

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

AUG 11 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: Florance 87	Facility Type: Natural gas well

Surface Owner: Federal	Mineral Owner: Federal	API No. 3004511644
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LOCATION OF RELEASE

Unit Letter N	Section 26	Township 29N	Range 9W	Feet from the 1,160	North/South Line South	Feet from the 1,670	East/West Line West	County: San Juan
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Latitude 36.692864 Longitude -107.753374

NATURE OF RELEASE

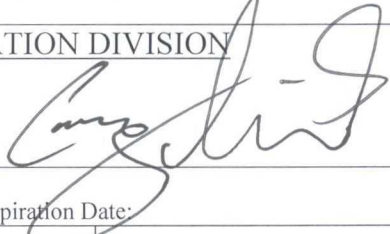
Type of Release: none	Volume of Release: N/A	Volume Recovered: N/A
Source of Release: below grade tank - 95 bbl	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: June 18, 2014; unknown
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a 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.* Hydrocarbon impacted soil discovered during removal of 95 bbl BGT. Groundwater encountered at approximately 5-6 feet below ground surface. Site delineation with soil sample collection above the water table. Soil remediation performed via excavation. Installation and sampling of groundwater monitoring wells.

Describe Area Affected and Cleanup Action Taken.* Hydrocarbon impacted soil encountered during BGT removal was excavated and transported for offsite disposal. Final excavation size measured approximately 252' x 92' x 8.5' deep with a total of 1,966 cubic yards of soil removed. The installation and sampling of two monitoring wells with laboratory analysis results for BTEX as non-detect and sulfate and TDS above water quality standards. Sample produced water from nearby Florance 72 well and determine elevated sulfate and TDS to be naturally occurring. The excavation was backfilled and compacted and is still within the active well area.

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: 8/12/15	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval:	Attached ☐
Date: August 7, 2015	Phone: 505-326-9497	

* Attach Additional Sheets If Necessary

#NSK 1516249720

BP America: Florance 87
(N) Sec 26 – T29N – R9W
San Juan County, New Mexico
API: 30-045-11644

Summary Record of Impact Remediation

June 18, 2014 Soils impacted with hydrocarbons encountered during closure sampling at 95 bbl BGT at this PxA well site. Shallow groundwater found at approximately 5-6 feet below grade, with soil staining at soil/groundwater interface. Investigation with excavation equipment determined impacts were limited to the existing well pad, with not impacts migrating off-site. Stripping of clean top soil and removal of impacts initiated immediately using dozer and trackhoe.

Site Closure Standard Determined at 100 ppm TPH based on:

Horizontal Distance to Largo Wash < 1,000 feet (10 points)
Nearest Water Well > 1,000 feet (0 points)
Depth to Groundwater < 50 feet (20 points)

July 3, 2014 Sample perimeter soils above water table, Overhead View Points 1, 2 and 3. All tested non-detect for TPH, BTEX and Chloride.

July 7, 2014 Sample perimeter soils above water table, Overhead View Points 4, 5, 6, 7, 8, 9, 10 and 11. All tested non-detect for TPH, BTEX and Chloride.

July 8, 2014 Sample perimeter soils above water table, Overhead View Points 12, 13, 14 and 15. All tested non-detect for TPH, BTEX and Chloride. Final excavation approximately 252' x 92' x 8.5 feet deep (average water table found at about 6' below grade). Final soil volume transported to BP Crouch Mesa Landfarm = 1,966 CY.

July 15, 2014 Excavation crew completes backfilling operation.

November 19, 2014 Install groundwater monitor wells in source area to evaluate water quality.

January 26, 2015 Develop monitor wells

January 27, 2015 Sample on-site monitor wells for evaluation of BTEX and cations/anions. BTEX tested non-detect, but Sulfate and TDS tested above NMWQCC standards.

February 10, 2015 Sample produced water from adjacent gas well Florance 72 for evaluation of Sulfate and TDS. Both tested below NMWQCC standards, indicating that Sulfate and TDS at on-site monitor wells is naturally occurring and not from prior a site release.

BP America
Florance 87
(N) Sec 26 - T29N - R9W
API: 30-045-11644

Williams Pipeline
Valve Boxes (still
in service)

Meter Run (removed)

95 BGT (Original
Source Point,
Removed)

MW-2

Excavation Perimeter
Approximately 252'
Long x 92' Wide
(Average Depth Dug:
8.5 feet
Approximate GW
Depth: 6 feet)

Well
PxA
Marker

Perimeter Soil
Sample Points.
All Tested Clean
for TPH, BTEX
and Chloride

MW-3

MW-1

BP AMERICA PRODUCTION COMPANY

FLORANCE # 87 (PC) - (Release discovered beneath 95 BGT)

Unit Letter N, Section 26, T29N, R9W - API Number: 30-045-11644

Field & Laboratory Data from Groundwater Monitor Wells

FIELD PARAMETERS								
SAMPLE ID	SAMPLE DATE	SAMPLE TIME	DEPTH TO WATER (feet)	TOTAL MW LENGTH (feet)	pH	Conductivity (µmhos/cm)	Temperature (°Celcius)	Volume Purged (gallons)
MW # 1 (source area)	01/27/15	1415	6.72	20.00	7.31	NA	11.9	4.00
MW # 2 (source area)	01/27/15	1540	8.00	16.25	7.00	NA	12.0	3.25
FLORANCE 72 (PC) - 21 bbl AGT PRODUCED WATER	02/10/15	0930	NA	NA	NA	NA	NA	NA
NMWQCC STANDARDS -					6 - 9			

LABORATORY PARAMETERS									
SAMPLE ID	Fluoride (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate- Nitrite as N (mg/L)	TDS (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl - benzene (µg/L)	Total Xylenes (µg/L)
MW # 1 (source area)	0.60	60	6,200	ND	8,950	ND	ND	ND	ND
MW # 2 (source area)	ND	56	5,000	ND	7,100	ND	ND	ND	ND
FLORANCE 72 (PC) - 21 bbl AGT PRODUCED WATER	NA	NA	18	ND	266	NA	NA	NA	NA
NMWQCC STANDARDS -	1.6	250	600	10	1,000	10	750	750	620

Notes:

Depth to water measured from casing top of monitor well.

Groundwater standards are applied to values assigned in blue highlighted boxes or confirmed background levels, which ever is higher.

MW - Monitor well

µmhos/cm - Micromhos per centimeter

TDS - Total dissolved solids

mg/L - Milligram per Liter

µg/L - Microgram per liter

ND - Not detected at Reporting Limit

NMWQCC - New Mexico Water Quality Control Commission



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

Project Name: Florance #87
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
03-Jul-14 18:23

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
68°N 10E@6'	P407021-01A	Soil	07/03/14	07/03/14	Glass Jar, 4 oz.
55°N 28W@6'	P407021-02A	Soil	07/03/14	07/03/14	Glass Jar, 4 oz.
65°N 62W@6'	P407021-03A	Soil	07/03/14	07/03/14	Glass Jar, 4 oz.

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

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laboratory@envirotech-inc.com

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

 Project Name: Florance #87
 Project Number: 03143-0424
 Project Manager: Jeff Blagg

 Reported:
 03-Jul-14 18:23

68°N 10E@6'
P407021-01 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.2 %		80-120		1427020	07/03/14	07/03/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.0 %		80-120		1427020	07/03/14	07/03/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1		1427019	07/03/14	07/03/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	ND	9.80	mg/kg	1		1427022	07/03/14	07/03/14	EPA 300.0	

Overhead Map ID: 1

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

 Project Name: Florance #87
 Project Number: 03143-0424
 Project Manager: Jeff Blagg

 Reported:
 03-Jul-14 18:23

 55'N 28W@6'
 P407021-02 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %	80-120			1427020	07/03/14	07/03/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.0 %	80-120			1427020	07/03/14	07/03/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1427020	07/03/14	07/03/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1		1427019	07/03/14	07/03/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	ND	9.75	mg/kg	1		1427022	07/03/14	07/03/14	EPA 300.0	

Overhead Map ID: 2

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

 Project Name: Florance #87
 Project Number: 03143-0424
 Project Manager: Jeff Blagg

 Reported:
 03-Jul-14 18:23

 65°N 62°W@6'
 P407021-03 (Solid)

Analyte	Reporting				Batch	Prepared	Analyzed	Method	Notes
	Result	Limit	Units	Dilution					
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1427020	07/03/14	07/03/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1427020	07/03/14	07/03/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1427020	07/03/14	07/03/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1427020	07/03/14	07/03/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1427020	07/03/14	07/03/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1427020	07/03/14	07/03/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1427020	07/03/14	07/03/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		99.8 %	80-120		1427020	07/03/14	07/03/14	EPA 8021B	
Surrogate: Bromochlorobenzene		103 %	80-120		1427020	07/03/14	07/03/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1427020	07/03/14	07/03/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1427019	07/03/14	07/03/14	EPA 8015D	
Cation/Anion Analysis									
Chloride	11.5	9.90	mg/kg	1	1427022	07/03/14	07/03/14	EPA 300.0	

Overhead Map ID: 3

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BP America Production Co.	Project Name:	Florance #87	Reported: 03-Jul-14 18:23
PO Box 22024	Project Number:	03143-0424	
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	

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 1427020 - Purge and Trap EPA 5030A

Blank (1427020-BLK1)

Prepared & Analyzed: 02-Jul-14

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	42.0		ug/L	50.0		84.0	80-120			
Surrogate: Bromochlorobenzene	43.4		"	50.0		86.8	80-120			

Duplicate (1427020-DUP1)

Source: P407018-01

Prepared & Analyzed: 02-Jul-14

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	49.7		ug/L	50.0		99.5	80-120			
Surrogate: Bromochlorobenzene	51.4		"	50.0		103	80-120			

Matrix Spike (1427020-MS1)

Source: P407018-01

Prepared & Analyzed: 02-Jul-14

Benzene	49.2		ug/L	50.0	ND	98.4	39-150			
Toluene	49.5		"	50.0	ND	99.0	46-148			
Ethylbenzene	48.2		"	50.0	ND	96.5	32-160			
p,m-Xylene	97.7		"	100	ND	97.7	46-148			
o-Xylene	49.2		"	50.0	ND	98.3	46-148			
Surrogate: 1,3-Dichlorobenzene	49.5		"	50.0		99.0	80-120			
Surrogate: Bromochlorobenzene	50.9		"	50.0		102	80-120			

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BP America Production Co.	Project Name:	Florance #87	Reported: 03-Jul-14 18:23
PO Box 22024	Project Number:	03143-0424	
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	

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
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Batch 1427019 - DRO Extraction EPA 3550C

Blank (1427019-BLK1)				Prepared & Analyzed: 02-Jul-14						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
Duplicate (1427019-DUP1)				Source: P407018-01 Prepared & Analyzed: 02-Jul-14						
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg		ND				30	
Matrix Spike (1427019-MS1)				Source: P407018-01 Prepared: 02-Jul-14 Analyzed: 03-Jul-14						
Diesel Range Organics (C10-C28)	248		mg/L	250	7.32	96.1	75-125			

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BP America Production Co.	Project Name:	Florance #87	
PO Box 22024	Project Number:	03143-0424	Reported:
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	03-Jul-14 18:23

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
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Batch 1427020 - Purge and Trap EPA 5030A

Blank (1427020-BLK1)		Prepared & Analyzed: 02-Jul-14								
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Duplicate (1427020-DUP1)		Source: P407018-01		Prepared & Analyzed: 02-Jul-14						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
Matrix Spike (1427020-MS1)		Source: P407018-01		Prepared & Analyzed: 02-Jul-14						
Gasoline Range Organics (C6-C10)	0.43		mg/L	0.450	ND	94.4	75-125			

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: Florance #87 Project Number: 03143-0424 Project Manager: Jeff Blagg	Reported: 03-Jul-14 18:23
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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 1427022 - Anion Extraction EPA 300.0

Blank (1427022-BLK1)				Prepared & Analyzed: 03-Jul-14						
Chloride	ND	9.96	mg/kg							
LCS (1427022-BS1)				Prepared & Analyzed: 03-Jul-14						
Chloride	495	9.94	mg/kg	497		99.6	90-110			
Matrix Spike (1427022-MS1)				Prepared & Analyzed: 03-Jul-14						
Chloride	503	9.97	mg/kg	499	ND	101	80-120			
Matrix Spike Dup (1427022-MSD1)				Prepared & Analyzed: 03-Jul-14						
Chloride	497	9.86	mg/kg	493	ND	101	80-120	1.24	20	

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CHAIN OF CUSTODY RECORD

17188

Client: BLAGG ENGINEERING INC. BP AMERICA			Project Name / Location: FLORANCE 87			ANALYSIS / PARAMETERS													
Email results to: Jeffcblagg@ADL.com perce.jeffrey@BP.com			Sampler Name: J. BLAGG			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.: 320-1183			Client No.: 03143-0424																
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative														
					HNO ₃	HCl													
68'N10E@6'	7/3/14	1004	P40702-0	1 x 4oz				X	X						X			Y	V
55'N28W@6'	"	1007	-02	"				X	X						X			L	L
65'N62W@6'	"	1010	-03	"				X	X						X			L	L
Relinquished by: (Signature) Jeff Blagg					Date 7/3/14	Time 1241	Received by: (Signature) [Signature]					Date 7/3/14	Time 1241						
Relinquished by: (Signature) [Signature]							Received by: (Signature) [Signature]												
Sample Matrix Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐																			
☐ Sample(s) dropped off after hours to secure drop off area.																			



8.8, 8.7 7.8

5795 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 • laboratory@envirotech-inc

Page 11 of 11

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

 Project Name: Florance 87
 Project Number:
 Project Manager: Jeff Blagg

Reported:
 09-Jul-14 13:49

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
86' N42E@6'	P407024-01A	Soil	07/07/14	07/07/14	Glass Jar, 4 oz.
113' N58E@6'	P407024-02A	Soil	07/07/14	07/07/14	Glass Jar, 4 oz.
86' N67E@6'	P407024-03A	Soil	07/07/14	07/07/14	Glass Jar, 4 oz.
64' S85E@6'	P407024-04A	Soil	07/07/14	07/07/14	Glass Jar, 4 oz.
43' S54E@6'	P407024-05A	Soil	07/07/14	07/07/14	Glass Jar, 4 oz.
43' S7W@6'	P407024-06A	Soil	07/07/14	07/07/14	Glass Jar, 4 oz.
65' S36W@6'	P407024-07A	Soil	07/07/14	07/07/14	Glass Jar, 4 oz.
98' S59W@6'	P407024-08A	Soil	07/07/14	07/07/14	Glass Jar, 4 oz.

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

 Project Name: Florance 87
 Project Number:
 Project Manager: Jeff Blagg

Reported:
 09-Jul-14 13:49

86' N42E@6'
P407024-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		<i>105 %</i>		<i>80-120</i>	<i>1428006</i>	<i>07/07/14</i>	<i>07/08/14</i>	<i>EPA 8021B</i>	
<i>Surrogate: 1,3-Dichlorobenzene</i>		<i>103 %</i>		<i>80-120</i>	<i>1428006</i>	<i>07/07/14</i>	<i>07/08/14</i>	<i>EPA 8021B</i>	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1428007	07/07/14	07/08/14	EPA 8015D	
Cation/Anion Analysis									
Chloride	ND	9.86	mg/kg	1	1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 4

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113' N58E@6'
P407024-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		104 %	80-120		1428006	07/07/14	07/08/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		101 %	80-120		1428006	07/07/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1428007	07/07/14	07/08/14	EPA 8015D	
Cation/Anion Analysis									
Chloride	ND	9.97	mg/kg	1	1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 5

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86' N67E@6'
P407024-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %		80-120	1428006	07/07/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.6 %		80-120	1428006	07/07/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428006	07/07/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1428007	07/07/14	07/08/14	EPA 8015D	
Cation/Anion Analysis									
Chloride	ND	9.86	mg/kg	1	1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 6

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64' S85E@6'
P407024-04 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1428006	07/07/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1428006	07/07/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1428006	07/07/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1428006	07/07/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1428006	07/07/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1428006	07/07/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1428006	07/07/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		107 %		80-120		1428006	07/07/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		102 %		80-120		1428006	07/07/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1		1428006	07/07/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1		1428007	07/07/14	07/08/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	ND	9.89	mg/kg	1		1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 7

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BP America Production Co.
 PO Box 22024
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 Project Name: Florance 87
 Project Number:
 Project Manager: Jeff Blagg

Reported:
 09-Jul-14 13:49

43' S54E@6'
P407024-05 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		107 %	80-120			1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		104 %	80-120			1428006	07/08/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1428007	07/08/14	07/08/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	ND	9.97	mg/kg	1		1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 8

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: Florance 87 Project Number: Project Manager: Jeff Blagg	Reported: 09-Jul-14 13:49
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43' S7W@6'
P407024-06 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<u>Volatile Organics by EPA 8021</u>									
Benzene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		101 %	80-120		1428006	07/08/14	07/08/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		105 %	80-120		1428006	07/08/14	07/08/14	EPA 8021B	
<u>Nonhalogenated Organics by 8015</u>									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428007	07/08/14	07/08/14	EPA 8015D	
<u>Cation/Anion Analysis</u>									
Chloride	ND	9.96	mg/kg	1	1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 9

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

 Project Name: Florance 87
 Project Number:
 Project Manager: Jeff Blagg

Reported:
 09-Jul-14 13:49

65' S36W@6'
P407024-07 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		93.9 %	80-120			1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		92.9 %	80-120			1428006	07/08/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1428007	07/08/14	07/08/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	ND	9.95	mg/kg	1		1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 10

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BP America Production Co.
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 Project Name: Florance 87
 Project Number:
 Project Manager: Jeff Blagg

 Reported:
 09-Jul-14 13:49

98' S59W@6'
P407024-08 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		93.3 %		80-120		1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		93.4 %		80-120		1428006	07/08/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1		1428007	07/08/14	07/08/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	ND	9.95	mg/kg	1		1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 11

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

 Project Name: Florance 87
 Project Number:
 Project Manager: Jeff Blagg

 Reported:
 09-Jul-14 13:49

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 1428006 - Purge and Trap EPA 5030A
Blank (1428006-BLK1)

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	47.9		ug/L	50.0		95.7	80-120			
Surrogate: Bromochlorobenzene	47.9		"	50.0		95.8	80-120			

Duplicate (1428006-DUP1)

Source: P407024-01

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	48.9		ug/L	50.0		97.7	80-120			
Surrogate: Bromochlorobenzene	49.2		"	50.0		98.4	80-120			

Matrix Spike (1428006-MS1)

Source: P407024-01

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Benzene	2.59	0.05	mg/kg	2.50	ND	104	39-150			
Toluene	2.57	0.05	"	2.50	ND	103	46-148			
Ethylbenzene	2.58	0.05	"	2.50	ND	103	32-160			
p,m-Xylene	5.10	0.05	"	5.00	ND	102	46-148			
o-Xylene	2.56	0.05	"	2.50	ND	103	46-148			
Surrogate: 1,3-Dichlorobenzene	48.9		ug/L	50.0		97.8	80-120			
Surrogate: Bromochlorobenzene	49.2		"	50.0		98.5	80-120			

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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
Batch 1428006 - Purge and Trap EPA 5030A										
Blank (1428006-BLK1)				Prepared: 07-Jul-14 Analyzed: 08-Jul-14						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
Duplicate (1428006-DUP1)				Source: P407024-01 Prepared: 07-Jul-14 Analyzed: 08-Jul-14						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
Matrix Spike (1428006-MS1)				Source: P407024-01 Prepared: 07-Jul-14 Analyzed: 08-Jul-14						
Gasoline Range Organics (C6-C10)	21.8	5.00	mg/kg	22.5	ND	96.9	75-125			

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

 Project Name: Florance 87
 Project Number:
 Project Manager: Jeff Blagg

Reported:
 09-Jul-14 13:49

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
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Batch 1428007 - DRO Extraction EPA 3550C
Blank (1428007-BLK1)

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Diesel Range Organics (C10-C28) ND 29.9 mg/kg

Duplicate (1428007-DUP1)
Source: P407024-01

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Diesel Range Organics (C10-C28) ND 29.9 mg/kg ND 30

Matrix Spike (1428007-MS1)
Source: P407024-01

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Diesel Range Organics (C10-C28) 227 mg/L 250 6.32 88.4 75-125

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BP America Production Co.	Project Name:	Florance 87	Reported: 09-Jul-14 13:49
PO Box 22024	Project Number:		
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	

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 1428008 - Anion Extraction EPA 300.0										
Blank (1428008-BLK1)				Prepared & Analyzed: 08-Jul-14						
Chloride	ND	9.97	mg/kg							
LCS (1428008-BS1)				Prepared & Analyzed: 08-Jul-14						
Chloride	505	9.90	mg/kg	495		102	90-110			
Matrix Spike (1428008-MS1)				Prepared & Analyzed: 08-Jul-14						
Chloride	507	10.0	mg/kg	501	ND	101	80-120			
Matrix Spike Dup (1428008-MSD1)				Prepared & Analyzed: 08-Jul-14						
Chloride	504	9.91	mg/kg	496	ND	102	80-120	0.732	20	

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CHAIN OF CUSTODY RECORD

17190

Client: BLAGG ENGINEERING INC. BP AMERICA			Project Name / Location: FLORANCE 87			ANALYSIS / PARAMETERS														
Email results to: jeffcblagg@AOL.com peace.jeffrey@BP.com			Sampler Name: JEFF BLAGG			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.: 505-320-1103			Client No.:																	
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative															
					HNO ₃	HCl														
86' N42E @ 6'	7/7/2014	1036	P407024-01	1 x 403				X	X						X				✓	✓
113' N58E @ 6'	"	1042	P407024-02	"				X	X						X				✓	✓
86' N67E @ 6'	"	1048	P407024-03	"				X	X						X				✓	✓
64' S85E @ 6'	"	1053	P407024-04	"				X	X						X				✓	✓
43' S54E @ 6'	"	1100	P407024-05	"				X	X						X				✓	✓
43' S7W @ 6'	"	1105	P407024-06	"				X	X						X				✓	✓
65' S36W @ 6'	"	1110	P407024-07	"				X	X						X				✓	✓
98' S59W @ 6'	"	1115	P407024-08	"				X	X						X				✓	✓
								RUSH ASAP												
Relinquished by: (Signature) <i>Jeff Blagg</i>				Date 7/7/2014	Time 1327	Received by: (Signature) <i>[Signature]</i>				Date 7/7/14	Time 1327									
Relinquished by: (Signature)						Received by: (Signature)														
Sample Matrix Soil ☒ Solid ☐ Sludge ☐ Aqueous ☐ Other ☐																				
☐ Sample(s) dropped off after hours to secure drop off area.																				


6.1 5.9 5.3 5.8



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

Project Name: Florance 87
Project Number: 03143-0424
Project Manager: Jeff Blagg

Reported:
10-Jul-14 09:46

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
138' S66W @ 6'	P407030-01A	Soil	07/08/14	07/08/14	Glass Jar, 4 oz.
150' S83W @ 6'	P407030-02A	Soil	07/08/14	07/08/14	Glass Jar, 4 oz.
123' West @ 6'	P407030-03A	Soil	07/08/14	07/08/14	Glass Jar, 4 oz.
98' N80W @ 6'	P407030-04A	Soil	07/08/14	07/08/14	Glass Jar, 4 oz.

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BP America Production Co.	Project Name:	Florance 87	
PO Box 22024	Project Number:	03143-0424	Reported:
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	10-Jul-14 09:46

138' S66W @ 6'

P407030-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		98.4 %	80-120		1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.8 %	80-120		1428006	07/08/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1428007	07/08/14	07/08/14	EPA 8015D	
Cation/Anion Analysis									
Chloride	ND	9.91	mg/kg	1	1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 12

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BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: Florance 87 Project Number: 03143-0424 Project Manager: Jeff Blagg	Reported: 10-Jul-14 09:46
---	--	------------------------------

150' S83W @ 6'

P407030-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %		80-120	1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.5 %		80-120	1428006	07/08/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428006	07/08/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428007	07/08/14	07/08/14	EPA 8015D	
Cation/Anion Analysis									
Chloride	ND	9.92	mg/kg	1	1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 13

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

 Project Name: Florance 87
 Project Number: 03143-0424
 Project Manager: Jeff Blagg

 Reported:
 10-Jul-14 09:46

123' West @ 6'
P407030-03 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		102 %	80-120			1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		99.4 %	80-120			1428006	07/08/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1428007	07/08/14	07/08/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	ND	9.95	mg/kg	1		1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 14

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

 Project Name: Florance 87
 Project Number: 03143-0424
 Project Manager: Jeff Blagg

Reported:
 10-Jul-14 09:46

98' N80W @ 6'
P407030-04 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %		80-120		1428006	07/08/14	07/08/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		99.4 %		80-120		1428006	07/08/14	07/08/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1		1428006	07/08/14	07/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1		1428007	07/08/14	07/08/14	EPA 8015D	
Cation/Anion Analysis										
Chloride	ND	9.93	mg/kg	1		1428008	07/08/14	07/08/14	EPA 300.0	

Overhead Map ID: 15

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BP America Production Co.	Project Name:	Florance 87	Reported: 10-Jul-14 09:46
PO Box 22024	Project Number:	03143-0424	
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	

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 1428006 - Purge and Trap EPA 5030A

Blank (1428006-BLK1)

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	47.9		ug/L	50.0		95.7	80-120			
Surrogate: Bromochlorobenzene	47.9		"	50.0		95.8	80-120			

Duplicate (1428006-DUP1)

Source: P407024-01

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	48.9		ug/L	50.0		97.7	80-120			
Surrogate: Bromochlorobenzene	49.2		"	50.0		98.4	80-120			

Matrix Spike (1428006-MS1)

Source: P407024-01

Prepared: 07-Jul-14 Analyzed: 08-Jul-14

Benzene	2.59	0.05	mg/kg	2.50	ND	104	39-150			
Toluene	2.57	0.05	"	2.50	ND	103	46-148			
Ethylbenzene	2.58	0.05	"	2.50	ND	103	32-160			
p,m-Xylene	5.10	0.05	"	5.00	ND	102	46-148			
o-Xylene	2.56	0.05	"	2.50	ND	103	46-148			
Surrogate: 1,3-Dichlorobenzene	48.9		ug/L	50.0		97.8	80-120			
Surrogate: Bromochlorobenzene	49.2		"	50.0		98.5	80-120			

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BP America Production Co.	Project Name:	Florance 87	
PO Box 22024	Project Number:	03143-0424	Reported:
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	10-Jul-14 09:46

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
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Batch 1428006 - Purge and Trap EPA 5030A

Blank (1428006-BLK1)				Prepared: 07-Jul-14 Analyzed: 08-Jul-14						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
Duplicate (1428006-DUP1)				Source: P407024-01 Prepared: 07-Jul-14 Analyzed: 08-Jul-14						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
Matrix Spike (1428006-MS1)				Source: P407024-01 Prepared: 07-Jul-14 Analyzed: 08-Jul-14						
Gasoline Range Organics (C6-C10)	21.8	5.00	mg/kg	22.5	ND	96.9	75-125			

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BP America Production Co.	Project Name:	Florance 87	
PO Box 22024	Project Number:	03143-0424	
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	Reported: 10-Jul-14 09:46

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
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Batch 1428007 - DRO Extraction EPA 3550C

Blank (1428007-BLK1)				Prepared: 07-Jul-14 Analyzed: 08-Jul-14			
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg				
Duplicate (1428007-DUP1)				Source: P407024-01 Prepared: 07-Jul-14 Analyzed: 08-Jul-14			
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	ND		30	
Matrix Spike (1428007-MS1)				Source: P407024-01 Prepared: 07-Jul-14 Analyzed: 08-Jul-14			
Diesel Range Organics (C10-C28)	227		mg/L	250	6.32	88.4	75-125

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BP America Production Co.	Project Name:	Florance 87	Reported: 10-Jul-14 09:46
PO Box 22024	Project Number:	03143-0424	
Tulsa OK, 74121-2024	Project Manager:	Jeff Blagg	

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 1428008 - Anion Extraction EPA 300.0

Blank (1428008-BLK1)				Prepared & Analyzed: 08-Jul-14						
Chloride	ND	9.97	mg/kg							
LCS (1428008-BS1)				Prepared & Analyzed: 08-Jul-14						
Chloride	505	9.90	mg/kg	495		102	90-110			
Matrix Spike (1428008-MS1)				Source: P407024-01 Prepared & Analyzed: 08-Jul-14						
Chloride	507	10.0	mg/kg	501	ND	101	80-120			
Matrix Spike Dup (1428008-MSD1)				Source: P407024-01 Prepared & Analyzed: 08-Jul-14						
Chloride	504	9.91	mg/kg	496	ND	102	80-120	0.732	20	

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501955

Date Reported: 2/4/2015

CLIENT: Blagg Engineering

Client Sample ID: MW # 1

Project: Florance # 87

Collection Date: 1/27/2015 3:40:00 PM

Lab ID: 1501955-001

Matrix: AQUEOUS

Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	1/29/2015 3:50:21 PM	R23989
Toluene	ND	1.0		µg/L	1	1/29/2015 3:50:21 PM	R23989
Ethylbenzene	ND	1.0		µg/L	1	1/29/2015 3:50:21 PM	R23989
Xylenes, Total	ND	2.0		µg/L	1	1/29/2015 3:50:21 PM	R23989
Surr: 4-Bromofluorobenzene	110	66.6-167		%REC	1	1/29/2015 3:50:21 PM	R23989
EPA METHOD 300.0: ANIONS							Analyst: lgp
Fluoride	0.60	0.50		mg/L	5	1/28/2015 7:31:09 PM	R23971
Chloride	60	10		mg/L	20	1/28/2015 7:43:34 PM	R23971
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	1/28/2015 7:31:09 PM	R23971
Sulfate	6200	100		mg/L	200	1/29/2015 11:39:50 PM	R23999
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	8950	200	*	mg/L	1	1/30/2015 5:10:00 PM	17454

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1501955

Date Reported: 2/4/2015

CLIENT: Blagg Engineering

Client Sample ID: MW # 2

Project: Florance # 87

Collection Date: 1/27/2015 2:15:00 PM

Lab ID: 1501955-002

Matrix: AQUEOUS

Received Date: 1/28/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	1.0		µg/L	1	1/29/2015 4:45:10 PM	R23989
Toluene	ND	1.0		µg/L	1	1/29/2015 4:45:10 PM	R23989
Ethylbenzene	ND	1.0		µg/L	1	1/29/2015 4:45:10 PM	R23989
Xylenes, Total	ND	2.0		µg/L	1	1/29/2015 4:45:10 PM	R23989
Surr: 4-Bromofluorobenzene	99.6	66.6-167		%REC	1	1/29/2015 4:45:10 PM	R23989
EPA METHOD 300.0: ANIONS							Analyst: Igp
Fluoride	ND	0.50		mg/L	5	1/28/2015 8:20:47 PM	R23971
Chloride	56	2.5		mg/L	5	1/28/2015 8:20:47 PM	R23971
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	1/28/2015 8:20:47 PM	R23971
Sulfate	5000	100		mg/L	200	1/29/2015 11:52:15 PM	R23999
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	7100	200	*	mg/L	1	1/30/2015 5:10:00 PM	17454

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501955

04-Feb-15

Client: Blagg Engineering

Project: Florance # 87

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R23971	RunNo:	23971					
Prep Date:		Analysis Date:	1/28/2015	SeqNo:	706984	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R23971	RunNo:	23971					
Prep Date:		Analysis Date:	1/28/2015	SeqNo:	706985	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.8	90	110			
Chloride	4.9	0.50	5.000	0	97.6	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	102	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R23999	RunNo:	23999					
Prep Date:		Analysis Date:	1/29/2015	SeqNo:	707671	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R23999	RunNo:	23999					
Prep Date:		Analysis Date:	1/29/2015	SeqNo:	707672	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.7	0.50	10.00	0	97.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501955

04-Feb-15

Client: Blagg Engineering

Project: Florance # 87

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R23989	RunNo:	23989					
Prep Date:		Analysis Date:	1/29/2015	SeqNo:	707426	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	23		20.00		117	66.6	167			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R23989	RunNo:	23989					
Prep Date:		Analysis Date:	1/29/2015	SeqNo:	707427	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.3	80	120			
Toluene	18	1.0	20.00	0	91.7	80	120			
Ethylbenzene	19	1.0	20.00	0	92.6	80	120			
Xylenes, Total	60	2.0	60.00	0	99.5	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		112	66.6	167			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1501955

04-Feb-15

Client: Blagg Engineering

Project: Florance # 87

Sample ID	MB-17454	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	17454	RunNo:	24012					
Prep Date:	1/29/2015	Analysis Date:	1/30/2015	SeqNo:	708015	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-17454	SampType: LCS			TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID: 17454			RunNo: 24012					
Prep Date:	1/29/2015	Analysis Date: 1/30/2015			SeqNo: 708016		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH greater than 2.
RL Reporting Detection Limit



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: BLAGG

Work Order Number: 1501955

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

1/28/2015 7:30:00 AM

Completed By: Lindsay Mangin

1/28/2015 9:56:00 AM

Reviewed By:

CS

01/28/15

Lindsay Mangin

Lindsay Mangin

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 $>0^{\circ}\text{C}$ 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:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Client: **BLAGG ENGR. / BP AMERICA**

Mailing Address: **P.O. BOX 87**
BLOOMFIELD, NM 87413

Phone #: **(505) 632-1199**
email or Fax#:

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

Accreditation:
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Project Name: **FLORENCE # 87**

Project #:

Project Manager:

NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3

[illegible]

Date: 1/27/15	Time: 1637	Relinquished by: 
------------------	---------------	---

Received by:	Date	Time
Phet W. pete	1/27/15	163

Date:	Time:	Relinquished by:
1/27/15	2100	R. H. Webb

Received by: 	Date	Time
	01/28/15	0730



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

[illegible]

Remarks: Report F, Cl, NO₃, SO₄, & TDS only for A/C balance.

BILL DIRECTLY TO BP:

Jeff Peace, 200 Energy Court, Farmington, NM 87401

Paykey: ZEVH01REME

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1502465

Date Reported: 2/16/2015

CLIENT: Blagg Engineering

Client Sample ID: 21 bbl AGT-Produced Water

Project: Florance #72

Collection Date: 2/10/2015 9:30:00 AM

Lab ID: 1502465-001

Matrix: AQUEOUS

Received Date: 2/11/2015 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Sulfate	18	2.5		mg/L	5	2/11/2015 5:56:31 PM	R24263
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	266	40.0		mg/L	1	2/13/2015 11:36:00 AM	17720

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	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
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502465

16-Feb-15

Client: Blagg Engineering

Project: Florance #72

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R24263	RunNo:	24263					
Prep Date:		Analysis Date:	2/11/2015	SeqNo:	715016	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R24263	RunNo:	24263					
Prep Date:		Analysis Date:	2/11/2015	SeqNo:	715017	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.9	0.50	10.00	0	98.6	90	110			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R24263	RunNo:	24263					
Prep Date:		Analysis Date:	2/11/2015	SeqNo:	715070	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R24263	RunNo:	24263					
Prep Date:		Analysis Date:	2/11/2015	SeqNo:	715071	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.9	0.50	10.00	0	99.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502465

16-Feb-15

Client: Blagg Engineering

Project: Florance #72

Sample ID	MB-17720	SampType:	MBLK	TestCode:	SM2540C MOD: Total Dissolved Solids					
Client ID:	PBW	Batch ID:	17720	RunNo:	24287					
Prep Date:	2/12/2015	Analysis Date:	2/13/2015	SeqNo:	715683	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID	LCS-17720	SampType: LCS			TestCode: SM2540C MOD: Total Dissolved Solids					
Client ID:	LCSW	Batch ID: 17720			RunNo: 24287					
Prep Date:	2/12/2015	Analysis Date: 2/13/2015			SeqNo: 715684		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
O RSD is greater than RSDlimit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
P Sample pH Not In Range
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87106
TEL: 505-345-3975 FAX: 505-345-4103
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1502465

RcptNo: 1

Received by/date: Aeg 02/11/15
Logged By: Ashley Gallegos 2/11/2015 8:30:00 AM Aeg
Completed By: Ashley Gallegos 2/11/2015 9:01:49 AM Aeg
Reviewed By: Aeg 02/11/15

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 $>0^{\circ}\text{C}$ 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: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Client: **BLAGG ENGR. / BP AMERICA**

Mailing Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Phone #: (505) 632-1199

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

FLORANCE # 72

Project #:

Project Manager:

NELSON VELEZ

Sampler: NELSON VELEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

[illegible]

Date:	Time:
2/10/15	11:03

Relinquished by: 

Received by: Christa Waelen Date 2/10/15 Time 1603

Remarks: SULFATE ONLY (ANIONS)

BILL DIRECTLY TO BP:

Jeff Peace, 200 Energy Court, Farmington, NM 87401

Paykey: ZEVH01REME

Date:	Time:
7/10/15	1744

Relinquished by: Christi White

Received by:	Date	Time
Lincoln	02/11/15	0831

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
20 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
BP America Production Company 200 Energy Ct. Farmington, NM 87401

2. Originating Site:
Florance 87

3. Location of Material (Street Address, City, State or ULSTR):
QRT/QRT: SE/SW Unit: N Section:26 T29N R09W

4. Source and Description of Waste: hydrocarbon impacted soil

Estimated Volume 8 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 96 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Courtney Cochran, representative or authorized agent for BP America Production Company do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

Courtney Cochran, representative for BP America Production Company authorize IEI to complete the testing/sign the Generator Waste Testing Certification.

I, David, representative for IEI do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the results have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:

Helmur
FM (Rock Springs Transport)
OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: BP America (Amoco Crouch Mesa Landfarm) NM-02-003

Address of Facility: #49 CR 3150 Aztec, NM 87410

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: L. machaeto

SIGNATURE: [Signature]

TITLE: Admin. Specialist

DATE: 10/25/14

TELEPHONE NO.: 505-632-1782

25-14

CL-2116
Ph-9