

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

RECEIVED

FEB 26 2015

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

NMOCD

DISTRICT III

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: BP	Contact: Jeff Peace
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9479
Facility Name: Hughes Com 5	Facility Type: Natural gas well

Surface Owner: Federal	Mineral Owner: Federal	API No. 3004524640
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LOCATION OF RELEASE

Unit Letter O	Section 10	Township 28N	Range 8W	Feet from the 1,130	North/South Line South	Feet from the 2,120	East/West Line East	County: San Juan
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Latitude 36.67215 Longitude 107.66695

NATURE OF RELEASE

Type of Release: oil/condensate	Volume of Release: unknown	Volume Recovered: none
Source of Release: below grade tank - 21 bbl	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: January 4, 2010; 1:21 PM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Sampling of the soil beneath the BGT was done during removal to ensure no soil impacts from the BGT. Soil analysis resulted in chloride below standards. TPH was 16,900 ppm by Method 418.1 and 16,500 ppm by Method 8015B. Benzene was 0.925 ppm and BTEX was 74.5 ppm. Analysis results are attached.

Describe Area Affected and Cleanup Action Taken.* BGT was removed and the area underneath the BGT was sampled. Sampling results indicate a release occurred. Borehole drilling was done to determine the vertical extent of the impacts. No impacts were found below 10 feet. Impacted soil was excavated and transported to a landfarm for treatment. Approximately 15 cubic yards of soil were removed and remediation was completed on May 27, 2010. The area under the BGT was backfilled and compacted and is still within the active well area. Sampling data, borehole diagram, a picture of the site and a remediation summary 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: <i>Jeff Peace</i>	OIL CONSERVATION DIVISION	
Printed Name: Jeff Peace	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Field Environmental Coordinator	Approval Date: 4/13/15	Expiration Date:
E-mail Address: peace.jeffrey@bp.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: February 26, 2015	Phone: 505-326-9479	

* Attach Additional Sheets If Necessary

#NCS 1510353271

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BP America Production Company

Hughes Com 005
(O) Sec 10 – T28N – R8W
API: 30-045-24640
San Juan County, New Mexico

Summary Record of Impacted Soil Remediation

January 4, 2010

Confirmation sampling conducted of the 21 barrel (**bbl**) below-grade tank (**BGT**) following the approved New Mexico Oil Conservation Division's (**NMOCD**) bgt permit closure plan.

January 8, 2010

Lab report delivered to Blagg Engineering, Inc. (**BEI**). The following table below shows the 2008 NMOCD 19.15.17.13 NMAC (pit rule) closure constituents, testing methods, and standards (release verification). Lab results of the 5 point composite sample (**5pcs**) collected immediately below BGT bottom are shown in the far right column.

Constituents	Testing Method	Release Verification (mg/Kg)	21 BGT C @ 6' (mg/Kg)
Benzene	US EPA Method SW-846 8021B or 8260B	0.2	0.925
Total BTEX	US EPA Method SW-846 8021B or 8260B	50	74.5
TPH	US EPA Method SW-846 418.1	100	16,900
Chlorides	US EPA Method 300.0 or 4500B	250 or background	20

Notes: mg/Kg = milligram per kilogram, BTEX = benzene, toluene, ethylbenzene, and total xylenes, TPH = total petroleum hydrocarbons. Other EPA methods that the division approves may be applied to all constituents listed. Chloride closure standards will be determined by which ever concentration level is greatest.

In addition, it was requested by BEI to analyze the confirmation sample for TPH using US EPA Method 8015B. The results revealed total TPH = 16,530 mg/Kg, in which Gasoline Range Organics (GRO) 12,900 mg/Kg and Diesel Range Organics (DRO) = 3,630 mg/Kg.

April 5, 2010

Initiated vertical extent investigation using CME95 mobile drill rig. Evaluation of NMOCD's "Guidelines for Remediation of Leaks, Spills and Releases", dated August 13, 1993, for site ranking criteria indicated a closure standard of 100 mg/Kg for TPH based on groundwater depth estimated at less than 50' from the known impacted soil vertical depth and lateral distance to a watercourse being less than 200 ft. in the down gradient direction. Bore hole located at the center of 21 bbl BGT position. Collected two (2) grab samples using split spoon sampler. The corresponding laboratory results are as follows;

Constituents	Testing Method	Release Verification (mg/Kg)	BH #1 @ 10' (mg/Kg)	BH #1 @ 20' (mg/Kg)
Benzene	US EPA Method SW-846 8021B or 8260B	0.2	<0.0009	<0.0009
Total BTEX	US EPA Method SW-846 8021B or 8260B	50	<0.0012	<0.0012
TPH	US EPA Method SW-846 418.1	100	12.3	32.1
Chlorides	US EPA Method 300.0 or 4500B	1,000	90	30

Notes: mg/Kg = milligram per kilogram, BTEX = benzene, toluene, ethylbenzene, and total xylenes, TPH = total petroleum hydrocarbons. Other EPA methods that the division approves may be applied to all constituents listed. Chloride closure standard utilized derived from acceptance level into a NMOCD's approved surface waste facilities.

May 27, 2010

Initiated site remediation by excavation with trackhoe. Final dimensions of the excavation were 12 ft. x 12 ft. x 9 ft. depth. The total quantity of impacted soils are estimated at 15 cubic yards (10 ft. x 10 ft. x 4). See attached "Field Report" for more detailed descriptions, measurements, and pertinent data. Lab results of the 5pcs collected at the excavation base are shown in the far right column.

Constituents	Testing Method	Release Verification (mg/Kg)	21 BGT 5-pt. @ 9' (mg/Kg)
Benzene	US EPA Method SW-846 8021B or 8260B	0.2	0.0305
Total BTEX	US EPA Method SW-846 8021B or 8260B	50	0.053
TPH	US EPA Method SW-846 418.1	100	14.9
TPH	US EPA Method SW-846 8015 Modified	100	67.8 (all DRO)
Chlorides	US EPA Method 300.0 or 4500B	1,000	10

Notes: mg/Kg = milligram per kilogram, BTEX = benzene, toluene, ethylbenzene, and total xylenes, TPH = total petroleum hydrocarbons, DRO = Diesel Range Organics. Other EPA methods that the division approves may be applied to all constituents listed. Chloride closure standard utilized derived from acceptance level into a NMOCD's approved surface waste facilities.

June 7, 2010

Final lab report furnished.

CLIENT:

BP

BLAGG ENGINEERING, INC.

P.O. BOX 87, BLOOMFIELD, NM 87413

(505) 632-1199

API #:

3004524640

FIELD REPORT:

BGT CONFIRMATION / TEMP. PIT CLOSURE / RELEASE INVESTIGATION

(other)

REMEDIATION OF IMPACTED SOILS

SITE INFORMATION:

SITE NAME:

HUGHES COM # 5

QUAD/UNIT:

O SEC: 10 TWP: 28N RNG: 8W PM: NM CNTY: SJ ST: NM

QTR-QTR/FOOTAGE:

1,130'S/2,120'E SW/SE LEASE TYPE:

FEDERAL

 STATE / FEE / INDIAN

LEASE #: SF078390 PROD. FORMATION: DK CONTRACTOR: PAUL & SONS

PAGE No:

1

of

1

DATE STARTED:

05/27/10

DATE FINISHED:

ENVIRONMENTAL SPECIALIST:

JCB

REFERENCE POINT:

WELL HEAD (W.H.) GPS COORD.:

36.67191 X 107.66669

 GL ELEV.:

6,235'

1)

21 BGT EXCAVATION

GPS COORD.:

36.67215 X 107.66695

DISTANCE/BEARING FROM W.H.:

102', N42W

2)GPS COORD.:DISTANCE/BEARING FROM W.H.:

3)GPS COORD.:DISTANCE/BEARING FROM W.H.:

4)GPS COORD.:DISTANCE/BEARING FROM W.H.:

5)GPS COORD.:DISTANCE/BEARING FROM W.H.:

LAB INFORMATION:

CHAIN OF CUSTODY RECORD(S): ENVIROTECH OVM READING

1) SAMPLE ID:

21 BGT 5-pt. @ 9'

 SAMPLE DATE:

05/27/10

 SAMPLE TIME:

1315

 LAB ANALYSIS:

418.1/8015B/8021B/4500B (CI)

 NA

2) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:

3) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:

4) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:

5) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:

SOIL DESCRIPTION:

SOIL TYPE:

SAND SILTY SAND

 SILT / SILTY CLAY / CLAY / GRAVEL / OTHER

SOIL COLOR:

MOSTLY DARK YELLOWISH ORANGE

COHESION (ALL OTHERS): NON COHESIVE SLIGHTLY COHESIVE COHESIVE / HIGHLY COHESIVE

CONSISTENCY (NON COHESIVE SOILS): LOOSE FIRM DENSE / VERY DENSE

PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC

DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD

MOISTURE: DRY SLIGHTLY MOIST MOIST / WET / SATURATED / SUPER SATURATED

ADDITIONAL COMMENTS:

EXCAVATED IMPACTED SOIL WITH TRACKHOE @ PRIOR 21 bbl BGT. VERY MINOR IMPACTS OBSERVED AT APPROX.
5'-6' BELOW GRADE IN CENTER OF EXCAVATION ONLY.

DISCOLORATION/STAINING OBSERVED: YES NO EXPLANATION -

HC ODOR DETECTED: YES NO EXPLANATION -

SAMPLE TYPE: GRAB COMPOSITE # OF PTS.

5

EXCAVATION DIMENSIONS (if applicable):

12 ft. X 12 ft. X 9 ft.

cubic yards excavated (if applicable):

48 +/-

SITE SKETCH

300 bbl
PROD.
TANK

PBGTL
T.B. ~ 6'
B.G.

BERM

EXCAVATION PERIMETER

WELL
HEAD

RF = 0.52

ppm

TIME: am/pm DATE:

PLOT PLAN

circle: Attached

MISCELL. NOTES

MAGNETIC DECLINATION @ 10° E

X - S.P.D.

NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; ~ = APPROX.; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL;

TRAVEL NOTES: CALLOUT: ONSITE: 05/27/10



Client:	Blagg/BP	Project #:	94034-0011
Sample ID:	21 BGT 5-pt @9'	Date Reported:	06-07-10
Laboratory Number:	54478	Date Sampled:	05-27-10
Chain of Custody No:	9487	Date Received:	05-27-10
Sample Matrix:	Soil	Date Extracted:	06-02-10
Preservative:	Cool	Date Analyzed:	06-02-10
Condition:	Intact	Analysis Needed:	TPH-418.1

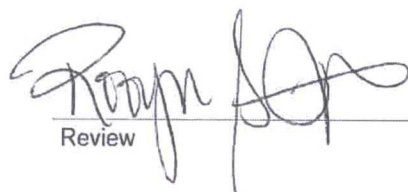
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	14.9	12.2

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Hughes Com #**


Analyst


Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Blagg/BP	Project #:	94034-0011
Sample ID:	21 BGT 5-pt @ 9'	Date Reported:	06-08-10
Laboratory Number:	54478	Date Sampled:	05-27-10
Chain of Custody No:	9487	Date Received:	05-27-10
Sample Matrix:	Soil	Date Extracted:	06-01-10
Preservative:	Cool	Date Analyzed:	06-03-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	67.8	0.1
Total Petroleum Hydrocarbons	67.8	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Hughes Com #**



Analyst

Review

Client:	Blagg/BP	Project #:	94034-0011
Sample ID:	21 BGT 5 -pt @ 9'	Date Reported:	06-07-10
Laboratory Number:	54478	Date Sampled:	05-27-10
Chain of Custody:	9487	Date Received:	05-27-10
Sample Matrix:	Soil	Date Analyzed:	06-04-10
Preservative:	Cool	Date Extracted:	06-01-10
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	30.5	0.9
Toluene	7.3	1.0
Ethylbenzene	3.9	1.0
p,m-Xylene	6.6	1.2
o-Xylene	4.7	0.9
Total BTEX	53.0	

ND - Parameter not detected at the stated detection limit.


Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	110 %
	1,4-difluorobenzene	107 %
	Bromochlorobenzene	102 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Hughes Com #**


 Analyst


 Review




Client:	Blagg/BP	Project #:	94034-0011
Sample ID:	21 BGT 5-pt @9'	Date Reported:	06-08-10
Lab ID#:	54478	Date Sampled:	05-27-10
Sample Matrix:	Soil	Date Received:	05-27-10
Preservative:	Cool	Date Analyzed:	06-02-10
Condition:	Intact	Chain of Custody:	9487

Parameter	Concentration (mg/Kg)
Total Chloride	10

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Hughes Com #


Analyst


Review

09487

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Analytical Laboratory

EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	QA/QC	Date Reported:	06-07-10
Laboratory Number:	06-02-TPH.QA/QC 54478	Date Sampled:	N/A
Sample Matrix:	Freon-113	Date Analyzed:	06-02-10
Preservative:	N/A	Date Extracted:	06-02-10
Condition:	N/A	Analysis Needed:	TPH

Calibration	I-Cal Date	C-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
	04/22/2010	06-02-10	1,690	1,770	4.7%	+/- 10%

Blank Conc. (mg/Kg)	Concentration	Detection Limit
TPH	ND	12.2

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
TPH	14.9	13.5	9.4%	+/- 30%

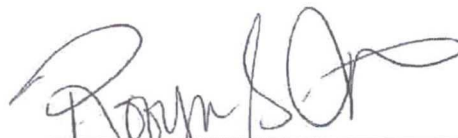
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
TPH	14.9	2,000	1,930	95.8%	80 - 120%

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: QA/QC for Samples 54478, 54486-54489, 54494-54497, 54507.


Analyst


Review



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Analytical Laboratory

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	06-03-10 QA/QC	Date Reported:	06-08-10
Laboratory Number:	54478	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-03-10
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	9.9960E+002	1.0000E+003	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	9.9960E+002	1.0000E+003	0.04%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	67.8	68.5	1.0%	0 - 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	263	105%	75 - 125%
Diesel Range C10 - C28	67.8	250	257	80.7%	75 - 125%

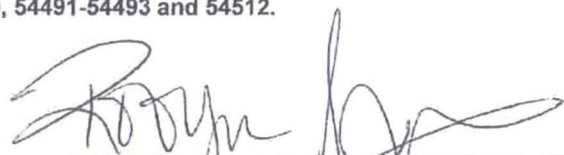
ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 54478, 54486-54489, 54491-54493 and 54512.



Analyst



Review

Client:	N/A	Project #:	N/A
Sample ID:	0604BBLK QA/QC	Date Reported:	06-07-10
Laboratory Number:	54478	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-04-10
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff	Blank Conc	Detect Limit
		Accept. Range 0 - 15%			
Benzene	1.2613E+006	1.2638E+006	0.2%	ND	0.1
Toluene	1.1630E+006	1.1654E+006	0.2%	ND	0.1
Ethylbenzene	1.0450E+006	1.0471E+006	0.2%	ND	0.1
p,m-Xylene	2.5909E+006	2.5961E+006	0.2%	ND	0.1
o-Xylene	9.6855E+005	9.7050E+005	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff	Accept Range	Detect Limit
Benzene	30.5	29.4	3.6%	0 - 30%	0.9
Toluene	7.3	5.8	20.5%	0 - 30%	1.0
Ethylbenzene	3.9	3.0	23.1%	0 - 30%	1.0
p,m-Xylene	6.6	6.4	3.0%	0 - 30%	1.2
o-Xylene	4.7	5.0	6.4%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	30.5	50.0	64.9	80.6%	39 - 150
Toluene	7.3	50.0	47.3	82.6%	46 - 148
Ethylbenzene	3.9	50.0	46.6	86.4%	32 - 160
p,m-Xylene	6.6	100	95.6	89.6%	46 - 148
o-Xylene	4.7	50.0	48.5	88.7%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 54478, 54486-54489, 54491-54493, 54511 and 54512.

Analyst

Review

BH-1 Drill Spot at Center
of 21 BGT location



BLAGG ENGINEERING, INC.

P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199

Page 1 of 1

FIELD BORING LOG

BORING ID: BH-1

PROJECT: BP: Hughes Com 5
 CLIENT: BP America Production Co.
 DRILLING CONTRACTOR: Kyvek
 EQUIPMENT USED: CME-95
 DATE START: 4/5/2010 DATE FINISH: 4/5/2010 DRILLER: KP LOGGED BY: JCB
 TOTAL DEPTH: 20' CASING TYPE & SIZE: — SLOT SIZE: —
 COMMENTS: Investigation @ Center of 21 BGT

DEPTH FEET	SAMPLE TIME	SAMPLE TYPE	Field OVM	SAMPLE DESCRIPTION
	1000	Cuttings		START DRILLING Silty SAND - NO ODR, NO STAIN, TAN
5'		Split SPAWN Cuttings		
10	1028	Split SPAWN Cuttings		SAMPLE FOR LAB TPH/BTEX/CL ⁻
15'		Split SPAWN Cuttings		
20	1043	Split SPAWN		SAMPLE FOR LAB TPH/BTEX/CL ⁻
				Auger TD = 19' Split SPAWN TD = 21'
25'				
30				



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Analytical Laboratory

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	BH #1 @ 10'	Date Reported:	04-13-10
Laboratory Number:	53620	Date Sampled:	04-05-10
Chain of Custody No:	9010	Date Received:	04-08-10
Sample Matrix:	Soil	Date Extracted:	04-09-10
Preservative:	Cool	Date Analyzed:	04-09-10
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	12.3	11.1

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Hughes Com #5**

Analyst

Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

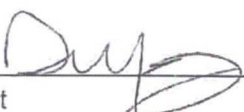
Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	BH #1 @10'	Date Reported:	04-14-10
Laboratory Number:	53620	Date Sampled:	04-05-10
Chain of Custody No:	9010	Date Received:	04-08-10
Sample Matrix:	Soil	Date Extracted:	04-12-10
Preservative:	Cool	Date Analyzed:	04-13-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Hughes Com #5**


Analyst


Review

**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	BH #1 @10'	Date Reported:	04-14-10
Laboratory Number:	53620	Date Sampled:	04-05-10
Chain of Custody:	9010	Date Received:	04-08-10
Sample Matrix:	Soil	Date Analyzed:	04-13-10
Preservative:	Cool	Date Extracted:	04-12-10
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	ND	0.9
Total BTEX	ND	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	102 %
	1,4-difluorobenzene	102 %
	Bromochlorobenzene	99.5 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Hughes Com #5

Analyst

Review

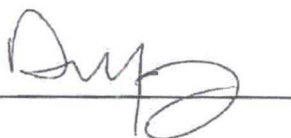
Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	BH #1 @ 10'	Date Reported:	04-13-10
Lab ID#:	53620	Date Sampled:	04-05-10
Sample Matrix:	Soil	Date Received:	04-08-10
Preservative:	Cool	Date Analyzed:	04-12-10
Condition:	Intact	Chain of Custody:	9010

Parameter	Concentration (mg/Kg)
Total Chloride	90

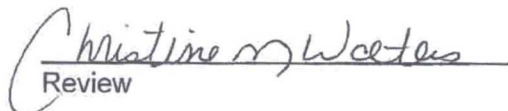
Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Hughes Com #5

Analyst



Review





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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	BH #1 @ 20'	Date Reported:	04-13-10
Laboratory Number:	53621	Date Sampled:	04-05-10
Chain of Custody No:	9010	Date Received:	04-08-10
Sample Matrix:	Soil	Date Extracted:	04-09-10
Preservative:	Cool	Date Analyzed:	04-09-10
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	32.1	11.1

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Hughes Com #5**

Analyst

Review

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

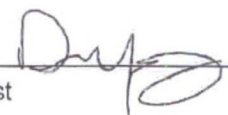
Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	BH #1 @20'	Date Reported:	04-14-10
Laboratory Number:	53621	Date Sampled:	04-05-10
Chain of Custody No:	9010	Date Received:	04-08-10
Sample Matrix:	Soil	Date Extracted:	04-12-10
Preservative:	Cool	Date Analyzed:	04-13-10
Condition:	Intact	Analysis Requested:	8015 TPH

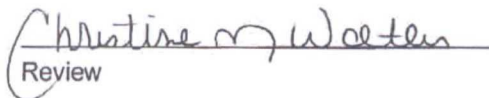
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Hughes Com #5**


Analyst


Review

**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	BH #1 @20'	Date Reported:	04-14-10
Laboratory Number:	53621	Date Sampled:	04-05-10
Chain of Custody:	9010	Date Received:	04-08-10
Sample Matrix:	Soil	Date Analyzed:	04-13-10
Preservative:	Cool	Date Extracted:	04-12-10
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	ND	0.9
Total BTEX	ND	

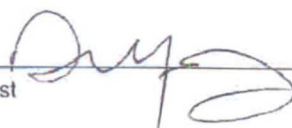
ND - Parameter not detected at the stated detection limit.

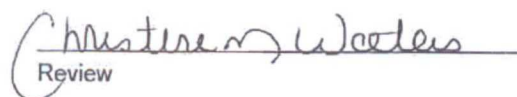
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.4 %
	1,4-difluorobenzene	97.4 %
	Bromochlorobenzene	96.6 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Hughes Com #5

Analyst 

Review 

Client:	Blagg/BP	Project #:	94034-0010
Sample ID:	BH #1 @ 20'	Date Reported:	04-13-10
Lab ID#:	53621	Date Sampled:	04-05-10
Sample Matrix:	Soil	Date Received:	04-08-10
Preservative:	Cool	Date Analyzed:	04-12-10
Condition:	Intact	Chain of Custody:	9010

Parameter	Concentration (mg/Kg)
Total Chloride	30

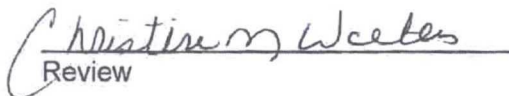
Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Hughes Com #5**

Analyst



Review



CHAIN OF CUSTODY RECORD

09010

Client: BLAGG/BP			Project Name / Location: HUGHES COM #5				ANALYSIS / PARAMETERS																																													
Client Address:			Sampler Name: J. Blagg				<table border="1"> <tr> <th>TPH (Method 8015)</th> <th>BTEX (Method 8021)</th> <th>VOC (Method 8260)</th> <th>RCRA 8 Metals</th> <th>Cation / Anion</th> <th>RCI</th> <th>TCLP with H/P</th> <th>PAH</th> <th>TPH (418.1)</th> <th>CHLORIDE</th> <th></th> <th></th> <th></th> <th></th> <th>Sample Cool</th> <th>Sample Intact</th> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>														TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE					Sample Cool	Sample Intact																
TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P															PAH	TPH (418.1)	CHLORIDE					Sample Cool	Sample Intact																							
Client Phone No.:			Client No.: 94034-0010																																																	
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative H ₂ O ₂ HCl		TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE					Sample Cool	Sample Intact																													
BH# 1 @ 10'	4/5/10	1028	53620	Soil Solid	Sludge Aqueous	1-402			X	X							X	X					Y	Y																												
BH# 1 @ 20'	"	1043	53621	Soil Solid	Sludge Aqueous	4			X	X							X	X					L	L																												
				Soil Solid	Sludge Aqueous																																															
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Relinquished by: (Signature) <i>J. Blagg</i>				Date 4/8/10	Time 1213	Received by: (Signature) <i>[Signature]</i>										Date 4/8/10	Time 1213																																			
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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS
QUALITY ASSURANCE REPORT**

Client:	QA/QC	Project #:	N/A
Sample ID:	QA/QC	Date Reported:	04-13-10
Laboratory Number:	04-09-TPH.QA/QC 53603	Date Sampled:	N/A
Sample Matrix:	Freon-113	Date Analyzed:	04-09-10
Preservative:	N/A	Date Extracted:	04-09-10
Condition:	N/A	Analysis Needed:	TPH

Calibration	I-Cal Date	C-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
	04-05-10	04-09-10	1,540	1,590	3.2%	+/- 10%

Blank Conc. (mg/Kg)	Concentration	Detection Limit
TPH	ND	11.1

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
TPH	13.6	14.8	8.8%	+/- 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
TPH	13.6	2,000	1,970	97.8%	80 - 120%

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: QA/QC for Samples 53603 - 53606 and 53620 - 53622.

Analyst

Review

**EPA Method 8015 Modified
 Nonhalogenated Volatile Organics
 Total Petroleum Hydrocarbons**

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	04-13-10 QA/QC	Date Reported:	04-14-10
Laboratory Number:	53620	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	04-13-10
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	8.7495E+002	8.7530E+002	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	9.8632E+002	9.8672E+002	0.04%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

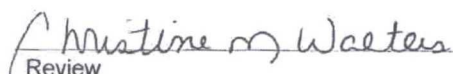
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	247	98.8%	75 - 125%
Diesel Range C10 - C28	ND	250	269	108%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 53602, 53620 - 53622, 53626 - 53629, 53652.

Analyst 


 Review

Client:	N/A	Project #:	N/A
Sample ID:	04-13-BT QA/QC	Date Reported:	04-14-10
Laboratory Number:	53620	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	04-13-10
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff.	Blank Conc	Detect. Limit
		Accept Range 0 - 15%			
Benzene	1.3942E+006	1.3970E+006	0.2%	ND	0.1
Toluene	1.2821E+006	1.2847E+006	0.2%	ND	0.1
Ethylbenzene	1.1454E+006	1.1477E+006	0.2%	ND	0.1
p,m-Xylene	2.8436E+006	2.8493E+006	0.2%	ND	0.1
o-Xylene	1.0827E+006	1.0849E+006	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff	Accept Range	Detect. Limit
Benzene	ND	ND	0.0%	0 - 30%	0.9
Toluene	ND	ND	0.0%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	ND	ND	0.0%	0 - 30%	1.2
o-Xylene	ND	ND	0.0%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	50.0	55.4	111%	39 - 150
Toluene	ND	50.0	55.1	110%	46 - 148
Ethylbenzene	ND	50.0	53.9	108%	32 - 160
p,m-Xylene	ND	100	107	107%	46 - 148
o-Xylene	ND	50.0	54.4	109%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
 Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 53602, 53620 - 53622, 53626 - 53629, 53652 and 53669.

Analyst



Review

