

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

NMOCD  
JUN 06 2018  
Form C-141  
Revised August 8, 2011  
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: BP America	Contact: Steve Moskal
Address: 380 Airport Road, Durango, CO 81303	Telephone No.: 505-330-9179
Facility Name: Sullivan Gas Com E No. 001	Facility Type: Natural gas well
Surface Owner: Federal	Mineral Owner: Federal
API No. 3004528641	

**LOCATION OF RELEASE**

Unit Letter N	Section 22	Township 32N	Range 10W	Feet from the 600	North/South Line South	Feet from the 1,540	East/West Line West	County: San Juan
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Latitude 36.695171° Longitude -107.872735°

**NATURE OF RELEASE**

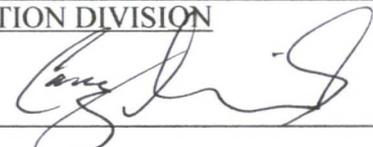
Type of Release: Compressor Lube Oil	Volume of Release: 300 gallons	Volume Recovered: 200 gallons
Source of Release: Compressor line	Date and Hour of Occurrence: 2/1/2017	Date and Hour of Discovery: 2/6/2017 @ 12:00PM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Lube oil line on compressor pinched on skid and broke. 300 gallons of lube oil spilled onto skid and ground over the period of a week. 200 gallons on skid/ 100 gallons on ground. The site was excavated by hand tools and equipment around the compressor where accessible and areas impacted outside of compressor footprint. The compressor is rather large and impedes access. A hand auger assessment was conducted to determine the extents of the release beneath the compressor. The remaining impacts beneath the compressor will be addressed when the compressor is removed or replaced.

Describe Area Affected and Cleanup Action Taken.\* The area immediate to the compressor skid and around the compressor was affected. The area was excavated and contents removed for offsite disposal. Approximately 66 cubic yards of soil was exported off site for landfarm treatment. Laboratory samples confirmed the maximum, accessible, extents of impacts were removed. A hand auger assessment was conducted, and documented in the attached report, to determine the extents of the release beneath the compressor. The hand auger assessment demonstrates very isolated areas of motor oil rang organics above the site closure standard. The site has been delineated via hand auguring and excavation and the data can be extrapolated to suggest the impacts are superficial, <2-3' in depth, and are not readily mobilized in soil. Attached is a field report, site diagram and laboratory analysis. BP request that the isolated areas of impacts remain until the removal or decommissioning of the compressor on site.

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Steve Moskal	Approved by Environmental Specialist: 	
Title: Field Environmental Coordinator	Approval Date: <u>6/21/18</u>	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: June 6, 2017	Phone: 505-330-9179	<u>Emailed / Attached</u>

\* Attach Additional Sheets If Necessary

#NMF1705454171

6/21/18

31

## Smith, Cory, EMNRD

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**From:** Smith, Cory, EMNRD  
**Sent:** Thursday, June 21, 2018 2:46 PM  
**To:** Steven Moskal - BP America (steven.moskal@BPX.com)  
**Cc:** Fields, Vanessa, EMNRD; 'Abiodun Adeloye'; whitney thomas (l1thomas@blm.gov)  
**Subject:** RE: Sullivan Gas Com E #1 C-141 Conditions of Approval 30-045-28641

Steve,

OCD received BP "Final Report" on 6/6/18 for the Sullivan Gas Com E #1 30-045-28641. After review, the OCD is approving BP request to defer remediation of the impacts below the compressor with the following conditions of approval.

- BP will remediate all impacts below the compressor if/when the compressor is moved for **any reason**.
- BP will schedule with District III final confirmation sampling.

BP compliance case will stay open, and OCD approval to defer remediation does not relieve BP of any liability nor any requirements imposed by other regulatory agencies.

Cory Smith  
Environmental Specialist  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410  
(505)334-6178 ext 115  
[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)

**From:** Smith, Cory, EMNRD  
**Sent:** Friday, June 1, 2018 9:49 AM  
**To:** Moskal, Steven <Steven.Moskal@bp.com>  
**Cc:** Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>  
**Subject:** RE: Sullivan Gas Com E #1 C-141 Conditions of Approval 30-045-28641

Steve,

Still have an Open compliance for the Sullivan Gas Com E#1, This is the site with the MRO under then Compressor skid. If I recall a third party was handling it on BP behalf.

Please review and send in the completed C-141 by June 30, 2018.

Thanks,

Cory Smith  
Environmental Specialist  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410

(505)334-6178 ext 115  
[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)

**From:** Smith, Cory, EMNRD  
**Sent:** Tuesday, August 29, 2017 10:55 AM  
**To:** Moskal, Steven <[Steven.Moskal@bp.com](mailto:Steven.Moskal@bp.com)>  
**Cc:** Fields, Vanessa, EMNRD <[Vanessa.Fields@state.nm.us](mailto:Vanessa.Fields@state.nm.us)>  
**Subject:** Sullivan Gas Com E #1 C-141 Conditions of Approval 30-045-28641

Steve,

OCD District III Office received a "Final C-141" on March 31, 2017 in regards to the Sullivan Gas Com E#1 (30-045-28641) which has been approved with the following conditions of approval.

- BP has until November 29, 2017 to return to the site to perform either additional remediation below the compressor skid, or perform additional delineation as required by the Conditions of Approval that were attached to the Initial C-141 approved on 2/23/17.
- BP will notify the OCD at least 72 hours but no more than 1 week prior to the start of remediation/delineation.
- BP will submit either a delineation report (To include BP path forward) on form C-141 or an additional C-141 with laboratory results no later than December 29, 2017

If you have any questions please give me a call.

Cory Smith  
Environmental Specialist  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410  
(505)334-6178 ext 115  
[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)



December 22, 2017

Project Number 15096-0014

Mr. Luke Klitzke  
Archrock Services, LP  
9807 Katy Freeway, Suite 100  
Houston, Texas 77024

Phone: (505) 320-3498  
Email: [lucanus.klitzke@archrock.com](mailto:lucanus.klitzke@archrock.com)

**SOIL SAMPLING ACTIVITIES FOR THE SULLIVAN GAS COM E#1 WELL SITE, SAN JUAN COUNTY, NEW MEXICO**

Dear Mr. Klitzke:

Enclosed please find the *Soil Sampling Report* detailing sampling activities at the Sullivan Gas Com E#1 well site located in Section 22, Township 32 North, Range 10 West, San Juan County, New Mexico.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,  
**ENVIROTECH, INC.**

  
\_\_\_\_\_  
Brittany Hall  
Environmental Field Technician  
[bhall@envirotech-inc.com](mailto:bhall@envirotech-inc.com)

Enclosures: *Soil Sampling Report*

Cc: Steve Moskal, BP America (via email)  
Client File Number 03143

# **SOIL SAMPLING REPORT**

## **LOCATION:**

**BP AMERICA PRODUCTION COMPANY  
SULLIVAN GAS COM E#1 WELL SITE  
SECTION 22, TOWNSHIP 32 NORTH, RANGE 10 WEST  
SAN JUAN COUNTY, NEW MEXICO**

## **CONTRACTED BY:**

**ARCHROCK SERVICES, LP  
MR. LUKE KLITZKE  
9807 KATY FREEWAY, SUITE 100  
HOUSTON, TEXAS 77024**

**PROJECT NUMBER 15096-0014  
DECEMBER 2017**

**ARCHROCK SERVICES, LP  
SOIL SAMPLING REPORT  
SULLIVAN GAS COM E#1 WELL SITE  
SECTION 22, TOWNSHIP 32 NORTH, RANGE 10WEST  
SAN JUAN COUNTY, NEW MEXICO**

**TABLE OF CONTENTS**

**INTRODUCTION ..... 1**

**ACTIVITIES PERFORMED..... 1**

Figures:     *Figure 1, Vicinity Map*  
              *Figure 2, Site Map*

Appendices: *Appendix A, Field Notes*  
              *Appendix B, Site Photography*  
              *Appendix C, Chain of Custody*

## INTRODUCTION

Envirotech, Inc. (Envirotech) of Farmington, New Mexico, was contracted by Archrock Services, LP to provide soil sampling services for additional hydrocarbon contamination delineation per the request of the New Mexico Oil Conservation Division (NMOCD) at the Sullivan Gas Com E#1 well site (operated by BP America) located in Section 22, Township 32 North, Range 10 West, San Juan County, New Mexico; see enclosed *Figure 1, Vicinity Map*. Approximately 300-500 gallons of oil were reported to be released from a compressor leak in February 2017. Activities included sample collection, documentation, and reporting.

## ACTIVITIES PERFORMED

Envirotech, Inc. was contacted with a request to perform additional soil sampling activities due to a release of oil from the on-site compressor at the above referenced location in February 2017. Envirotech personnel arrived on site to perform soil sampling on November 21, 2017. Upon arrival to the site, a brief assessment was conducted and a job safety analysis (JSA) was completed. Based on the previous remediation activities and analytical results, the impacted area was determined to be the soil beneath the compressor skid.

Four (4) samples on each side of the compressor skid were to be collected by hand augering at approximately a 45-degree angle to three (3) to five (5) feet below ground surface (bgs). During hand augering activities, auger refusal was met at approximately two (2) feet bgs on the north and south sides of the compressor skid and at approximately one (1) foot bgs on the west and east sides of the compressor skid. Envirotech personnel consulted with BP America representative, Mr. Steve Moksal and a decision was made to collect bottom hole samples from three (3) locations on the east side of the compressor skid, two (2) locations on the south and west sides of the compressor skid, and one (1) sample from the north side of the compressor skid; see enclosed *Site Photography* and *Field Notes*. Upon collection of the requested samples, the samples were placed into laboratory provided four (4) ounce glass jars, placed on ice, and transported back to Envirotech. The samples were relinquished to Christine Walters with Hall Environmental per the request of Mr. Steve Moskal, BP America; see enclosed *Chain of Custody*. Analytical results were to be sent to Mr. Steve Moskal, BP America.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,

**ENVIROTECH, INC.**



Brittany Hall  
Environmental Field Technician  
[bhall@envirotech-inc.com](mailto:bhall@envirotech-inc.com)

Reviewed by:

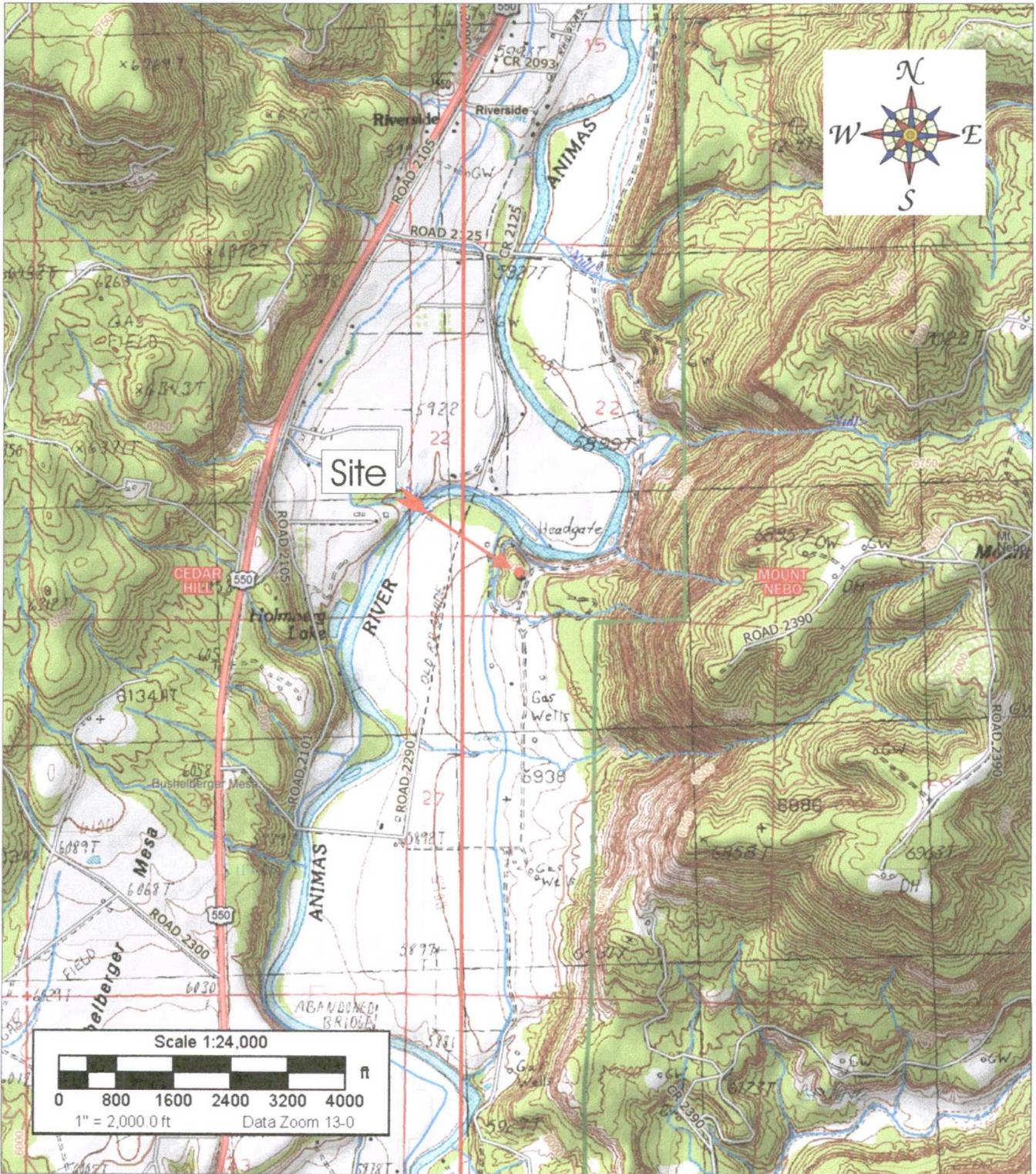


Felipe Aragon, CES  
Environmental Assistant Manager  
[faragon@envirotech-inc.com](mailto:faragon@envirotech-inc.com)

**FIGURES**

*Figure 1, Vicinity Map*

*Figure 2, Site Map*



Source: 7.5 Minute, Mount Nebo, New Mexico U.S.G.S. Topographic Quadrangle Map  
 Scale: 1:24,000 1" = 2000'

Archrock Service, LP  
 Sullivan Gas Com E#1  
 Section 22 Township 32N Range 10W  
 San Juan County, New Mexico

Project Number: 15096-0014    Date Drawn: 12/12/17



**envirotech**  
 ENVIRONMENTAL SCIENTISTS & ENGINEERS

5796 U.S. HIGHWAY 64  
 Farmington, New Mexico 87401  
 505.632.0615

Vicinity Map

Figure #1

DRAWN BY:  
 Brittany Hall

PROJECT MANAGER:  
 Felipe Aragon



## LEGEND

X Sample locations

Compressor

## SITE MAP Archrock Service, LP Sullivan Gas Com E#1

SECTION 22, TWP 32 NORTH, RANGE 10 WEST  
San Juan County, New Mexico

SCALE: NTS	FIGURE NO. 2	REV
PROJECT NO15096-0014		

### REVISIONS

NO.	DATE	BY	DESCRIPTION
MAP DRWN	BH	12/12/2017	BASE DRWN

MAP DRWN	BH	12/12/2017	BASE DRWN		
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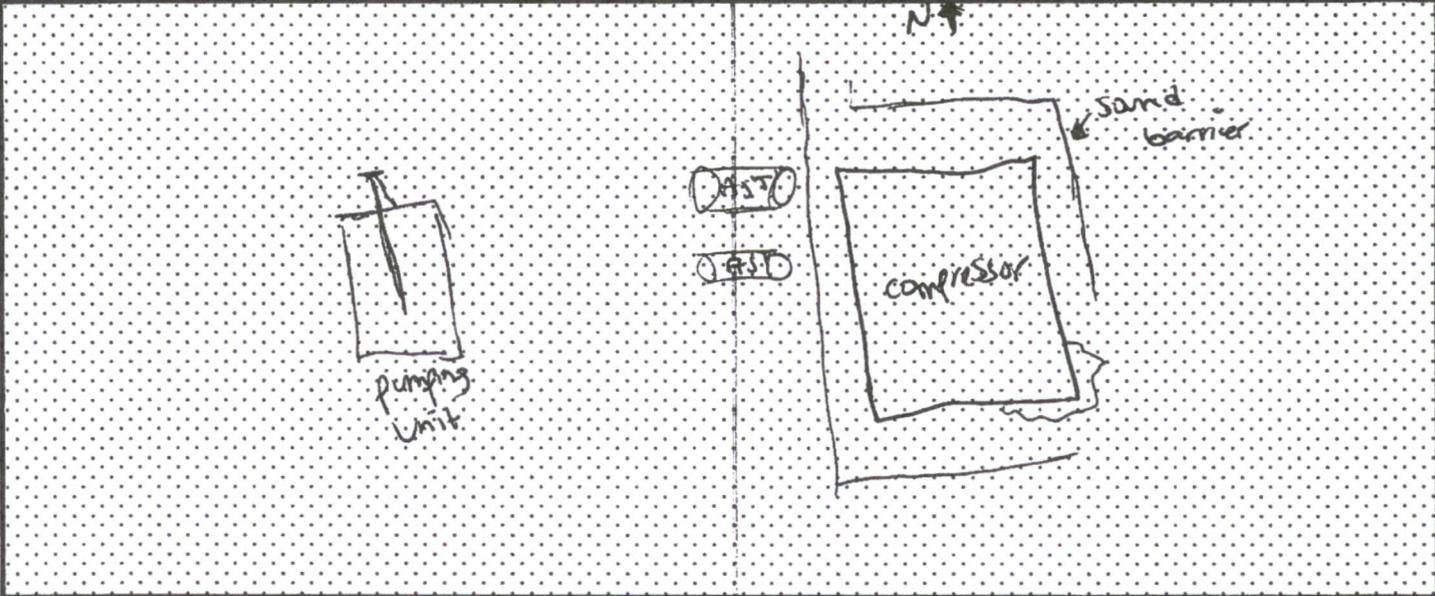
5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615

**APPENDIX A**

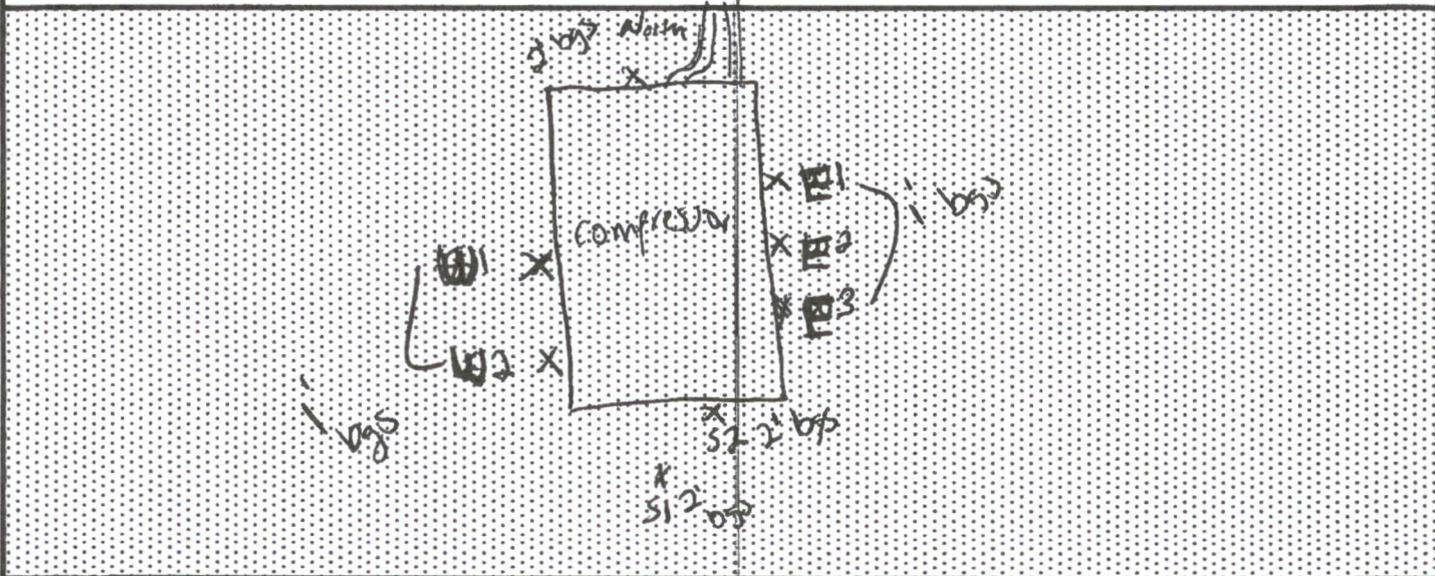
*Field Notes*



**SPILL PERIMETER:** Draw a schematic of the spill site. Attach photos and other diagrams as needed.



**EXCAVATION PROFILE:**



**NOTES:**

Include number of samples and borings taken, and screening types completed.  
Describe spill in narrative format including amount, source and type of product.

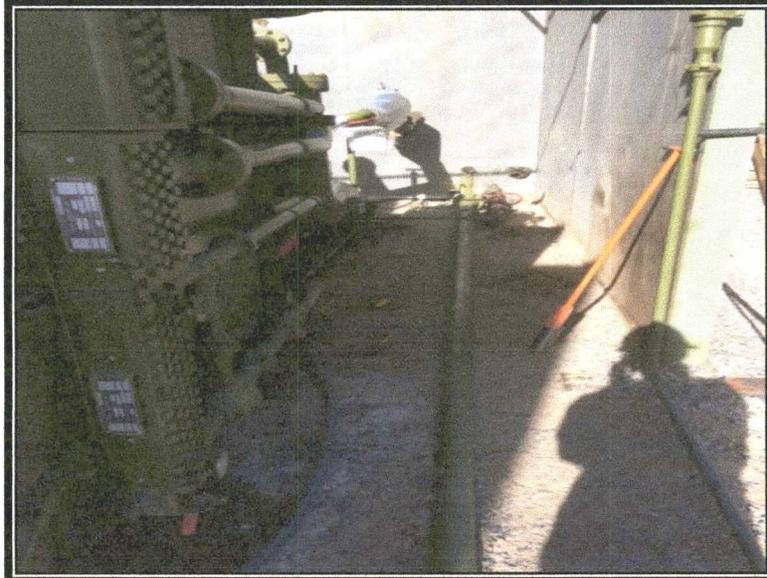
WO #:

Who Ordered/Site Rep:

**APPENDIX B**

*Site Photography*

Site Photography  
Archrock Service, LP  
Sullivan Gas Com E#1 Well Site  
Soil Sampling Report  
Project No. 15096-0014



Picture 1: Sample Locations on the East Side of Compressor



Picture 2: Sample Location on North Side of Compressor

Site Photography  
Archrock Service, LP  
Sullivan Gas Com E#1 Well Site  
Soil Sampling Report  
Project No. 15096-0014

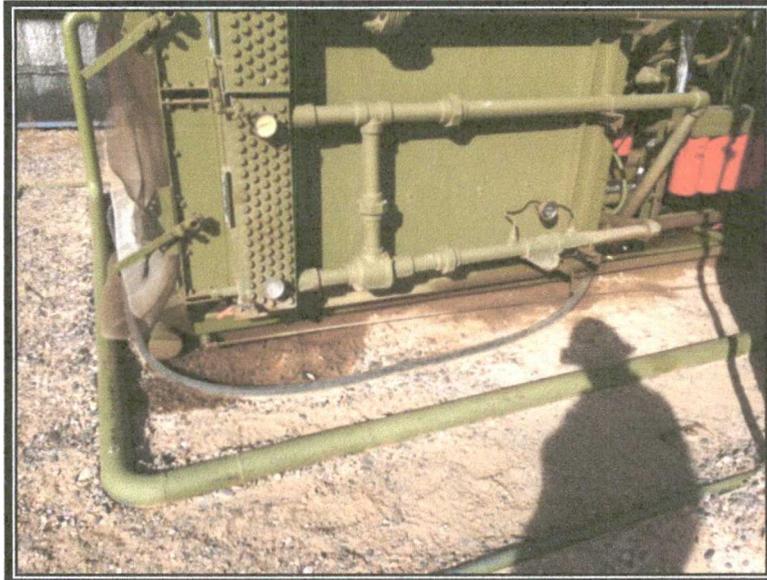


Picture 3: Sample Locations on West Side of Compressor

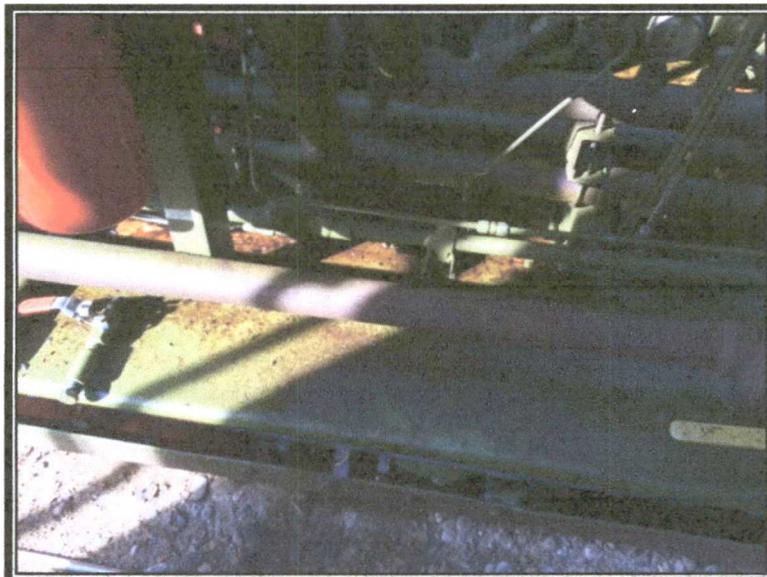


Picture 4: Sample Locations on South Side of Compressor

Site Photography  
Archrock Service, LP  
Sullivan Gas Com E#1 Well Site  
Soil Sampling Report  
Project No. 15096-0014



Picture 5: Soil Staining on Southeast Corner of Compressor



Picture 6: View of Standing Liquid on Compressor Skid

**APPENDIX C**

*Chain of Custody*





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

November 30, 2017

Greg Crabtree  
Envirotech  
5796 US Highway 64  
Farmington, NM 87401  
TEL: (505) 632-0615  
FAX (505) 632-1865

RE: Sullivan GC E1 Soil Sampling

OrderNo.: 1711B89

Dear Greg Crabtree:

Hall Environmental Analysis Laboratory received 8 sample(s) on 11/22/2017 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](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Envirotech **Client Sample ID:** North  
**Project:** Sullivan GC E1 Soil Sampling **Collection Date:** 11/21/2017 12:40:00 PM  
**Lab ID:** 1711B89-001 **Matrix:** SOIL **Received Date:** 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	320	94		mg/Kg	10	11/29/2017 4:06:29 PM	35150
Motor Oil Range Organics (MRO)	7200	470		mg/Kg	10	11/29/2017 4:06:29 PM	35150
Surr: DNOP	0	70-130	S	%Rec	10	11/29/2017 4:06:29 PM	35150
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/28/2017 7:12:06 PM	35154
Surr: BFB	106	15-316		%Rec	1	11/28/2017 7:12:06 PM	35154

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative 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, Inc.**

**CLIENT:** Envirotech

**Client Sample ID:** South 2

**Project:** Sullivan GC E1 Soil Sampling

**Collection Date:** 11/21/2017 2:24:00 PM

**Lab ID:** 1711B89-002

**Matrix:** SOIL

**Received Date:** 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	27	9.6		mg/Kg	1	11/28/2017 6:38:16 PM	35150
Motor Oil Range Organics (MRO)	330	48		mg/Kg	1	11/28/2017 6:38:16 PM	35150
Surr: DNOP	114	70-130		%Rec	1	11/28/2017 6:38:16 PM	35150
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/28/2017 7:59:35 PM	35154
Surr: BFB	109	15-316		%Rec	1	11/28/2017 7:59:35 PM	35154

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative 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, Inc.**

**CLIENT:** Envirotech

**Client Sample ID:** South 1

**Project:** Sullivan GC E1 Soil Sampling

**Collection Date:** 11/21/2017 12:00:00 PM

**Lab ID:** 1711B89-003

**Matrix:** SOIL

**Received Date:** 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/29/2017 3:22:05 PM	35150
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/29/2017 3:22:05 PM	35150
Surr: DNOP	103	70-130		%Rec	1	11/29/2017 3:22:05 PM	35150
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/28/2017 8:23:18 PM	35154
Surr: BFB	109	15-316		%Rec	1	11/28/2017 8:23:18 PM	35154

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative 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, Inc.**

**CLIENT:** Envirotech

**Client Sample ID:** West 1

**Project:** Sullivan GC E1 Soil Sampling

**Collection Date:** 11/21/2017 11:45:00 AM

**Lab ID:** 1711B89-004

**Matrix:** SOIL

**Received Date:** 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	17	9.6		mg/Kg	1	11/28/2017 7:26:40 PM	35150
Motor Oil Range Organics (MRO)	510	48		mg/Kg	1	11/28/2017 7:26:40 PM	35150
Surr: DNOP	105	70-130		%Rec	1	11/28/2017 7:26:40 PM	35150
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/28/2017 8:47:03 PM	35154
Surr: BFB	109	15-316		%Rec	1	11/28/2017 8:47:03 PM	35154

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative 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, Inc.**

**CLIENT:** Envirotech

**Client Sample ID:** West 2

**Project:** Sullivan GC E1 Soil Sampling

**Collection Date:** 11/21/2017 2:15:00 PM

**Lab ID:** 1711B89-005

**Matrix:** SOIL

**Received Date:** 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	11/29/2017 3:44:06 PM	35150
Motor Oil Range Organics (MRO)	59	47		mg/Kg	1	11/29/2017 3:44:06 PM	35150
Surr: DNOP	105	70-130		%Rec	1	11/29/2017 3:44:06 PM	35150
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/28/2017 9:10:38 PM	35154
Surr: BFB	109	15-316		%Rec	1	11/28/2017 9:10:38 PM	35154

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative 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, Inc.**

**CLIENT:** Envirotech

**Client Sample ID:** East 1

**Project:** Sullivan GC E1 Soil Sampling

**Collection Date:** 11/21/2017 1:57:00 PM

**Lab ID:** 1711B89-006

**Matrix:** SOIL

**Received Date:** 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	42	9.7		mg/Kg	1	11/28/2017 8:15:04 PM	35150
Motor Oil Range Organics (MRO)	370	49		mg/Kg	1	11/28/2017 8:15:04 PM	35150
Surr: DNOP	110	70-130		%Rec	1	11/28/2017 8:15:04 PM	35150
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/28/2017 9:34:26 PM	35154
Surr: BFB	109	15-316		%Rec	1	11/28/2017 9:34:26 PM	35154

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative 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, Inc.**

**CLIENT:** Envirotech **Client Sample ID:** East 2  
**Project:** Sullivan GC E1 Soil Sampling **Collection Date:** 11/21/2017 1:10:00 PM  
**Lab ID:** 1711B89-007 **Matrix:** SOIL **Received Date:** 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	16	9.3		mg/Kg	1	11/28/2017 8:39:09 PM	35150
Motor Oil Range Organics (MRO)	460	46		mg/Kg	1	11/28/2017 8:39:09 PM	35150
Surr: DNOP	111	70-130		%Rec	1	11/28/2017 8:39:09 PM	35150
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/28/2017 9:58:15 PM	35154
Surr: BFB	109	15-316		%Rec	1	11/28/2017 9:58:15 PM	35154

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

<b>Qualifiers:</b>	<ul style="list-style-type: none"> <li>* Value exceeds Maximum Contaminant Level.</li> <li>D Sample Diluted Due to Matrix</li> <li>H Holding times for preparation or analysis exceeded</li> <li>ND Not Detected at the Reporting Limit</li> <li>PQL Practical Quantitative Limit</li> <li>S % Recovery outside of range due to dilution or matrix</li> </ul>	<ul style="list-style-type: none"> <li>B Analyte detected in the associated Method Blank</li> <li>E Value above quantitation range</li> <li>J Analyte detected below quantitation limits</li> <li>P Sample pH Not In Range</li> <li>RL Reporting Detection Limit</li> <li>W Sample container temperature is out of limit as specified</li> </ul>
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**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Envirotech

**Client Sample ID:** East 3

**Project:** Sullivan GC E1 Soil Sampling

**Collection Date:** 11/21/2017 2:03:00 PM

**Lab ID:** 1711B89-008

**Matrix:** SOIL

**Received Date:** 11/22/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	950	950		mg/Kg	100	11/29/2017 4:50:39 PM	35150
Motor Oil Range Organics (MRO)	16000	4700		mg/Kg	100	11/29/2017 4:50:39 PM	35150
Surr: DNOP	0	70-130	S	%Rec	100	11/29/2017 4:50:39 PM	35150
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/28/2017 10:22:01 PM	35154
Surr: BFB	109	15-316		%Rec	1	11/28/2017 10:22:01 PM	35154

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative 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#: 1711B89  
30-Nov-17

Client: Envirotech  
Project: Sullivan GC E1 Soil Sampling

Sample ID	<b>LCS-35150</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>35150</b>	RunNo:	<b>47354</b>					
Prep Date:	<b>11/27/2017</b>	Analysis Date:	<b>11/28/2017</b>	SeqNo:	<b>1512100</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.0	73.2	114			
Surr: DNOP	4.7		5.000		94.1	70	130			

Sample ID	<b>MB-35150</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>35150</b>	RunNo:	<b>47354</b>					
Prep Date:	<b>11/27/2017</b>	Analysis Date:	<b>11/28/2017</b>	SeqNo:	<b>1512101</b>	Units:	<b>mg/Kg</b>			
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	10		10.00		103	70	130			

Sample ID	<b>LCS-35209</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>35209</b>	RunNo:	<b>47389</b>					
Prep Date:	<b>11/29/2017</b>	Analysis Date:	<b>11/29/2017</b>	SeqNo:	<b>1512108</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.5	70	130			

Sample ID	<b>MB-35209</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>35209</b>	RunNo:	<b>47389</b>					
Prep Date:	<b>11/29/2017</b>	Analysis Date:	<b>11/29/2017</b>	SeqNo:	<b>1512109</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		91.0	70	130			

### Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| PQL Practical Quantitative Limit                        | RL Reporting 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#: 1711B89  
30-Nov-17

**Client:** Envirotech  
**Project:** Sullivan GC E1 Soil Sampling

Sample ID <b>RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>G47369</b>		RunNo: <b>47369</b>							
Prep Date:	Analysis Date: <b>11/28/2017</b>		SeqNo: <b>1511549</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		110	15	316			

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>G47369</b>		RunNo: <b>47369</b>							
Prep Date:	Analysis Date: <b>11/28/2017</b>		SeqNo: <b>1511550</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		116	15	316			

Sample ID <b>MB-35154</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>35154</b>		RunNo: <b>47368</b>							
Prep Date: <b>11/27/2017</b>	Analysis Date: <b>11/28/2017</b>		SeqNo: <b>1511588</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.1	15	316			

Sample ID <b>LCS-35154</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>35154</b>		RunNo: <b>47368</b>							
Prep Date: <b>11/27/2017</b>	Analysis Date: <b>11/28/2017</b>		SeqNo: <b>1511589</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.3	75.9	131			
Surr: BFB	1000		1000		102	15	316			

**Qualifiers:**

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



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: Envirotech

Work Order Number: 1711B89

RcptNo: 1

Received By: Anne Thorne 11/22/2017 7:00:00 AM

*Anne Thorne*

Completed By: Anne Thorne 11/22/2017 2:40:48 PM

*Anne Thorne*

Reviewed By: *JM* 11/22/17

### 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
- 13. Are matrices correctly identified on Chain of Custody? Yes  No
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No

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

### Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	1.0	Good	Yes			

<b>Client: Archrock</b> Project: Sullivan GC E1 Soil Sampling Project Manager: F.Aragon Address: 1280 Troy King Rd City, State, Zip Farmington, MN 57401 Phone: (505) 947-9510 Greg Crabtree Email: Faragon.Gcrabtree@Admin.Bhall		<b>Report Attention</b> Report due by: <u>Standard</u>  Address: <u>Send Report to</u> City, State, Zip <u>Envirotech</u> Phone: <u>Greg Crabtree</u>		<b>Lab/Use Only</b>		<b>TAT</b>		<b>EPA Program</b>			
				Lab WO# <u>P</u>	Job Number <u>15096-0014</u>	1D	3D	RCRA	CWA	SDWA	
<b>Analysis and Method</b>								<b>State</b>			
								NM	CO	UT	AZ
								<input checked="" type="checkbox"/>			

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	RCRA 8 Metals 6010	8270	TPH 418.1	Total Mercury	Oil and Grease 1664	pH 5M4500H+8 - 2000	TSS SM2540D - 1997	TDS	Remarks
1240	11/21/17	S	1	North		X	X											1711589-001
1424	11/21/17	S	1	South 2		X	X											202
1200	11/21/17	S	1	South 1		X	X											203
1145	11/21/17	S	1	West 1		X	X											204
1415	11/21/17	S	1	West 2		X	X											205
1357	11/21/17	S	1	East 1		X	X											206
1310	11/21/17	S	1	East 2		X	X											207
1403	11/21/17	S	1	East 3		X	X											208

**Additional Instructions:** Per CW invoice Archrock Rpt to Envirotech / At 11/22/17 email Greg Crabtree

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Brian Hall

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature) <u>Brian Hall</u>	Date <u>11/21/17</u>	Time <u>1645</u>	Received by: (Signature) <u>Christina W...</u>	Date <u>11/21/17</u>	Time <u>1645</u>	Lab Use Only Received on ice: <u>Y / N</u> T1 <u>        </u> T2 <u>        </u> T3 <u>        </u> AVG Temp °C <u>1.0</u>
Relinquished by: (Signature) <u>Christina W...</u>	Date <u>11/21/17</u>	Time <u>1819</u>	Received by: (Signature) <u>Ch...</u>	Date <u>11/22/17</u>	Time <u>0700</u>	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other  
 Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

