbuck at 505-325-7535.

Submitted by: SOUDER, MILLER & ASSOCIATES Reviewed by:

M. Janyan

hauna Chubbuck

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 3: Site and Sample Location Map

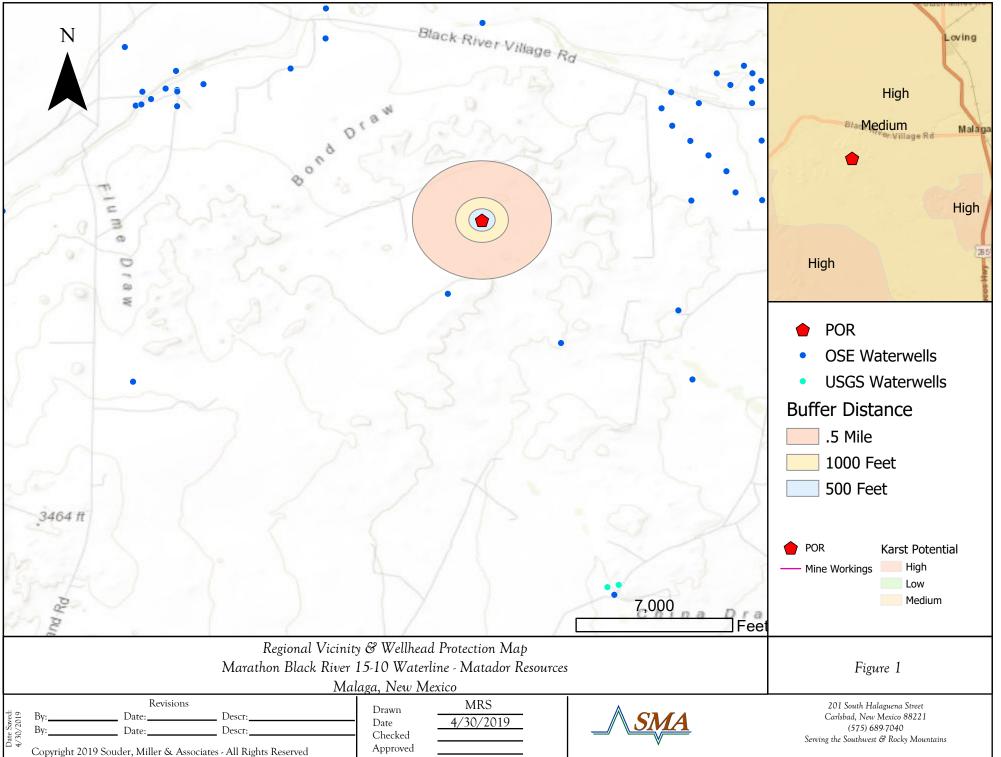
Tables:

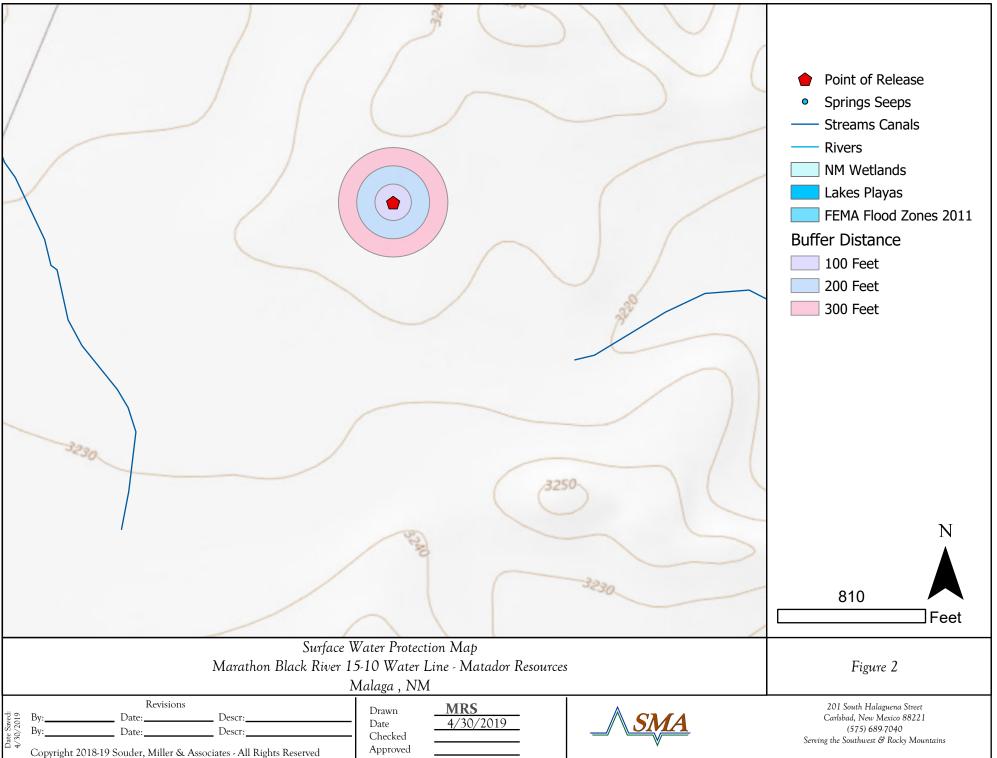
Table 2: NMOCD Closure Criteria Justification Table 3: Summary of Sample Results

Appendices:

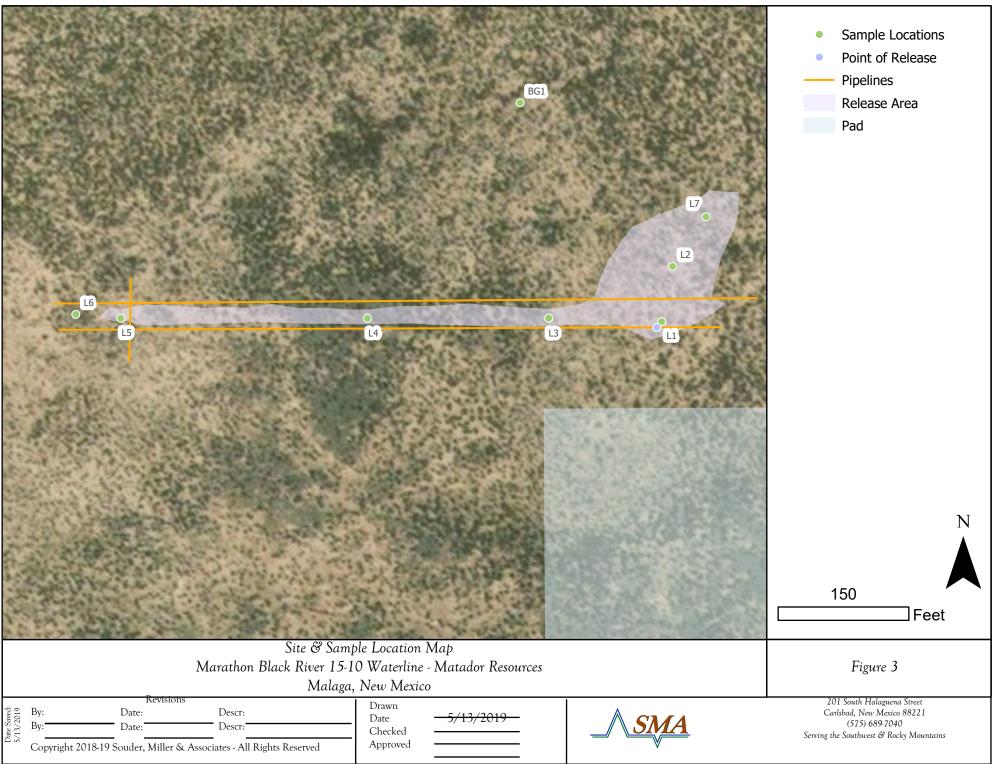
Appendix A: C141 Forms Appendix B: NMOSE Wells Report Appendix C: Laboratory Analytical Reports

FIGURES





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TABLES

Table 2: NMOCD Closure Criteria

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)	Source/Notes	
Depth to Groundwater (feet bgs)	108	OSE & USGS (Appendix B)
Hortizontal Distance From All Water Sources Within 1/2 Mile (ft)	1300' & 1890'	Canal #3298 (below) & Stream 3875 (finger of Black River)
Hortizontal 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)						
	Closure Criteria (units in mg/kg)					
Depth to Groundwater		Chloride *numerical limit or background, whichever is greater	ТРН	GRO + DRO	BTEX	Benzene
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	yes or no		if ye	s, then		
<300' from continuously flowing watercourse or other significant watercourse? <200' from lakebed, sinkhole or playa lake? Water Well or Water Source	no no					
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes? <1000' from fresh water well or spring?	no					
Human and Other Areas		600	100		50	10
<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

Sample	Sample	Depth	BTEX	Benzene	GRO	DRO	MRO	Total TPH	CI-
ID	Date	(feet bgs)	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMC	CD Closure	Criteria	50	10	10	00		2500	20000
	4/23/2019	0.5							
L1	4/23/2019	1	<0.217	<0.024	<4.8	<9.8	<49	<63.6	2200
	4/23/2019	2	-				-		400
	4/23/2019	0.5	<0.221	<0.025	<4.9	<9.8	<49	<63.7	330
L2	4/23/2019	1							
	4/23/2019	2							
	4/23/2019	0.5							
L3	4/23/2019	1			<4.8	<9.5	<47	<52.3	7900
	4/23/2019	2							910
	5/6/2019	2.5							82
	4/23/2019	0.5							
L4	4/23/2019	1	<0.225	<0.025	<5.0	<9.8	<49	<63.8	4900
	4/23/2019	2							630
	4/23/2019	0.5	<0.225	<0.025	<5.0	<10	<50	<65	<60
L5	4/23/2019	1							
	4/23/2019	2							
	4/23/2019	0.5							
L6	4/23/2019	1			<4.9	<9.7	<49	<63.6	2000
	4/23/2019	2							<60
	4/23/2019	0.5			<4.9	<9.6	<48	<62.5	<60
L7	4/23/2019	1							
	4/23/2019	2							
BG1	4/23/2019	1							

"--" = Not Analyzed

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

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	248	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)

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

Carbon plug on the meter run blew out

Form	C-141
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State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does the responsible party consider this a major release? >25 bbls
19.15.29.7(A) NMAC?	
🖾 Yes 🗌 No	
LONDO I II.	
	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes, by SMA (Melodie S	anjari) 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

 \boxtimes The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: John Hurt	Title:RES Specialist
Signature: Allow	Date: - 5/2/19
email:JHurt@matadorresources.com	Telephone:972-371-5200
	8
OCD Only	
Received by:	Date:

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

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)

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) 225 bbls	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release: Carbon plug on the met	er run blew out	
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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?	If YES, for what reason(s) does the responsible party consider this a major release? >25 bbls
🛛 Yes 🗌 No	
	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? anjari) 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

 \boxtimes The source of the release has been stopped.

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The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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:	John Hurt	Title:	RES Specialist	
Signature:	Allett		Date: 5/28/19	
email:	JHurt@matadorresources.com		Telephone:972-371-5200	
	-			
OCD Only				
Received by:			Date:	
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State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>108</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗋 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗋 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗋 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🛛 No

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

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

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

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

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IN:

Form C-141	State of New Mexico		Incident ID	
Page 4	Oil Conservation Division		District RP	
-			Facility ID	
			Application ID	
regulations all operators are requir public health or the environment. failed to adequately investigate an addition, OCD acceptance of a C- and/or regulations. Printed Name:	on given above is true and complete to the red to report and/or file certain release no The acceptance of a C-141 report by the ad remediate contamination that pose a the 141 report does not relieve the operator of Hurt	otifications and perform co c OCD does not relieve the ireat to groundwater, surfa of responsibility for compl	prrective actions for rele operator of liability sho ce water, human health iance with any other feo	ases which may endanger ould their operations have or the environment. In
OCD Only				
Received by:		Date:		

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Form C-141 Page 5 State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

Description of remediation activities

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

Printed Name: JOhn HURT Title: RES SPecial 45t
Signature: HURT @ mata Oak Resources Telephone: 972-871-5200 S. Com
email: <u>JHURT</u> mata Oak Resource Telephone: <u>972-871-5200</u>
J & C (free
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:

, i.j

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	O=or	OD has replaced phaned, e file is		aua	rter	รล	re 1:	-NW	2=NF :	3=SW 4=	=SF)				
water right file.)	close		-	-					st to la			, AD83 UTM in me	eters)	(n feet)	
		POD		~	~	~								Denth	Denth	
POD Number	Code	Sub- e basin (County		Q 16		Sec	Tws	Rng		х	Y	Distance	-	Depth Water	vvater Column
C 01452		С	ED						27E	5774	35	3563175* 🌍	1078	95	70	25
<u>C 00347</u>		CUB	ED		1	1	13	24S	27E	5800	010	3565479* 🌍	2544	60	30	30
<u>C 03147</u>		С	ED	3	3	3	12	24S	27E	5798	85	3565715 🌍	2571	140		
C 04147 POD1		CUB	ED	4	1	3	24	24S	27E	5801	01	3562969 🌍	2582	35		
<u>C 01943</u>		С	ED			1	13	24S	27E	5802	21	3565275* 🌍	2637	30	25	5
<u>C 00342</u>	С	CUB	ED		4	1	13	24S	27E	5804	32	3565080* 🌍	2761	2565		
C 03260 POD1		С	ED	3	3	3	12	24S	27E	5799	95	3565935 🌍	2792	80	56	24
C 03260 POD2	0	С	ED	1	3	3	12	24S	27E	5801	00	3565984 🌍	2905	80	56	24
<u>C 03145</u>		С	ED	3	1	4	13	24S	27E	5807	'49	3564579* 🌍	2954	103	40	63
<u>C 00850</u>		С	ED		2	3	09	24S	27E	5755	95	3566223* 🌍	3020	108	35	73
<u>C 00821</u>		С	ED		3	2	09	24S	27E	5759	96	3566635* 🌍	3057	97	50	47
<u>C 01721</u>		С	ED			1	25	24S	27E	5802	271	3562033* 🌍	3258	170		
<u>C 02976</u>		С	ED	4	2	3	12	24S	27E	5805	519	3566195* 🌍	3366	57	27	30
<u>C 00364</u>	С	CUB	ED		1	2	09	24S	27E	5759	97	3567043* 🌍	3393	2270		
<u>C 03037</u>		С	ED	4	3	4	12	24S	27E	5809	30	3565795* 🌍	3502	116	25	91
<u>C 01366</u>		CUB	ED			4	08	24S	27E	5745	90	3566003* 🌍	3708	60	35	25
C 03740 POD1		С	ED	4	4	4	12	24S	27E	5812	83	3565795 🌍	3819	340		
<u>C 00631</u>		С	ED	3	3	4	08	24S	27E	5742	88	3565701* 🌍	3845	50	24	26
<u>C 00516</u>		CUB	ED	1	3	4	08	24S	27E	5742	88	3565901* 🌍	3929	105	36	69
C 00516 CLW201016	0	CUB	ED	1	3	4	08	24S	27E	5742	88	3565901* 🌍	3929	62		
C 00516 CLW308590	0	CUB	ED	1	3	4	80	24S	27E	5742	88	3565901* 🌍	3929	105	36	69
C 00516 S		CUB	ED	1	3	4	08	24S	27E	5742	88	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 Water Resources

USGS Home Contact USGS Search USGS

National Water Information System: Web Interface

	Data Category:	Geographic Area:		
<u>•</u>	Groundwater \checkmark	United States	└ GO	

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- Full News 🔝

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

• 320959104093001

Minimum number of levels = 1

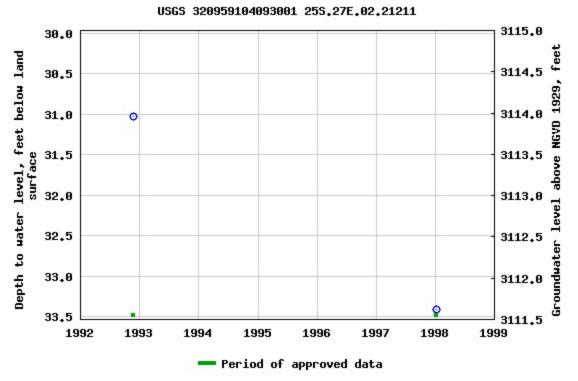
Save file of selected sites to local disk for future upload

USGS 320959104093001 25S.27E.02.21211

Available data for this site Groundwater: Field measurements V 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	
Tab-separated data	
Graph of data	
Reselect period	



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

Download a presentation-quality graph

Questions about sites/data? Feedback on this web site Automated retrievals Help Data Tips Explanation of terms Subscribe for system changes News

AccessibilityPlug-InsFOIAPrivacyPolicies and NoticesU.S. Department of the InteriorU.S. Geological SurveyTitle:Groundwater for USA:Water LevelsURL: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 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1904C24

Date Reported: 5/9/2019

4/27/2019 5:27:11 PM

4/27/2019 5:27:11 PM

44546

44546

Hall Environmental Analysis Laboratory, Inc.

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 Result **RL Oual** Units **DF** Date Analyzed Batch Analyses **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 %Rec 4/30/2019 1:06:21 AM 44564 70-130 1 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB 4/27/2019 5:27:11 PM Gasoline Range Organics (GRO) ND 44546 4.8 mg/Kg 1 Surr: BFB 90.7 73.8-119 %Rec 4/27/2019 5:27:11 PM 44546 1 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 4/27/2019 5:27:11 PM 44546 mg/Kg 1 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

ND

89.7

0.097

80-120

mg/Kg

%Rec

1

1

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

Qualifiers:

Xylenes, Total

Surr: 4-Bromofluorobenzene

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

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 16

Hall Environment	nc.	Lab Order 1904C24 Date Reported: 5/9/2019						
CLIENT: Souder, Miller	& Associates	Client	Sample II	D: L1-	-2'			
Project: Black River RO	OW (BR-ROW)	Colle	ection Dat	e: 4/2	3/2019 7:10:00 AM			
Lab ID: 1904C24-002	Matrix: SOIL	Matrix: SOIL Received Date: 4/25/2019 9:20:00 AM						
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: AN	IONS				Analy	vst: smb		
Chloride	400	60	mg/Kg	20	4/30/2019 11:31:44 P	PM 44629		

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

Qualifiers: *

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceededND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

Value exceeds Maximum Contaminant Level.

- 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

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Analytical Report Lab Order 1904C24

Analytical Report
Lab Order 1904C24

Date Reported: 5/9/2019

4/27/2019 5:50:45 PM

4/27/2019 5:50:45 PM

4/27/2019 5:50:45 PM

44546

44546

44546

Hall Environmental Analysis Laboratory, Inc.

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 Result **RL Oual** Units **DF** Date Analyzed Batch Analyses **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 %Rec 44564 70-130 1 4/30/2019 1:28:45 AM **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB 4/27/2019 5:50:45 PM Gasoline Range Organics (GRO) ND 44546 4.9 mg/Kg 1 Surr: BFB 88.3 73.8-119 %Rec 4/27/2019 5:50:45 PM 44546 1 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.025 4/27/2019 5:50:45 PM 44546 mg/Kg 1 Toluene ND 0.049 mg/Kg 1 4/27/2019 5:50:45 PM 44546

ND

ND

86.7

0.049

0.098

80-120

mg/Kg

mg/Kg

%Rec

1

1

1

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

Qualifiers:

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

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

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

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Analytical Report
Lab Order 1904C24

Date Reported: 5/9/2019

CLIENT: Souder, Miller & Associates		C	ient Sample II	D: L3	8-1'			
Project: Black River ROW (BR-ROW)			Collection Dat	e: 4/2	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	10	0 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 RANG	E				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		

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers: * Valu

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

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

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Hall Environmental Analysis Laboratory, Inc.				Lab Order 1904C24 Date Reported: 5/9/2019						
CLIENT:	Souder, Miller & Associates		Client	Sample II	D: L3	-2'				
Project:	Black River ROW (BR-ROW)		Colle	ection Dat	e: 4/2	23/2019 8:10:00 AM				
Lab ID:	1904C24-006	Matrix: SOIL	Received Date: 4/25/2019 9:20:00 AM							
Analyses		Result	RL Qu	al Units	DF	Date Analyzed	Batch			
EPA MET	HOD 300.0: ANIONS					Analys	t: 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.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- 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

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Analytical Report Lab Order 1904C24

S % Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order 1904C24

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 5/9/2019

CLIENT:Souder, Miller & AssociatesProject:Black River ROW (BR-ROW)Lab ID:1904C24-007	Client Sample ID: L4-1' Collection Date: 4/23/2019 8:20:00 AM 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	: том		
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.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Hall Environmental Analysis Laboratory, Inc.				Lab Order 1904C24 Date Reported: 5/9/2019						
CLIENT: S	Souder, Miller & Associates		Client S	Sample II	D: L4	-2'				
Project:	Black River ROW (BR-ROW)		Colle	ction Dat	e: 4/2	23/2019 8:30:00 AM				
Lab ID:	1904C24-008	Matrix: SOIL	Rece	eived Dat	e: 4/2	25/2019 9:20:00 AM				
Analyses		Result	RL Qua	l Units	DF	Date Analyzed	Batch			
EPA METH	IOD 300.0: ANIONS					Analys	st: smb			
Chloride		630	60	mg/Kg	20	5/1/2019 12:33:48 AM	44629			

Analytical Report

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

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

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Analytical Report Lab Order 1904C24

Date Reported: 5/9/2019

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates Project: Black River ROW (BR-ROW) Lab ID: 1004C24 000	Client Sample ID: L5-0.5' Collection Date: 4/23/2019 8:45:00 AM Matrix: SOIL Received Date: 4/25/2019 9:20:00 AM						
Lab ID: 1904C24-009 Analyses	Matrix: SOIL Result	RL	Oual U			Date Analyzed	Batch
EPA METHOD 300.0: ANIONS		RL	Yam.		21	Analyst	
Chloride	ND	60	r	ng/Kg	20	5/1/2019 12:46:12 AM	44629
EPA METHOD 8015M/D: DIESEL RANGE						Analyst	
Diesel Range Organics (DRO)	ND	10	r	ng/Kg	1	4/30/2019 1:50:56 AM	44564
Motor Oil Range Organics (MRO)	ND	50		ng/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	r	ng/Kg	1	4/27/2019 6:14:02 PM	44546
Surr: BFB	87.1	73.8-119	c	%Rec	1	4/27/2019 6:14:02 PM	44546
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.025	r	ng/Kg	1	4/27/2019 6:14:02 PM	44546
Toluene	ND	0.050	r	ng/Kg	1	4/27/2019 6:14:02 PM	44546
Ethylbenzene	ND	0.050	r	ng/Kg	1	4/27/2019 6:14:02 PM	44546
Xylenes, Total	ND	0.10	r	ng/Kg	1	4/27/2019 6:14:02 PM	44546
Surr: 4-Bromofluorobenzene	86.2	80-120	c	%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.

* Value exceeds Maximum Contaminant Level. **Qualifiers:**

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

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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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					Analys	t: smb	
Chloride	2000	60	mg/Kg	20	5/1/2019 1:23:27 AM	44629	
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analys	t: 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	E				Analys	t: 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	

Hall Environmental Analysis Laboratory, Inc.

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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.				Lab Order 1904C24 Date Reported: 5/9/2019					
CLIENT:	Souder, Miller & Associates		Client S	Sample II	D: L6	i-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 Qua	l Units	DF	Date Analyzed	Batch		
EPA MET	HOD 300.0: ANIONS					Analys	t: 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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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

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Analytical Report Lab Order 1904C24

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					Analys	t: smb			
Chloride	ND	60	mg/Kg	20	5/1/2019 1:48:16 AM	44629			
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analys	t: 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 RANG	E				Analys	t: 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			

Hall Environmental Analysis Laboratory, Inc.

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

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

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WO#:	1904C24
	09-May-19

	uder, Miller & Associates ack 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: 4/30/201	Analysis Date: 4/30/2019 SeqNo: 2006282 Units: mg/Kg	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDL	_imit Qual
Chloride	ND 1.5	
Sample ID: LCS-4462	SampType: LCS TestCode: EPA Method 300.0: Anions	
Client ID: LCSS	Batch ID: 44629 RunNo: 59543	
Prep Date: 4/30/201	Analysis Date: 4/30/2019 SeqNo: 2006283 Units: mg/Kg	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDL	_imit Qual
Chloride	14 1.5 15.00 0 96.5 90 110	

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

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

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	1904C24
	09-May-19

Client: Souder,	Miller & Associates	
Project: Black R	iver 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		SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO) Surr: DNOP	541050.005.25.000	0 107 63.9 124 105 70 130
	5.2 5.000	105 70 150
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) Surr: DNOP	ND 50 11 10.00	108 70 130
	11 10.00	100 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 Diesel Range Organics (DRO)	ResultPQLSPK value481050.00	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 0 96.9 63.9 124
Surr: DNOP	4.0 5.000	79.8 70 130
Sample ID: MP 44726		TootCodo: EDA Mothod 9015M/D. Discol Dance Organica
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		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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

WO#:	1904C24
	09-May-19

Client:	Souder, Miller & A	Associate	es							
Project:	Black River ROW	(BR-RC	OW)							
Sample ID: MB-447	36 Samp	Туре: М	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Bat	ch ID: 44	736	F	RunNo: 5 9	9674				
Prep Date: 5/6/20	19 Analysis	Date: 5/	7/2019	S	SeqNo: 2	012069	Units: mg/K	٤g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics	s (MRO) ND	50								
Surr: DNOP	9.7		10.00		97.0	70	130			

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

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

Page 14 of 16

	Miller & Ass ver ROW (B									
Sample ID: MB-44546	SampTy	pe: ME	BLK	Test	Code: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch	ID: 44	546	R	unNo: 5 9	9477				
Prep Date: 4/25/2019	Analysis Da	te: 4/	27/2019	S	eqNo: 20	003610	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 890	5.0	1000		89.5	73.8	119			
Sample ID: LCS-44546	SampTy	pe: LC	S	Test	Code: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch	ID: 44	546	R	unNo: 59	9477				
Prep Date: 4/25/2019	Analysis Da	te: 4/	27/2019	S	eqNo: 20	003611	Units: mg/K	g		
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	SampTy	pe: LC	S	Test	Code: EF	PA Method	8015D: Gaso	line Rang	9	
Client ID: LCSS	Batch	ID: 44	737	R	unNo: 5 9	9701				
Prep Date: 5/6/2019	Analysis Da	ite: 5/	7/2019	S	eqNo: 20	012808	Units: mg/K	g		
Prep Date: 5/6/2019 Analyte	Analysis Da Result	ite: 5/ PQL		S SPK Ref Val	eqNo: 2 0%	D12808 LowLimit	Units: mg/K HighLimit	g %RPD	RPDLimit	Qual
					•		•	•	RPDLimit	Qual
Analyte	Result	PQL	SPK value	SPK Ref Val	· %REC	LowLimit	HighLimit	•	RPDLimit	Qual
Analyte Gasoline Range Organics (GRO)	Result 25	PQL 5.0	SPK value 25.00 1000	SPK Ref Val 0	%REC 98.8 106	LowLimit 80.1 73.8	HighLimit 123	%RPD		Qual
Analyte Gasoline Range Organics (GRO) Surr: BFB	Result 25 1100	PQL 5.0 pe: ME	SPK value 25.00 1000 BLK	SPK Ref Val 0 Test	%REC 98.8 106	LowLimit 80.1 73.8 PA Method	HighLimit 123 119	%RPD		Qual
Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44737	Result 25 1100 SampTy	PQL 5.0 pe: ME ID: 44	SPK value 25.00 1000 BLK 737	SPK Ref Val 0 Test R	%REC 98.8 106 Code: EF	LowLimit 80.1 73.8 PA Method	HighLimit 123 119	%RPD		Qual
Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID: MB-44737 Client ID: PBS	Result 25 1100 SampTy Batch	PQL 5.0 pe: ME ID: 44	SPK value 25.00 1000 BLK 737 7/2019	SPK Ref Val 0 Test R	%REC 98.8 106 Code: EF	LowLimit 80.1 73.8 PA Method	HighLimit 123 119 8015D: Gaso	%RPD		Qual

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

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	1904C24
	09-May-19

	r, Miller & Asso River ROW (BF							
Sample ID: MB-44546	SampType	e: MBLK	Test	Code: EPA Metho	od 8021B: Volat	iles		
Client ID: PBS	Batch ID	2 44546	R	unNo: 59477				
Prep Date: 4/25/2019	Analysis Date	e: 4/27/2019	S	eqNo: 2003656	Units: mg/K	g		
Analyte	Result F	QL SPK value	SPK Ref Val	%REC LowLim	it 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 8	0 120			
Sample ID: LCS-44546	SampType	e: LCS	Test	Code: EPA Metho	od 8021B: Volat	iles		
Client ID: LCSS	Batch ID	2: 44546	R	unNo: 59477				
Prep Date: 4/25/2019	Analysis Date	e: 4/27/2019	S	eqNo: 2003657	Units: mg/K	g		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC LowLim	it HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92 0	.025 1.000	0	92.2 8	0 120			
Toluene	0.95 0	.050 1.000	0	94.7 8	0 120			
Ethylbenzene	0.94 0	.050 1.000	0	94.4 8	0 120			
Xylenes, Total	2.8	0.10 3.000	0	94.8 8	0 120			
Surr: 4-Bromofluorobenzene	0.92	1.000		92.3 8	0 120			
Sample ID: LCS-44737	SampType	e: LCS	Test	Code: EPA Metho	od 8021B: Volat	iles		
Client ID: LCSS	Batch ID	2 44737	R	unNo: 59701				
Prep Date: 5/6/2019	Analysis Date	e: 5/7/2019	S	eqNo: 2014350	Units: mg/K	g		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC LowLim	it HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81 0	.025 1.000	0	80.8 8	0 120			
Toluene	0.84 0	.050 1.000	0	84.2 8	0 120			
Ethylbenzene	0.84 0	.050 1.000	0	84.2 8	0 120			
Xylenes, Total	2.5	0.10 3.000	0	84.2 8	0 120			
Surr: 4-Bromofluorobenzene	0.96	1.000		96.2 8	0 120			
Sample ID: MB-44737	SampType	e: MBLK	Test	Code: EPA Metho	od 8021B: Volat	iles		
Client ID: PBS	Batch ID): 44737	R	unNo: 59701				
Prep Date: 5/6/2019	Analysis Date	e: 5/7/2019	S	eqNo: 2014353	Units: mg/K	g		
Analyte		PQL SPK value	SPK Ref Val	%REC LowLim	it HighLimit	%RPD	RPDLimit	Qual
Benzene		.025						
Toluene	ND 0	.050						
Ethylbenzene		.050						
Xylenes, Total	ND	0.10						
Surr: 4-Bromofluorobenzene	0.93	1.000		92.5 8	0 120			

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
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- PQL Practical Quanitative Limit
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P Sample pH Not In Range

RL Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345	ental Analysis Labora 4901 Hawkin Albuquerque, NM 8 3975 FAX: 505-345 w.hallenvironmental	s NE 7109 San 4107	Sample Log-In Check List			
Client Name: SMA-CARLSBAD	Work Order Num	nber: 1904C24		RcptNo:	1		
Received By: Erin Melendrez	4/25/2019 9:20:00		ULUA Int Bac	7			
Completed By: Leah Baca Reviewed By: ENM	4/25/2019 11:22:1 4/25/9	7 AM	Laal Bac	í.			
Labeled by JJC 4-25-1 Chain of Custody	2						
1. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present			
2. How was the sample delivered?		Courier					
Log In 3. Was an attempt made to cool the samples?		Yes 🗹	No 🗌	NA 🗌			
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗌				
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) proper	y 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 broke	n?	Yes 🗌	No 🗹	# of preserved bottles checked			
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	for pH:	>12 unless noted)		
12. Are matrices correctly identified on Chain of	Custody?	Yes 🗹	No 🗌	Adjusted?	×		
13. Is it clear what analyses were requested?		Yes 🔽	No 🗌				
 Were all holding times able to be met? (If no, notify customer for authorization.) 		Yes 🗹	No 🗌	Checked by:	1)(4-25-19		
Special Handling (if applicable)							
15. Was client notified of all discrepancies with	this order?	Yes	No 🗌	NA 🔽			
Person Notified:	Date	· [and the second		-		
By Whom:	Via:	P	hone 🗌 Fax	In Person			
Regarding:							
Client Instructions:							
16. Additional remarks:							
17. <u>Cooler Information</u> <u>Cooler No</u> Temp °C Condition So 1 4.9 Good Yes	eal Intact Seal No	Seal Date	Signed By				
	,						

The intermediation of the	
II: CMP Cartsbacd II: Standard Krush Claud rig Address: Robert Project Name: Robert 4901 Hawki rig Address: Bacu Ryver Bacu Ryver Poul 4901 Hawki rig Address: Robert Robert Project Nameser: 7055 Profect rig Address: Racu Ryver Project Manager: 7055 Profect 4901 Hawki rin Frain Project Manager: Project Manager: 7055 Profect 7055 Profect rin Frain Project Manager: Robert Cart 8001 Project Manager: 7055 Profect Restrict Control Restrict Ryves NTRE 7001 C2-4 1714 Restrict Control Restrict Ryves No 7001 C2-4 1714 Restrict Control Restrict Ryves Project Ryves 7001 C2-4 1714 Restrict Control Restrict Ryves Project Ryves 7002 C0 1714 Restrict Control Restrict Ryves Project Ryves 7002 C0 1714 Restrict Control Restrict Ryves Prov 7002 C0 1714 Restrict Ryves Restrict Ryves Prov 7002 Conternet 1717 Restrict Ryves Restrict Ryves Restrint 11177<	
Ing Address: Project Name: 3 Ing Address: Blau L River Row (Rz - Low) Inf Fax#: Project Manager: Re #: Project Manager: Project Manager: Project Manager: Project Manager: Project Manager: Project Manager: Project Manager: Pro: Project Manage	Sday
Ing Address: Black Row row Black Row row 4901 Hawki Inf Address: Project # Project # 10.0000 Inf Fax#: Project Manager: Project # 10.0000 Inf Fax#: Project # Project # 10.0000 Inf Fax#: Sample: WE 0.0000 Inf Fax#: Sample: WE 0.0000 Inf Fax#: Project # Project # 10.0000 Inf Fax#: Inf Fax#: Project # 10.0000 Inf Fax#: In	www.hallenvironments
Tel: Project #: In Fact#: Project #: In Fact#: Project #: In Fact#: Project Manager: In Project #: Project Manager: In Project #: Project Manager: In Project #: Project #: In Project #: Proj	(B2 - ROW) 4901 Hawki
In $free #$. Project Manager: C Package: In $free #$. Project Manager: From $free #$. Project Manager: C Package: Intrins Matrix Sample: MLF from $free # free # fr$	10
II or Fax#: Project Manager: All conclusion Project Manager: All conclusion All conconding condinin All conconding conclusio	Analysis
C Package: Indiard Indiard </td <td>[▶]0[,]</td>	[▶] 0 [,]
editation: \Box Az Compliance Sampler: WLF ELAC \Box Other: MTF MTF DD (Type) # of Coolers: 1 $MTEF$ $MTEF$ Time Matrix Sample Name $Tope$ $MTEF$ 7: Vo S.vi S.vi $TiPP$ $MTEF$ 7: Vo S.vi L1 - 1' Mr $MTEF$ 7: Vo S.vi L1 - 2' Mr $MrEF$ 7: Vo S.vi L1 - 2' Mr $MrEF$ 7: Vo S.vi L1 - 2' $MrEF$ $MTEF$ 7: Vo L1 - 2' $MrEF$ $MrEF$ $MTEF$ 7: Vo L1 - 2' $MrEF$ $MrEF$ $MTEF$ 7: Vo L1 - 1' $MrEF$ $MrEF$ $MREF$ 7: Vo L1 - 1' $MrEF$ $MrEF$ $MTEF$ 7: Vo L2 - 0.5' $MrEF$ $MREF$ $MREF$ 8: 20 L3 - 1' $MrEF$ $MrEF$ $MrEF$ 8: 2	РСВ's (802 [.]
ELAC Other Mo DD(Type) # of Coolers: 1 # of Coolers: 1 3 Time Matrix Sample Name Type and # Type 3 7: ve Sample Name 3 7: ve Sample Name 3 7: ve L1 - 1 3 7: ve Sample Name $7: Ve$ L1 - 1 $4n$ $7: Ve$ L1 - 1 $7: Ve$ L1 - 2 $7: Ve$ L1 - 1 $7: Ve$ L1 - 2 $7: Ve$ L1 - 1 $8: vev$ L3 - 1 $8: vev$ L4 - 2 $8: vev$ L4 - 2 $8: vev$ L4 - 2	и DR 10 ₂ , 10 ₂ ,
DD (Type)Monthing CriticityTimeMatrixSample NameFreservativeHEAL No.37: υ Sample NameContainerPreservativeHEAL No.37: υ Sample NameContainerPreservativeHEAL No.7: υ Sample NameType and #TypeSoilEDB (Methods)7: υ 27: υ Sample Name 0.02 MT FBE7: ϑ 27: υ 2001 0.02 MT FBE7: ϑ 27: υ 0.02 0.02 0.02 7: ϑ 27: υ 0.02 0.02 0.02 7: ϑ 27: υ 0.02 0.02 0.02 7: ϑ 27: υ 0.02 0.02 0.02 8: υ $1.2 - \sigma$ 0.02 0.02 0.02 8: ε $1.4 - 1$ 0.02 0.02 0.02 8: ε $1.4 - 1$ 0.02 0.02 0.02 8: ε $1.4 - 1$ 0.02 0.02 0.02 8: ε $1.4 - 2$ 0.02 0.02 0.02 8: ε 0.02 0.02 0.02 <td>□ N 100 1 100 100 1 100 100 100 100 100 100 100 100 100 100</td>	□ N 100 1 100 100 1 100 100 100 100 100 100 100 100 100 100
Image Matrix Cooler Templementer Preservative HEAL NO. 3 7: υ ς - υ T T T 3 7: υ ς - υ T T T 3 7: υ ς - υ T T T 3 7: υ ς - υ T T T 7 7 : υ ς - υ T T T 7 : 3 L T T $-\sigma$ T 7 : 3 L T T $-\sigma$ T 7 : 3 L T T $-\sigma$ T 7 : 3 L L T $-\sigma$ T 7 : 3 L L T $-\sigma$ T 7 : 3 L L T $-\sigma$ T 7 : 9 L L T $-\sigma$ T 7 : 9 L L T $-\sigma$ 7 : 9 L L T $-\sigma$ 8 : 2 L L $-\sigma$ T 8 : 2 L L $-\sigma$ $-\sigma$	VC (GF 310 310 310 310
Time Matrix Sample Name Container Preservative HEAL No. 3 7: v_{0} solid $Li - I^{1}$ A_{0} D_{0} D_{0} 3 7: v_{0} solid $Li - I^{1}$ A_{0} D_{0} D_{0} 3 7: v_{0} solid $Li - I^{1}$ A_{0} D_{0} D_{0} 7: V_{0} $Li - 2^{1}$ A_{0} D_{0} D_{0} D_{0} 7: Y_{0} $Li - 2^{1}$ D_{0} D_{0} D_{0} D_{0} 7: Y_{0} $Li - 2^{1}$ D_{0} D_{0} D_{0} D_{0} 8: v_{0} $L_{0} - 1^{1}$ D_{0} D_{0} D_{0} D_{0} 8: v_{0} $L_{0} - 1^{1}$ D_{0} D_{0} D_{0} D_{0} 8: v_{0} $L_{0} - 1^{1}$ D_{0} D_{0} D_{0} D_{0} 8: v_{0} $L_{0} - 1^{1}$ D_{0} D_{0} D_{0} D_{0} 8: v_{0} $L_{0} - 1^{1}$ D_{0} D_{0} D_{0} D_{0} 8: v_{0} $L_{0} - 1^{1}$ D_{0} D_{0} D_{0} D_{0} 8: v_{0} $L_{0} - 1$	2,0% 15D 145D 145D 145D 145D 145D 145D 145D
Image Matrix Sample Name Type and # Type $q_0 q_0 q_0 Q_0 q_1$ $B \square \Delta D_1$ $3 7: v v$ $Solil$ $LI - I^{1}$ $4n$ $-coll$ $-co$	HEAL No.
2 $7:ve$ soil $LI-Ii$ $4m.$ $-coil$ M $7:Po$ $LI-Ii$ $4m.$ $-coil$ M $-coil$ M $7:Po$ $LI-2i$ T $-coil$ M $-coil$ M $7:Po$ $L2-0.5i$ T $-coil$ $PLEm3E$ H $7:Po$ $L3-1i$ $-coil$ $PLEm3E$ H $8:Vo$ $L3-1i$ $-coil$ $PLEm3E$ H $8:2o$ $L4-1i$ $-coil$ $PLEm3E$ H $8:2o$ $L4-2i$ $-coil$ $PLm3E$ H $8:2o$ $L4-2i$ $-coil$ $PLm3E$ H $8:2o$ $L4-2i$ $-coil$ $-coil$ $PLm3E$ H $8:2o$ $L4-2i$ $-coil$ $-coil$ $-coil$ PL $PLm3E$	904C24 BT F 8 E P R C 82 82
7:10 $L:2:$ -002	
7:30 $(22-0.5)$ -003 3 7:40 $(23-1)$ -003 3 8:10 $(23-1)$ -003 3 8:10 $(23-1)$ -004 $RtEnte$ 8:10 $(23-1)$ -004 $RtEnte$ 8:10 $(23-1)$ -006 -004 $RtEnte$ 8:20 $(4-1)$ -006 -004 $RtEnte$ 8:20 $(4-2)$ -000 -000 -000 -000 8:20 $(4-2)$ -000 -000 -000 -010 $RtEnte$ 16 9:05 $16-1$ -010 -010 -010 -010 -010	- 002
$7:40$ $L.2-1!$ -0.04 $RLEM3E$ I_1 $S:co$ $L3-1!$ -0.04 $RLEM3E$ I_1 $S:co$ $L3-2!$ -0.06 $RLEM3E$ I_1 $S:co$ $L3-2!$ -0.06 $RLEM3E$ I_1 $S:2c$ $L3-2!$ -0.06 $RLEM3E$ I_1 $S:2c$ $L4-1!$ -0.06 $RLEM3E$ I_1 $S:2c$ $L4-1!$ -0.06 $RLEM3E$ I_1 $S:2c$ $L4-1!$ -0.02 $RLEM3E$ I_1 $S:2c$ $L4-1!$ -0.02 $RLEM3E$ I_1 $R:2c$ $L4-2!$ -0.02 $RLEM3E$ I_1 $R:2c$ $L4-2!$ -0.02 $RLM2$ I_1 $R:2c$ $L4-2!$ -0.02 $RLM2$ I_1 $R:2c$ $L4-2!$ I_1 -0.02 $RLM2$ I_1 $R:2c$ $L4-2!$ I_1 I_2 I_2 I_1 I_2 I_1 $R:2c$ $L2-1! I_2 I_2 I_2<$	-002 75
$F:co$ $L3^{-1}I$ -0.05 -0.05 -0.05 $F:co$ $L3^{-2}I$ -0.06 -0.06 -0.06 $F:co$ $L4^{-1}I$ -0.06 -0.06 -0.06 $F:co$ $L4^{-1}I$ -0.06 -0.06 -0.06 $F:co$ $L4^{-1}I$ -0.06 -0.06 -0.06 $F:co$ $L6^{-1}I$ -0.02 -0.02 -0.02 -0.02 $F:co$ $L6^{-1}I$ -0.02 -0.02 -0.02 -0.02 -0.02 -0.02 $F:co$ $L6^{-1}I$ -0.02 -0.02 -0.02 -0.02 -0.02 -0.02	PUE
8:10 $L3^{-}2^{1}$ -006 -006 -006 8:20 $L4^{-}1^{1}$ -008 -008 -008 8:30 $L6^{-}1^{1}$ -010 $PLENSE$ IH 9:05 $L4^{-}2^{1}$ -012 -012 $PLENSE$ IH	- 0 ^(j)
$g:2\omega$ $(4-1)$ (-0.4) (-0.03) (-0.03) (-0.03) $g:3O$ $(2-2)$ (-0.1) (-0.03) (-0.03) (-0.03) $g:3O$ $(2-1)$ (-0.03) (-0.03) (-0.03) (-0.03) $g:3O$ (-1) (-0.03) (-0.03) (-0.03) (-0.03)	-006
$8:30$ $24 \cdot 2^{-1}$ -008 -008 -008 875 $15 - 0.5^{-1}$ -008 -010 7.673ε 14 8.50 $15 - 1^{-1}$ -010 7.673ε 14 -010 7.673ε 14 9.05 $16 - 1^{-1}$ -010 $7.6-10$ -012 -012 -012 -012	
8:45 15-0.5' 10-009 V V 8:50 2 15-1' -010 PLENSE 14 9:05 2 14-2' 2011 10-011 10-012 14	2
850 15-1 15-1 -010 READE 14 9:05 2 16-1 2 -011 1 -012 1	
9:00 1 16-1' 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PLENSE M
9.05 4 L4-21 + n.	
	- 210-
man Remain	U 24/19 May May add V add the following tests:
Date: Time: Relinquished by: Received by: Via:COUNTIENDALENTIME Per Me lodie -	Irriedpate Time Per
from the serves as notice of this possibility. Any sub-contracted to the analytical report for the analytical report	boratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

	ANALYSIS LABORATORY	www hallenvironmental com	26 ···) 4901 Hawkins NE - Albuquerque, NM 87109	10	Anal	¢0)	SO [¢] S SIWS SCB₁ ²	2 ^{5,} F 2703 1) DRC	V 01 8/80 01 8 01 8 01 8 7 01 0 7 01 0 0 0 0 0 0 0 0 0	VC 103 110 110 110 110	etho etho y 83 Me Me Me OA)	XIEX / XIEX / XI	2 deserver me	-OH PUEKE MAN					Remarks: Murtud »1	J 2 2	Ksubmitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	D Standard Rush Sdau	Project Name:	Back River Row (\$P- 120	Project #:		Project Manager:	Werenter Leunien	Samper: NVCS	1925	olers:	Cooler Temp(including CF): 2.6	Container Preservative HEAL No. Type and # Type							 AN PUL	Received by: Via: COULTIEL Date Time	ontracted to other accredited laboratories. This serves as notic
Chain-of-Custody Record	Client: Smy Carusbad.		Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:			(adv		Date Time Matrix Sample Name	9:30 QUT	9:45					Date: Time: Relinquished by: Why on the Andrew of the Andr	Verte Time: Relinguished by:	If hecessary, sample submitted to Hall Environmental may be subc



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

OrderNo.: 1905377

RE: Black River 15-10

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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis	s Laboratory, Inc	с.			Lab Order 1905377 Date Reported: 5/10/2	019
CLIENT: Souder, Miller & Associates		Client Sa	mple II): L3	-2.5	
Project: Black River 15-10		Collect	ion Dat	e: 5/6	/2019 2:00:00 PM	
Lab ID: 1905377-001	Matrix: SOIL	Receiv	/2019 8:50:00 AM			
Analyses	Result	RL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: MRA
Chloride	82	60	mg/Kg	20	5/9/2019 11:23:55 PM	44837

Analytical Report

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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

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

Page 1 of 2

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:		er, Miller & Ass k River 15-10	sociate	2S							
Sample ID:	MB-44837	SampTy	pe: mb	olk	Tes	tCode: EF	PA Method	300.0: Anion	S		
Client ID:	PBS	Batch	ID: 448	837	F	RunNo: 5 9	9766				
Prep Date:	5/9/2019	Analysis Da	te: 5/	9/2019	S	SeqNo: 20	016270	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID:	LCS-44837	SampTy	pe: Ics	;	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	ID: 448	837	F	RunNo: 5 9	9766				
Prep Date:	5/9/2019	Analysis Da	te: 5/	9/2019	S	SeqNo: 20	016271	Units: mg/K	g		
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.
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- 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

	RONMENTA Ysis Pratory	AL	TE.	ll Environmer L: 505-345-39 Website: www	490 Albuquerq 975 FAX:	1 Hawkins N ue, NM 8710 505-345-410	^s San	nple Log-In (Check List
Client Name:	SMA-CARL	.SBAD	Work	Order Numb	ber: 1905	377		RcptNc	p: 1
Received By:	Isaiah Ort	iz	5/8/201	9 8:50:00 AI	М		ILC	2/	
Completed By:	Isaiah Ort	iz		9 10:01:02 A	MA		I_C I_C	2~~	
Reviewed By:	NB		518	119		3			
LB:	DAD	5/8/19							
Chain of Cu		5/0111							
1. Is Chain of C	Custody comp	lete?			Yes	\checkmark	No 🗌	Not Present	
2. How was the	e sample deliv	ered?			Cour	ier			
Log In									
3. Was an atter	mpt made to c	ool the samp	es?		Yes	\checkmark	No 🗌		
4. Were all sam	ples received	at a tempera	ure of >0° C	to 6.0°C	Yes	\checkmark	No 🗌	NA 🗌	
5. Sample(s) in	proper contai	ner(s)?			Yes	\checkmark	No 🗌		
6. Sufficient sar	nple volume f	or indicated te	st(s)?		Yes	\checkmark	No 🗌		
7. Are samples	(except VOA	and ONG) pro	perly preserve	ed?	Yes	\checkmark	No 🗌		
8. Was preserva	ative added to	bottles?			Yes		No 🗹	NA 🗌	
0		_							
9. VOA vials ha		14			Yes		No 🗌	No VOA Vials 🗹	
10. Were any sa	mple containe	rs received b	oken?		Yes		No 🗹	# of preserved	
11. Does paperw	ork match bot	tle labels?			Yes	\checkmark	No 🗌	bottles checked for pH:	
(Note discrep	ancies on cha	in of custody							r >12 unless noted)
12. Are matrices							No 🗌	Adjusted?	
13. Is it clear what			?				No 🗌	Checked but	DAD 518/19
14. Were all hold (If no, notify c	ustomer for a				Yes		No 🗌	Checked by:	JIID 37877
Special Hand	ling (if and	licable)							
15. Was client n			<i>lith this order?</i>		Yes		No 🗌	NA 🔽	
		sereparicies v							
	Notified:			Date:	-		— -	— · -	
By Wh Regard				Via:	eMa	uil 🗌 Phor	ie 🗌 Fax	In Person	
	Instructions:								
16. Additional re									
17. <u>Cooler Info</u> Cooler No	ALL THE COLUMN AND DO THE REAL OF	Condition	Seal Intact	Seal No	Seal Da	te Sir	ned By	1	
1	2.3	Good	Yes				, ,	An and a second s	

	S day ANAL ENVIRONMENTAL	River 15-10 4901 Hawkins NE - Albuqueroue, NM 87109	Tel. 505-345-3975	Analysis	04	PO4, S DSIMS PCB's (802 (802 (802 (802 (802)	10 ² ;	(0) 8/8/ 904 904 904 904 904 904 904 904 904 904		5D(stic 83 7, <i>N</i> 83 7, <i>N</i> 7, <i>N</i>	HEAL NO HEAL NO BTEX / BTEX / BOB (Md BOB1 Pe BOB (Md PAHS by RCRA 8									Date Time Remarks:	5/6/19 1500 Matador.	Date Time	
Turn-Around Time:	Standard Kush S	 Black R	Project #:		Project Manager:	Merodic	Sampler: NRS	10000	olers:	Cooler Temp(including CF): 2	Container Preservative Type and # Type			2					<i>u</i>	Received by: Mig	11111	Received by: Via:	
Chain-of-Custody Record	Client: SMA-Cansbad.	Mailing Address:		Phone #:	email or Fax#:	QA/QC Package:	Accreditation:		ype)		Date Time Matrix Sample Name	12-2	2000							uished by:	Manian	Relinquished by:	Shile 1a. Mill