

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

DEC 11 2014

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 WPX Energy Production	Contact Vanessa K Fields
Address PO Box 640	Telephone No. 505-333-1880
Facility Name NE Chaco COM #173H	Facility Type Well Site

Surface Owner Sate NMBLM	Mineral Owner NMBLM	API No. 30-039-31207
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	13	23N	07W					Rio Arriba

Latitude 36.22881 release Longitude -107.53379 release

**NATURE OF RELEASE**

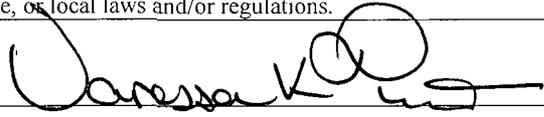
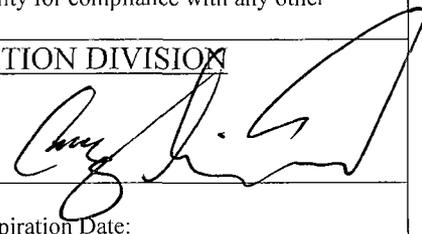
Type of Release: LGC-36 Gel/Produced Water (MSDS Attached)	Volume of Release 60 BBLS	Volume Recovered 30 BBLS
Source of Release: Contractor on Hydraulic Fracturing job failed to close the valve on the flowback tank resulting in release of LGC-36Gel and produced water.	Date and Hour of Occurrence 11-16-2014 6:00 am	Date and Hour of Discovery 11-16-2014 6:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Brandon Powell NMOCD, Cory Smith, NMOCD & Shari Ketcham NMBLM (See attached e-mail)	
By Whom? Vanessa Fields	Date and Hour 11-16-2014 at 7:42 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.\*  
Contractor on Hydraulic Fracturing job failed to close the valve on the flowback tank resulting in release of LGC-36Gel and produced water.

Describe Area Affected and Cleanup Action Taken.\*  
WPX Energy removed all contaminated soil from location transporting to Envirotech Land farm. Results of the samples determined no hydrocarbon impact to soil. (Please see attached analytical results.).

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: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Vanessa K Fields	Approved by Environmental Specialist: 	
Title: Environmental Specialist	Approval Date: <u>1/8/15</u>	Expiration Date:
E-mail Address: Vanessa.fields@wpxenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 12/08/2014 Phone: 333-1880		

\* Attach Additional Sheets If Necessary

#NCS 1500854295

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## Fields, Vanessa

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**From:** Fields, Vanessa  
**Sent:** Sunday, November 16, 2014 7:42 AM  
**To:** 'Powell, Brandon, EMNRD'; Smith, Cory, EMNRD; 'Ketcham, Shari'  
**Subject:** NE Chaco Com #173H 30-039-31207 60 BBL Frac Gel Spill  
**Attachments:** LGC -36 UC MSDS.pdf

**Importance:** High

### NE Chaco Com #173H 30-039-31207 D 13 23N 07W

Good Morning,

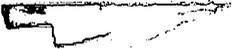
At 6:00 am this morning WPX Energy had a release on the NE Chaco Com #173 approximately 60 BBLs of frac gel (LGC-36 UC) was released on location after vendor failed to close the valve on the frac tank. The spill is contained on site, vac trucks are removing spill disposing at Envirotech's Landfarm. Soil samples will be obtained after clean-up has occurred this morning and tested for the following (BTEX, TPH, Chlorides). A C-141 will follow after a further investigation.

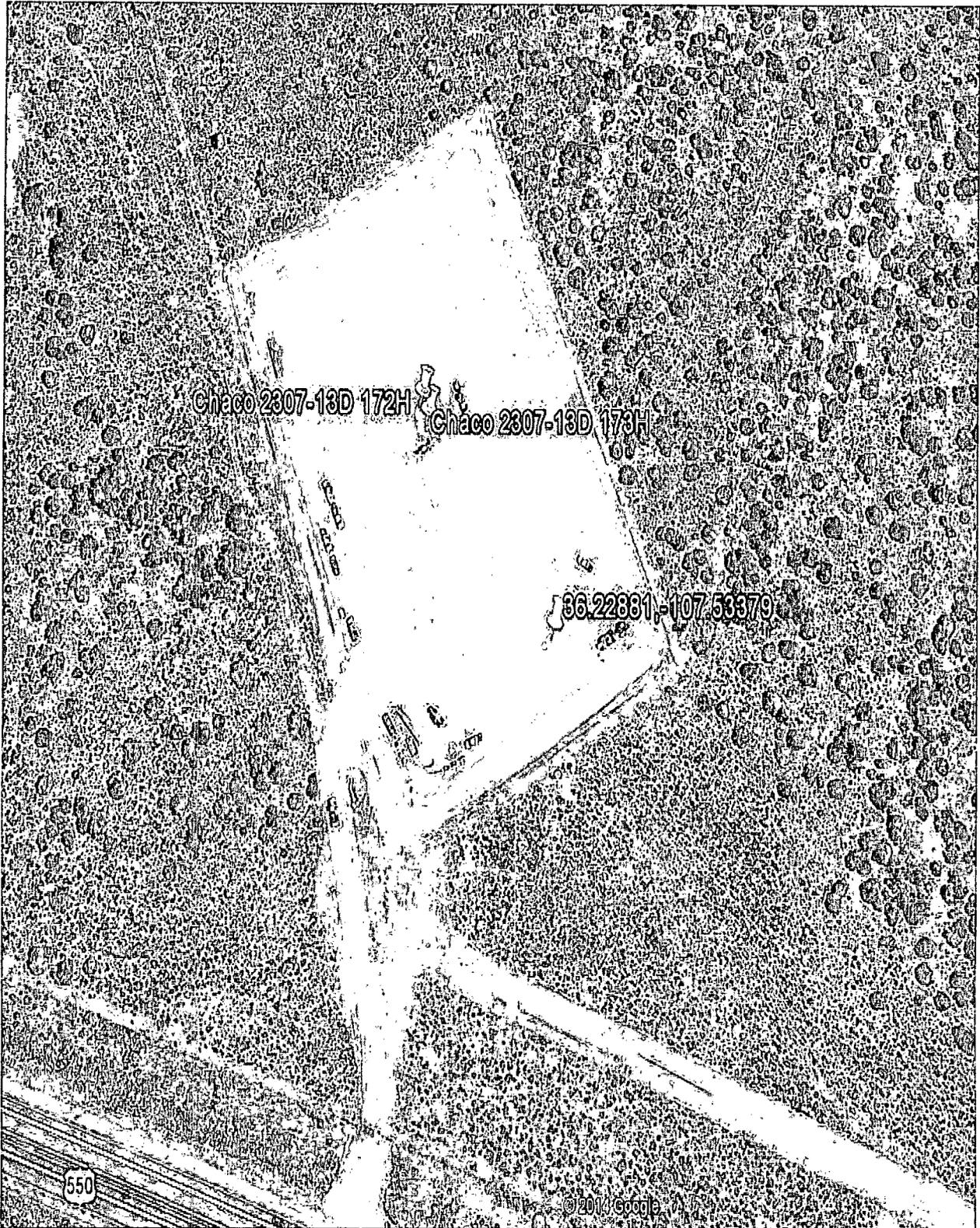
Please let me know if you have any questions and/or concerns at this time.

Thank you,

Vanessa Fields  
Environmental Specialist  
Office# 505-333-1880  
Fax# 505-333-1805  
Cell# 505-419-6219  
[vanessa.fields@wpxenergy.com](mailto:vanessa.fields@wpxenergy.com)

**WPXENERGY.**





Chaco 2307-13D 172H

Chaco 2307-13D 173H

36.22831, -107.53379

550

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## Analytical Report

### Report Summary

Client: WPX Energy, Inc.

Chain Of Custody Number: 17411

Samples Received: 11/21/2014 12:46:00PM

Job Number: 04108-0136

Work Order: P411081

Project Name/Location: Chaco 173H Spill

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 11/25/14

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



WPX Energy, Inc.	Project Name:	Chaco 173H Spill	<b>Reported:</b> 25-Nov-14 18:40
PO Box 21218	Project Number:	04108-0136	
Tulsa OK, 74121-1358	Project Manager:	Vanessa Fields	

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Chaco 173H Spill Lat/ Long 36.22881 -107.53379	P411081-01A	Soil	11/18/14	11/21/14	Glass Jar, 4 oz.

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Ph (970) 259-0615 Fr (800) 362-1879





WPX Energy, Inc. PO Box 21218 Tulsa OK, 74121-1358	Project Name: Chaco 173H Spill Project Number: 04108-0136 Project Manager: Vanessa Fields	Reported: 25-Nov-14 18:40
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**Chaco 173H Spill Lat/ Long 36.22881 -107.53379**  
**P411081-01 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.10	mg/kg	1	1447036	11/21/14	11/24/14	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1447036	11/21/14	11/24/14	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1447036	11/21/14	11/24/14	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1447036	11/21/14	11/24/14	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1447036	11/21/14	11/24/14	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1447036	11/21/14	11/24/14	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1447036	11/21/14	11/24/14	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		81.9 %		50-150	1447036	11/21/14	11/24/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	9.98	mg/kg	1	1447036	11/21/14	11/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1447037	11/21/14	11/24/14	EPA 8015D	
<i>Surrogate: o-Terphenyl</i>		107 %		50-200	1447037	11/21/14	11/24/14	EPA 8015D	
<i>Surrogate: 4-Bromochlorobenzene-FID</i>		80.8 %		50-150	1447036	11/21/14	11/24/14	EPA 8015D	
<b>Total Petroleum Hydrocarbons by 418.1</b>									
Total Petroleum Hydrocarbons	ND	35.0	mg/kg	1	1448007	11/24/14	11/24/14	EPA 418.1	
<b>Cation/Anion Analysis</b>									
Chloride	ND	9.98	mg/kg	1	1447038	11/21/14	11/21/14	EPA 300.0	

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WPX Energy, Inc. PO Box 21218 Tulsa OK, 74121-1358	Project Name: Chaco 173H Spill Project Number: 04108-0136 Project Manager: Vanessa Fields	Reported: 25-Nov-14 18:40
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**Volatile Organics by EPA 8021 - Quality Control**  
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1447036 - Purge and Trap EPA 5030A**

Blank (1447036-BLK1)			Prepared: 20-Nov-14 Analyzed: 21-Nov-14							
Benzene	ND	0.10	mg/kg							
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	"							
p,m-Xylene	ND	0.20	"							
o-Xylene	ND	0.10	"							
Total Xylenes	ND	0.10	"							
Total BTEX	ND	0.10	"							
Surrogate: 4-Bromochlorobenzene-PID	0.322		"	0.399		80.6	50-150			

LCS (1447036-BS1)			Prepared: 20-Nov-14 Analyzed: 21-Nov-14							
Benzene	20.2	0.10	mg/kg	20.0		101	75-125			
Toluene	19.4	0.10	"	20.0		97.1	70-125			
Ethylbenzene	19.6	0.10	"	20.0		97.8	75-125			
p,m-Xylene	40.4	0.20	"	40.0		101	80-125			
o-Xylene	19.0	0.10	"	20.0		95.0	75-125			
Surrogate: 4-Bromochlorobenzene-PID	0.341		"	0.400		85.4	50-150			

Matrix Spike (1447036-MS1)			Source: P411077-01		Prepared: 20-Nov-14 Analyzed: 21-Nov-14					
Benzene	20.6	0.10	mg/kg	20.0	ND	103	75-125			
Toluene	19.9	0.10	"	20.0	ND	99.8	70-125			
Ethylbenzene	20.0	0.10	"	20.0	ND	100	75-125			
p,m-Xylene	41.4	0.20	"	40.0	ND	104	80-125			
o-Xylene	19.5	0.10	"	20.0	0.11	96.8	75-125			
Surrogate: 4-Bromochlorobenzene-PID	0.331		"	0.400		82.8	50-150			

Matrix Spike Dup (1447036-MSD1)			Source: P411077-01		Prepared: 20-Nov-14 Analyzed: 21-Nov-14					
Benzene	21.7	0.10	mg/kg	20.0	ND	108	75-125	4.96	15	
Toluene	20.7	0.10	"	20.0	ND	104	70-125	3.80	15	
Ethylbenzene	20.7	0.10	"	20.0	ND	104	75-125	3.21	15	
p,m-Xylene	42.8	0.20	"	39.9	ND	107	80-125	3.30	15	
o-Xylene	20.1	0.10	"	20.0	0.11	100	75-125	3.49	15	
Surrogate: 4-Bromochlorobenzene-PID	0.345		"	0.399		86.4	50-150			

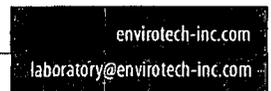
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WPX Energy, Inc. PO Box 21218 Tulsa OK, 74121-1358	Project Name: Chaco 173H Spill Project Number: 04108-0136 Project Manager: Vanessa Fields	Reported: 25-Nov-14 18:40
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**Nonhalogenated Organics by 8015 - Quality Control**

**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1447036 - Purge and Trap EPA 5030A</b>										
<b>Blank (1447036-BLK1)</b>										
					Prepared: 20-Nov-14 Analyzed: 21-Nov-14					
Gasoline Range Organics (C6-C10)	ND	9.98	mg/kg							
Surrogate: 4-Bromochlorobenzene-FID	0.321		"	0.399		80.5	50-150			
<b>LCS (1447036-BS1)</b>										
					Prepared: 20-Nov-14 Analyzed: 21-Nov-14					
Gasoline Range Organics (C6-C10)	255	10.0	mg/kg	292		87.2	80-120			
Surrogate: 4-Bromochlorobenzene-FID	0.331		"	0.400		82.7	50-150			
<b>Matrix Spike (1447036-MS1)</b>										
		Source: P411077-01		Prepared: 20-Nov-14 Analyzed: 21-Nov-14						
Gasoline Range Organics (C6-C10)	270	9.99	mg/kg	292	ND	92.6	75-125			
Surrogate: 4-Bromochlorobenzene-FID	0.321		"	0.400		80.3	50-150			
<b>Matrix Spike Dup (1447036-MSD1)</b>										
		Source: P411077-01		Prepared: 20-Nov-14 Analyzed: 21-Nov-14						
Gasoline Range Organics (C6-C10)	276	9.98	mg/kg	292	ND	94.6	75-125	2.05	15	
Surrogate: 4-Bromochlorobenzene-FID	0.339		"	0.399		84.9	50-150			

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WPX Energy, Inc. PO Box 21218 Tulsa OK, 74121-1358	Project Name: Chaco 173H Spill Project Number: 04108-0136 Project Manager: Vanessa Fields	Reported: 25-Nov-14 18:40
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**Nonhalogenated Organics by 8015 - Quality Control**  
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1447037 - DRO Extraction EPA 3550M</b>										
<b>LCS (1447037-BS1)</b>				Prepared: 20-Nov-14 Analyzed: 21-Nov-14						
Diesel Range Organics (C10-C28)	580	25.0	mg/kg	499		116	38-132			
Surrogate: o-Terphenyl	54.0		"	39.9		135	50-200			
<b>Matrix Spike (1447037-MS1)</b>				Source: P411077-01 Prepared: 20-Nov-14 Analyzed: 21-Nov-14						
Diesel Range Organics (C10-C28)	582	29.9	mg/kg	499	ND	117	38-132			
Surrogate: o-Terphenyl	52.3		"	39.9		131	50-200			
<b>Matrix Spike Dup (1447037-MSD1)</b>				Source: P411077-01 Prepared: 20-Nov-14 Analyzed: 21-Nov-14						
Diesel Range Organics (C10-C28)	475	30.0	mg/kg	500	ND	95.1	38-132	20.3	20	SPK1
Surrogate: o-Terphenyl	37.7		"	40.0		94.4	50-200			

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WPX Energy, Inc. PO Box 21218 Tulsa OK, 74121-1358	Project Name: Chaco 173H Spill Project Number: 04108-0136 Project Manager: Vanessa Fields	Reported: 25-Nov-14 18:40
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**Total Petroleum Hydrocarbons by 418.1 - Quality Control**

**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1448007 - 418 Freon Extraction**

<b>Blank (1448007-BLK1)</b>				Prepared & Analyzed: 24-Nov-14						
Total Petroleum Hydrocarbons	ND	35.0	mg/kg							
<b>Duplicate (1448007-DUP1)</b>				Source: P411081-01 Prepared & Analyzed: 24-Nov-14						
Total Petroleum Hydrocarbons	ND	35.0	mg/kg		ND				30	
<b>Matrix Spike (1448007-MS1)</b>				Source: P411081-01 Prepared & Analyzed: 24-Nov-14						
Total Petroleum Hydrocarbons	1890	35.0	mg/kg	2020	ND	93.5	80-120			

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WPX Energy, Inc. PO Box 21218 Tulsa OK, 74121-1358	Project Name: Chaco 173H Spill Project Number: 04108-0136 Project Manager: Vanessa Fields	Reported: 25-Nov-14 18:40
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**Cation/Anion Analysis - Quality Control**  
**Envirotech Analytical Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1447038 - Anion Extraction EPA 300.0**

<b>Blank (1447038-BLK1)</b>				Prepared & Analyzed: 21-Nov-14						
Chloride	ND	9.96	mg/kg							
<b>LCS (1447038-BS1)</b>				Prepared & Analyzed: 21-Nov-14						
Chloride	487	9.83	mg/kg	492		99.0	90-110			
<b>Matrix Spike (1447038-MS1)</b>		<b>Source: P411077-01</b>		Prepared & Analyzed: 21-Nov-14						
Chloride	555	9.97	mg/kg	499	58.3	99.6	80-120			
<b>Matrix Spike Dup (1447038-MSD1)</b>		<b>Source: P411077-01</b>		Prepared & Analyzed: 21-Nov-14						
Chloride	574	9.93	mg/kg	496	58.3	104	80-120	3.38	20	

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WPX Energy, Inc. PO Box 21218 Tulsa OK, 74121-1358	Project Name: Chaco 173H Spill Project Number: 04108-0136 Project Manager: Vanessa Fields	Reported: 25-Nov-14 18:40
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**Notes and Definitions**

- SPK1 The spike recovery for this QC sample is outside of control limits.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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*Rush*

# CHAIN OF CUSTODY RECORD

17411

Client: <i>WPX Energy</i>	Project Name / Location: <i>Chaco 173H Spill</i>	ANALYSIS / PARAMETERS											
Email results to: <i>Vanessa.Fields@wpxenergy.com</i>	Sampler Name: <i>Rob Backshaw</i>	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE	Sample Cool	Sample Intact
Client Phone No.: <i>505-419-6219</i>	Client No.: <i>04108-0136</i>												

Sample No. / Identification	Sample Date	Sample Time	Lab No.	No. / Volume of Containers	Preservative		TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE	Sample Cool	Sample Intact
					HNO <sub>3</sub>	HCl												
<i>Chaco 173H Spill - 2 1/2 Ons 36.2288T -107.53379</i>	<i>11/18/14</i>	<i>4:40pm</i>	<i>P411081-01</i>	<i>1402</i>			<i>X</i>	<i>X</i>							<i>X</i>	<i>X</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Relinquished by: (Signature) <i>[Signature]</i>	Date <i>11/21/14</i>	Time <i>12:40</i>	Received by: (Signature) <i>[Signature]</i>	Date <i>11/21/14</i>	Time <i>12:40</i>
Relinquished by: (Signature)			Received by: (Signature)		
Sample Matrix Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>					

# MATERIAL SAFETY DATA SHEET

**Product Trade Name:** LGC-36 UC

**Revision Date:** 14-Feb-2013

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Trade Name:** LGC-36 UC  
**Synonyms:** None  
**Chemical Family:** Blend  
**Application:** Liquid Gel Concentrate

**Manufacturer/Supplier:** Halliburton Energy Services, Inc.  
P.O. Box 1431  
Duncan, Oklahoma 73536-0431  
Emergency Telephone: (281) 575-5000

**Prepared By:** Chemical Compliance  
Telephone: 1-580-251-4335  
e-mail: fdunexchem@halliburton.com

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Hydrotreated light petroleum distillate	64742-47-8	30 - 60%	Not applicable	Not applicable
Guar gum	9000-30-0	30 - 60%	10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>

**3. HAZARDS IDENTIFICATION**

**Hazard Overview:** May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May cause allergic respiratory reaction. May be harmful if swallowed.

**4. FIRST AID MEASURES**

**Inhalation:** If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

**Skin:** In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

**Ingestion:** Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

**Notes to Physician:** Not Applicable

## 5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	180
Flash Point/Range (C):	82
Flash Point Method:	COC
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined

<b>Fire Extinguishing Media</b>	Carbon Dioxide, Dry Chemicals, Foam.
<b>Special Exposure Hazards</b>	Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce toxic gases.
<b>Special Protective Equipment for Fire-Fighters</b>	Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.
<b>NFPA Ratings:</b>	Health 1, Flammability 2, Reactivity 0
<b>HMIS Ratings:</b>	Health 1, Flammability 2, Physical Hazard 0

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautionary Measures</b>	Use appropriate protective equipment.
<b>Environmental Precautionary Measures</b>	Prevent from entering sewers, waterways, or low areas.
<b>Procedure for Cleaning / Absorption</b>	Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

## 7. HANDLING AND STORAGE

<b>Handling Precautions</b>	Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.
<b>Storage Information</b>	Store away from oxidizers. Store in a cool well ventilated area. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 24 months.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls</b>	Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.
<b>Respiratory Protection</b>	<p>If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.</p> <p>Not normally needed. But if significant exposures are possible then the following respirator is recommended: Organic vapor respirator with a dust/mist filter. (A2P2/P3)</p>
<b>Hand Protection</b>	Impervious rubber gloves.
<b>Skin Protection</b>	Normal work coveralls.
<b>Eye Protection</b>	Chemical goggles; also wear a face shield if splashing hazard exists.

**Other Precautions**

Eyewash fountains and safety showers must be easily accessible.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Liquid
<b>Color:</b>	Off white
<b>Odor:</b>	Mild hydrocarbon
<b>pH:</b>	6.5 - 7.5
<b>Specific Gravity @ 20 C (Water=1):</b>	1.086
<b>Density @ 20 C (lbs./gallon):</b>	9.05
<b>Bulk Density @ 20 C (lbs/ft<sup>3</sup>):</b>	Not Determined
<b>Boiling Point/Range (F):</b>	392
<b>Boiling Point/Range (C):</b>	200
<b>Freezing Point/Range (F):</b>	Not Determined
<b>Freezing Point/Range (C):</b>	Not Determined
<b>Vapor Pressure @ 20 C (mmHg):</b>	< 0.15
<b>Vapor Density (Air=1):</b>	Not Determined
<b>Percent Volatiles:</b>	Not Determined
<b>Evaporation Rate (Butyl Acetate=1):</b>	Not Determined
<b>Solubility in Water (g/100ml):</b>	Insoluble
<b>Solubility in Solvents (g/100ml):</b>	Not Determined
<b>VOCs (lbs./gallon):</b>	Not Determined
<b>Viscosity, Dynamic @ 20 C (centipoise):</b>	Not Determined
<b>Viscosity, Kinematic @ 20 C (centistokes):</b>	Not Determined
<b>Partition Coefficient/n-Octanol/Water:</b>	Not Determined
<b>Molecular Weight (g/mole):</b>	Not Determined

**10. STABILITY AND REACTIVITY**

<b>Stability Data:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Conditions to Avoid</b>	Keep away from heat, sparks and flame.
<b>Incompatibility (Materials to Avoid)</b>	Strong oxidizers.
<b>Hazardous Decomposition Products</b>	Carbon monoxide and carbon dioxide.
<b>Additional Guidelines</b>	Not Applicable

**11. TOXICOLOGICAL INFORMATION**

<b>Principle Route of Exposure</b>	Eye or skin contact, inhalation.
<b>Inhalation</b>	May cause respiratory irritation. May cause allergic respiratory reaction. May cause chemical pneumonia. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.
<b>Skin Contact</b>	May cause skin irritation. Causes drying of the skin.
<b>Eye Contact</b>	May cause eye irritation.

<b>Ingestion</b>	Irritation of the mouth, throat, and stomach. Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions.
<b>Aggravated Medical Conditions</b>	Skin disorders.
<b>Chronic Effects/Carcinogenicity</b>	No data available to indicate product or components present at greater than 1% are chronic health hazards.
<b>Other Information</b>	None known.
<b>Toxicity Tests</b>	
<b>Oral Toxicity:</b>	Not determined
<b>Dermal Toxicity:</b>	Not determined
<b>Inhalation Toxicity:</b>	Not determined
<b>Primary Irritation Effect:</b>	Not determined
<b>Carcinogenicity</b>	Not determined
<b>Genotoxicity:</b>	Not determined
<b>Reproductive / Developmental Toxicity:</b>	Not determined

**12. ECOLOGICAL INFORMATION**

<b>Mobility (Water/Soil/Air)</b>	Not determined
<b>Persistence/Degradability</b>	Not determined
<b>Bio-accumulation</b>	Not determined

**Ecotoxicological Information**

<b>Acute Fish Toxicity:</b>	Not determined
<b>Acute Crustaceans Toxicity:</b>	Not determined
<b>Acute Algae Toxicity:</b>	Not determined
<b>Chemical Fate Information</b>	Not determined
<b>Other Information</b>	Not applicable

**13. DISPOSAL CONSIDERATIONS**

<b>Disposal Method</b>	Disposal should be made in accordance with federal, state, and local regulations.
<b>Contaminated Packaging</b>	Follow all applicable national or local regulations.

**14. TRANSPORT INFORMATION**

**Land Transportation**

**DOT**

Not restricted

**DOT (Bulk)**

Not restricted in accordance with the terms and conditions of 49 CFR 173.120(b)(3).

**Canadian TDG**

Not restricted

**ADR**

Not restricted

**Air Transportation**

**ICAO/IATA**

Not restricted

**Sea Transportation**

**IMDG**

Not restricted

**Other Transportation Information**

Labels: None

**15. REGULATORY INFORMATION**

**US Regulations**

**US TSCA Inventory** All components listed on inventory or are exempt.

**EPA SARA Title III Extremely Hazardous Substances** Not applicable

**EPA SARA (311,312) Hazard Class** Acute Health Hazard  
Fire Hazard

**EPA SARA (313) Chemicals** This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

**EPA CERCLA/Superfund Reportable Spill Quantity** Not applicable.

**EPA RCRA Hazardous Waste Classification** If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

**California Proposition 65** The California Proposition 65 regulations apply to this product.

**MA Right-to-Know Law** One or more components listed.

**NJ Right-to-Know Law** One or more components listed.

**PA Right-to-Know Law** One or more components listed.

**Canadian Regulations**

**Canadian DSL Inventory** All components listed on inventory or are exempt.

**WHMIS Hazard Class**

B3 Combustible Liquids  
D2B Toxic Materials

**16. OTHER INFORMATION**

**The following sections have been revised since the last issue of this MSDS**

Not applicable

**Additional Information**

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

**Disclaimer Statement**

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**\*\*\*END OF MSDS\*\*\***