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

May 25, 2018

#5E26784-BG4

NMOCD District II
Mike Bratcher
811 S. First St.
Artesia, NM 88210

SUBJECT: SOIL REMEDIATION CLOSURE REPORT FOR THE GOLDEN D FEDERAL #004 (2RP-4551) RELEASE SITE, EDDY COUNTY, NEW MEXICO

Dear Mr. Bratcher:

On behalf of XTO Energy, Inc. (XTO), Souder, Miller & Associates (SMA) has prepared this CLOSURE REPORT that describes the assessment, initial delineation and remediation for a release associated with the Golden D Federal #004 (2RP-4551). The site is located in UNIT E, SECTION 16, TOWNSHIP 21S, RANGE 29E, NMPM, Eddy County, New Mexico, on Federal and State land. Figure 1 illustrates the vicinity and location of the site. Table 1, below, summarizes information regarding the release.

Table 1: Release Information and Site Ranking	
Name	Golden D Federal #004
Company	XTO Energy Inc
Incident Number	2RP-4551
API Number	30-015-35636
Location	32.481906, -103.9908092
Estimated Date of Release	12/21/2017
Date Reported to NMOCD	12/21/2017
Land Owner	BLM/State
Reported To	NMOCD District II
Source of Release	Flow Line
Released Material	Produced Water
Released Volume	26 bbl
Recovered Volume	0 bbl
Net Release	26 bbl
Nearest Waterway	Old Indian Draw is approximately 5 miles south of location
Depth to Groundwater	Estimated to be greater than 100’
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	0
SMA Response Dates	12/21/2017, 1/15/2018, 4/4/2018, 4/5/2018

1.0 Background

On December 21, 2017, a leak formed on the steel surface flowline of the Golden D Federal #004 pipeline due to a loose hammer union. The release impacted approximately 4,988 square feet of lease road that includes both federal and state surface.

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 13 miles east of Carlsbad, with an elevation of approximately 3,344 feet above sea level. SMA searched the New Mexico State Engineer's Office (NMOSE) online water well database for water wells in the vicinity of the release. Several wells are located within a three-mile radius of the site, all of which have a depth of groundwater greater than 100 feet. After further evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be greater than 100 feet below ground surface (bgs).

Recommended Remediation Action Levels (RRALs) are determined by the site ranking according to the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (1993). Below, Table 2 summarizes the remediation standards and the site ranking for this location. Justification for this site ranking is found in Figure 1 and Appendix B.

Table 2.

Soil Remediation Standards	0 to 9	10 to 19	>19
Benzene	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
TPH	5000 PPM	1000 PPM	100 PPM

Depth to Groundwater	NMOCD Numeric Rank
< 50 BGS = 20	
50' to 99' = 10	
>100' = 0	0
Distance to Nearest Surface Water	**NMOCD Numeric Rank**
< 200' = 20	
200' - 1000' = 10	
>1000' = 0	0
Well Head Protection	**NMOCD Numeric Rank**
<1000' (or <200' domestic) = 20	
> 1000' = 0	0
Total Site Ranking	**0**

3.0 Release Characterization

On December 21, 2017, SMA field personnel assessed the release area and collected delineation samples. Four sample locations (L1-L4) along the flow path were augured by hand to a maximum depth of two feet bgs. Soil samples were field-screened for chlorides with a mobile titration unit (EPA 4500).

On January 15, 2018, SMA field personnel returned to the site to further delineate vertical contamination at sample locations L1 and L2. These locations were augured by hand to a maximum of three feet bgs due to the confining layer of caliche. The soil samples were again field-screened for chlorides with a mobile titration unit (EPA 4500).

All samples were collected and processed according to NMOCD soil sampling procedures. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for MRO, DRO, and GRO by EPA Method 8015D (L1 at 0.5 feet), BTEX by EPA Method 8021 (L1 at 0.5 feet), and Chlorides by Method 300 (all samples). Sample locations are depicted on Figure 2. All laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

Laboratory results indicated that hydrocarbon impacts are below NMOCD screening RRALs, and chloride impacts decreased with depth.

4.0 Remediation

On April 4 and 5, 2018 after approval from area utilities via 811, SMA personnel was on location to guide and oversee the remediation of impacted soils. The area surrounding sample points L1 and L2 was excavated to a total of 4 feet bgs, while the rest of the impacted area was excavated from 3 feet bgs to 0.5 feet bgs, as outlined in Table 3. Three additional locations were sampled (L5-L7), and each location was sampled from the bottom of the excavation. In addition, a total of 12 sidewall samples were collected to ensure horizontal delineation.

Contaminated soils were removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil was transported for proper disposal at an NMOCD permitted disposal facility.

5.0 Scope and Limitations

The scope of our services consisted of the performance of verification of release stabilization, assessment and closure sampling, regulatory liaison, and preparation of 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 Austin Weyant at 575-689-8801 or Shawna Chubbuck at 505-325-7535.

Submitted by:
SOUDER, MILLER & ASSOCIATES

J. Austin Weyant

Austin Weyant
Project Scientist

Reviewed by:

Shawna Chubbuck

Shawna Chubbuck
Senior Scientist

ATTACHMENTS:

Figures:

Figure 1: Vicinity and Well Head Protection Map
Figure 2: Site and Sample Location Map

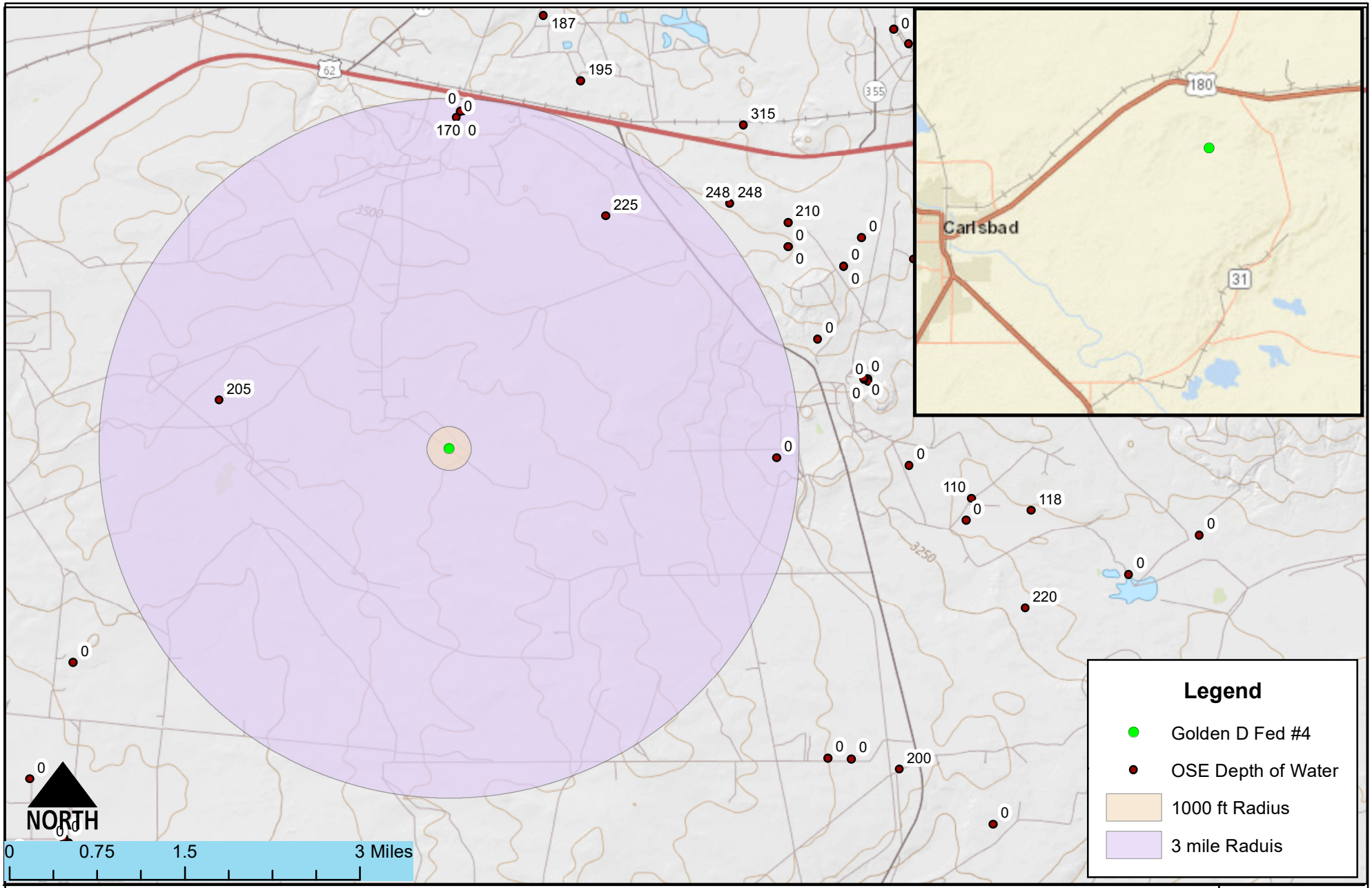
Tables:

Table 3: Summary of Sample Results

Appendices:

Appendix A: Form C141 Initial and Final
Appendix B: NMOSE Wells Report
Appendix C: Laboratory Analytical Reports

FIGURE 1
VICINITY AND NMOSE DATA MAP



Vicinity and Well Head Protection Map
Golden D Federal #4 - XTO
S 16-T21S-R29E, New Mexico

Figure 1

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

Date Saved: 1/10/2018

Drawn Heather Patterson
Checked
Approved

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

FIGURE 2
SITE AND SAMPLE
LOCATION MAP

Site and Sample Location Map
Golden D Federal #4 - XTO
S 16-T21S-R29E, New Mexico

Figure 2

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

Date Saved: 5/14/2018

Drawn Heather Patterson
Checked
Approved

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

TABLE 3
SUMMARY SAMPLE RESULTS

Golden D Federal #004

Table 3.

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Action Taken	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- Field Screens (ppm)	Cl- Laboratory mg/Kg
NMOCD RRAL's for Site Ranking 0				50 mg/Kg	10 mg/Kg				5000 mg/Kg		
L1	12/21/2017	0.5	excavated	<0.24	<0.24	14	150	71	235	--	14000
	12/21/2017	1	excavated	--	--	--	--	--	--	--	7000
	1/15/2018	2	excavated	--	--	--	--	--	--	1705	1700
	1/15/2018	3	excavated	--	--	--	--	--	--	839	940
	4/5/2018	4	in-situ	<0.23	<0.023	<4.7	<9.3	<47	<62	262	280
L2	12/21/2017	0.5	excavated	--	--	--	--	--	--	--	8400
	12/21/2017	1	excavated	--	--	--	--	--	--	--	8700
	12/21/2017	2	excavated	--	--	--	--	--	--	--	4900
	1/15/2018	2.5	excavated	--	--	--	--	--	--	2282	2500
	1/15/2018	3	excavated	--	--	--	--	--	--	969	800
	4/5/2018	3.5	in-situ	--	--	--	--	--	--	363	--
L3	12/21/2017	0.5	excavated	--	--	--	--	--	--	--	7600
	12/21/2017	1	excavated	--	--	--	--	--	--	--	980
	12/21/2017	2	excavated	--	--	--	--	--	--	--	380
	4/5/2018	3	in-situ	--	--	--	--	--	--	363	130
L4	12/21/2017	0.5	excavated	--	--	--	--	--	--	--	7100
	12/21/2017	1	excavated	--	--	--	--	--	--	--	750
	12/21/2017	2	excavated	--	--	--	--	--	--	--	460
	4/5/2018	2.5	in-situ	--	--	--	--	--	--	--	<30
L5	4/5/2018	0.5	in-situ	--	--	--	--	--	--	--	30
L6	4/5/2018	1	in-situ	<0.23	<0.025	<4.9	<9.2	<46	<61	<271	400
L7	4/5/2018	1	excavated	--	--	--	--	--	--	<271	130
	4/5/2018	2	in-situ	--	--	--	--	--	--	<271	91
BG1	12/21/2017	1	in-situ	--	--	--	--	--	--	--	<30
SW1	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	<271	43
SW2	4/4/2018	sidewall	excavated	--	--	--	--	--	--	--	1600
	5/18/2018	sidewall	in-situ	--	--	--	--	--	--	--	210

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Action Taken	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	**Total TPH** mg/Kg	Cl- Field Screens (ppm)	Cl- Laboratory mg/Kg
NMOCD RRAL's for Site Ranking 0				50 mg/Kg	10 mg/Kg				5000 mg/Kg		
SW3	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	392	310
SW4	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	<271	--
SW5	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	<271	130
SW6	4/4/2018	sidewall	excavated	--	--	--	--	--	--	--	1900
	5/18/2018	sidewall	in-situ	--	--	--	--	--	--	--	150
SW7	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	334	--
SW8	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	363	230
SW9	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	291	150
SW10	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	420	150
SW11	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	594	500
SW12	4/4/2018	sidewall	in-situ	--	--	--	--	--	--	--	210

"--" = Not Analyzed

APPENDIX A
FORM C141 INITIAL AND FINAL

NM OIL CONSERVATION ARTESIA DISTRICT JAN 04 2018 RECEIVED

NM OIL CONSERVATION ARTESIA DISTRICT JAN 04 2018 RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

NAB1800936367 BOPCO 260737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy	Contact: Amy C. Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No: 432-661-0571
Facility Name: Golden D Federal #004 (location of well is on Federal, location of release point is on NM State Land)	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No: 30-015-35636

see above - release on SLO land + BLM?

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	16	21S	29E	1745	North	18	West	Eddy

Latitude 32.481906° **Longitude** -103.998092° NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 26 bbls	Volume Recovered: 0 bbls
Source of Release: Flow Line	Date and Hour of Occurrence: 12/21/2017 time unknown	Date and Hour of Discovery: 12/21/2017 9 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Crystal Weaver (NMOCD), Shelly Tucker/Jim Amos (BLM)	
By Whom? Kyle Littrell	Date and Hour: 12/21/2017 3:35 pm by email	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
Steel surface flow line developed a leak due to a loose hammer union. The connection was tightened.

Describe Area Affected and Cleanup Action Taken.*
The release impacted approximately 4,988 square feet of lease road running NW to SE on the northeast side of the Golden Lane 17 Federal #1 well pad. The release extended into NM State land at its east end across the road intersection. A remediation contractor has been contacted to assist with the delineation and remediation effort.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Amy C. Ruth	Approved by Environmental Specialist: Crystal W
Title: Environmental Coordinator	Approval Date: 1/8/18 Expiration Date: N/A
E-mail Address: Amy_Ruth@xtoenergy.com	Conditions of Approval: See attached Attached ☒ 2RP-4551
Date: 1/4/2018 Phone: 432-661-0571	

* Attach Additional Sheets If Necessary

1/8/18 AB

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **1/4/18** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4551 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 2/4/18. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

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

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

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

- Composite sampling is not generally allowed.

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

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

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

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

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

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

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

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company XTO Energy	Contact Kyle Littrell
Address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	Telephone No. 432-221-7331
Facility Name Golden D Federal #4	Facility Type Exploration and Production

Surface Owner Fed/State	Mineral Owner Federal	API No. 30-015-35636

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	16	21s	29e	1745	North	18	West	Eddy

Latitude 32.481906 **Longitude** -103.998092 NAD83

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 26 bbls	Volume Recovered 0 bbls
Source of Release flow line	Date and Hour of Occurrence 12/21/2017	Date and Hour of Discovery 12/21/2017
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Crystal Weaver (NMOCD), Shelly Tucker/Jim Amos (BLM)	
By Whom? Kyle Littrell	Date and Hour 12/21/2017 3:35 pm by email	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/a	

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

Describe Cause of Problem and Remedial Action Taken.*
A steel surface line developed a leak due to a loose hammer union. The connection was repaired.

Describe Area Affected and Cleanup Action Taken.*
The release impacted approximately 4,899 square feet of lease road running NW to SE on the northeast side of the Golden Lane 17 Federal #1 well pad. The release extended into NM State Land at its east end across the road intersection. Remediation was performed by third party in accordance with the NMOCD approved work plan.

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

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Kyle Littrell	Approved by Environmental Specialist:	
Title: Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval:	Attached ☐
Date: 5-14-2018 Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

2RP-4551

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-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 00516	CP	ED	4	4	4	12	21S	28E	590901	3594984*	3277	275	205	70
CP 00430	CP	ED	1	4	1	03	21S	29E	596221	3597558*	3874	360	225	135
CP 00419	CP	ED		4	3	32	20S	30E	594250	3599003*	4694	262	170	92

Average Depth to Water: **200 feet**

Minimum Depth: **170 feet**

Maximum Depth: **225 feet**

Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 594108.67 **Northing (Y):** 3594310.44 **Radius:** 5000

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

APPENDIX C

LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 05, 2018

Austin Weyant
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-7040
FAX

RE: Golden D4 Road OrderNo.: 1712E24

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 11 sample(s) on 12/23/2017 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-0.5
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-001 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	14000	750		mg/Kg	500	1/3/2018 7:21:31 PM	35804
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	150	10		mg/Kg	1	12/28/2017 8:49:02 PM	35723
Motor Oil Range Organics (MRO)	71	51		mg/Kg	1	12/28/2017 8:49:02 PM	35723
Surr: DNOP	95.9	70-130		%Rec	1	12/28/2017 8:49:02 PM	35723
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	14	4.8		mg/Kg	1	12/29/2017 1:57:50 AM	35711
Surr: BFB	123	15-316		%Rec	1	12/29/2017 1:57:50 AM	35711
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	12/29/2017 1:57:50 AM	35711
Benzene	ND	0.024		mg/Kg	1	12/29/2017 1:57:50 AM	35711
Toluene	ND	0.048		mg/Kg	1	12/29/2017 1:57:50 AM	35711
Ethylbenzene	ND	0.048		mg/Kg	1	12/29/2017 1:57:50 AM	35711
Xylenes, Total	ND	0.097		mg/Kg	1	12/29/2017 1:57:50 AM	35711
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	12/29/2017 1:57:50 AM	35711

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 Detection Limit
W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-1
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-002 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	7000	300		mg/Kg	200	1/3/2018 7:33:56 PM	35804

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

Qualifiers:

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

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-0.5
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-003 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	8400	750		mg/Kg	500	1/3/2018 7:46:21 PM	35804

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

Qualifiers:

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

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-1
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-004 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	8700	750		mg/Kg	500	1/3/2018 7:58:45 PM	35804

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

Qualifiers:

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

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-2
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-005 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	4900	300		mg/Kg	200	1/3/2018 8:11:10 PM	35804

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 Detection Limit
W	Sample container temperature is out of limit as specified

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-0.5
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-006 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	7600	750		mg/Kg	500	1/3/2018 8:23:34 PM	35804

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

Qualifiers:

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

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-1
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-007 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	980	30		mg/Kg	20	1/2/2018 8:03:05 PM	35804

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

Qualifiers:

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

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-2
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-008 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	380	30		mg/Kg	20	1/2/2018 8:15:30 PM	35804

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

Qualifiers:

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

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-0.5
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-009 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	7100	750		mg/Kg	500	1/3/2018 8:35:59 PM	35804

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

Qualifiers:

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

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-1
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-010 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	750	30		mg/Kg	20	1/2/2018 8:40:19 PM	35804

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

Qualifiers:

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

Analytical Report
Lab Order **1712E24**
Date Reported: **1/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-2
Project: Golden D4 Road
Collection Date: 12/21/2017 10:50:00 AM
Lab ID: 1712E24-011 **Matrix:** SOIL **Received Date:** 12/23/2017 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	460	30		mg/Kg	20	1/2/2018 8:52:43 PM	35804

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1712E24**
05-Jan-18

Client: Souder, Miller & Associates
Project: Golden D4 Road

Sample ID	**MB-35804**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**35804**	RunNo:	**48126**					
Prep Date:	**1/2/2018**	Analysis Date:	**1/2/2018**	SeqNo:	**1545516**	Units:	**mg/Kg**			

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

Sample ID	**LCS-35804**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**35804**	RunNo:	**48126**					
Prep Date:	**1/2/2018**	Analysis Date:	**1/2/2018**	SeqNo:	**1545517**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712E24**

05-Jan-18

Client: Souder, Miller & Associates

Project: Golden D4 Road

Sample ID	**LCS-35723**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**35723**		RunNo:	**48061**				
Prep Date:	**12/27/2017**	Analysis Date:	**12/28/2017**		SeqNo:	**1540950**	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	95.6	73.2	114			
Surr: DNOP	4.4		5.000		87.5	70	130			

Sample ID	**MB-35723**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**35723**		RunNo:	**48061**				
Prep Date:	**12/27/2017**	Analysis Date:	**12/28/2017**		SeqNo:	**1540955**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		88.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712E24**

05-Jan-18

Client: Souder, Miller & Associates

Project: Golden D4 Road

Sample ID	**MB-35711**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**35711**	RunNo:	**48084**					
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541238**	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	780		1000		77.6	15	316			

Sample ID	**LCS-35711**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**35711**	RunNo:	**48084**					
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541239**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	108	75.9	131			
Surr: BFB	980		1000		97.5	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712E24**

05-Jan-18

Client: Souder, Miller & Associates

Project: Golden D4 Road

Sample ID	**MB-35711**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**35711**	RunNo:	**48084**					
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541278**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.4	80	120			

Sample ID	**LCS-35711**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**35711**	RunNo:	**48084**					
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541279**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.92	0.10	1.000	0	91.7	70.1	121			
Benzene	0.89	0.025	1.000	0	88.7	77.3	128			
Toluene	0.91	0.050	1.000	0	90.5	79.2	125			
Ethylbenzene	0.89	0.050	1.000	0	89.5	80.7	127			
Xylenes, Total	2.7	0.10	3.000	0	91.2	81.6	129			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1712E24 RcptNo: 1

Received By: **Andy Freeman** 12/23/2017 8:30:00 AM

Completed By: **Michelle Garcia** 12/26/2017 9:30:08 AM

Reviewed By:

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

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

Person Notified: Date

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

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

Project Name: Golden D4 Road

Project #:

Project Manager: Anstine Weyant

Sampler: JAW

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.9 + 0.1 = 2.0

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1712E24	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
12-21-17	10:54	soil	L1-0.5	4 oz		001	X		X					X				
			L1-1			002								X				
			L2-0.5			003								X				
			L2-1			004								X				
			L2-2			005								X				
			L3-0.5			006								X				
			L3-1			007								X				
			L3-2			008								X				
			L4-0.5			009								X				
			L4-1			010								X				
			L4-2			011								X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
12-22-17	9:10				
12/22/17	1902			12/23/17	0836

Remarks: XTO

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

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

January 24, 2018

Austin Weyant
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-7040
FAX

RE: Golden Federal Road OrderNo.: 1801836

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 4 sample(s) on 1/17/2018 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1801836**
Date Reported: **1/24/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates **Lab Order:** 1801836
Project: Golden Federal Road

Lab ID: 1801836-001 **Collection Date:** 1/15/2018 10:08:00 AM
Client Sample ID: L1-2' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1700	75		mg/Kg	50	1/23/2018 7:56:47 PM	36110

Lab ID: 1801836-002 **Collection Date:** 1/15/2018 10:47:00 AM
Client Sample ID: L1-3' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	940	30		mg/Kg	20	1/19/2018 4:10:35 PM	36110

Lab ID: 1801836-003 **Collection Date:** 1/15/2018 11:34:00 AM
Client Sample ID: L2-2.5' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	2500	75		mg/Kg	50	1/23/2018 8:09:11 PM	36110

Lab ID: 1801836-004 **Collection Date:** 1/15/2018 12:04:00 PM
Client Sample ID: L2-3' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	800	30		mg/Kg	20	1/19/2018 4:35:24 PM	36110

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1801836**

24-Jan-18

Client: Souder, Miller & Associates

Project: Golden Federal Road

Sample ID	**MB-36110**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**36110**	RunNo:	**48569**					
Prep Date:	**1/19/2018**	Analysis Date:	**1/19/2018**	SeqNo:	**1563719**	Units:	**mg/Kg**			

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

Sample ID	**LCS-36110**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**36110**	RunNo:	**48569**					
Prep Date:	**1/19/2018**	Analysis Date:	**1/19/2018**	SeqNo:	**1563721**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.2	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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1801836 RcptNo: 1

Received By: Isaiah Ortiz 1/17/2018 9:50:00 AM

Completed By: Sophia Campuzano 1/17/2018 10:19:31 AM

Reviewed By: 1/17/18

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. 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: _____

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	0.6	Good	Yes			

Chain-of-Custody Record

Client: SMA - Carlsbad

Mailing Address: 201 S. Halagueno

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5 day turn

Project Name: Golden Federal Road

Project #:

Project Manager: Austin Weyant

Sampler: MRS

On Ice: ☐ Yes ☐ No

Sample Temperature: 16-1.0(CF) 0.4

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1801836	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
01/15/18	10:08	soil	L1-2'	402		-001								✓								
"	10:47	"	L1-3'	"		-002								✓								
"	11:34	"	L2-2.5'	"		-003								✓								
"	12:04	"	L2-3'	"		-004								✓								

Date	Time	Relinquished by	Received by	Date	Time
1/16/18	0800	M Tanyan			
1/16/18	1900			1/17/18	950

Remarks: XTO

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

April 18, 2018

Austin Weyant
Souder, Miller & Associates
201 S Halagueno
Carlsbad, NM 88221
TEL: (575) 689-7040
FAX

RE: Golden OrderNo.: 1804586

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 17 sample(s) on 4/11/2018 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 #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 1
Project: Golden
Collection Date: 4/4/2018 8:00:00 AM
Lab ID: 1804586-001 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	43	30		mg/Kg	20	4/16/2018 10:21:01 PM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 2
Project: Golden
Collection Date: 4/4/2018 8:30:00 AM
Lab ID: 1804586-002 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1600	75		mg/Kg	50	4/17/2018 11:07:16 PM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 3
Project: Golden
Collection Date: 4/4/2018 9:00:00 AM
Lab ID: 1804586-003 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	310	30		mg/Kg	20	4/16/2018 11:10:40 PM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 5
Project: Golden
Collection Date: 4/4/2018 9:40:00 AM
Lab ID: 1804586-004 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	30		mg/Kg	20	4/16/2018 11:23:05 PM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 6
Project: Golden
Collection Date: 4/4/2018 10:00:00 AM
Lab ID: 1804586-005 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1900	75		mg/Kg	50	4/17/2018 11:19:40 PM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 8
Project: Golden
Collection Date: 4/4/2018 10:15:00 AM
Lab ID: 1804586-006 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	230	30		mg/Kg	20	4/16/2018 11:47:54 PM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 9
Project: Golden
Collection Date: 4/4/2018 10:30:00 AM
Lab ID: 1804586-007 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	150	30		mg/Kg	20	4/17/2018 12:00:18 AM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 10
Project: Golden
Collection Date: 4/4/2018 11:00:00 AM
Lab ID: 1804586-008 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	150	30		mg/Kg	20	4/17/2018 12:12:42 AM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 11
Project: Golden
Collection Date: 4/4/2018 11:15:00 AM
Lab ID: 1804586-009 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	500	30		mg/Kg	20	4/17/2018 12:49:56 AM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW 12
Project: Golden
Collection Date: 4/4/2018 11:20:00 AM
Lab ID: 1804586-010 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	210	30		mg/Kg	20	4/17/2018 1:27:10 AM	37631

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-4
Project: Golden
Collection Date: 4/5/2018 10:20:00 AM
Lab ID: 1804586-011 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	280	30		mg/Kg	20	4/17/2018 1:39:35 AM	37631
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/13/2018 2:12:37 PM	37571
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/13/2018 2:12:37 PM	37571
Surr: DNOP	73.5	70-130		%Rec	1	4/13/2018 2:12:37 PM	37571
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/13/2018 3:21:07 PM	37580
Surr: BFB	97.0	15-316		%Rec	1	4/13/2018 3:21:07 PM	37580
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	4/13/2018 3:21:07 PM	37580
Toluene	ND	0.047		mg/Kg	1	4/13/2018 3:21:07 PM	37580
Ethylbenzene	ND	0.047		mg/Kg	1	4/13/2018 3:21:07 PM	37580
Xylenes, Total	ND	0.094		mg/Kg	1	4/13/2018 3:21:07 PM	37580
Surr: 4-Bromofluorobenzene	88.3	80-120		%Rec	1	4/13/2018 3:21:07 PM	37580

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L6-1
Project: Golden
Collection Date: 4/5/2018 10:45:00 AM
Lab ID: 1804586-012 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	400	30		mg/Kg	20	4/17/2018 1:51:59 AM	37631
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/13/2018 2:34:38 PM	37571
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/13/2018 2:34:38 PM	37571
Surr: DNOP	99.7	70-130		%Rec	1	4/13/2018 2:34:38 PM	37571
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/13/2018 6:51:50 PM	37580
Surr: BFB	96.9	15-316		%Rec	1	4/13/2018 6:51:50 PM	37580
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	4/13/2018 6:51:50 PM	37580
Toluene	ND	0.049		mg/Kg	1	4/13/2018 6:51:50 PM	37580
Ethylbenzene	ND	0.049		mg/Kg	1	4/13/2018 6:51:50 PM	37580
Xylenes, Total	ND	0.098		mg/Kg	1	4/13/2018 6:51:50 PM	37580
Surr: 4-Bromofluorobenzene	91.3	80-120		%Rec	1	4/13/2018 6:51:50 PM	37580

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

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L4-2
Project: Golden
Collection Date: 4/5/2018 11:00:00 AM
Lab ID: 1804586-013 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	4/17/2018 3:28:05 PM	37649

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L5-0.5
Project: Golden
Collection Date: 4/5/2018 11:30:00 AM
Lab ID: 1804586-014 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	30	30		mg/Kg	20	4/17/2018 4:05:19 PM	37649

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

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L3-3
Project: Golden
Collection Date: 4/5/2018 10:30:00 AM
Lab ID: 1804586-015 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	30		mg/Kg	20	4/17/2018 4:17:43 PM	37649

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-1'
Project: Golden
Collection Date: 4/5/2018 12:05:00 PM
Lab ID: 1804586-016 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	130	30		mg/Kg	20	4/17/2018 4:30:08 PM	37649

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

Qualifiers:

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

Analytical Report
Lab Order **1804586**
Date Reported: **4/18/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L7-2'
Project: Golden
Collection Date: 4/5/2018 12:27:00 PM
Lab ID: 1804586-017 **Matrix:** SOIL **Received Date:** 4/11/2018 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	91	30		mg/Kg	20	4/17/2018 4:42:33 PM	37649

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804586**

18-Apr-18

Client: Souder, Miller & Associates

Project: Golden

Sample ID	**MB-37631**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37631**	RunNo:	**50586**					
Prep Date:	**4/16/2018**	Analysis Date:	**4/16/2018**	SeqNo:	**1641560**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-37631**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37631**	RunNo:	**50586**					
Prep Date:	**4/16/2018**	Analysis Date:	**4/16/2018**	SeqNo:	**1641561**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Sample ID	**MB-37649**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37649**	RunNo:	**50620**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/17/2018**	SeqNo:	**1642684**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-37649**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37649**	RunNo:	**50620**					
Prep Date:	**4/17/2018**	Analysis Date:	**4/17/2018**	SeqNo:	**1642685**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1804586**
18-Apr-18

Client: Souder, Miller & Associates
Project: Golden

Sample ID	**LCS-37571**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**37571**		RunNo:	**50539**				
Prep Date:	**4/12/2018**	Analysis Date:	**4/13/2018**		SeqNo:	**1639346**	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	94.4	70	130			
Surr: DNOP	3.8		5.000		76.2	70	130			

Sample ID	**MB-37571**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**37571**		RunNo:	**50539**				
Prep Date:	**4/12/2018**	Analysis Date:	**4/13/2018**		SeqNo:	**1639347**	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	9.3		10.00		93.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804586**

18-Apr-18

Client: Souder, Miller & Associates

Project: Golden

Sample ID	**MB-37580**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**37580**	RunNo:	**50542**					
Prep Date:	**4/12/2018**	Analysis Date:	**4/13/2018**	SeqNo:	**1639961**	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	1000		1000		104	15	316			

Sample ID	**LCS-37580**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**37580**	RunNo:	**50542**					
Prep Date:	**4/12/2018**	Analysis Date:	**4/13/2018**	SeqNo:	**1639962**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	114	75.9	131			
Surr: BFB	1200		1000		115	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804586**

18-Apr-18

Client: Souder, Miller & Associates

Project: Golden

Sample ID	**MB-37580**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**37580**	RunNo:	**50542**					
Prep Date:	**4/12/2018**	Analysis Date:	**4/13/2018**	SeqNo:	**1639986**	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	0.95		1.000		95.0	80	120			

Sample ID	**LCS-37580**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**37580**	RunNo:	**50542**					
Prep Date:	**4/12/2018**	Analysis Date:	**4/13/2018**	SeqNo:	**1639987**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.5	77.3	128			
Toluene	0.91	0.050	1.000	0	91.4	79.2	125			
Ethylbenzene	0.90	0.050	1.000	0	90.3	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	92.8	81.6	129			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.6	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 Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: 1804586 RcptNo: 1

Received By: Erin Melendrez 4/11/2018 9:30:00 AM

Completed By: Erin Melendrez 4/11/2018 12:51:43 PM

Reviewed By: MS 04/11/18

Labled By: MW 4/11/18

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. 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: 4/11/18 (<2 or >12 unless noted)
Adjusted? MW
Checked by:

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	3.4	Good	Yes			

Chain-of-Custody Record

1 of 2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: SMA - Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5 day.

Project Name: Golden

Project #:

Project Manager: Austin Weyant

Sampler: HMP/AW.

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.4

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804586	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-,Cl^-,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
4/5/18	8:00	soil	SW1	4oz		-001								X								
	8:30		SW2			-002								X								
	9:00		SW3			-003								Y								
	9:40		SW5			-004								Y								
	10:00		SW6			-005								X								
	10:15		SW8			-006								X								
	10:30		SW9			-007								Y								
	11:00		SW10			-008								X								
	11:15		SW11			-009								Y								
	11:20		SW12			-010								X								
4/5/18	10:20		L1-4			-011	X		X					X								
4/5/18	10:45		L6-1			-012	X		X					X								

Date	Time	Relinquished by:	Received by:	Date	Time
4/10/18	0930	for A Weyant		4/10/18	0930
4/10/18	1900		Courier 4/11/18 ELM	4/11/18	0830

Remarks:
XTO
page 1 of 1

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

Chain-of-Custody Record

Client: SMA Carlsbad

Mailing Address:

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 5day.

Project Name: Golden

Project #:

Project Manager: Austin Weyant

Sampler: JAW.

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804586	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
4/5/18	11:00	soil	L4-2	4oz.		-013								X								
	11:30		L5-0.5			-014								X								
	10:30		L3-3			-015								X								
	12:05		L7-1'			-016								X								
↓	12:27		L7-2'	↓		-017								X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/10/18	0930	for A. Weyant		4/10/18	0930
4/10/18	1900		Courier 4/11/18 EMM	4/11/18	0930

Remarks: XTO

page 2 of 2

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

Analytical Report
Lab Order **1805C46**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW2
Project: Golden 4
Collection Date: 5/18/2018 1:06:00 PM
Lab ID: 1805C46-001 **Matrix:** SOIL **Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	210	30		mg/Kg	20	5/24/2018 4:35:41 AM	38300

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

Qualifiers:

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

Analytical Report
Lab Order **1805C46**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: SW6
Project: Golden 4
Collection Date: 5/18/2018 1:09:00 PM
Lab ID: 1805C46-002 **Matrix:** SOIL **Received Date:** 5/23/2018 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	150	30		mg/Kg	20	5/24/2018 4:48:05 AM	38300

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

Qualifiers:

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

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

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

COMMENTS

Action 199115

COMMENTS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 199115
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

COMMENTS

Created By	Comment	Comment Date
amaxwell	Historical document upload	3/21/2023

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

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

CONDITIONS

Action 199115

CONDITIONS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 199115
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	3/21/2023