

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

OIL CONS. DIV DIST. 3

DEC 21 2015

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	Contact: Steve Moskal
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9497
Facility Name: Gallegos Canyon Unit 187E	Facility Type: Natural gas well

Surface Owner: Private	Mineral Owner: Federal	API No. 3004524172
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LOCATION OF RELEASE

Unit Letter N	Section 30	Township 29N	Range 12W	Feet from the 805	North/South Line South	Feet from the 1,600	East/West Line West	County: San Juan
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Latitude 36.6924° Longitude -108.14314°

NATURE OF RELEASE

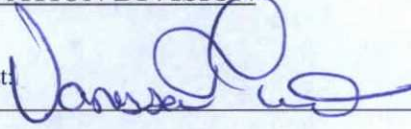
Type of Release: condensate	Volume of Release: Unknown	Volume Recovered: none
Source of Release: Pipeline from separator to condensate tank	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: November 24, 2014 at 9:20 AM
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Soils impacted with hydrocarbons encountered at separator during trenching for a new flow line between the separator and 300 bbl stock tank. Original source of impacts not evident, but appeared to be historical in nature from possible integrity issues with past flow lines. Source of impacts could not be identified. Remedial action taken was excavation and offsite treatment of impacted soils.

Describe Area Affected and Cleanup Action Taken.* Site remediation by excavation of impacts with backhoe followed by trackhoe. Final excavation size 55' x 35' x 14' deep. Final soil volume of 998 cubic yards was excavated and transported off site for treatment. Final closure samples were collected February 13, 2015 with results below the spill and release guidelines for a site ranking based on 10 points. Laboratory reports are attached.

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

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Steve Moskal		Approved by Environmental Specialist: 	
Title: Field Environmental Coordinator		Approval Date: <u>12/29/2015</u>	Expiration Date:
E-mail Address: steven.moskal@bp.com		Conditions of Approval:	Attached ☐
Date: December 21, 2015	Phone: 505-326-9497		

* Attach Additional Sheets If Necessary

NCS 1433629834

BP America: GCU 187E

(N) Sec 30 – T29N – R12W

API: 30-045-24172

San Juan County, New Mexico

Summary Record of Impact Remediation

November 17, 2014 Soils impacted with hydrocarbons encountered at separator during trenching for a new flow line between the separator and 300 bbl stock tank. Original source of impacts not evident, but appeared to be historical in nature from possible integrity issues with past flow lines. No current source of impacts could be identified. Shallow sandstone encountered throughout location, beginning at 2' below grade. Sample of impacted sandstone at 5' depth below separator tested TPH (U.S. EPA Method 8015B, DRO + GRO) reported at 10,440 mg/Kg.

Site Closure Standard Determined at 1,000 ppm TPH based on BGT permit (Current permit signed by NMOCD on April 6, 2015):

Horizontal distance to ephemeral wash > 700 feet (10 points)

Nearest water well > 1,000 feet (0 points)

Depth to groundwater > 100 feet (0 points)

November 18, 2014 Begin remediation of site by excavation of impacts with backhoe.

November 19, 2014 Excavation size approximately 25' diameter x 7' deep. Collect 8-point excavation sidewall sample for laboratory testing from 3' – 7' interval. TPH (U.S. EPA Method 8015B, DRO + GRO) reported at 1,383 mg/Kg.

November 24, 2014 Excavation size 28' diameter x 9' deep. Collect sidewall 4-point composite from 4' – 8' interval for laboratory testing. TPH (U.S. EPA Method 8015B, DRO + GRO) reported at 5,520 mg/Kg. Collect base 5-point composite at 9' depth. TPH (U.S. EPA Method 8015B, DRO + GRO) reported at 3,380 mg/Kg. Entire excavation in dense sandstone. Postpone further digging with backhoe and wait on remediation crew to continue excavation with trackhoe.

February 9, 2015 Remediation crew continues site remediation with trackhoe.

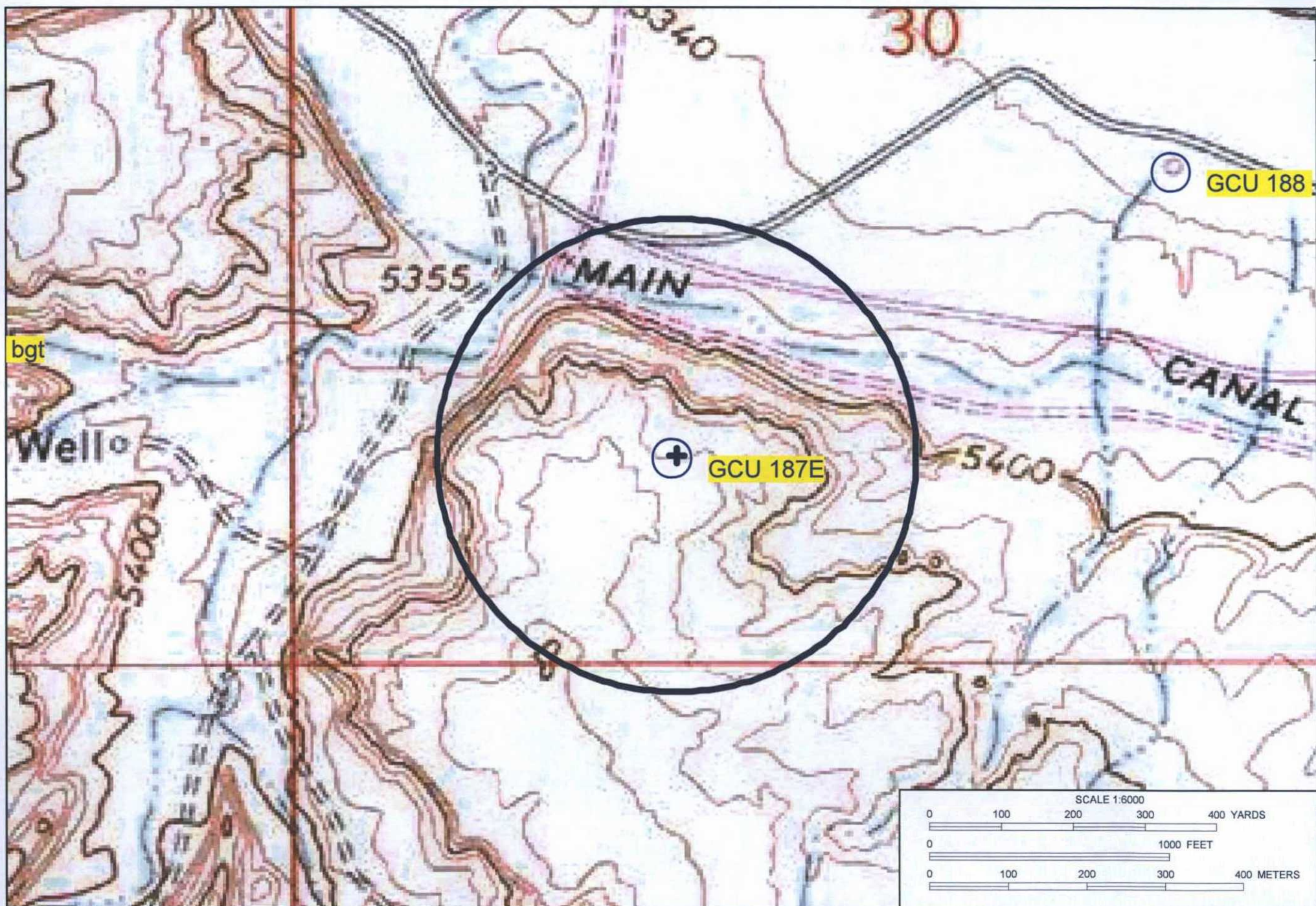
February 11, 2015 Excavation size 55' x 32' x 14' deep. Sample Base, East, West and South sidewalls for laboratory testing. Recommend excavation crew extend north sidewall an additional 3' north.

February 13, 2015 Final excavation size 55' x 35' x 14' deep. Sample north sidewall for laboratory testing.

Sample ID	Date	Map ID	TPH 8015B (DRO+ GRO)	BTEX 8021	Chloride
Base 3-pt @14'	2/11/2015	B	ND	ND	75.3 mg/Kg
East Sidewall 3-pt 4'-12'	2/11/2015	E	165.8 mg/Kg	6.37 mg/Kg	172 mg/Kg
South Sidewall 3-pt 4'-12'	2/11/2015	S	ND	ND	96.7 mg/Kg
West Sidewall 3-pt 4'-12'	2/11/2015	W	ND	ND	49.2 mg/Kg

North Sidewall 5-pt 4'-12'	2/13/2015	N	56.7 mg/Kg	ND	24.8 mg/Kg
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Total soil volume estimate based on excavation dimensions = 998 CY.



Name: FARMINGTON SOUTH
Date: 11/17/2014
Scale: 1 inch equals 500 feet

Location: 036.6925153° N 108.1433759° W



Google earth

CCU 187E

Meter House

Final Excavation of Impact
(55' x 35' x 14' deep)
(Dense Sandstone Begins at 2' Depth)

95 BGT

300 Tank

Separator (Moved during Remediation)



100 ft



Analytical Report

Report Summary

Client: BP America Production Co.
Chain Of Custody Number: 17725
Samples Received: 2/11/2015 10:47:00AM
Job Number: 03143-0424
Work Order: P502029
Project Name/Location: GCU 187E

Entire Report Reviewed By:

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

Date: 2/13/15

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.



BP America Production Co.
PO Box 22024
Tulsa OK, 74121-2024

Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
East Sidewall 3-pt 4'-12'	P502029-01A	Soil	02/11/15	02/11/15	Glass Jar, 4 oz.
Base 3-pt @ -14'	P502029-02A	Soil	02/11/15	02/11/15	Glass Jar, 4 oz.
South Sidewall 3-pt 4'-12'	P502029-03A	Soil	02/11/15	02/11/15	Glass Jar, 4 oz.
West Sidewall 3-pt 4'-12'	P502029-04A	Soil	02/11/15	02/11/15	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

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

envirotech-inc.com
laboratory@envirotech-inc.com



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Tulsa OK, 74121-2024

Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

East Sidewall 3-pt 4'-12'
P502029-01 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	0.12	0.10	mg/kg	1		1507021	02/11/15	02/12/15	EPA 8021B	
Toluene	0.46	0.10	mg/kg	1		1507021	02/11/15	02/12/15	EPA 8021B	
Ethylbenzene	0.62	0.10	mg/kg	1		1507021	02/11/15	02/12/15	EPA 8021B	
p,m-Xylene	4.06	0.20	mg/kg	1		1507021	02/11/15	02/12/15	EPA 8021B	
o-Xylene	1.11	0.10	mg/kg	1		1507021	02/11/15	02/12/15	EPA 8021B	
Total Xylenes	5.17	0.10	mg/kg	1		1507021	02/11/15	02/12/15	EPA 8021B	
Total BTEX	6.37	0.10	mg/kg	1		1507021	02/11/15	02/12/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		110 %		50-150		1507021	02/11/15	02/12/15	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	113	9.99	mg/kg	1		1507021	02/11/15	02/12/15	EPA 8015D	
Diesel Range Organics (C10-C28)	52.8	25.0	mg/kg	1		1507020	02/11/15	02/12/15	EPA 8015D	
Surrogate: o-Terphenyl		115 %		50-200		1507020	02/11/15	02/12/15	EPA 8015D	
Surrogate: 4-Bromochlorobenzene-FID		107 %		50-150		1507021	02/11/15	02/12/15	EPA 8015D	
Cation/Anion Analysis										
Chloride	172	9.91	mg/kg	1		1507017	02/11/15	02/11/15	EPA 300.0	

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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

Base 3-pt @ -14'
P502029-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatiles Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		110 %		50-150	1507021	02/11/15	02/12/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.97	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1507020	02/11/15	02/12/15	EPA 8015D	
Surrogate: o-Terphenyl		109 %		50-200	1507020	02/11/15	02/12/15	EPA 8015D	
Surrogate: 4-Bromochlorobenzene-FID		98.9 %		50-150	1507021	02/11/15	02/12/15	EPA 8015D	
Cation/Anion Analysis									
Chloride	75.3	9.94	mg/kg	1	1507017	02/11/15	02/11/15	EPA 300.0	

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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

South Sidewall 3-pt 4'-12'
P502029-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatiles Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		107 %		50-150	1507021	02/11/15	02/12/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.99	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	24.9	mg/kg	1	1507020	02/11/15	02/12/15	EPA 8015D	
Surrogate: o-Terphenyl		110 %		50-200	1507020	02/11/15	02/12/15	EPA 8015D	
Surrogate: 4-Bromochlorobenzene-FID		96.2 %		50-150	1507021	02/11/15	02/12/15	EPA 8015D	
Cation/Anion Analysis									
Chloride	96.7	9.81	mg/kg	1	1507017	02/11/15	02/11/15	EPA 300.0	

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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

West Sidewall 3-pt 4'-12'
P502029-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		106 %		50-150	1507021	02/11/15	02/12/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.97	mg/kg	1	1507021	02/11/15	02/12/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1507020	02/11/15	02/12/15	EPA 8015D	
Surrogate: o-Terphenyl		114 %		50-200	1507020	02/11/15	02/12/15	EPA 8015D	
Surrogate: 4-Bromochlorobenzene-FID		94.8 %		50-150	1507021	02/11/15	02/12/15	EPA 8015D	
Cation/Anion Analysis									
Chloride	49.2	9.86	mg/kg	1	1507017	02/11/15	02/11/15	EPA 300.0	

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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

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 1507021 - Purge and Trap EPA 5030A

Blank (1507021-BLK1)

Prepared: 11-Feb-15 Analyzed: 12-Feb-15

Benzene	ND	0.002	mg/kg							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
p,m-Xylene	0.008	0.004	"							
o-Xylene	ND	0.002	"							
Total Xylenes	0.008	0.002	"							
Total BTEX	0.008	0.002	"							

Surrogate: 4-Bromochlorobenzene-PID 0.447 " 0.400 112 50-150

LCS (1507021-BS1)

Prepared: 11-Feb-15 Analyzed: 12-Feb-15

Benzene	20.4	0.10	mg/kg	20.0		102	75-125			
Toluene	21.2	0.10	"	20.0		106	70-125			
Ethylbenzene	21.4	0.10	"	20.0		107	75-125			
p,m-Xylene	43.2	0.20	"	40.0		108	80-125			
o-Xylene	20.9	0.10	"	20.0		104	75-125			

Surrogate: 4-Bromochlorobenzene-PID 0.426 " 0.400 106 50-150

Matrix Spike (1507021-MS1)

Source: P502029-01

Prepared: 11-Feb-15 Analyzed: 12-Feb-15

Benzene	21.9	0.10	mg/kg	20.0	0.12	109	75-125			
Toluene	23.3	0.10	"	20.0	0.46	114	70-125			
Ethylbenzene	23.4	0.10	"	20.0	0.62	114	75-125			
p,m-Xylene	49.3	0.20	"	39.9	4.06	113	80-125			
o-Xylene	23.8	0.10	"	20.0	1.11	113	75-125			

Surrogate: 4-Bromochlorobenzene-PID 0.461 " 0.399 115 50-150

Matrix Spike Dup (1507021-MSD1)

Source: P502029-01

Prepared: 11-Feb-15 Analyzed: 12-Feb-15

Benzene	22.1	0.10	mg/kg	20.0	0.12	110	75-125	0.738	15	
Toluene	23.5	0.10	"	20.0	0.46	116	70-125	1.12	15	
Ethylbenzene	23.7	0.10	"	20.0	0.62	116	75-125	1.27	15	
p,m-Xylene	49.7	0.20	"	39.9	4.06	114	80-125	0.919	15	
o-Xylene	24.1	0.10	"	20.0	1.11	115	75-125	1.31	15	

Surrogate: 4-Bromochlorobenzene-PID 0.459 " 0.399 115 50-150

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PO Box 22024
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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

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
Batch 1507020 - DRO Extraction EPA 3550M										
Blank (1507020-BLK1)				Prepared: 11-Feb-15 Analyzed: 12-Feb-15						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: o-Terphenyl	44.7		"	40.0		112	50-200			
LCS (1507020-BS1)				Prepared: 11-Feb-15 Analyzed: 12-Feb-15						
Diesel Range Organics (C10-C28)	532	24.9	mg/kg	499		107	38-132			
Surrogate: o-Terphenyl	49.8		"	39.9		125	50-200			
Matrix Spike (1507020-MS1)				Source: P502029-01		Prepared: 11-Feb-15 Analyzed: 12-Feb-15				
Diesel Range Organics (C10-C28)	539	25.0	mg/kg	499	52.8	97.4	38-132			
Surrogate: o-Terphenyl	47.4		"	40.0		119	50-200			
Matrix Spike Dup (1507020-MSD1)				Source: P502029-01		Prepared: 11-Feb-15 Analyzed: 12-Feb-15				
Diesel Range Organics (C10-C28)	570	29.9	mg/kg	499	52.8	104	38-132	5.57	20	
Surrogate: o-Terphenyl	48.7		"	39.9		122	50-200			

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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

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
Batch 1507021 - Purge and Trap EPA 5030A										
Blank (1507021-BLK1)				Prepared: 11-Feb-15 Analyzed: 12-Feb-15						
Gasoline Range Organics (C6-C10)	ND	0.20	mg/kg							
Surrogate: 4-Bromochlorobenzene-FID	0.403		"	0.400		101	50-150			
LCS (1507021-BS1)				Prepared: 11-Feb-15 Analyzed: 12-Feb-15						
Gasoline Range Organics (C6-C10)	290	10.0	mg/kg	292		99.2	80-120			
Surrogate: 4-Bromochlorobenzene-FID	0.386		"	0.400		96.6	50-150			
Matrix Spike (1507021-MS1)				Source: P502029-01 Prepared: 11-Feb-15 Analyzed: 12-Feb-15						
Gasoline Range Organics (C6-C10)	399	9.99	mg/kg	292	113	98.0	75-125			
Surrogate: 4-Bromochlorobenzene-FID	0.413		"	0.399		103	50-150			
Matrix Spike Dup (1507021-MSD1)				Source: P502029-01 Prepared: 11-Feb-15 Analyzed: 12-Feb-15						
Gasoline Range Organics (C6-C10)	397	9.98	mg/kg	291	113	97.5	75-125	0.408	15	
Surrogate: 4-Bromochlorobenzene-FID	0.412		"	0.399		103	50-150			

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laboratory@envirotech-inc.com



BP America Production Co.
PO Box 22024
Tulsa OK, 74121-2024

Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1507017 - Anion Extraction EPA 300.0										
Blank (1507017-BLK1)				Prepared & Analyzed: 11-Feb-15						
Chloride	ND	9.93	mg/kg							
LCS (1507017-BS1)				Prepared & Analyzed: 11-Feb-15						
Chloride	474	9.95	mg/kg	498		95.3	90-110			
Matrix Spike (1507017-MS1)				Source: P502028-01 Prepared & Analyzed: 11-Feb-15						
Chloride	634	9.96	mg/kg	498	158	95.6	80-120			
Matrix Spike Dup (1507017-MSD1)				Source: P502028-01 Prepared & Analyzed: 11-Feb-15						
Chloride	637	9.82	mg/kg	491	158	97.6	80-120	0.558	20	

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PO Box 22024
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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
13-Feb-15 13:47

Notes and Definitions

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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Analytical Report

Report Summary

Client: BP America Production Co.

Chain Of Custody Number:

Samples Received: 2/13/2015 1:57:00PM

Job Number: 03143-0424

Work Order: P502046

Project Name/Location: GCU 187E

Entire Report Reviewed By:

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

Date: 2/18/15

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.



BP America Production Co.
PO Box 22024
Tulsa OK, 74121-2024

Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
18-Feb-15 12:52

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
North Sidewall 5-pt 4'-12'	P502046-01A	Soil	02/13/15	02/13/15	Glass Jar, 4 oz.

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BP America Production Co.
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Tulsa OK, 74121-2024

Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
18-Feb-15 12:52

North Sidewall 5-pt 4'-12'
P502046-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1507033	02/13/15	02/17/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1507033	02/13/15	02/17/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1507033	02/13/15	02/17/15	EPA 8021B	
p,m-Xylene	ND	0.20	mg/kg	1	1507033	02/13/15	02/17/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1507033	02/13/15	02/17/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1507033	02/13/15	02/17/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1507033	02/13/15	02/17/15	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		104 %		50-150	1507033	02/13/15	02/17/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.88	mg/kg	1	1507033	02/13/15	02/17/15	EPA 8015D	
Diesel Range Organics (C10-C28)	56.7	25.0	mg/kg	1	1508001	02/16/15	02/16/15	EPA 8015D	
<i>Surrogate: o-Terphenyl</i>		108 %		50-200	1508001	02/16/15	02/16/15	EPA 8015D	
<i>Surrogate: 4-Bromochlorobenzene-FID</i>		103 %		50-150	1507033	02/13/15	02/17/15	EPA 8015D	
Cation/Anion Analysis									
Chloride	24.8	9.99	mg/kg	1	1508006	02/16/15	02/16/15	EPA 300.0	

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BP America Production Co.
PO Box 22024
Tulsa OK, 74121-2024

Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
18-Feb-15 12:52

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 1507033 - Purge and Trap EPA 5030A

Blank (1507033-BLK1)

Prepared: 13-Feb-15 Analyzed: 18-Feb-15

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 0.404 " 0.394 102 50-150

LCS (1507033-BS1)

Prepared: 13-Feb-15 Analyzed: 16-Feb-15

Benzene	22.7	0.10	mg/kg	19.9		114	75-125			
Toluene	23.8	0.10	"	19.9		120	70-125			
Ethylbenzene	24.0	0.10	"	19.9		121	75-125			
p,m-Xylene	48.2	0.20	"	39.8		121	80-125			
o-Xylene	23.5	0.10	"	19.9		118	75-125			

Surrogate: 4-Bromochlorobenzene-PID 0.439 " 0.398 110 50-150

Matrix Spike (1507033-MS1)

Source: P502037-01

Prepared: 13-Feb-15 Analyzed: 16-Feb-15

Benzene	22.3	0.10	mg/kg	19.8	ND	113	75-125			
Toluene	28.4	0.10	"	19.8	ND	144	70-125			SPK1
Ethylbenzene	23.5	0.10	"	19.8	ND	119	75-125			
p,m-Xylene	48.4	0.20	"	39.5	ND	122	80-125			
o-Xylene	23.4	0.10	"	19.8	ND	119	75-125			

Surrogate: 4-Bromochlorobenzene-PID 0.452 " 0.395 114 50-150

Matrix Spike Dup (1507033-MSD1)

Source: P502037-01

Prepared: 13-Feb-15 Analyzed: 16-Feb-15

Benzene	22.4	0.10	mg/kg	19.8	ND	113	75-125	0.213	15	
Toluene	29.1	0.10	"	19.8	ND	147	70-125	2.57	15	SPK1
Ethylbenzene	23.8	0.10	"	19.8	ND	120	75-125	0.886	15	
p,m-Xylene	48.8	0.20	"	39.6	ND	123	80-125	0.890	15	
o-Xylene	23.3	0.10	"	19.8	ND	118	75-125	0.494	15	

Surrogate: 4-Bromochlorobenzene-PID 0.431 " 0.396 109 50-150

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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
18-Feb-15 12:52

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
Batch 1507033 - Purge and Trap EPA 5030A										
Blank (1507033-BLK1)				Prepared: 13-Feb-15 Analyzed: 18-Feb-15						
Gasoline Range Organics (C6-C10)	ND	9.86	mg/kg							
Surrogate: 4-Bromochlorobenzene-FID	0.399		"	0.394		101	50-150			
LCS (1507033-BS1)				Prepared: 13-Feb-15 Analyzed: 16-Feb-15						
Gasoline Range Organics (C6-C10)	327	9.94	mg/kg	290		113	80-120			
Surrogate: 4-Bromochlorobenzene-FID	0.390		"	0.398		98.1	50-150			
Matrix Spike (1507033-MS1)				Source: P502037-01		Prepared: 13-Feb-15 Analyzed: 16-Feb-15				
Gasoline Range Organics (C6-C10)	371	9.88	mg/kg	288	ND	129	75-125			SPK1
Surrogate: 4-Bromochlorobenzene-FID	0.432		"	0.395		109	50-150			
Matrix Spike Dup (1507033-MSD1)				Source: P502037-01		Prepared: 13-Feb-15 Analyzed: 16-Feb-15				
Gasoline Range Organics (C6-C10)	366	9.89	mg/kg	289	ND	127	75-125	1.17	15	SPK1
Surrogate: 4-Bromochlorobenzene-FID	0.397		"	0.396		100	50-150			

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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
18-Feb-15 12:52

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1508006 - Anion Extraction EPA 300.0										
Blank (1508006-BLK1)				Prepared & Analyzed: 16-Feb-15						
Chloride	ND	9.94	mg/kg							
LCS (1508006-BS1)				Prepared & Analyzed: 16-Feb-15						
Chloride	473	9.87	mg/kg	493		95.8	90-110			
Matrix Spike (1508006-MS1)				Source: P502027-01 Prepared & Analyzed: 16-Feb-15						
Chloride	505	9.93	mg/kg	497	30.4	95.6	80-120			
Matrix Spike Dup (1508006-MSD1)				Source: P502027-01 Prepared & Analyzed: 16-Feb-15						
Chloride	499	9.91	mg/kg	496	30.4	94.5	80-120	1.25	20	

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Project Name: GCU 187E
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
18-Feb-15 12:52

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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