

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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

Form C-144  
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: BP AMERICA PROD. CO. Telephone: (505-326-9200) e-mail address: \_\_\_\_\_  
Address: 200 ENERGY COURT, FARMINGTON, NM 87410  
Facility or well name: HORTON #3 API #: 30-045-28910 U/L or Qtr/Qtr G Sec 28 T 31N R 9W  
County: SAN JUAN Latitude 36.87145 Longitude 107.78175 NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

Pit	Below-grade tank
Type: Drilling <input type="checkbox"/> Production <input type="checkbox"/> Disposal <input checked="" type="checkbox"/> <u>BLOW</u> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input checked="" type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness _____ mil Clay <input type="checkbox"/> Pit Volume _____ bbl	Volume: _____ bbl Type of fluid _____ Construction material: <u>N/A</u> Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) <b>20</b> 100 feet or more (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) No (0 points) <b>0</b>
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) <b>10</b> 1000 feet or more (0 points)
Ranking Score (Total Points) <b>30</b>	

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility \_\_\_\_\_. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☒ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5)

Attach soil sample results and a diagram of sample locations and excavations

Additional Comments	<u>PIT LOCATED APPROXIMATELY 108 FT. N39E FROM WELL HEAD.</u>
PIT EXCAVATION: WIDTH <u>n/a ft.</u> , LENGTH <u>n/a ft.</u> , DEPTH <u>n/a ft.</u>	<u>RCUD JUN13'07</u>
PIT REMEDIATION: CLOSE AS IS: <input checked="" type="checkbox"/> LANDFARM: <input type="checkbox"/> COMPOST: <input type="checkbox"/> STOCKPILE: <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> (explain)	<u>OIL CONS. DIV.</u>
Cubic yards: <u>N/A</u>	<u>DIST. 3</u>
<u>NEED TO ESTABLISH VERTICAL EXTENT</u>	

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an alternative OCD-approved plan ☒.

Date: 10/23/04

Printed Name/Title Jeff Blagg - P.E. # 11607 Signature Jeff Blagg

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: Deputy Oil & Gas Inspector,  
Printed Name/Title District #3 Signature B. Blagg Date: AUG 10 2007

30-045-28910

36.87145x

107.78175

VUL

CLIENT:

BP

**BLAGG ENGINEERING, INC.**  
**P.O. BOX 87, BLOOMFIELD, NM 87413**  
**(505) 632-1199**

LOCATION NO: 81474

COCR NO: HALL

**FIELD REPORT: PIT CLOSURE VERIFICATION**

PAGE No: 1 of 1

LOCATION: NAME: HORTON WELL #: 3 TYPE: BLOW  
 QUAD/UNIT: G SEC: 28 TWP: 31N RING: 9W PM: NM CNTY: SJ ST: NM  
 QTR/FOOTAGE: 1755'W/1465'E SW/NE CONTRACTOR: HD(ONOFFEE)

DATE STARTED: 10/18/04  
 DATE FINISHED:

ENVIRONMENTAL SPECIALIST: JCB

EXCAVATION APPROX. NA FT. x NA FT. x NA FT. DEEP. CUBIC YARDAGE: 0

DISPOSAL FACILITY: NA REMEDIATION METHOD: SEE BELOW

LAND USE: RANGE - BURN LEASE: NM093958 FORMATION: PC

FIELD NOTES &amp; REMARKS: PIT LOCATED APPROXIMATELY 108 FT. N39E FROM WELLHEAD.

DEPTH TO GROUNDWATER &lt; 50 NEAREST WATER SOURCE: &gt; 1000 NEAREST SURFACE WATER &lt; 1000

NMOCD RANKING SCORE 20+ NMOCD TPH CLOSURE STD: 100 PPM

**SOIL AND EXCAVATION DESCRIPTION:**

OVM CALIB. READ. = 53.3 ppm  
 OVM CALIB. GAS = 100 ppm RF = 0.52  
 TIME: 1340 am/pm DATE: 10/18

SOIL TYPE: SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER

SOIL COLOR: GRAY

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 &amp; SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD

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

DISCOLORATION/STAINING OBSERVED YES / NO EXPLANATION - GRAY STAIN FROM PIT BASE TO TD

HC ODOR DETECTED YES / NO EXPLANATION - STRONG

SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS.

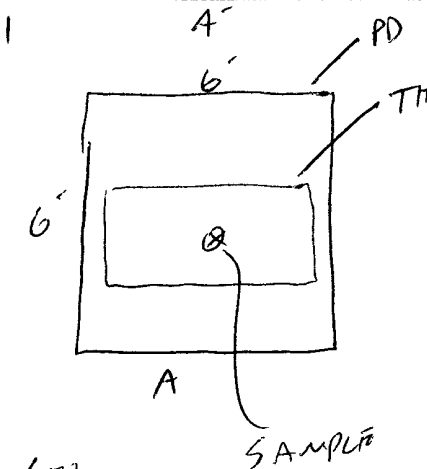
ADDITIONAL COMMENTS: 6'x6'x6' DEEP WOOD LINED EARTHEN PIT. USE BACKHOLE TO SAMPLE.

\* MAY NEED TO DRILL TO FIND VERTICAL \*

**SCALE**

0 1 FT

N

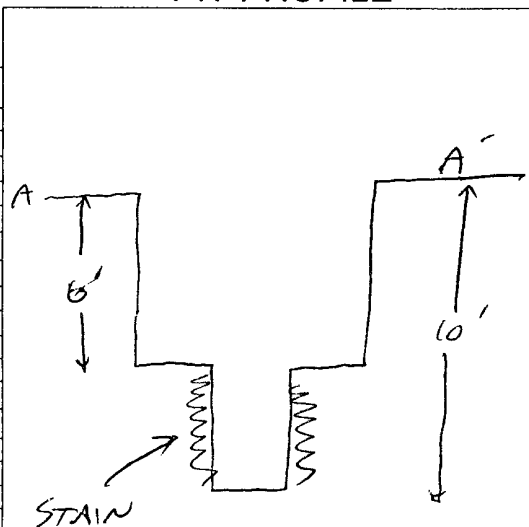
**PIT PERIMETER**

↓ TO WELL

SAMPLE

**FIELD 418.1 CALCULATIONS**

SAMP. TIME	SAMP. ID	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (ppm)

**PIT PROFILE****OVM READING**

SAMPLE ID	FIELD HEADSPACE (ppm)
1 @ 10'	238
2 @	
3 @	
4 @	
5 @	

**LAB SAMPLES**

SAMPLE ID	ANALYSIS	TIME
1 @ 10'	TH/TPH	1330

FAILED TPH

P D = PIT DEPRESSION; B G = BELOW GRADE, B = BELOW  
 T H = TEST HOLE, ~ = APPROX.; T.B. = TANK BOTTOM

TRAVEL NOTES:

CALLOUT: 10/18/04 1000 ONSITE: 10/18/04 1300

# Hall Environmental Analysis Laboratory

Date: 25-Oct-04

CLIENT: Blagg Engineering  
Lab Order: 0410193  
Project: Horton 3  
Lab ID: 0410193-01

Client Sample ID: Blow Pit @10'  
Collection Date: 10/18/2004 1:30:00 PM  
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE</b>						Analyst: JMP
Diesel Range Organics (DRO)	2000	100		mg/Kg	10	10/23/2004 1:07:43 PM
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	10/23/2004 1:07:43 PM
Surr: DNOP	0	60-124	S	%REC	10	10/23/2004 1:07:43 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	120	25		mg/Kg	5	10/21/2004 10:15:42 PM
Surr: BFB	122	74-118	S	%REC	5	10/21/2004 10:15:42 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.13		mg/Kg	5	10/21/2004 10:15:42 PM
Toluene	ND	0.13		mg/Kg	5	10/21/2004 10:15:42 PM
Ethylbenzene	1.2	0.13		mg/Kg	5	10/21/2004 10:15:42 PM
Xylenes, Total	2.0	0.13		mg/Kg	5	10/21/2004 10:15:42 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	5	10/21/2004 10:15:42 PM

21  
TOT. TPH = 2,120 ppm  
TOT. BTEX = 3.2 ppm

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

# BLAGG ENGINEERING, Inc.

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

## BORE / TEST HOLE REPORT


CLIENT: **BP AMERICA PRODUCTION CO.**  
LOCATION NAME: **HORTON # 3 BLOW PIT** UNIT G, SEC. 28, T31N, R9W  
CONTRACTOR: **BLAGG ENGINEERING, INC. / ENVIROTECH, INC.**  
EQUIPMENT USED: **MOBILE DRILL RIG (CME 75)**  
BORING LOCATION: **101 FEET, N40E FROM WELL HEAD.**

BORING #..... **BH1**  
MW #..... **NA**  
PAGE #..... **1**  
DATE STARTED **09/14/06**  
DATE FINISHED **09/14/06**  
OPERATOR..... **DP**  
PREPARED BY **NJV**

DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	OVM READING (ppm)	FIELD CLASSIFICATION AND REMARKS
2				
4				
6				
8				
10				
12				
14				
16			0.0	BH1 @ 15-17 FT. TIME: 1045 BLOW COUNT = 27 PER 2 FEET COLLECTED WITH SPLIT SPOON SAMPLER.
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				
40				

GROUND SURFACE

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 15.0 FT. BELOW GRADE).

NOTES:  - SAND.  
OVM - Organic Vapor Meter or Photo-ionization Detector (PID).  
ppm - Parts per million (unit value).

OVM CALIBRATION = 51.7 ppm  
with 100 ppm Isobutylene gas &  
response factor set @ 0.52;  
DATE - 09/14/06, TIME - 1113.

# BLAGG ENGINEERING, Inc.

P.O. BOX 87

BLOOMFIELD, NM 87413

(505) 632-1199

## BORE / TEST HOLE REPORT

CLIENT:

BP AMERICA PRODUCTION CO.

LOCATION NAME:

HORTON # 3 BLOW PIT UNIT G, SEC. 28, T31N, R9W

CONTRACTOR:

BLAGG ENGINEERING, INC. / ENVIROTECH, INC.

EQUIPMENT USED:

MOBILE DRILL RIG (CME 75)

BORING LOCATION:

109 FEET, N39E FROM WELL HEAD.

BORING #..... BH2

MW #..... NA

PAGE #..... 1

DATE STARTED 09/14/06

DATE FINISHED 09/14/06

OPERATOR..... DP

PREPARED BY NJV

DEPTH  
(FT.)

INTERVAL

LITHOLOGY  
INTERVAL

OVM  
READING  
(ppm)

### FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

2

4

6

8

10

12

14

16

18

20

22

24

26

28

30

32

34

36

38

40

DARK YELLOWISH ORANGE SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 5.0 FT. BELOW GRADE).

DARK YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, AN APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (5.0 - 10.0 FT. BELOW GRADE).

BH2 @ 15-17 FT. TIME: 1104 BLOW COUNT = 9 PER 2 FEET COLLECTED WITH SPLIT SPOON SAMPLER.  
TPH = ND

DARK YELLOWISH BROWN SILTY SAND PHASING INTO SILTY CLAY, NON COHESIVE, SLIGHTLY MOIST, FIRM TO STIFF, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (15.0 - 20.0 FT. BELOW GRADE).

BH2 @ 20-22 FT. TIME: 1110 BLOW COUNT = 9 PER 2 FEET COLLECTED WITH SPLIT SPOON SAMPLER  
TPH = ND.

#### NOTES:



- SAND.



- SILTY SAND TO SILTY CLAY.

**OVM** - Organic Vapor Meter or Photo-ionization Detector (PID).

**TPH** - Total Petroleum Hydrocarbons EPA Method 8015B.

**ND** - Not detected at the Reporting Limit.

**ppm** - Parts per million (unit value).

OVM CALIBRATION = 51.7 ppm  
with 100 ppm Isobutylene gas &  
response factor set @ 0.52 ;  
DATE - 09/14/06, TIME - 1113

DRAWING: HORTON 3 BH2.SKF

DATE: 03/19/07

DWN BY NJV

**Hall Environmental Analysis Laboratory, Inc.**

Date: 22-Sep-06

**CLIENT:** Blagg Engineering  
**Lab Order:** 0609187  
**Project:** Horton #3-Blow Pit  
**Lab ID:** 0609187-01

**Client Sample ID:** BH2 @ 15'-17'  
**Collection Date:** 9/14/2006 11:04:00 AM  
**Date Received:** 9/15/2006  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2006 12:09:13 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2006 12:09:13 PM
Surr. DNOP	89.3	61.7-135		%REC	1	9/20/2006 12:09:13 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/21/2006 7:26:57 PM
Surr BFB	104	84.5-129		%REC	1	9/21/2006 7:26:57 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation 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

**Hall Environmental Analysis Laboratory, Inc.**

Date: 22-Sep-06

**CLIENT:** Blagg Engineering  
**Lab Order:** 0609187  
**Project:** Horton #3-Blow Pit  
**Lab ID:** 0609187-02

**Client Sample ID:** BH2 @ 20'-22'  
**Collection Date:** 9/14/2006 11:10:00 AM  
**Date Received:** 9/15/2006  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/20/2006 12:44:21 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2006 12:44:21 PM
Surr: DNOP	91.5	61	7-135	%REC	1	9/20/2006 12:44:21 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/21/2006 7:57:27 PM
Surr: BFB	103	84.5	129	%REC	1	9/21/2006 7 57:27 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation 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

Accreditation Applied ☒ USACE ☐

Other:

Project Name:

Horton 3

Project #:

Project Manager:

**Sampler:**

Fax #:

Sample temperature:

077

Time

Sample I.D. No.

Number/Volume

$\text{HgCl}_2$	$\text{HNO}_3$
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HEAL No.

712

Blow P.T @ 10'

1-402

—

—

Relinquished By: (Signature)

Received By: (Signature) \_\_\_\_\_

7. C. 2. 33

James D. Galt

Relinquished By: (Signature)

Received By: (Signature)

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109

Tel. 505.345.3975 Fax 505.345.4107

[www.hallenvironmental.com](http://www.hallenvironmental.com)

# ANALYSIS REQUEST

[illegible]

Remarks:



## Hall Environmental Analysis Laboratory

Date: 25-Oct-04

CLIENT: Blagg Engineering  
Work Order: 0410193  
Project: Horton 3

## QC SUMMARY REPORT

Method Blank

Sample ID	MB-6701	Batch ID:	6701	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	10/21/2004 4:17:57 PM	Prep Date	10/21/2004	
Client ID:		Run ID:	FID(17A) 2_041021A	SeqNo:	315064							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		ND	10									
Motor Oil Range Organics (MRO)		ND	50									
Surr: DNOP		8.523	0	10	0	85.2	60	124	0			

Sample ID	MB-6701	Batch ID:	6701	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	10/23/2004 11:37:39 A	Prep Date	10/21/2004	
Client ID:		Run ID:	FID(17A) 2_041023A	SeqNo:	315345							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		ND	10									
Motor Oil Range Organics (MRO)		ND	50									
Surr: DNOP		9.668	0	10	0	96.7	60	124	0			

Sample ID	MB-6695	Batch ID:	6695	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	10/21/2004 10:45:33 P	Prep Date	10/20/2004	
Client ID:		Run ID:	PIDFID_041021A	SeqNo:	314985							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	5									
Surr: BFB		1009	0	1000	0	101	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: Blagg Engineering  
Work Order: 0410193  
Project: Horton 3

## QC SUMMARY REPORT

Method Blank

Sample ID	MB-6695	Batch ID:	6695	Test Code:	SW8021	Units:	mg/Kg	Analysis Date	10/21/2004 10:45:33 P	Prep Date	10/20/2004
Client ID:		Run ID:	PIDFID_041021A	SeqNo:	314972						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.025									
Toluene	ND	0.025									
Ethylbenzene	ND	0.025									
Xylenes, Total	ND	0.025									
Surr: 4-Bromofluorobenzene	1	0	1	0	100	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

## Hall Environmental Analysis Laboratory

Date: 25-Oct-04

CLIENT: Blagg Engineering  
Work Order: 0410193  
Project: Horton 3

**QC SUMMARY REPORT**  
Laboratory Control Spike - generic

Sample ID	LCS-6701	Batch ID:	6701	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	10/21/2004 4:49:09 PM	Prep Date	10/21/2004	
Client ID:		Run ID:	FID(17A) 2_041021A	SeqNo:	315065							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		55.64	10	50	0	111	67.4	117	0			

Sample ID	LCSD-6701	Batch ID:	6701	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	10/21/2004 5:19:34 PM	Prep Date	10/21/2004	
Client ID:		Run ID:	FID(17A) 2_041021A	SeqNo:	315066							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)		54.45	10	50	0	109	67.4	117	55.64	2.17	17.4	

Sample ID	LCS-6695	Batch ID:	6695	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	10/21/2004 2:47:03 PM	Prep Date	10/20/2004	
Client ID:		Run ID:	PIDFID_041021A	SeqNo:	314986							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		26.98	5	25	0	108	73.8	120	0			

Sample ID	LCS-6695	Batch ID:	6695	Test Code:	SW8021	Units:	mg/Kg	Analysis Date	10/21/2004 2:47:03 PM	Prep Date	10/20/2004	
Client ID:		Run ID:	PIDFID_041021A	SeqNo:	314973							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene		0.4411	0.025	0.42	0	105	77	122	0			
Toluene		2.045	0.025	1.9	0	108	81	115	0			
Ethylbenzene		0.4101	0.025	0.41	0	100	84	117	0			
Xylenes, Total		1.948	0.025	1.9	0	103	84	116	0			

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

## Hall Environmental Analysis Laboratory

Date: 25-Oct-04

CLIENT: Blagg Engineering

Project: Horton 3

Lab Order: 0410193

### CASE NARRATIVE

Analytical Comments for METHOD 8015DRO\_S, SAMPLE 0410193-01A: Surrogate not recovered due to dilution.

# Hall Environmental Analysis Laboratory

## Sample Receipt Checklist

Client Name BLAGG

Date and Time Received:

Work Order Number 0410193

Received by AMG

Checklist completed by

Okonjale 10/19/04  
Signature Date

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☒

Yes ☐

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

4°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

QA/QC Package: \_\_\_\_\_  
Std ☐ Level 4

Std ☐ Level 4 ☐

Project Name:

HORTON #3-Bow Pit

Project #:

P.O. Box 87

BLED. NM 87413

Project Manager:

22

**Sampler:**

632-1199

Fax #: \_\_\_\_\_

Sample Temperature:

Preservative

HEAL No.

Number/Volume

Sample I.D. No.

Time

151	152	153	154
155	156	157	158
159	160	161	162
163	164	165	166
167	168	169	170
171	172	173	174
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187	188	189	190
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1-422

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9/14/06	1110	501L	BH2 @ 20'-22'
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(- 402.)

✓

2

Relinquished By: Signature: \_\_\_\_\_

Date: , Time:

Received By: (Signature)

CA 1844	1	13	39	Remarks:
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Relinquished By: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: (Signature)

2000

4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109  
Tel. 505.345.3975 Fax 505.345.4107  
[www.hallenvironmental.com](http://www.hallenvironmental.com)

## ANALYSIS REQUEST

[illegible]

9-15-06

CA 1844	1339	Remarks:
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Received By: (Signature)

Relinquished By: Signature: \_\_\_\_\_

Date: , Time:

2000

Received By: (Signature)

Relinquished By: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

## QA/QC SUMMARY REPORT

**Client:** Blagg Engineering  
**Project:** Horton #3-Blow Pit

**Work Order:** 0609187

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: SW8015</b>									
<b>Sample ID: MB-11301</b>		<i>MBLK</i>				Batch ID: 11301	Analysis Date:	9/20/2006 5:45:15 AM	
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
<b>Sample ID: LCS-11301</b>		<i>LCS</i>				Batch ID: 11301	Analysis Date:	9/20/2006 6:20:03 AM	
Diesel Range Organics (DRO)	35.04	mg/Kg	10	70.1	64.6	116			
<b>Sample ID: LCSD-11301</b>		<i>LCSD</i>				Batch ID: 11301	Analysis Date:	9/20/2006 6:54:50 AM	
Diesel Range Organics (DRO)	37.38	mg/Kg	10	74.8	64.6	116	6.45	17.4	
<b>Method: SW8015</b>									
<b>Sample ID: MB-11294</b>		<i>MBLK</i>				Batch ID: 11294	Analysis Date:	9/19/2006 6:49:38 PM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
<b>Sample ID: LCS-11294</b>		<i>LCS</i>				Batch ID: 11294	Analysis Date:	9/19/2006 7:20:12 PM	
Gasoline Range Organics (GRO)	22.70	mg/Kg	5.0	90.8	73.4	115			

## Qualifiers:

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
R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name **BLAGG**

Date and Time Received:

9/18/2006

Work Order Number **0609187**

Received by **GLS**

Checklist completed by

Signature

Date

Matrix

Carrier name Greyhound

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Not Shipped ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_