

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 21 2018

DISTRICT III

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 Hilcorp Energy Company	Contact Clara Cardoza
Address 382 CR 310	Telephone No. 505-564-0733
Facility Name Reid B 6	Facility Type Well
Surface Owner Federal	Mineral Owner Federal
API No. 30-045-25690	

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	31	29N	10W	2262	South	1901	East	San Juan

Latitude 36.68139 Longitude -107.92257 NAD83

#### NATURE OF RELEASE

Type of Release Hydrocarbon/paraffin	Volume of Release 3 bbl	Volume Recovered none
Source of Release Rupture disc	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 2/2/2017 09:00
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Cory Smith and Whitney Thomas	
By Whom? Lisa Hunter	Date and Hour n/a 2/2/2017 11:00 (Cory Smith) & 11:30 (Whitney Thomas)	
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.\*

*\* Additional Remediation Req.*

Describe Cause of Problem and Remedial Action Taken.\*

Malfunction of rupture disc on the low side of a separator caused the release of approximately 3 bbls of hydrocarbon/paraffin. Trucks were called immediately to begin recovering fluid from the location.

Describe Area Affected and Cleanup Action Taken.\*

There is a natural depression on the northern edge of the pad that had collected rain and snow melt which the hydrocarbons reached during the event. Vacuum trucks were called in to remove the water which was impacted. Impacted soil was also removed from the location. A sample was taken in the area where water collected (and consequently removed) and also in the area between the separator and compressor per NMOCDs request. The lab results are attached to this report. In situ surface treatment for the area from the separator to the compressor were implemented to reduce the tph levels. TPH and BTEX levels in the water collection area were N/D.

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: <i>Clara Cardoza</i>	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Clara Cardoza	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Environmental Specialist	Approval Date: <i>6/22/18</i>	Expiration Date:
E-mail Address: ccardoza@hilcorp.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 06/15/2018	Phone: 505-564-0733	<i>* Additional Remediation Required.</i>

\* Attach Additional Sheets If Necessary

15

## Smith, Cory, EMNRD

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**From:** Smith, Cory, EMNRD  
**Sent:** Friday, June 22, 2018 2:16 PM  
**To:** 'Clara Cardoza'  
**Cc:** Fields, Vanessa, EMNRD  
**Subject:** RE: [EXTERNAL EMAIL]RE: [EXTERNAL EMAIL]RE: Release notification - Reid B 6  
**Attachments:** DSC05392.jpg; DSC05391.jpg; DSC05390.jpg; DSC05389.jpg; DSC05388.jpg; DSC05387.jpg; DSC05386.jpg; DSC05385.jpg; DSC05384.jpg; DSC05383.jpg; DSC05396.jpg; DSC05394.jpg; DSC05395.jpg; DSC05393.jpg

Clara,

OCD has received the Final C-141 on 6/21/18 for the Reid B #6 after review the OCD as Approved the final C-141 with the following conditions of Approval:

- HEC will return and remediate the area defined as "Separator" as it is over the closure of 100 mg/kg TPH, 50 mg/kg BTEX and 10 mg/kg Benzene.
- HEC will schedule with OCD final confirmation samples.
- HEC must initiate remediate no later than September 24, 2018 this includes any time for additional work plans if needed.

I have attached the pictures from the sampling event for your reference, most of the spill path was clean it was really the area near the separator under gravel etc that was dirty. 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)

**From:** Clara Cardoza <ccardoza@hilcorp.com>  
**Sent:** Friday, June 15, 2018 11:56 AM  
**To:** Smith, Cory, EMNRD <Cory.Smith@state.nm.us>  
**Cc:** Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>  
**Subject:** RE: [EXTERNAL EMAIL]RE: [EXTERNAL EMAIL]RE: Release notification - Reid B 6

Cory, attached is a copy of the Final C-141 for the Reid B 6 release of Feb 2017. I will put a copy in the mail on Monday but wanted to make sure to get you a copy that I committed to have to you by today. Please let me know if you have any questions or concerns.

Thank you,  
Clara

**From:** Smith, Cory, EMNRD [<mailto:Cory.Smith@state.nm.us>]  
**Sent:** Wednesday, June 13, 2018 1:57 PM  
**To:** Clara Cardoza <[ccardoza@hilcorp.com](mailto:ccardoza@hilcorp.com)>  
**Cc:** Fields, Vanessa, EMNRD <[Vanessa.Fields@state.nm.us](mailto:Vanessa.Fields@state.nm.us)>  
**Subject:** [EXTERNAL EMAIL]RE: [EXTERNAL EMAIL]RE: Release notification - Reid B 6

The release impacted a playa/surface water so it was reportable.

COPC collected samples and performed sampling events.

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:** Clara Cardoza <[ccardoza@hilcorp.com](mailto:ccardoza@hilcorp.com)>  
**Sent:** Wednesday, June 13, 2018 11:40 AM  
**To:** Smith, Cory, EMNRD <[Cory.Smith@state.nm.us](mailto:Cory.Smith@state.nm.us)>  
**Subject:** RE: [EXTERNAL EMAIL]RE: Release notification - Reid B 6

Cory, I was reviewing Lisa's files for this release. Assuming you were talking about the incident from February 2, 2017 that appears to have been a 3 bbl spill. Does this require paper work because Lisa submitted a notice/email to you and Vanessa?

Thank you,  
Clara

**From:** Smith, Cory, EMNRD [<mailto:Cory.Smith@state.nm.us>]  
**Sent:** Thursday, May 31, 2018 2:36 PM  
**To:** Lisa Hunter <[lhunter@hilcorp.com](mailto:lhunter@hilcorp.com)>; Clara Cardoza <[ccardoza@hilcorp.com](mailto:ccardoza@hilcorp.com)>; Jennifer Deal <[jdeal@hilcorp.com](mailto:jdeal@hilcorp.com)>; Christine Brock <[cbrock@hilcorp.com](mailto:cbrock@hilcorp.com)>  
**Cc:** Fields, Vanessa, EMNRD <[Vanessa.Fields@state.nm.us](mailto:Vanessa.Fields@state.nm.us)>  
**Subject:** [EXTERNAL EMAIL]RE: Release notification - Reid B 6

Hello All,

OCD has an open Compliance case for the Reid B #6 please complete review/complete your paper work and submit the final C-141 no later than June 30, 2018.

Thank you,

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:** Hunter, Lisa <[Lisa.Hunter@conocophillips.com](mailto:Lisa.Hunter@conocophillips.com)>  
**Sent:** Friday, July 14, 2017 4:26 PM  
**To:** Smith, Cory, EMNRD <[Cory.Smith@state.nm.us](mailto:Cory.Smith@state.nm.us)>  
**Subject:** FW: Release notification - Reid B 6

Cory –

Attached is the lab report from samples collected at the Reid B 6 on May 19<sup>th</sup>.

As you'll recall COPC returned to the location and removed all hydrocarbon stained spoil on location from the separator to the depressed area on the northern edge of location where stormwater sometimes collects, the result from a 3 bbl hydrocarbon release in February 2017. At that time, COPC also cleaned the stained surface area around the separator and compressor station from this release as well as an accumulation of past years' small leaks and overspray common with this equipment, and new gravel was applied as well.

Per NMOCD's request, COPC collected a 5-point composite sample of the northern edge on May 19<sup>th</sup> to confirm no contamination remained in the depression, and would not be a concern in the future when stormwater collected. The attached lab report confirms no contamination.

The additional sample collected (per NMOCD's request) from the area of the separator and compressor does indicate hydrocarbons present and does exceed the NMOCD guidelines of 100ppm, however, the BTEX levels are non-detect, and continued surface treatment and summer sun and heat should remedy the situation. COPC believes the residual contaminates do not pose a present or foreseeable threat or an environmental risk to water, humans or animals, and no further soil removal required.

Please let me know if you have any questions.

*Lisa Hunter*

Field Environmental Specialist  
ConocoPhillips Company

505.258.1607

[Lisa.Hunter@cop.com](mailto:Lisa.Hunter@cop.com)

*"Archaeology permits us to see small moments in time to witness events in everyday lives not recorded by history."*

**From:** Hunter, Lisa  
**Sent:** Friday, February 10, 2017 12:01 PM  
**To:** Smith, Cory, EMNRD <[Cory.Smith@state.nm.us](mailto:Cory.Smith@state.nm.us)>; Fields, Vanessa, EMNRD <[Vanessa.Fields@state.nm.us](mailto:Vanessa.Fields@state.nm.us)>; whitney thomas ([l1thomas@blm.gov](mailto:l1thomas@blm.gov)) <[l1thomas@blm.gov](mailto:l1thomas@blm.gov)>  
**Cc:** Walker, Crystal <[Crystal.Walker@conocophillips.com](mailto:Crystal.Walker@conocophillips.com)>  
**Subject:** RE: Release notification - Reid B 6

Cory –

As we discussed the spill doesn't appear to have left location after all, and appears to be within the pad's disturbed area on the northern edge. As you know, however, there is a natural depression on this northern edge that collects water from rain and snow melt (stormwater) and contamination did reach this water. Last Thursday and Friday trucks worked at vacuuming the storm water, as well as the water and oil throughout the effected location. Crews also erected a temporary fence around the storm water area to keep animals out until we are satisfied that all concerns have been addressed. Additionally, they built a temporary earthen berm between the location equipment and the storm water area, preventing further contamination from run off during expected precipitation.

I visited the location today, before the predicted rain and snow this weekend. It looked good -- I didn't see any evidence of oil or paraffin in the natural depression. There is some minor surface treatment that will need to be completed between this area and the location equipment. I will follow up after this weekend to see what effects, if any, there are to the area after the expected rain.

Please let me know if you have any questions.

Thanks,

*Lisa Hunter*

Field Environmental Specialist

ConocoPhillips Company

505.258.1607

[Lisa.Hunter@cop.com](mailto:Lisa.Hunter@cop.com)

*"Archaeology permits us to see small moments in time to witness events in everyday lives not recorded by history."*

**From:** Smith, Cory, EMNRD [<mailto:Cory.Smith@state.nm.us>]

**Sent:** Thursday, February 09, 2017 3:48 PM

**To:** Hunter, Lisa <[Lisa.Hunter@conocophillips.com](mailto:Lisa.Hunter@conocophillips.com)>; Fields, Vanessa, EMNRD <[Vanessa.Fields@state.nm.us](mailto:Vanessa.Fields@state.nm.us)>; whitney thomas ([l1thomas@blm.gov](mailto:l1thomas@blm.gov)) <[l1thomas@blm.gov](mailto:l1thomas@blm.gov)>

**Cc:** Walker, Crystal <[Crystal.Walker@conocophillips.com](mailto:Crystal.Walker@conocophillips.com)>

**Subject:** [EXTERNAL]RE: Release notification - Reid B 6

Good Afternoon Lisa,

Do you have an Status update on the Reid B #6?

Thank you,

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)

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**From:** Hunter, Lisa [<mailto:Lisa.Hunter@conocophillips.com>]

**Sent:** Thursday, February 2, 2017 11:59 AM

**To:** Smith, Cory, EMNRD <[Cory.Smith@state.nm.us](mailto:Cory.Smith@state.nm.us)>; Fields, Vanessa, EMNRD <[Vanessa.Fields@state.nm.us](mailto:Vanessa.Fields@state.nm.us)>; whitney thomas ([l1thomas@blm.gov](mailto:l1thomas@blm.gov)) <[l1thomas@blm.gov](mailto:l1thomas@blm.gov)>

**Cc:** Walker, Crystal <[Crystal.Walker@conocophillips.com](mailto:Crystal.Walker@conocophillips.com)>

**Subject:** Release notification - Reid B 6

Good Morning,

At 9:00 am on February 2, 2017, a release was discovered on the **Reid B 6, API# 3004525690, UL-J, Sec. 31, T29N, R10W, Lat: 36.68139, Long: -107.92257**. *Malfunction of a rupture disc on the low side of a separator caused the release of approximately 3bbls hydrocarbon/parrfin. Approximately 20 gals (.5bbl) followed a rutted area off location and entered the edge of a surface water of a natural depression approximately 150 feet off location. Trucks were called immediately to begin recovering fluid off location.* Notification was provided to OCD (Cory Smith) and BLM (Whitney Thomas) on February 2<sup>nd</sup> at 11:00 a.m & 11:30 a.m. respectively. Soil sampling and paperwork will be filed as soon as possible.

Please feel free to contact me at any time if you have any questions or concerns.

Thank you,

*Lisa Hunter*

Field Environmental Specialist

ConocoPhillips Company

P O Box 4289

[Lisa.Hunter@cop.com](mailto:Lisa.Hunter@cop.com)

Cell: 505.258.1607

*"Archaeology permits us to see small moments in time to witness events in everyday lives not recorded by history."*



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)

May 24, 2017

Lisa Hunter  
Conoco Phillips  
PO Box 4289  
Farmington, NM 87499  
TEL: (505) 326-9782  
FAX

RE: Reid B6

OrderNo.: 1705B32

Dear Lisa Hunter:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/20/2017 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:** Conoco Phillips **Client Sample ID:** Pond  
**Project:** Reid B6 **Collection Date:** 5/19/2017 9:20:00 AM  
**Lab ID:** 1705B32-001 **Matrix:** SOIL **Received Date:** 5/20/2017 11:15:00 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	9.4		mg/Kg	1	5/23/2017 4:32:26 PM	31890
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/23/2017 4:32:26 PM	31890
Surr: DNOP	84.4	70-130		%Rec	1	5/23/2017 4:32:26 PM	31890
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/23/2017 11:32:37 AM	31878
Surr: BFB	97.9	54-150		%Rec	1	5/23/2017 11:32:37 AM	31878
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	5/23/2017 11:32:37 AM	31878
Benzene	ND	0.025		mg/Kg	1	5/23/2017 11:32:37 AM	31878
Toluene	ND	0.050		mg/Kg	1	5/23/2017 11:32:37 AM	31878
Ethylbenzene	ND	0.050		mg/Kg	1	5/23/2017 11:32:37 AM	31878
Xylenes, Total	ND	0.099		mg/Kg	1	5/23/2017 11:32:37 AM	31878
Surr: 4-Bromofluorobenzene	115	66.6-132		%Rec	1	5/23/2017 11:32:37 AM	31878

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Conoco Phillips  
 Project: Reid B6  
 Lab ID: 1705B32-002

Matrix: SOIL

Client Sample ID: Separator  
 Collection Date: 5/19/2017 9:26:00 AM  
 Received Date: 5/20/2017 11:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM
Diesel Range Organics (DRO)	640	100		mg/Kg	10	5/23/2017 5:00:32 PM	31890
Motor Oil Range Organics (MRO)	540	500		mg/Kg	10	5/23/2017 5:00:32 PM	31890
Surr: DNOP	0	70-130	S	%Rec	10	5/23/2017 5:00:32 PM	31890
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	11	4.6		mg/Kg	1	5/23/2017 12:44:06 PM	31878
Surr: BFB	195	54-150	S	%Rec	1	5/23/2017 12:44:06 PM	31878
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.093		mg/Kg	1	5/23/2017 12:44:06 PM	31878
Benzene	ND	0.023		mg/Kg	1	5/23/2017 12:44:06 PM	31878
Toluene	ND	0.046		mg/Kg	1	5/23/2017 12:44:06 PM	31878
Ethylbenzene	ND	0.046		mg/Kg	1	5/23/2017 12:44:06 PM	31878
Xylenes, Total	ND	0.093		mg/Kg	1	5/23/2017 12:44:06 PM	31878
Surr: 4-Bromofluorobenzene	121	66.6-132		%Rec	1	5/23/2017 12:44:06 PM	31878

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705B32

24-May-17

**Client:** Conoco Phillips

**Project:** Reid B6

Sample ID	<b>LCS-31890</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>31890</b>	RunNo:	<b>42984</b>					
Prep Date:	<b>5/22/2017</b>	Analysis Date:	<b>5/23/2017</b>	SeqNo:	<b>1352959</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.0	73.2	114			
Surr: DNOP	4.3		5.000		86.8	70	130			

Sample ID	<b>MB-31890</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>31890</b>	RunNo:	<b>42984</b>					
Prep Date:	<b>5/22/2017</b>	Analysis Date:	<b>5/23/2017</b>	SeqNo:	<b>1352960</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	8.4		10.00		84.1	70	130			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705B32

24-May-17

**Client:** Conoco Phillips  
**Project:** Reid B6

Sample ID <b>MB-31878</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>31878</b>		RunNo: <b>42996</b>							
Prep Date: <b>5/22/2017</b>	Analysis Date: <b>5/23/2017</b>		SeqNo: <b>1353382</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	950		1000		95.4	54	150			

Sample ID <b>LCS-31878</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>31878</b>		RunNo: <b>42996</b>							
Prep Date: <b>5/22/2017</b>	Analysis Date: <b>5/23/2017</b>		SeqNo: <b>1353383</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	92.9	76.4	125			
Surr: BFB	1000		1000		99.8	54	150			

Sample ID <b>1705B32-002AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>Separator</b>	Batch ID: <b>31878</b>		RunNo: <b>42996</b>							
Prep Date: <b>5/22/2017</b>	Analysis Date: <b>5/23/2017</b>		SeqNo: <b>1353386</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	4.8	24.25	10.57	87.8	77.8	128			
Surr: BFB	2100		969.9		216	54	150			S

Sample ID <b>1705B32-002AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>Separator</b>	Batch ID: <b>31878</b>		RunNo: <b>42996</b>							
Prep Date: <b>5/22/2017</b>	Analysis Date: <b>5/23/2017</b>		SeqNo: <b>1353387</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	45	4.8	23.99	10.57	143	77.8	128	33.9	20	RS
Surr: BFB	3300		959.7		341	54	150	0	0	S

Sample ID <b>MB-31873</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>31873</b>		RunNo: <b>42996</b>							
Prep Date: <b>5/22/2017</b>	Analysis Date: <b>5/23/2017</b>		SeqNo: <b>1353389</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		95.8	54	150			

Sample ID <b>LCS-31873</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>31873</b>		RunNo: <b>42996</b>							
Prep Date: <b>5/22/2017</b>	Analysis Date: <b>5/23/2017</b>		SeqNo: <b>1353390</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		110	54	150			

**Qualifiers:**

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705B32

24-May-17

Client: Conoco Phillips

Project: Reid B6

Sample ID	<b>MB-31878</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>31878</b>	RunNo:	<b>42996</b>					
Prep Date:	<b>5/22/2017</b>	Analysis Date:	<b>5/23/2017</b>	SeqNo:	<b>1353418</b>	Units:	<b>mg/Kg</b>			
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	1.1		1.000		113	66.6	132			

Sample ID	<b>LCS-31878</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>31878</b>	RunNo:	<b>42996</b>					
Prep Date:	<b>5/22/2017</b>	Analysis Date:	<b>5/23/2017</b>	SeqNo:	<b>1353419</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.96	0.10	1.000	0	95.8	66.5	120			
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	66.6	132			

Sample ID	<b>1705B32-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>Pond</b>	Batch ID:	<b>31878</b>	RunNo:	<b>42996</b>					
Prep Date:	<b>5/22/2017</b>	Analysis Date:	<b>5/23/2017</b>	SeqNo:	<b>1353421</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.10	0.9950	0	112	42.5	143			
Benzene	1.1	0.025	0.9950	0	113	61.5	138			
Toluene	1.2	0.050	0.9950	0.007738	117	71.4	127			
Ethylbenzene	1.2	0.050	0.9950	0	120	70.9	132			
Xylenes, Total	3.7	0.10	2.985	0	123	76.2	123			
Surr: 4-Bromofluorobenzene	1.1		0.9950		115	66.6	132			

Sample ID	<b>1705B32-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>Pond</b>	Batch ID:	<b>31878</b>	RunNo:	<b>42996</b>					
Prep Date:	<b>5/22/2017</b>	Analysis Date:	<b>5/23/2017</b>	SeqNo:	<b>1353422</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.098	0.9766	0	117	42.5	143	2.89	20	
Benzene	1.1	0.024	0.9766	0	118	61.5	138	2.24	20	
Toluene	1.2	0.049	0.9766	0.007738	122	71.4	127	2.18	20	
Ethylbenzene	1.2	0.049	0.9766	0	125	70.9	132	1.92	20	

**Qualifiers:**

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- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1705B32

24-May-17

**Client:** Conoco Phillips  
**Project:** Reid B6

Sample ID	1705B32-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles						
Client ID:	Pond	Batch ID:	31878	RunNo:	42996						
Prep Date:	5/22/2017	Analysis Date:	5/23/2017	SeqNo:	1353422	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Xylenes, Total	3.7	0.098	2.930	0	128	76.2	123	1.98	20	S	
Surr: 4-Bromofluorobenzene	1.1		0.9766		117	66.6	132	0	0		

Sample ID	MB-31873	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles						
Client ID:	PBS	Batch ID:	31873	RunNo:	42996						
Prep Date:	5/22/2017	Analysis Date:	5/23/2017	SeqNo:	1353425	Units:	%Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	1.1		1.000		114	66.6	132				

Sample ID	LCS-31873	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles						
Client ID:	LCSS	Batch ID:	31873	RunNo:	42996						
Prep Date:	5/22/2017	Analysis Date:	5/23/2017	SeqNo:	1353426	Units:	%Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	1.1		1.000		115	66.6	132				

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
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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: Conoco Phillips Farmingt

Work Order Number: 1705B32

RcptNo: 1

Received By: Anne Thorne 5/20/2017 11:15:00 AM

*Anne Thorne*

Completed By: Anne Thorne 5/22/2017 9:21:25 AM

*Anne Thorne*

Reviewed By: *SRE 05/22/17*

### 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	2.4	Good	Yes			

