Fields, Vanessa, EMNRD

PWC00310639533

From:

Fields, Vanessa, EMNRD

Sent:

Thursday, November 29, 2018 7:59 AM

To:

Steven Moskal

Cc:

Blagg, Jefferey; Vance Hixon; 'blagg_njv@yahoo.com'; Jody Gonzales

Subject:

RE: GCU 169 Auger Plan

Good morning Steve,

Thank you for the follow-up email. What you have stated is correct per our phone conversation.

Thank you,

Vanessa Fields
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 119
Cell: (505) 419-0463
vanessa.fields@state.nm.us

From: Steven Moskal <Steven.Moskal@BPX.COM> Sent: Thursday, November 29, 2018 7:54 AM

To: Fields, Vanessa, EMNRD < Vanessa. Fields@state.nm.us>

Cc: Blagg, Jefferey < jeffcblagg@aol.com>; Vance Hixon < VANCE.HIXON@BPX.COM>; 'blagg njv@yahoo.com'

<blagg njv@yahoo.com>; Jody Gonzales <JODY.GONZALES@BPX.COM>

Subject: [EXT] GCU 169 Auger Plan

Vanessa.

As discussed, BPX will plan to hand auger three locations within the footprint of the former BGT a depth of the bottom of the tank or at the groundwater interface. These three samples will be composited and submitted for lab analysis to determine if closure is achieved.

A groundwater sample will also be collected from the monitor well in the pit area, MW-6, if I remember correctly.

This work will be scheduled and we will notify the NMOCD within 48 hours or proceeding.

Thank you,

Steve Moskal BPX Energy - WBU

Field Environmental Coordinator



BPX Energy

1199 Main Ave. Suite 101 Durango, CO 81301

November 1, 2018

Attention: Environmental Specialists New Mexico Oil Conservation Division 1000 Rio Brazos Road Aztec, NM 87410 NMOCD NOV 05 2018 DISTRICT III

Re: Gallegos Canyon Unit 169 Groundwater Closure Request

(I) Sec 35 – T29N – R12W, San Juan County

API #30-045-07670

3RP - 393

BPX Energy is requesting closure of the subject groundwater monitoring site based on the contents of the attached report. The report documents historical impacts, delineation activities and finding and subsequent groundwater monitoring at the site. Following BP's Groundwater Management Plan, BP believes the site qualifies for closure, meeting 4 consecutive quarters of water quality data below the regulatory standards for analyzed constituents of concern.

If you have any questions or concerns, please contact me at (505) 330-9179 or at Steven.Moskal@bpx.com.

Sincerely,

Steve Moskal

Field Environmental Coordinator

Groundwater Closure Report

GCU 169

(I) Sec 35 – T29N – R12W API: 30-045-07670 San Juan County, New Mexico

3RP-393

Prepared for: BP America Production Co. Farmington, New Mexico

Prepared by:
Blagg Engineering, Inc.
P.O. Box 87
Bloomfield, New Mexico 87413
(505)320-1183



GROUNDWATER CLOSURE REPORT

GCU 169

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Findings
Remediation Closure
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Appendix B: Summary Water Quality Analytical Data Spreadsheet
Appendix C: Boring Logs
Appendix D: Field Sampling Notes and Laboratory Analytical Data Reports
Appendix E: 1996 Pit Closures and 2003 BGT Closure Documentation

GROUNDWATER MONITORING CLOSURE REPORT GCU 169

INTRODUCTION

Blagg Engineering Inc. (BEI) has been retained by BP America Production Co. (BP) to conduct groundwater monitoring at the GCU 169, located in rural San Juan County, New Mexico at (I) Sec. 35 - T29N - R12W (Appendix A: Figures 1 and 2). The purpose of this monitoring has been to evaluate groundwater quality following replacement of a steel separator below grade tank (BGT) in February, 2003. A groundwater sample collected immediately below the BGT detected hydrocarbons in excess of New Mexico Oil Conservation Division NMOCD) standards. Investigation and remediation of the discovery was pursuant to BP's "Groundwater Management Plan" (GMP), as directed by the NMOCD.

Previous impacts at the GCU 169 included (1) and unlined blow pit, and (2) an unlined separator pit. Both were remediated via excavation in February, 1996. There were no groundwater monitor wells installed immediately following the 1996 pit remediations.

Groundwater monitor wells to evaluate water quality at the prior site impact areas were installed in September, 2011. Quarterly water sampling pursuant to the GMP was conducted beginning in October, 2011 and completed in September, 2017 when all requirements of the GMP had been achieved. Included herein is the analytical data confirming that requirements of the BP GMP have been met.

The initial 2003 pit closure report and the 1996 unlined pit remediation closure reports, all submitted to NMOCD, are included in Appendix E for reference.

SAMPLING PROCEDURES

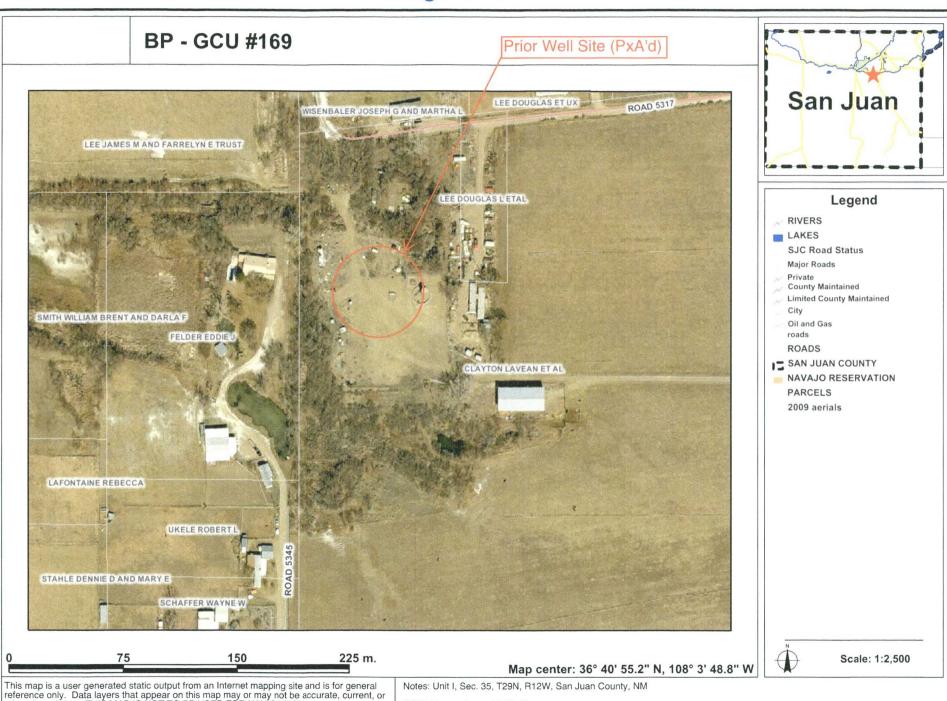
Drilling positions for monitor wells MW-1 through MW-6 were determined based on the locations of the previously remediated unlined pits, the replaced separator steel pit and the anticipated groundwater gradient (Appendix A: Figure 3). The wells were strategically placed within, upgradient and down-gradient of excavated areas.

Drilling operations were completed between September 26 - 27, 2011 by Kyvek Energy Services using a CME-75 hollow stem auger rig equipped with 5-foot long x 7-3/4 inch outside diameter, 4-inch inside diameter auger. While drilling soil samples were collected using a 2-inch diameter split spoon sampler and from drill cuttings. The wells were advanced to a total depth of between 19' – 20' below ground surface (Appendix C: Boring Logs).

Well completions consisted of a 15-foot long slotted screened section with riser extending to surface grade. The piping used for completion of the wells was a schedule 40 PVC with threaded connections. The annulus of the screened section was sand packed with washed graded silica 10/20 mesh from boring total depth (TD) to approximately 2 feet above the top screen slot. Hydrated bentonite/grout mix was placed immediately above the sand pack, with a concrete mix at the ground surface. The well tops were secured with a steel, secured well protector, concreted into place and locked.

APPENDIX A Figures

Figure 1



This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

GCU169 parcel map 06-13-10

APPENDIX B

Laboratory Analytical Data Summary Spreadsheet

BP AMERICA PRODUCTION COMPANY

GROUNDWATER FIELD DATA & LAB BTEX RESULTS

GCU # 169 - BLOW & SEP. PITS UNIT I, SEC. 35, T29N, R12W Revised Date: October 31, 2018 Submitted by Blagg Engineering, Inc.

SAMPLE DATE	WELL NAME /NUMBER	Fluoride (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	lron (mg/L)	TDS (mg/L)
05/29/13	MW #1	0.36	9.2	170	4.2	0.037	646
05/29/13	MW #2	0.37	14	270	3.0	0.042	840
05/29/13	MW #3	0.31	17	200	ND	ND	814
05/29/13	MW #4	0.35	9.7	160	3.3	ND	672
05/29/13	MW #5	0.40	14	140	ND	1.2	715
05/29/13	MW #6	0.45	10	48	ND	0.60	545
VOCC GROUN	IDWATER STANDARDS	1.60	250	600	10	1.0	1,000

NOTES:

- 1) RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS.
- 2) RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PREVIOUS RESULTS IN BOLD RED TYPE EXCEEDED.
- 3) NMWQCC New Mexico Water Quality Control Commission.
- 4) TDS Total Dissolved Solids
- 5) mg/L Milligrams per liter
- 6) Conduct. Conductivity
- 7) µmhos Micro-ohms
- 8) pH NMWQCC standards range between 6-9
- 9) μg/L Micrograms per liter
- 10) NA Not available or not applicable
- 11) ND Indicates not detected at the reporting limits (less than regulatory standards of at least a magnitude of 10).
- 12) LP AGT Low profile above-grade tank (used for source level purposes).

APPENDIX C Boring Logs

The wells were initially developed on October 27, 2011 by using a new, dedicated disposable pump and tubing to recover water from each well until stable parameters (pH, conductivity and temperature) were achieved. The wells were initially sampled by hand bailing using a new, dedicated disposable bailer until stable parameters were achieved on October 28, 2011. Samples were placed into laboratory supplied containers with appropriate preservatives, labeled, placed on ice in an ice chest, then express delivered to a Pace Laboratories in Lenexa, Kansas with chain-of-custody documentation. Laboratory samples were analyzed via U.S EPA Method 8260 for volatile organic compounds.

Subsequent quarterly samples were collected using the same procedures as the first sample event, with the exception that samples were hand delivered to a representative of Hall Analytical Laboratories for subsequent analytical testing. General water chemistry parameters were tested on samples collected May 29, 2013.

FINDINGS

Initial analytical test results (Appendix B: Summary Water Quality Analytical Data Spreadsheet) on the water samples collect on May 28, 2011 determined that only well MW-6 indicated subsequent quarterly sampling would be required as stipulated in the BP GMP. Analytical results on MW-6 reported that only the constituent xylene exceeded regulatory standards. Subsequent quarterly test results indicated a fluctuation in xylene concentration over time but with a general overall decrease. The required four (4) consecutive quarters testing below regulatory standards for xylenes was achieved on the September 6, 2017 sample event. Down-gradient monitor well MW-3 was sampled on eight (8) separate occasions to demonstrate that no impacts were migrating off site.

All wells passed general water chemistry parameters on the May 29, 2013 sample event and pursuant to the BP GMP subsequent sampling was not required. All laboratory analytical reports are included in Appendix D.

REMEDIATION CLOSURE

The laboratory analytical results of groundwater indicate that site closure of groundwater impacts has been achieved at all monitor well locations. It is Blagg Engineering, Inc's opinion that monitor wells are sufficiently placed to quantify remaining on-site, down-gradient and up-gradient residual water quality. It is possible that monitor wells placed at other locations could result in differing analytical results.

It is Blagg Engineering, Inc's professional opinion that the sampling and analytical testing conducted has been sufficient to determine that no groundwater impacts exceeding site closure standards for petroleum hydrocarbons remain at any monitor well points. There is no indication that additional site investigations are necessary, and closure is recommended.

Blagg Engineering, Inc.

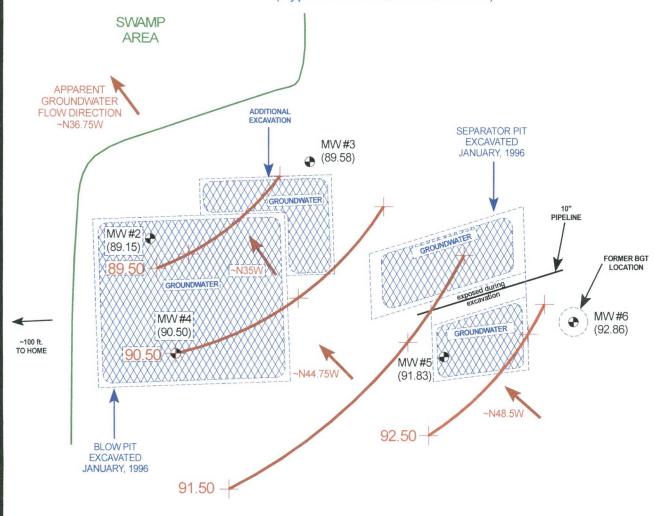
Jeffrey C. Blagg, P.E. President

FIGURE 2 **SWAMP** AREA ADDITIONAL BLOW PIT TH1 **EXCAVATION** SEP. PIT SEPARATOR PIT **EXCAVATED** MW #3 JANUARY, 1996 GROUNDWATER 10" PIPELINE GROUNDWATER MW #2 FORMER BGT GROUNDWATER ₱ MW #6 GROUNDWATER ~100 ft. TO HOME MW #5 MW #4 **BLOW PIT EXCAVATED** JANUARY, 1996 MW #1 PLUG & **ABANDON MARKER** \oplus MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER) ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE 40 80 FT. BP AMERICA PRODUCTION CO. PROJECT: MW SAMPLING SITE B LAGG ENGINEERING. NC. DRAWN BY: NJV GCU # 169 CONSULTING PETROLEUM / RECLAMATION SERVICES MAP P.O. BOX 87 FILENAME: GCU 169 - SM.SKF NE/4 SE/4 SEC. 35, T29N, R12W **BLOOMFIELD, NEW MEXICO 87413** 09/11 REVISED: 10-19-11 NJV SAN JUAN COUNTY, NEW MEXICO

FIGURE 3 (1st 1/4, 2013)



(Typical GW Contour Gradient)

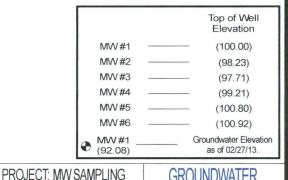


MW#1 (92.08)



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

PLUG & ABANDON MARKER



BP AMERICA PRODUCTION CO.

GCU # 169

NE/4 SE/4 SEC. 35, T29N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87 BLOOMFIELD, NEW MEXICO 87413 PHONE: (505) 632-1199 DRAWN BY: NJV FILENAME: 02-27-13-GW.SKF

REVISED: 02-27-13 NJV

GROUNDWATER
CONTOUR
MAP
02/13

BP AMERICA PRODUCTION COMPANY

GROUNDWATER FIELD DATA & LAB BTEX RESULTS

GCU #169 - BLOW & SEP. PITS UNIT I, SEC. 35, T29N, R12W

Revised Date: October 31, 2018 Submitted by Blagg Engineering, Inc.

SAMPLE						BTEX US EPA METHOD 8021B or 8					
	WELL NAME	DEPTH TO	WELL	TDS	CONDUCT.	рН	FREE PHASE		TOLUENE	ETHYL	TOTAL
DATE	/ NUMBER	WATER	DEPTH				PRODUCT			BENZENE	XYLENES
		(ft)	(ft)	(mg/L)	(umhos)		(ft)	(ppb)	(ppb)	(ppb)	(ppb)
10/28/11	MW #1	7.51	20.00		1,200	7.70		ND	ND	ND	ND
10/28/11	MW #2	8.76	20.00		1,500	7.61		ND	ND	ND	ND
10/28/11	MW #3	7.84	20.00		1,700	7.42		ND	ND	ND	ND
02/17/12		8.19			1,700	7.07		ND	ND	ND	ND
06/25/12		8.48			1,600	7.31		ND	ND	ND	ND
09/14/12		7.56			1,500	7.28		ND	ND	ND	ND
11/26/12		7.70			1,300	7.37		2.1	ND	ND	ND
05/29/13		8.27			1,400	6.92		ND	ND	ND	ND
08/24/13		7.72			1,000	7.51		ND	ND	ND	ND
09/06/17		8.83			900	7.08		ND	ND	ND	ND
10/28/11	MW #4	8.35	20.00		1,600	7.55		ND	ND	ND	ND
10/28/11	MW #5	8.47	20.00		1,500	7.67		ND	ND	ND	ND
10/28/11	MW #6	7.61	20.00		1,300	7.73		ND	16.7	125	388
02/17/12		8.18	20.00		1,200	7.11		ND	3.7	95	300
06/25/12		8.74			1,100	7.48		ND	40	300	1,400
09/14/12		7.44			1,200	7.44		ND	45	260	1,400
11/26/12		7.56			1,100	7.50		ND	18	230	850
02/27/13		8.06			1,100	7.15		ND	18	110	330
05/29/13		8.30			1,100	7.21		ND	14	220	910
08/24/13		7.54			800	7.68		ND	17	230	1,100
12/11/13		7.65			800	7.59		ND	5.1	240	880
02/26/14		7.97			900	6.90		5.2	1.8	180	560
05/27/14		8.41			900	7.24		ND	8.7	240	1,100
08/25/14		7.86			800	7.45		ND	12	190	980
11/25/14		7.60			800	7.64		ND	ND	180	920
03/10/15		8.08			900	7.21		ND	ND	150	420
05/14/15		8.58			900	7.14		2.9	ND	230	1,000
08/26/15		8.43			1,000	7.05		ND	16	240	1,300
12/02/15		8.06			900	7.23		ND	3.7	180	910
02/23/16		8.62			900	6.98		ND	1.9	200	750
06/06/16		9.13			900	7.30		2.0	5.2	170	840
08/18/16		8.80			900	7.27		ND	6.4	170	920
12/13/16		8.47			800	7.02		ND	ND	140	580
02/23/17		8.78			800	7.35		ND	ND	73	210
05/26/17		9.19			1,000	7.12		ND	ND	72	160
09/06/17		8.89			800	7.11		ND	ND	52	220
		0.00	-		000			110	110		

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

MW # 1

BORE / TEST HOLE

CLIENT:

38

40

CONTRACTOR:

EQUIPMENT USED:

LOCATION NAME:

BORING LOCATION:

BP AMERICA PRODUCTION CO

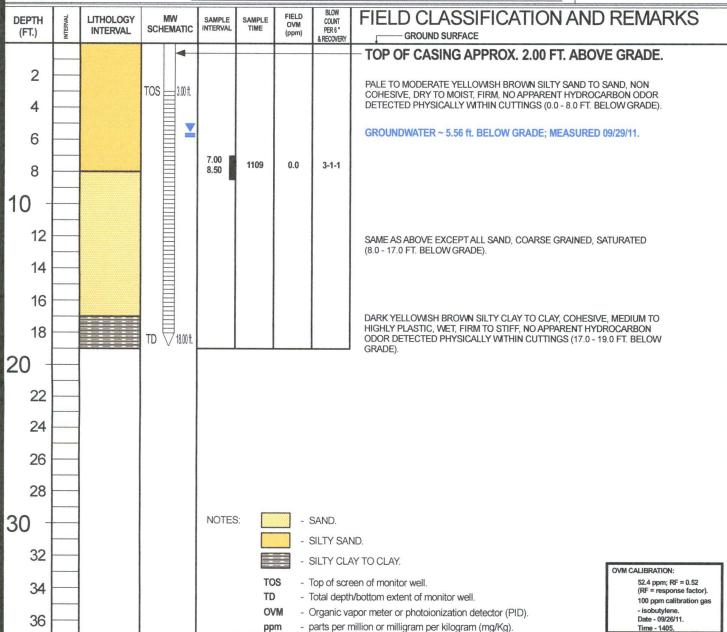
GCU # 169

UNIT I, SEC. 35, T29N, R12W BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.

MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER

95 FEET, N47.5W FROM PLUGGED & ABANDONED MARKER.

BORING #..... BH - 1 MW#..... PAGE #..... DATE STARTED 09/26/11 DATE FINISHED 09/26/11 OPERATOR..... LOGGED BY..... NJV



Monitor well consist of 2 inch PVC piping - casing from 2.00 ft. above grade to 3.00 ft. below grade, 0.020 slotted screen between 3.00 to 18.00 ft. below grade, sand packed annular to 2.0 ft. below grade, bentonite grout to grade. Above-grade steel well protector encompassing exposed casing

and secured with padlock.

DRAWING: GCU 169 MW1-BH-1, SKF

DATE: 09/27/11

DWN BY: NJV

BLOOMFIELD, NM 87413 (505) 632-1199

MW#2

BORE / TEST HOLE

CLIENT:

34

36

38

40

LOCATION NAME: CONTRACTOR:

EQUIPMENT USED: BORING LOCATION: BP AMERICA PRODUCTION CC

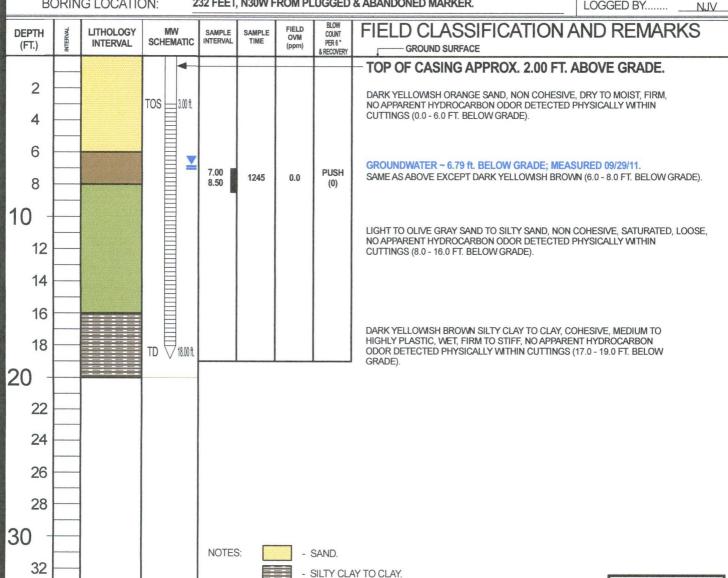
GCU # 169

UNIT I, SEC. 35, T29N, R12W BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.

MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER

232 FEET, N30W FROM PLUGGED & ABANDONED MARKER.

BORING #..... BH - 2 MW#..... 2 PAGE #..... DATE STARTED __09/26/11 DATE FINISHED 09/26/11 OPERATOR..... LOGGED BY.....





TOS

- Top of screen of monitor well.

TD OVM - Total depth/bottom extent of monitor well.

- Organic vapor meter or photoionization detector (PID).

- parts per million or milligram per kilogram (mg/Kg).

OVM CALIBRATION:

52.4 ppm; RF = 0.52 (RF = response factor). 100 ppm calibration gas isobutylene. Date - 09/26/11

Monitor well consist of 2 inch PVC piping - casing from 2.00 ft. above grade to 3.00 ft. below grade, 0.020 slotted screen between 3.00 to 18.00 ft. below grade, sand packed annular to 2.0 ft. below grade, bentonite grout to grade. Above-grade steel well protector encompassing exposed casing and secured with padlock.

DRAWING: GCU 169 MW2-BH-2, SKF

DATE: 09/27/11

DWN BY: NJV

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

MW#3

BORE / TEST HOLE REPORT

CLIENT:

40

LOCATION NAME: CONTRACTOR:

EQUIPMENT USED: BORING LOCATION: BP AMERICA PRODUCTION CO

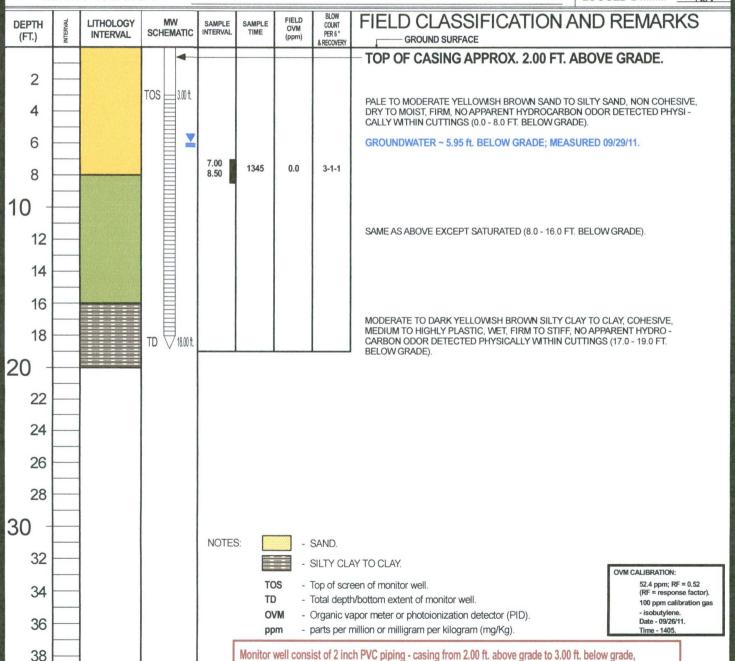
GCU # 169

UNIT I. SEC. 35, T29N, R12W BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.

MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER

238 FEET, N12W FROM PLUGGED & ABANDONED MARKER.

BORING #..... BH - 3 MW# PAGE #..... 3 DATE STARTED 09/26/11 DATE FINISHED 09/26/11 OPERATOR..... KP LOGGED BY..... N.JV



0.020 slotted screen between 3.00 to 18.00 ft. below grade, sand packed annular to 2.0 ft. below grade, bentonite grout to grade. Above-grade steel well protector encompassing exposed casing

DRAWING: GCU 169 MW3-BH-3. SKF

DATE: 09/27/11

DWN BY: NJV

and secured with padlock.

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

MW#4

BORE / TEST HOLE REPORT

CLIENT:

38

LOCATION NAME: CONTRACTOR:

EQUIPMENT USED: BORING LOCATION:

BP AMERICA PRODUCTION CO.

GCU # 169

UNIT I, SEC. 35, T29N, R12W

BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.

MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER

186 FEET, N34.5W FROM PLUGGED & ABANDONED MARKER.

 BORING #......
 BH - 4

 MW #.....
 4

 PAGE #.....
 4

 DATE STARTED
 09/27/11

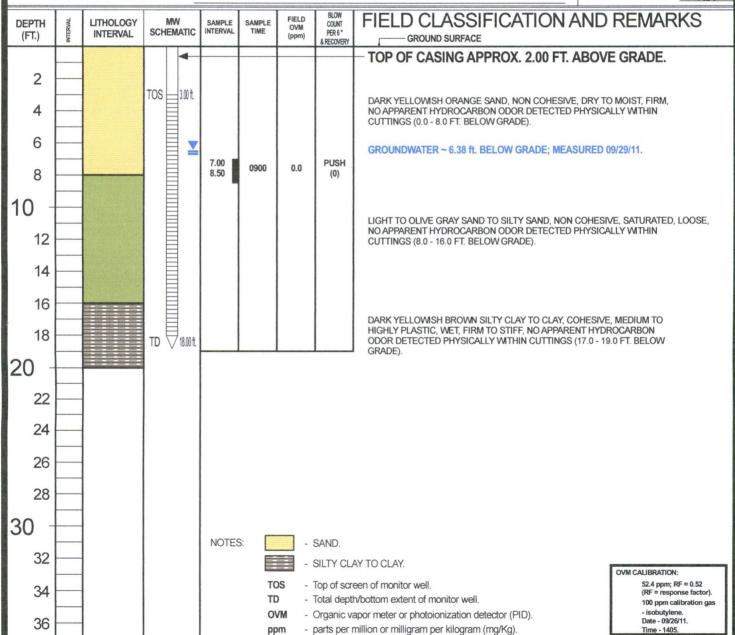
 DATE FINISHED
 09/27/11

 OPERATOR.....
 KP

 LOGGED BY.....
 N.IV

DWN BY: NJV

DATE: 09/27/11



and secured with padlock.

Monitor well consist of 2 inch PVC piping - casing from 2.00 ft. above grade to 3.00 ft. below grade, 0.020 slotted screen between 3.00 to 18.00 ft. below grade, sand packed annular to 2.0 ft. below grade, bentonite grout to grade. Above-grade steel well protector encompassing exposed casing

DRAWING: GCU 169 MW4-BH-4, SKF

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

MW # 5

BORE / TEST HOLE REPORT

CLIENT:

40

LOCATION NAME: CONTRACTOR:

EQUIPMENT USED: BORING LOCATION:

BP AMERICA PRODUCTION CO.

GCU # 169 UNIT I, SEC. 35, T29N, R12W

BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.

MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER

152 FEET, N2.5E FROM PLUGGED & ABANDONED MARKER.

 BORING #......
 BH - 5

 MW #.....
 5

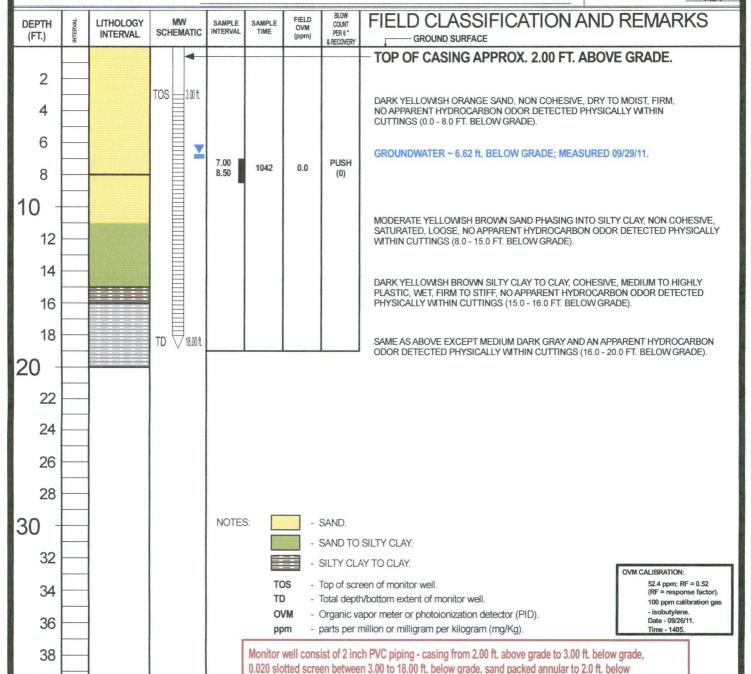
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 DATE STARTED
 09/27/11

 DATE FINISHED
 09/27/11

 OPERATOR......
 KP

 LOGGED BY......
 NJV



grade, bentonite grout to grade. Above-grade steel well protector encompassing exposed casing

DRAWING: GCU 169 MW5-BH-5. SKF

DATE: 09/27/11

DWN BY: NJV

and secured with padlock.

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

MW#6

BORE / TEST HOLE REPORT

CLIENT:

24

26

28

32

34

36

38

30

LOCATION NAME: CONTRACTOR:

EQUIPMENT USED: BORING LOCATION:

BP AMERICA PRODUCTION CO.

GCU # 169

UNIT I, SEC. 35, T29N, R12W

BLAGG ENGINEERING, INC. / KYVEK ENERGY SERVICES, INC.

MOBILE DRILL RIG (CME 75) - HOLLOW STEM AUGER

177 FEET, N20E FROM PLUGGED & ABANDONED MARKER.

 BORING #......
 BH - 6

 MW #.....
 6

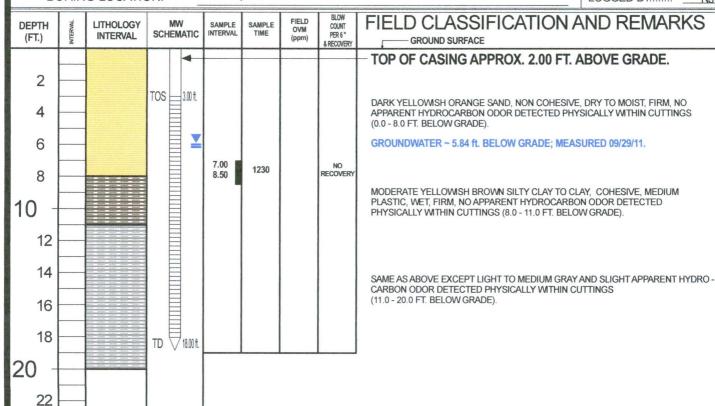
 PAGE #.....
 6

 DATE STARTED
 09/27/11

 DATE FINISHED
 09/27/11

 OPERATOR.....
 KP

 LOGGED BY.....
 NJV



NOTES:



- SAND

- SILTY CLAY TO CLAY.

TOS

- Top of screen of monitor well.

TD

- Total depth/bottom extent of monitor well.

OVM

- Organic vapor meter or photoionization detector (PID).

ppm

- parts per million or milligram per kilogram (mg/Kg).

OVM CALIBRATION:

52.4 ppm; RF = 0.52 (RF = response factor). 100 ppm calibration gas - isobutylene. Date - 09/26/11. Time - 1405.

Monitor well consist of 2 inch PVC piping - casing from 2.00 ft. above grade to 3.00 ft. below grade, 0.020 slotted screen between 3.00 to 18.00 ft. below grade, sand packed annular to 2.0 ft. below grade, bentonite grout to grade. Above-grade steel well protector encompassing exposed casing and secured with padlock.

DRAWING: GCU 169 MW6-BH-6, SKF

DATE: 09/27/11

DWN BY: NJV

APPENDIX D

Field Sampling Notes and Laboratory Analytical Data Reports

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY #: N/A GCU #169 - BLOW & SEP. PITS LABORATORY (S) USED: PACE ANALYTICAL UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : NJV Date: October 28, 2011 NJVFilename: 10-28-11.WK4 PROJECT MANAGER:

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1	100.00	92.49	7.51	20.00	0905	7.70	1,200	14.7	6.25
2	98.23	89.47	8.76	20.00	1010	7.61	1,500	14.5	5.50
3	97.71	89.87	7.84	20.00	1105	7.42	1,700	14.3	6.00
4	99.21	90.86	8.35	20.00	1030	7.55	1,600	15.5	5.75
5	100.80	92.33	8.47	20.00	1135	7.67	1,500	15.4	5.75
6	100.92	93.31	7.61	20.00	1230	7.73	1,300	14.9	6.00

INSTRUMENT CALIBRATIONS = | 4.01/7.00/10.00

DATE & TIME = 10/28/2011

2,800 0855

NOTES: Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes: 2.00 " well diameter = 0.49 gal. / ft. of water.

Comments or note well diameter if not standard 2".

Excellent recovery in all MW's. All MW's brown tint in appearance except MW #6 (dark gray with slight apparent hydrocarbon odor detected physically). Used subsersible pump and vinyl clear tubing in all MW's for purging and sampling. Collected samples from MW #1, #2, #3 on 10/28/11, MW #4, #5, #6 on 10/29/11 for BTEX per US EPA Method 8260B.

Top of casing MW #1 ~ 2.00 ft., MW #2 ~ 2.00 ft., MW #3 ~ 2.00 ft., MW #4 ~ 2.00 ft., MW #5 ~ 2.00 ft., MW #6 ~ 2.00 ft. above grade.



Project: GCU #169
Pace Project No.: 60109248

Sample: MW #1	Lab ID: 6010924800	1 Collecte	d: 10/28/	11 09:05	Received: 1	1/01/11 09:20	Matrix: Water	
Parameters	Results Units	Rep	ort Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA	8260						
Benzene	ND ug/L		1.0	1		11/04/11 03:49	9 71-43-2	
Ethylbenzene	ND ug/L		1.0	1		11/04/11 03:49	9 100-41-4	
Toluene	ND ug/L		1.0	1		11/04/11 03:49	9 108-88-3	
Xylene (Total)	ND ug/L		3.0	1		11/04/11 03:49	9 1330-20-7	
Dibromofluoromethane (S)	100 %		86-112	1		11/04/11 03:49	9 1868-53-7	
Toluene-d8 (S)	97 %		90-110	1		11/04/11 03:49	9 2037-26-5	
4-Bromofluorobenzene (S)	101 %		87-113	1		11/04/11 03:49	9 460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		82-119	1		11/04/11 03:49	9 17060-07-0	
Preservation pH	1.0		1.0	1		11/04/11 03:49	9	



Project: GCU #169
Pace Project No.: 60109248

Sample: MW #2	Lab ID: 6010924800	2 Collected: 10/28/1	1 10:10	Received: 1	1/01/11 09:20	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA	8260					
Benzene	ND ug/L	1.0	1		11/04/11 04:03	3 71-43-2	
Ethylbenzene	ND ug/L	1.0	1		11/04/11 04:03	3 100-41-4	
Toluene	ND ug/L	1.0	1		11/04/11 04:03	3 108-88-3	
Xylene (Total)	ND ug/L	3.0	1		11/04/11 04:03	3 1330-20-7	
Dibromofluoromethane (S)	100 %	86-112	1		11/04/11 04:03	3 1868-53-7	
Toluene-d8 (S)	101 %	90-110	1		11/04/11 04:03	3 2037-26-5	
4-Bromofluorobenzene (S)	103 %	87-113	1		11/04/11 04:03	3 460-00-4	
1,2-Dichloroethane-d4 (S)	98 %	82-119	1		11/04/11 04:03	3 17060-07-0	
Preservation pH	1.0	1.0	1		11/04/11 04:03	3	



Project:

GCU #169

Pace Project No.: 60109248

Sample: MW #3	Lab ID: 6010924800	3 Collected: 10/28/1	1 11:05	Received: 11/01/11 09:2	20 Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared Analyz	zed CAS No.	Qual
8260 MSV UST, Water	Analytical Method: EPA	8260				
Benzene	ND ug/L	1.0	1	11/04/11	04:17 71-43-2	
Ethylbenzene	ND ug/L	1.0	1	11/04/11	04:17 100-41-4	
Toluene	ND ug/L	1.0	1	11/04/11	04:17 108-88-3	
Xylene (Total)	ND ug/L	3.0	1	11/04/11	04:17 1330-20-7	
Dibromofluoromethane (S)	99 %	86-112	1	11/04/11	04:17 1868-53-7	
Toluene-d8 (S)	100 %	90-110	1	11/04/11	04:17 2037-26-5	
4-Bromofluorobenzene (S)	102 %	87-113	1	11/04/11	04:17 460-00-4	
1,2-Dichloroethane-d4 (S)	99 %	82-119	1	11/04/11	04:17 17060-07-0	
Preservation pH	1.0	1.0	1	11/04/11	04:17	

(913)599-5665



ANALYTICAL RESULTS

Project:

GCU #169

Pace Project No.: 60109248

Sample: MW #4	Lab ID: 601092480	004 Collected: 10/29/	11 10:30	Received: 11/01/11 09:20	Matrix: Water	
Parameters	Results Un	its Report Limit	DF	Prepared Analyzed	CAS No. Q	ual
8260 MSV UST, Water	Analytical Method: EF	PA 8260				
Benzene	ND ug/L	1.0	1	11/04/11 04:	32 71-43-2	
Ethylbenzene	ND ug/L	1.0	1	11/04/11 04:	32 100-41-4	
Toluene	ND ug/L	1.0	1	11/04/11 04:	32 108-88-3	
Xylene (Total)	ND ug/L	3.0	1	11/04/11 04:	32 1330-20-7	
Dibromofluoromethane (S)	100 %	86-112	1	11/04/11 04:	32 1868-53-7	
Toluene-d8 (S)	98 %	90-110	1	11/04/11 04:	32 2037-26-5	
4-Bromofluorobenzene (S)	99 %	87-113	1	11/04/11 04:	32 460-00-4	
1,2-Dichloroethane-d4 (S)	98 %	82-119	1	11/04/11 04:	32 17060-07-0	
Preservation pH	1.0	1.0	1	11/04/11 04:	32	





Project: GCU #169
Pace Project No.: 60109248

Sample: MW #5	Lab ID: 6010924	8005 Collected:	10/29/11 11:35	Received:	11/01/11 09:20	Matrix: Water	
Parameters	Results	Units Report	Limit DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST, Water	Analytical Method:	EPA 8260					
Benzene	ND ug/L		1.0 1		11/04/11 04:46	6 71-43-2	
Ethylbenzene	ND ug/L		1.0 1		11/04/11 04:46	6 100-41-4	
Toluene	ND ug/L		1.0 1		11/04/11 04:46	6 108-88-3	
Xylene (Total)	ND ug/L		3.0 1		11/04/11 04:46	6 1330-20-7	
Dibromofluoromethane (S)	98 %	8	36-112 1		11/04/11 04:46	6 1868-53-7	
Toluene-d8 (S)	100 %	(90-110 1		11/04/11 04:46	6 2037-26-5	
4-Bromofluorobenzene (S)	100 %	8	37-113 1		11/04/11 04:46	6 460-00-4	
1,2-Dichloroethane-d4 (S)	98 %	8	32-119 1		11/04/11 04:46	6 17060-07-0	
Preservation pH	1.0		1.0 1		11/04/11 04:46	6	





Project:

GCU #169

Pace Project No.: 60109248

Sample: MW #6	Lab ID: 60109248000	6 Collected: 10/29/1	1 12:30	Received: 11/01/11 09:20	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared Analyzed	CAS No. Q	Qual
8260 MSV UST, Water	Analytical Method: EPA	8260				
Benzene	ND ug/L	1.0	1	11/04/11 05:0	00 71-43-2	
Ethylbenzene	125 ug/L	1.0	1	11/04/11 05:0	0 100-41-4	
Toluene	16.7 ug/L	1.0	1	11/04/11 05:0	00 108-88-3	
Xylene (Total)	388 ug/L	15.0	5	11/06/11 01:5	54 1330-20-7	
Dibromofluoromethane (S)	99 %	86-112	1	11/04/11 05:0	00 1868-53-7	
Toluene-d8 (S)	102 %	90-110	1	11/04/11 05:0	00 2037-26-5	
4-Bromofluorobenzene (S)	106 %	87-113	1	11/04/11 05:0	00 460-00-4	
1,2-Dichloroethane-d4 (S)	97 %	82-119	1	11/04/11 05:0	00 17060-07-0	
Preservation pH	1.0	1.0	1	11/04/11 05:0	00	



Chain of Custody Record

Project Name: GCU # 169

BP BU/AR Region/Enfos Segment: SAN JUAN SOUTH O.C.

State or Lead Regulatory Agency: NMOCD

Requested Due Date (mm/dd/yy): 11/7/2011

Lab Name	PACE ANALYTICAL	BP/AR Facility No.: GCU # 169						Cons	Consultant/Contractor: BLAGG ENGR., INC.																	
Address:	9608 LOIRET BLVD.						BP/AR Facility Address:			1	Unit	I, Se	ec. 35	5, T291	N, R1	2W	Addi	ress:			11	10 N. 4 th	ST.			
	LENEXA, KS 66219			-	_		Site Lat/Long:				36.6	8203	/ 10	8.0635	5				-		В	LOOMF	ELD,	NM 874	13	
ab PM:	COLLEEN KOPORC						California Global ID No.:										Cons	sultar	t/Cont	tractor	r Proje	ect No.:				
Tele/Fax:	913-599-5665						Enfos Project No.:									Consultant/Contractor PM: JEFF C. BLAGG										
3P Contac	t: Jeff Peace						Provision or OOC (circle one)								Tele/Fax: 505-632-1199											
Address: 200 Energy Court							Phase/WBS:										Repo	ort Ty	ре & (QCL	evel:	STANI	ARD			
Farmington, NM 87401							Sub Phase/Task:									4000	E-m	ail EI	DD To	:		blagg	ijv@ya	hoo.cor	n	
ele/Fax: Office: (505) 326-9479 Cell: (505) 330-4937						Cost Element:			and the second	Contraction (-		See to the see to	Part of the second second	Invo	ice to	: Con	sultar	nt or B	P of Atlanti	Richfiel	d Co. (circ	ele one)		
ab Bottle	e Order No:				Matri	K				Pr	eserv	ative				Request	ed An	alysis	3			I	,	. 7	11/	
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air	Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	HCI HgCl ₂	Methanol	EPA 8260B (BTEX)										09Z		nments
1	MW #1	0905	10/28/2011		X			2			7	X		X					T	T		21	069H)		al
2	MW #2	1010	10/28/2011		X			2			1	X	П	X			П		T	T	T		1			ar
3	MW #3	1105	10/28/2011		X			2			_	X	П	X	7		\Box		\top	\top	T					603
4	MW #4	1030	10/29/2011		X			2			-	X	П	X	\top		\Box		T	T	1			***************************************	0	24
5	MW #5	1135	10/29/2011		X			2			7	X	П	X					T	1	T				0	25
6	MW #6	1230	10/29/2011		X			2			1	X		X								,	V		a	4
7											T						П			T	T				200,000	
8								П			1	T	П						T		T					***************************************
9																									**************	
10																					I	Report	BTEX	consti	tuent	sonly
Sampler's	s Name: NELSON VELEZ						Relinquished By	/ Affi	iliatio	on				Date		Time				Accep	ted By	/ Affiliation		1	Date	Time
Sampler's	s Company: BLAGG ENGR., INC	C.					9 Mn 11 -84	96	6	F	JE	R.		10/31/2	011	1500			The	4/	V	H		11/	///	920
Shipment	t Date: 10/31/2011						.0												/"	7	VI					
Shipment	t Method: FED. EX.									WINDSHAM							L		****							
Shipment Tracking No: 8664 8408 4230																										
Special	Instructions: Send invoice	directly	to BP co	ntac	t list	ted a	bove and use Pay key	coc	le:	ZI	E	CJ	DE	NV	Wor	k orde	r#:	N	149	145	59.					
		THE RESERVE OF THE PERSON NAMED IN					g@aol.com & blagg_nj																			
	Custody Seals In Place: Y	res (No)	Temp I	31ank	Yes	No	Cooler Temp on Rece	ipt:	4.	°F/	6	1	Trip	Blank	Yes	1/180		MS	MSI) Sa	mple	e Submitt	Section 1	STREET, SQUARE, SQUARE		
																							HPIT	C Rev 4	08/26	/2010





CERTIFICATIONS

Project: GCU #169 Pace Project No.: 60109248

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219 A2LA Certification #: 2456.01 Arkansas Certification #: 05-008-0 Illinois Certification #: 001191 Iowa Certification #: 118 Kansas/NELAP Certification #: E-10116 Louisiana Certification #: 03055 Nevada Certification #: KS000212008A Oklahoma Certification #: 9205/9935 Texas Certification #: T104704407-08-TX Utah Certification #: 9135995665





SAMPLE SUMMARY

Project:

GCU #169

Pace Project No.: 60109248

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60109248001	MW #1	Water	10/28/11 09:05	11/01/11 09:20
60109248002	MW #2	Water	10/28/11 10:10	11/01/11 09:20
60109248003	MW #3	Water	10/28/11 11:05	11/01/11 09:20
60109248004	MW #4	Water	10/29/11 10:30	11/01/11 09:20
60109248005	MW #5	Water	10/29/11 11:35	11/01/11 09:20
60109248006	MW #6	Water	10/29/11 12:30	11/01/11 09:20





SAMPLE ANALYTE COUNT

Project: GCU #169 Pace Project No.: 60109248

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60109248001	MW #1	EPA 8260	PRG	9
60109248002	MW #2	EPA 8260	PRG	9
60109248003	MW #3	EPA 8260	PRG	9
60109248004	MW #4	EPA 8260	PRG	9
60109248005	MW #5	EPA 8260	PRG	9
60109248006	MW #6	EPA 8260	HMW, PRG	9





PROJECT NARRATIVE

Project: GCU #169 Pace Project No.: 60109248

Method: EPA 8260

Description: 8260 MSV UST, Water Client: BP-Blagg Engineering Date: November 08, 2011

General Information:

6 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/41357

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/41413

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



QUALITY CONTROL DATA

Project:

GCU #169

Pace Project No.: 60109248

QC Batch:

MSV/41357

Analysis Method:

EPA 8260

QC Batch Method:

EPA 8260

Analysis Description:

8260 MSV UST-WATER

Associated Lab Samples:

60109248001, 60109248002, 60109248003, 60109248004, 60109248005, 60109248006

METHOD BLANK: 903661

Matrix: Water

Associated Lab Samples: 60109248001, 60109248002, 60109248003, 60109248004, 60109248005, 60109248006

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	11/04/11 03:06	
Ethylbenzene	ug/L	ND	1.0	11/04/11 03:06	
Toluene	ug/L	ND	1.0	11/04/11 03:06	
Xylene (Total)	ug/L	ND	3.0	11/04/11 03:06	
1,2-Dichloroethane-d4 (S)	%	97	82-119	11/04/11 03:06	
4-Bromofluorobenzene (S)	%	101	87-113	11/04/11 03:06	
Dibromofluoromethane (S)	%	98	86-112	11/04/11 03:06	
Toluene-d8 (S)	%	98	90-110	11/04/11 03:06	

LABORATORY CONTROL SAMPLE: 903662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.5	98	82-117	
Ethylbenzene	ug/L	20	19.8	99	79-121	
Toluene	ug/L	20	19.1	95	80-120	
Xylene (Total)	ug/L	60	59.9	100	79-120	
1,2-Dichloroethane-d4 (S)	%			97	82-119	
4-Bromofluorobenzene (S)	%			102	87-113	
Dibromofluoromethane (S)	%			103	86-112	
Toluene-d8 (S)	%			101	90-110	



QUALITY CONTROL DATA

Project:

GCU #169

Pace Project No.: 60109248

QC Batch:

MSV/41413

Analysis Method:

EPA 8260

QC Batch Method: EPA 8260

Analysis Description:

8260 MSV UST-WATER

Associated Lab Samples: 60109248006

Matrix: Water

Associated Lab Samples: 60109248006

METHOD BLANK: 905103

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Xylene (Total)	ug/L	ND	3.0	11/06/11 01:21	
1,2-Dichloroethane-d4 (S)	%	114	82-119	11/06/11 01:21	
4-Bromofluorobenzene (S)	%	110	87-113	11/06/11 01:21	
Dibromofluoromethane (S)	%	109	86-112	11/06/11 01:21	
Toluene-d8 (S)	%	109	90-110	11/06/11 01:21	

LABORATORY CONTROL SAMPLE:

905104

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	60	50.5	84	79-120	
1,2-Dichloroethane-d4 (S)	%		00.0	114	82-119	
4-Bromofluorobenzene (S)	%			97	87-113	
Dibromofluoromethane (S)	%			112	86-112	
Toluene-d8 (S)	%			105	90-110	





QUALIFIERS

Project: GCU #169 Pace Project No.: 60109248

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: MSV/41357

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/41413

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Date: 11/08/2011 02:20 PM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GCU #169
Pace Project No.: 60109248

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60109248001	MW #1	EPA 8260	MSV/41357		
60109248002	MW #2	EPA 8260	MSV/41357		
60109248003	MW #3	EPA 8260	MSV/41357		
60109248004	MW #4	EPA 8260	MSV/41357		
60109248005	MW #5	EPA 8260	MSV/41357		
60109248006	MW #6	EPA 8260	MSV/41357		
60109248006	MW #6	EPA 8260	MSV/41413		



Sample Condition Upon Receipt - ESI Tech Specs

Client Name: BP BLANG	ENE.	Project #:_	60109248
Courier: Fed Ex St UPS USPS Client U	Commercial □ Pace	□ Other □	Optional
Tracking #: 866484084230 P	ace Shipping Label Used	d? Yes□ NoXi	Proj Due Date: [
Custody Seal on Cooler/Box Present: Yes No.	Seals intact: Yes	□ No,89	harry the same of
Packing Material: Bubble Wrap D Bubble Ba	gs 🗆 Foam 🗆	None □ C	ther 🗆
Thermometer Used: T-191 / T-194 Ty	pe of Ice: Web Blue	None ☐ Samples re	ceived on ice, cooling process has begun.
Cooler Temperature: 41	(circle on	,	and initials of person examining ents:
Temperature should be above freezing to 6°C		cont	ents: (1) (1) (100
Chain of Custody present:	Yes No N/A 1.		
Chain of Custody filled out:	✓Yes □No □N/A 2.		
Chain of Custody relinquished:	ØYes □No □N/A 3.		
Sampler name & signature on COC:	ØYes □No □N/A 4.		
Samples arrived within holding time:	Yes □No □N/A 5.		
Short Hold Time analyses (<72hr):	□Yes ⊠No □N/A 6.		
Rush Turn Around Time requested: (<724)	□Yes ☑No □N/A 7.	4 day	TAT
Sufficient volume:	□Yes ⊀2No □N/A 8.	2 Vals	each.
Correct containers used:	ŻŶes □No □N/A	*	
-Pace containers used:	□Yes ⊉No □N/A 9.		
Containers intact:	120 res □No □N/A 10).	
Unpreserved 5035A soils frozen w/in 48hrs?	□Yes □No ♥N/A 11		
Filtered volume received for dissolved tests?	□Yes □No ØN/A 12		
Sample labels match COC:	₹Yes □No □N/A		
-Includes date/time/ID/analyses Matrix:	12/ 13	3.	
All containers needing preservation have been checked.	□Yes □No X2N/A		
All containers needing preservation are found to be in	□Yes □No ₩N/A 14	1	
compliance with EPA recommendation. Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water),	Init	tial when /	Lot # of added
Phenolics Trip Blank present:		mpleted	preservative
Pace Trip Blank lot # (if purchased):	□Yes ZNo □N/A		
Headspace in VOA vials (>6mm):	15 ☐Yes ZNo ☐N/A),	
Britan III II I	16		l-
Project sampled in USDA Regulated Area:	□Yes □No ØN/A 17	7. List State:	
Client Notification/ Resolution: Copy CO	OC to Client? (Y)/N	Field Data Requir	
Person Contacted: Da	ate/Time:		Temp Log: Record start and finish times when unpacking cooler, if >20 min,
Comments/ Resolution:			recheck sample temps.
			Start: 1100 Start:
Project Manager Review: (ASV			End: [110 End:
Project Manager Review: ('ASV	Dat	te: 11 2 1	Temp: Temp:

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the NCDENR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

F-KS-C-004-Rev.0, 02February2011

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP AME	ERICA P	ROD. CO	<u>).</u>	С	HAIN-OF-CI	JSTODY#:	N	/ A
GCU # 16	9 - BLOW 8	& SEP. PIT	S		LAB	ORATORY	(S) USED:	HALL ENVI	RONMENTAL
UNIT I, S	EC. 35, T29	9N, R12W							
Date:	February	17, 2012			DE\	/ELOPER /	SAMPLER:	N	JV
Filename :	02-17-12.V	VK4			F	PROJECT N	MANAGER:	N	JV
WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1	100.00	91.98	8.02	20.00	-	-	-	-	-
2	98.23	89.10	9.13	20.00	-	-	-	-	-
3	97.71	89.52	8.19	20.00	1045	7.07	1,700	11.4	5.75
4	99.21	90.44	8.77	20.00	-	-	-	-	-
5	100.80	91.73	9.07	20.00	-	-	-	-	-
6	100.92	92.74	8.18	20.00	1140	7.11	1,200	9.6	5.75
			INSTRUM	ENT CALIBI	RATIONS =	4.01/7.00/10.00	2,800		
				DATE	& TIME =	02/16/2012	1000		
NOTES:			<u>ed from wel</u> t. h = 1 ft.)				X 7.48 gal./	t3) X 3 (well	bores).
			three (3) we				diameter =	0.49 gal. / f	ft. of water.
Commonto			if not stand						
			6. MW #3						
			ed physically						
for purging	and sampl	ing. Collec	ted samples	from MW	#3 & #6 for	r BTEX per	US EPA Met	thod 80210B	3.
								-	

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 \sim 2.00 ft. above grade.

Lab Order 1202760

Date Reported: 2/29/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project:

Lab ID:

GCU #169

1202760-001

Client Sample ID: MW #3

Collection Date: 2/17/2012 10:45:00 AM

Matrix: AQUEOUS Received Date: 2/22/2012 9:54:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: RAA
Benzene	ND	1.0	μg/L	1	2/24/2012 7:23:30 PM
Toluene	ND	1.0	μg/L	1	2/24/2012 7:23:30 PM
Ethylbenzene	ND	1.0	μg/L	1	2/24/2012 7:23:30 PM
Xylenes, Total	ND	2.0	μg/L	1	2/24/2012 7:23:30 PM
Surr: 4-Bromofluorobenzene	110	76.5-115	%REC	1	2/24/2012 7:23:30 PM

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit

Lab Order 1202760

Date Reported: 2/29/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

Project: GCU #169

Collection Date: 2/17/2012 11:40:00 AM

Lab ID: 1202760-002

Matrix: AQUEOUS

Received Date: 2/22/2012 9:54:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		μg/L	1	2/24/2012 7:52:19 PM
Toluene	3.7	1.0		µg/L	1	2/24/2012 7:52:19 PM
Ethylbenzene	95	1.0		μg/L	1	2/24/2012 7:52:19 PM
Xylenes, Total	300	20		μg/L	10	2/27/2012 4:53:49 PM
Surr: 4-Bromofluorobenzene	176	76.5-115	S	%REC	1	2/24/2012 7:52:19 PM

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit

CI	nain-c	of-Cus	tody Record	Turn-Around T	ime:			1	r 1	-	łΔ	LL	E	NV	TE	20	N		NT	ΓΑΙ	L
Client:	BLAG	G ENGR.	/ BP AMERICA	✓ Standard	Rush _															OR	
				Project Name:							ww	w.ha	allen	viro	nme	ntal	.com	1			
Mailing Ad	dress:	P.O. BO	X 87		GCU # 16	9		49	01 H	lawk	ins l	NE -	Alb	ouqu	erqu	ie, N	1M 8	710	9		
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50)5-34	45- 3	975	ł	Fax	505-	345	-410	17			
Phone #:		(505) 63	2-1199									I	Analy	ysis	Rec	lues	t				
email or F	ax#:			Project Manag	er:									504)							
QA/QC Pad Standa	_		Level 4 (Full Validation)		NELSON VI	ELEZ	s-(8021B)	(Gas only)	(Gas/Diesel)					P04,	PCB's						
Accreditati	ion:			Sampler:	NELSON VI	ELEZ	1 1	(Gas	(Gas		_			NO3, NO2,	8082 P						
□ NELAP	THE REST OF THE PARTY OF THE PA	□ Other		to the state of th	Y Yes	□ No	1	+ TPH	8015B	418.1)	04.1	AH)		03, 1	-		8				114
□ EDD (T	ype)		VI. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	Sample Temp	erature: [🔻 🚫	1	1		d 80	pd 4	od 5	or P.	tals	Z,	ides	7	-VO/-	0.00			3
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX +-MIT	BTEX + MTBE	TPH Method	TPH (Method	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, CI,	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	Chloride (300.0)			Ais Dubbles
2/17/12	1045	WATER	MW #3	40 ml VOA - 2	HCI & Cool	- 1	٧														
2/17/12	1140	WATER	MW #6	40 ml VOA - 2	HCI & Cool	-2	٧														
																				_	
			***************************************																	\perp	
	Andrews and the second and the second																				
	Paris da de la companya de la compa																				
Date:	Time:	Relinquishe	ed by:	Received by:	1	Date Time	1	nark	s:		Andrew Street, Advanced										
421/12	0853	9/1	un of	Mart	Weete	3/21/12 C853				LY T						126					
Date:	Time:	Relinquishe	ed by:	Received by:		Date Time	1			200 E											
1/21/12	1429	Thru	etu Welen	LA3	2/00/1	2 954	l w	ork (Orde	r:	V152	2010)7	Pa	aykey	/: Z	PEA	CIDE	.NV		

Hall Environmental Analysis Laboratory, Inc.

WO#: **1202760**

29-Feb-12

Client:

Blagg Engineering

Project:

GCU #169

Project:	GCU #16	9						une position neces de concession de la region de la regio	alected control of the second		
Sample ID	5ML-RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID:	PBW	Batch	1D: R1	140	F	RunNo: 1	140				
Prep Date:		Analysis D	ate: 2/	24/2012	5	SeqNo: 3	2619	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-Bron	nofluorobenzene	21		20.00		107	76.5	115			
Sample ID	100NG BTEX LCS	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID:	LCSW	Batch	1D: R1	140	F	RunNo: 1	140				
Prep Date:		Analysis D	ate: 2/	24/2012	5	SeqNo: 3	2623	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		20	1.0	20.00	0	99.2	80	120			
Toluene		20	1.0	20.00	0	102	80	120			
Ethylbenzene		20	1.0	20.00	0	102	80	120			
Xylenes, Total		61	2.0	60.00	0	102	80	120			
Surr: 4-Bron	nofluorobenzene	22		20.00		110	76.5	115			nakanada Danimusi nyapajin meneralah (ili melakan melakan
Sample ID	5ML-RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID:	PBW	Batch	1D: R1	157	F	RunNo: 1	157				
Prep Date:		Analysis D	ate: 2/	27/2012	5	SeqNo: 3	3082	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total		ND	2.0								
Surr: 4-Bron	nofluorobenzene	22		20.00		110	76.5	115			
Sample ID	100NG BTEX LCS	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles	numaraban (Poansoncum anders Coloque Coloque Coloque	
Client ID:	LCSW	Batch	1D: R1	157	F	RunNo: 1	157				
Prep Date:		Analysis D	ate: 2/	27/2012	5	SeqNo: 3	3089	Units: µg/L			
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total		62	2.0	60.00	0	103	80	120			

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

23

20.00

E Value above quantitation range

Surr: 4-Bromofluorobenzene

J Analyte detected below quantitation limits

R RPD 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

114

76.5

115

RL Reporting Detection Limit

Page 3 of 3



Hall Environmental Analysis Laboratory 4901 Hawkins NE

Sample Log-In Check List

Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107

Website: www.h	hallenvironmental.com
Client Name: BLAGG Received by/date: M 2/22//2 Logged By: Michelle Garcia 2/22/2012 9:54:00 AM Completed By: Michelle Garcia 2/22/2012 3:58:56 PM Reviewed By: A 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3 2 3	
Chain of Custody	
1. Were seals intact?	Yes No Not Present ✔
2. Is Chain of Custody complete?	Yes ✔ No Not Present
3. How was the sample delivered?	Courier
Log In	
4. Coolers are present? (see 19. for cooler specific information)	Yes ✔ No NA
5. Was an attempt made to cool the samples?	Yes ✔ No NA
6. Were all samples received at a temperature of >0° C to 6.0°C	Yes ✔ No NA
7. Sample(s) in proper container(s)?	Yes ✔ No
8. Sufficient sample volume for indicated test(s)?	Yes ✔ No
9. Are samples (except VOA and ONG) properly preserved?	Yes ✔ No
10. Was preservative added to bottles?	Yes No ✓ NA
11. VOA vials have zero headspace?	Yes No No VOA Vials ✔
12. Were any sample containers received broken?	Yes No ✔
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ✓ No # of preserved bottles checked for pH:
14. Are matrices correctly identified on Chain of Custody?	Yes ✓ No (<2 or >12 unless noted)
15. Is it clear what analyses were requested?	Yes ✓ No Adjusted?
16. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ✓ No Checked by:
Special Handling (if applicable)	oncolled by.
17. Was client notified of all discrepancies with this order?	Yes No NA ✔
Person Notified: Date	A THE AND AREA TO THE HEAD AND AREA AREA AREA AREA AREA AREA AREA ARE
By Whom: Via:	eMail Phone Fax In Person
Regarding:	
Client Instructions:	rannermonna amma zimmanni (filid 675/19070 CARTILLA Russiana) sedangan sebanya kenulukulukulukuluk sepapulukulukuli pilid kenulukulukuluk sepapulukulukuluk sepapulukuluk sepapulukulukuluk sepapulukuluk sepapulukuluk sepapulukuluk sepapulukuluk sepapulukuluk sepapulukuluk sepapuluk sepapu
19 Additional remarks:	

atio	n
ð	itio

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes	:		

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:	BP AME	ERICA P	ROD. CO	<u>).</u>	С	HAIN-OF-CU	JSTODY#:	N	/ A				
GCU # 16	9 - BLOW	& SEP. PIT	S		LAB	ORATORY	(S) USED:	HALL ENVI	RONMENTAL				
UNIT I, S	EC. 35, T29	9N, R12W											
Date:	June 29,	2012			DEV	/ELOPER / S	SAMPLER:	N	J V				
Filename :	06-29-12.V	VK4			F	PROJECT N	MANAGER:	NJV					
WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME				
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED				
	(ft)	(ft)	(ft)	(ft)					(gal.)				
1	1 100.00 91.70 8.30 20.00												
2	2 98.23 88.87 9.36 20.00												
3	97.71	89.23	8.48	20.00	0845	7.31	1,600	16.3	5.75				
4	99.21	90.18	9.03	20.00	-	-	-	_	-				
5	100.80	91.43	9.37	20.00	-	-	-	-	-				
6	100.92	92.18	8.74	20.00	0935	7.48	1,100	16.5	5.50				
			INSTRUME	ENT CALIBR	RATIONS =	4.01/7.00/10.00	2,800						
				DATE	& TIME =	06/23/1912	0645						
NOTES:			ed from well t. h = 1 ft.)				X 7.48 gal./f	ft3) X 3 (well	bores).				
	Ideally a m	ninimum of	three (3) we	ellbore volu	mes:	2.00 " well	diameter =	0.49 gal. / f	ft. of water.				
Comments	or note we	ell diameter	if not stand	ard 2".									
Excellent re	ecovery in M	/IW #3 & #	6. MW #3	- brown tin	t in appeara	nce, MW #	6 - dark gra	y with slig	nt				
-			ed physically										
for purging	and sampli	ing . Collec	ted samples	from MW #	#3 & #6 for	BTEX per	US EPA Met	thod 80210B					
									to the printing of the second				

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 \sim 2.00 ft. above grade.

Lab Order 1207172

Date Reported: 7/16/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW # 3

Project: GCU # 169

Collection Date: 6/29/2012 8:45:00 AM

Lab ID: 1207172-001

Matrix: AQUEOUS Received Date: 7/6/2012 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES S	HORT LIST				Analyst: RAA
Benzene	ND	1.0	μg/L	1	7/6/2012 5:06:56 PM
Toluene	ND	1.0	μg/L	1	7/6/2012 5:06:56 PM
Ethylbenzene	ND	1.0	μg/L	1	7/6/2012 5:06:56 PM
Xylenes, Total	ND	2.0	μg/L	1	7/6/2012 5:06:56 PM
Surr: 1,2-Dichloroethane-d4	93.6	70-130	%REC	1	7/6/2012 5:06:56 PM
Surr: 4-Bromofluorobenzene	101	70-130	%REC	1	7/6/2012 5:06:56 PM
Surr: Dibromofluoromethane	104	69.8-130	%REC	1	7/6/2012 5:06:56 PM
Surr: Toluene-d8	95.3	70-130	%REC	1	7/6/2012 5:06:56 PM

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

Lab Order 1207172

Date Reported: 7/16/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW # 6

 Project:
 GCU # 169
 Collection Date: 6/29/2012 9:35:00 AM

 Lab ID:
 1207172-002
 Matrix: AQUEOUS
 Received Date: 7/6/2012 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SI	HORT LIST				Analyst: RAA
Benzene	ND	1.0	μg/L	1	7/6/2012 5:35:19 PM
Toluene	40	1.0	μg/L	1	7/6/2012 5:35:19 PM
Ethylbenzene	300	10	μg/L	10	7/10/2012 3:27:05 PM
Xylenes, Total	1400	20	µg/L	10	7/10/2012 3:27:05 PM
Surr: 1,2-Dichloroethane-d4	96.4	70-130	%REC	1	7/6/2012 5:35:19 PM
Surr: 4-Bromofluorobenzene	94.0	70-130	%REC	1	7/6/2012 5:35:19 PM
Surr: Dibromofluoromethane	103	69.8-130	%REC	1	7/6/2012 5:35:19 PM
Surr: Toluene-d8	92.5	70-130	%REC	1	7/6/2012 5:35:19 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

Page 2 of 3

C	naın-d	ot-Cus	tody Record	Turn-Around	ıme:		1.	HALL ENV				/TE	20	N	F	NI	ГΔ	D			
Client:	BLAG	G ENGR.	/ BP AMERICA	✓ Standard	Rush _													RA			
				Project Name:							ww	w.ha	allen	viro	nme	ntal	l.com	n			
Mailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 H	ławk	kins !	NE -	- Alk	ouqu	ıerqı	ue, N	MV 8	37109	9		
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50)5-3	45-3	975		Fax	505	345	-410)7			
Phone #:		(505) 63	2-1199									1	Anal	ysis	Rec	lues	st				
email or F	ax#:			Project Manag	ger:									504)							
QA/QC Pad Standa	-		Level 4 (Full Validation)		NELSON VI	ELEZ	84-(8021B)	(yluo	Method 8015B (Gas/Diesel)					P04,	PCB's						e
Accreditat	ion:			Sampler:	NELSON VI	ELEZ	8	TPH (Gas	(Gas					102,	82 P						ldw
□ NELAF	1	□ Other		On Ice:	Yes	□ No] 🛊	TPH	15B	18.1	04.1	4H)		3, 6	/ 80		7				e sa
□ EDD (1	ype)	T		Sample Temp	erature:	10	1	BE +	08 p	od 4	od 5	or P	tals	Z,	ides	4	-00/-	0.00		e	oosit
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX +**	BTEX + MTBE	TPH Metho	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO3, NO2,	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	Chloride (300.0)		Grab sample	5 pt. composite sample
6/29/12	0845	WATER	MW # 3	40 ml VOA - 2	HCI & Cool	-601	٧													٧	
																				\Box	
6/29/12	0935	WATER	MW # 6	40 ml VOA - 2	HCI & Cool	-007	٧													٧	
`																					
		. **																			
																				\neg	
Date: 7/5/12	Time: 1430	Relinquishe	ed by:	Received by:	4 6010	Date Time 7/5/12 /430		nark LL DI		LY T	О ВР):									
Date: 7/5/12	Time:	Relinquishe	nath hala	Received by:	1 Can	Date Time	Je	ff Pea								on, N	iM 8	7401			
	If necessa	ary samples s	ubmitted to Hall Environmental may be	subcontracted to other	anarditad Inhantaria	- Lucy of the															

Hall Environmental Analysis Laboratory, Inc.

WO#: 1207172

16-Jul-12

Client: Blagg Engineering

Project: GCU # 169

Project: GCU #	169									
Sample ID 5ml-rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260: Volatile	es Short L	ist	
Client ID: PBW	Batch	ID: R3	963	F	RunNo: 3	963				
Prep Date:	Analysis D	ate: 7/	6/2012	5	SeqNo: 1	13355	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: 1,2-Dichloroethane-d4	9.4		10.00		93.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	10		10.00		101	69.8	130			
Surr: Toluene-d8	9.3		10.00		93.5	70	130			
Sample ID 100ng Ics	SampT	ype: LC	s	Tes	tCode: El	PA Method	8260: Volatile	es Short L	ist	
Client ID: LCSW	Batch	ID: R3	963	F	RunNo: 3	963				
Prep Date:	Analysis D	ate: 7/	6/2012	5	SeqNo: 1	13356	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.8	84.1	126			
Toluene	18	1.0	20.00	0	91.8	80	120			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	11		10.00		106	69.8	130			
Surr: Toluene-d8	9.1		10.00		90.9	70	130			
Sample ID 5ml-rb	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8260: Volatile	es Short L	.ist	
Client ID: PBW	Batch	ID: R3	944	F	RunNo: 3	944				
Prep Date:	Analysis D	ate: 7/	10/2012	5	SeqNo: 1	14321	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		115	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.7		10.00		97.5	70	130			
Sample ID 100ng Ics	SampT	ype: LC	s	Tes	tCode: El	PA Method	8260: Volatile	es Short L	.ist	
Client ID: LCSW	Batch	ID: R3	944	F	RunNo: 3	944				
Prep Date:	Analysis D	ate: 7/	10/2012	5	SeqNo: 1	14322	Units: %RE	С		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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

RL Reporting Detection Limit

Page 3 of 3



4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-410;

Website: www.hallenvironmental.com

Sample Log-In Check List

	Website, www.nat	ienvironmeniai.com		
Client Name: BLAGG	/ / w	ork Order Number: 12	207172	
Received by/date:	07/06/12			
Logged By: Lindsay Mangin	7/6/2012 9: 45 :00 AM	Timber	Hayo	
Completed By: Lindsay Mangin	7/6/2012 10:34:57 AM	0 3	Horo	
Reviewed By:	07/00/12			
Chain of Custody				
1. Were seals intact?		Yes No	Not Present	
2. Is Chain of Custody complete?		Yes ✓ No □	Not Present	
			Not Present 🗀	
3. How was the sample delivered?		Courier		
<u>Log In</u>				
4. Coolers are present? (see 19. for cooler sp	pecific information)	Yes 🗹 No 🗌	NA 🗌	
- 1		v	NA [
Was an attempt made to cool the samples	i?	Yes 🗸 No	NA .	
6. Were all samples received at a temperatur	re of >0° C to 6.0°C	Yes 🗸 No 🗌	NA 🗌	
7. Sample(s) in proper container(s)?		Yes 🗸 No		
8. Sufficient sample volume for indicated test	(s)?	Yes 🗸 No		
9. Are samples (except VOA and ONG) prope	erly preserved?	Yes 🗸 No		
10. Was preservative added to bottles?		Yes No 🗸	NA 🗌	
			- 104 VII-1- []	
11. VOA vials have zero headspace?	•		No VOA Vials	
12. Were any sample containers received brok	(en?	Yes No 🗹	# of preserved	
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes V No	bottles checked	-
	of Custody?	Yes 🗸 No 🗌	for pH:	12 unless noted)
14. Are matrices correctly identified on Chain of	of Custody?	Yes V No	Adjusted?	2 unless noted)
15. Is it clear what analyses were requested?				
16. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹 No 🗌	Checked by:	ı
Special Handling (if applicable)			Checked by.	
17. Was client notified of all discrepancies with	this order?	Yes No 🗸	NA 🗌	
Person Notified:	Detail			7
	Date:	Datas Dhana	7 F	
By Whom:	Via:	eMail Phone	Fax In Person	
Regarding:				
Client Instructions:				
18. Additional remarks:				
40. Cooler Information				
19. Cooler Information COOLER NO TEMP	00 1			
	COMBITION	DEALINTAL	To lake	
1.0°	6000	SEAL INTAC	ollow.	
Page 1 of 1			1	

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CHAIN-OF-CUSTODY #: N / A CLIENT: BP AMERICA PROD. CO. GCU #169 - BLOW & SEP. PITS LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W

Date: September 14, 2012 DEVELOPER / SAMPLER : NJV

NJVFilename: 09-14-12.WK4 PROJECT MANAGER:

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1	100.00	92.74	7.26	20.00	-	-	-	-	-
2	98.23	90.74	7.49	20.00	-	_	-	-	-
3	97.71	90.15	7.56	20.00	1145	7.28	1,500	17.3	6.00
4	99.21	91.16	8.05	20.00	-	-	-	-	-
5	100.80	92.55	8.25	20.00	-	-	-	-	-
6	100.92	93.48	7.44	20.00	1230	7.44	1,200	21.5	6.25

INSTRUMENT CALIBRATIONS =

09/12/12 DATE & TIME =

4.01/7.00/10.00

NOTES: Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes: 2.00 " well diameter = 0.49 gal. / ft. of water.

2,800

1050

Comments or note well diameter if not standard 2 ".

Excellent recovery in MW #3 & #6. MW #3 - brown tint in appearance, MW #6 - dark gray with slight apparent hydrocarbon odor detected physically). Used subsersible pump and vinyl clear tubing in both MW's for purging and sampling. Collected samples from MW #3 & #6 for BTEX per US EPA Method 80210B. for BTEX per US EPA Method 8260B.

Top of casing MW #1 ~ 2.00 ft., MW #2 ~ 2.00 ft., MW #3 ~ 2.00 ft., MW #4 ~ 2.00 ft., MW #5 ~ 2.00 ft., MW #6 ~ 2.00 ft. above grade.

Lab Order 1209727

Date Reported: 9/21/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #3

Project:

GCU #169

Collection Date: 9/14/2012 11:45:00 AM

Lab ID: 1209727-001

Matrix: AQUEOUS

Received Date: 9/18/2012 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	μg/L	1	9/19/2012 12:32:08 AM
Toluene	ND	1.0	μg/L	1	9/19/2012 12:32:08 AM
Ethylbenzene	ND	1.0	μg/L	1	9/19/2012 12:32:08 AM
Xylenes, Total	ND	2.0	μg/L	1	9/19/2012 12:32:08 AM
Surr: 4-Bromofluorobenzene	81.8	69.7-152	%REC	1	9/19/2012 12:32:08 AM

Ot	ıa	li	fi	e	r	S	:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded H
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits Page 1 of 4

Lab Order 1209727

Date Reported: 9/21/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project:

Lab ID:

GCU #169

1209727-002

Client Sample ID: MW #6

Collection Date: 9/14/2012 12:30:00 PM

Received Date: 9/18/2012 10:00:00 AM Matrix: AQUEOUS

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	10	μg/L	10	9/19/2012 1:02:18 AM
Toluene	45	10	μg/L	10	9/19/2012 1:02:18 AM
Ethylbenzene	260	10	μg/L	10	9/19/2012 1:02:18 AM
Xylenes, Total	1400	20	μg/L	10	9/19/2012 1:02:18 AM
Surr: 4-Bromofluorobenzene	79.5	69.7-152	%REC	10	9/19/2012 1:02:18 AM

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Sample pH greater than 2
- Reporting Detection Limit

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded H
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits 2 of 4

C	hain-c	of-Cus	stody Record	Turn-Around T	ime:			T	1 1	ŀ	4.6	11	F	NV	/TE	20	N	F	NT	'ΔΙ	
Client:	BLAG	G ENGR.	/ BP AMERICA	Standard Standard	Rush				F										AT(
				Project Name:								w.ha									•
Mailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 H									37109	9		
L			FIELD, NM 87413	Project #:					el. 50					-ax							
Phone #:		(505) 63					Analysis Request														
email or F	ax#:	(202) 22		Project Manag	er;									-							
QA/QC Pa	_		Level 4 (Full Validation)		NELSON VI	ELEZ	(8021B)	only)	/Diesel)					PO4, SO4)	PCB's						a)
Accreditat	ion:			Sampler:	NELSON VI	ELEZ MV	-\$(8)	(Gas	(Gas,					NO2,	82 P(sample
□ NELAF)	□ Other		On Ice:	Yes	□ No :	1	FPH	15B	(1.81)4.1)	Œ		33, N	/ 80		-				
□ EDD (ype)	1		Sample Tempe	rature: IN		1	3E +	08 p	od 43	od 50	or P/	tals	Z, N(ides	7	-V0/	0.00		e e	osit
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX +-NHT	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO3,	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	Chloride (300.0)		rab	5 pt. composite
9/14/12	1145	WATER	MW # 3	40 ml VOA - 2	HCl & Cool	-601	٧													٧	
9/14/12	1230	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-002	٧													٧	
																					\top
Date: 7/17/17	Time: 0825	Relinquishe	Mm Vf.	Received by:	belen	Date Time 9/17/12 825		nark LL DI		LY T	О ВЕ);								,1	
Date:	Time:	Relinquishe	- U	Received by:		Date / fime	}					gy Co in er			-	on, N	8 MI	7401			

Hall Environmental Analysis Laboratory, Inc.

WO#:

1209727

21-Sep-12

Client:

Blagg Engineering

Project:

GCU #169

Sample ID 5ML RB

SampType: MBLK

TestCode: EPA Method 8015B: Gasoline Range

PBW

LCSW

Batch ID: R5614

RunNo: 5614

Client ID:

Units: %REC

Prep Date:

Analysis Date: 9/18/2012

SeqNo: 160860

119

Analyte

Result

SPK value SPK Ref Val

%REC LowLimit 93.2 69.8 HighLimit %RPD

RPDLimit

Qual

Surr: BFB

19

20.00

TestCode: EPA Method 8015B: Gasoline Range

%RPD

Sample ID 2.5UG GRO LCS

SampType: LCS

Batch ID: R5614 Analysis Date: 9/18/2012

RunNo: 5614 SeqNo: 160861

Units: %REC

Qual

Analyte

Client ID:

Prep Date:

Result

SPK value SPK Ref Val %REC

104

69.8

HighLimit

Surr: BFB

21

20.00

LowLimit

RPDLimit

119

Qualifiers:

P

Value exceeds Maximum Contaminant Level.

Value above quantitation range

Analyte detected below quantitation limits Sample pH greater than 2

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit ND

RPD outside accepted recovery limits

Page 3 of 4

Hall Environmental Analysis Laboratory, Inc.

WO#: **1209727**

21-Sep-12

Client: Blagg Engineering

Project: GCU #169

Sample ID 5ML RB TestCode: EPA Method 8021B: Volatiles SampType: MBLK Client ID: PBW Batch ID: R5614 RunNo: 5614 Prep Date: Analysis Date: 9/18/2012 SeqNo: 160875 Units: µg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual ND Benzene 1.0

 Benzene
 ND
 1.0

 Toluene
 ND
 1.0

 Ethylbenzene
 ND
 1.0

 Xylenes, Total
 ND
 2.0

Surr: 4-Bromofluorobenzene 19 20.00 94.2 69.7 152

Sample ID 100NG BTEX LC	S SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	1D: R5	614	F	RunNo: 5	614				
Prep Date:	Analysis D	ate: 9/	18/2012	S	SeqNo: 1	60876	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.5	80	120			
Toluene	20	1.0	20.00	0	102	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		92.6	69.7	152			

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

HALL ENVIRON TAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: BLAGG Work Order Number: 1209727 49118/12 Received by/date: anne Am Logged By: Anne Thorne 9/18/2012 10:00:00 AM Completed By: an Ham Anne Thorne 9/18/2012 Reviewed By: -Chain of Custody Yes No Not Present V 1. Were seals intact? Yes V No Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In Yes V No NA 4. Coolers are present? (see 19. for cooler specific information) NA I Yes V No 5. Was an attempt made to cool the samples? Yes V No NA 🗌 6. Were all samples received at a temperature of >0° C to 6.0°C Yes ✓ No 🗆 7 Sample(s) in proper container(s)? Yes V No 8 Sufficient sample volume for indicated test(s)? Yes 🗸 No 🗌 Are samples (except VOA and ONG) properly preserved? NA 🗌 10. Was preservative added to bottles? Yes No V Yes ✓ No ☐ No VOA Viais ☐ 11. VOA vials have zero headspace? Yes No V 12. Were any sample containers received broken? # of preserved Yes V No 13. Does paperwork match bottle labels? bottles checked (Note discrepancies on chain of custody) for pH: Yes V No 14. Are matrices correctly identified on Chain of Custody? (<2 or >12 unless noted) Yes V No Adjusted? 15. Is it clear what analyses were requested? Yes V No 16. Were all holding times able to be met? (If no, notify customer for authorization.) Checked by Special Handling (if applicable) Yes No NA V 17. Was client notified of all discrepancies with this order? Person Notified: Date By Whom: eMail Phone Fax In Person Regarding: Client Instructions: 18. Additional remarks: - cola Sample pHe 70, - coza Sample pHe 5.5 NB9/19/12 19. Cooler Information Cooler No Temp °C | Condition Seal Intact | Seal No Seal Date Signed By Good Yes

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. N/A CHAIN-OF-CUSTODY #: GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : Date: February 27, 2013 GCU 169 mw log 02-27-13.xls PROJECT MANAGER: Filename: WELL WELL WATER DEPTH TO TOTAL SAMPLING На CONDUCT TEMP. VOLUME ELEV. DEPTH **PURGED** ELEV. WATER TIME (umhos) (celcius) (ft) (ft) (ft) (ft) (gal.) 100.00 92.08 7.92 20.00 2 98.23 89.15 9.08 20.00 3 97.71 89.58 8.13 20.00 -4 99.21 90.50 8.71 20.00 5 91.83 8.97 20.00 100.80 6 100.92 92.86 8.06 20.00 1025 7.15 1.100 9.3 6.00 INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800 DATE & TIME = 02/24/13 1500 NOTES: Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2". Excellent recovery in MW #6. MW #6 - dark gray with slight apparent hydrocarbon odor detected physically). Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per US EPA Method 8260B Top of casing MW #1 ~ 2.00 ft., MW #2 ~ 2.00 ft., MW #3 ~ 2.00 ft., MW #4 ~ 2.00 ft., MW #5 ~ 2.00 ft., MW #6 ~ 2.00 ft. above grade.

on-site	9:40 AM	temp	27 F
off-site	10:35 AM	temp	30 F
sky cond.		Sunny	
wind speed	0 - 5	direct.	CALM

Lab Order 1303137

Date Reported: 3/7/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

GCU #169 Project:

Collection Date: 2/27/2013 10:25:00 AM

Lab ID: 1303137-001 Matrix: AQUEOUS Received Date: 3/5/2013 9:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	5.0	μg/L	5	3/6/2013 12:33:22 AM
Toluene	ND	5.0	µg/L	5	3/6/2013 12:33:22 AM
Ethylbenzene	110	5.0	μg/L	5	3/6/2013 12:33:22 AM
Xylenes, Total	330	10	µg/L	5	3/6/2013 12:33:22 AM
Surr: 4-Bromofluorobenzene	99.4	69.7-152	%REC	5	3/6/2013 12:33:22 AM

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH greater than 2
- Reporting Detection Limit

- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits 1 of 2

С	Chain-of-Custody Record			Turn-Around T	ime:] ,	ı		ŀ	dΕ		F	NV	/TF	30	N	F	NT	ΔΙ		
Client:	BLAG	G ENGR.	/ BP AMERICA	☑ Standard	Rush _				F										ATC			
				Project Name:				À	and the same			w.ha									-	
Mailing A	ddress:	P.O. BO	X 87	1	GCU # 16	9		49	01 F	ławk									9			
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50	05-34	45-3	975	Į	Fax	505-	-345	-410	7				
Phone #:		(505) 63	2-1199									ļ	hnal	ysis	Red	ques	t					*
email or F	ax#:			Project Manag	er:									504)						T		
QA/QC Pa			Level 4 (Full Validation)		NELSON VI	ELEZ	48's (8021B)	only)	(Diesel)					PO4, SC	PCB's							
Accreditat				Sampler:	NELSON VI	ELEZ 91V	80	Gas	Gas/					02,	32 PC						sample	
□ NELAF)	□ Other		SACROPPING THE PRODUCT OF SACROPPING	"(√Yes	□ No	1	TPH (15B (18.1)	504.1)	Œ)3, N	/ 808		2					111
□ EDD (Гуре)	The second section of the sect		Sample Tempe	erature: C		l	E +	08 p	od 43	od 5(or P/	tals	I, NC	ides	2	-V0/	0.00	.	e .	osit	1 2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX +-MTE	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO3, NO2,	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	Chloride (300.0)		rab	5 pt. composite	A ! D L. L.
2/27/13	1025	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-001	٧													V	T	Inner
																				\top	\top	deserte
																				T	\top	
Annual An																				+	\forall	-
							 	-											1	+	+	
3																			\neg	+	+	-
									 			-				-				+	+	
-							-		\vdash											+	+	-
							-													+	+	-
										-				_			_			+	+	-
																				+	+	
							-				_	-							_	+	+	_
Date:	Time:	Relinquish	ed by:	Received by:		Date Time	Rer	nark	 :s:	L			L			<u> </u>						-
3/4/13	9//	90	le Uj	Mister	Walter	3/4/13 911	ВІ	LL DI	REC	TLY T 200 f				Form	ologt	on N	O MIL	7401				
Date:	Time:	Relinquish	ed by: Jalla	Received by:		Date Time			-	se O		-			_	υπ, r	vivi ő	7401	3			
11/10	11 130	1/ WUN	or villa		03/0	2 13 OJA	4													· ·		_

Hall Environmental Analysis Laboratory, Inc.

WO#: **1303137**

07-Mar-13

Client: Blagg Engineering

Project: GCU #169

Sample ID: 5ML RB TestCode: EPA Method 8021B: Volatiles SampType: MBLK Client ID: **PBW** Batch ID: R8983 RunNo: 8983 Units: µg/L Prep Date: Analysis Date: 3/5/2013 SeqNo: 256581 %RPD **RPDLimit** Qual Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Analyte ND 1.0

 Benzene
 ND
 1.0

 Toluene
 ND
 1.0

 Ethylbenzene
 ND
 1.0

 Xylenes, Total
 ND
 2.0

Surr: 4-Bromofluorobenzene 19 20.00 93.8 69.7 152

Sample ID: 100NG BTEX LCS	S	Tes	tCode: El	PA Method	8021B: Volati	iles				
Client ID: LCSW	Batch	ID: R8	983	F	RunNo: 89	983				
Prep Date:	ate: 3/	5/2013	\$	SeqNo: 2	56582	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	f Val %REC LowLimit HighLimit				RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	80	120			
Toluene	21	1.0	20.00	0	107	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	66	2.0	60.00	0	109	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		104	69.7	152			

Qualifiers:

P Sample pH greater than 2

R RPD outside accepted recovery limits

Page 2 of 2

^{*} Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation 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 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-410'

Website: www.hallenvironmental.com

Sample Log-In Check List

BLAGG Client Name: Work Order Number: 1303137 AG- 03/05/13 Received by/date: anne Am 3/5/2013 9:55:00 AM Logged By: **Anne Thorne** anne Am Completed By: 3/5/2013 Anne Thorne Reviewed By: Chain of Custody 1. Were seals intact? Yes No Not Present Yes V No Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In NA Yes V No _ 4. Coolers are present? (see 19. for cooler specific information) Yes V No 5. Was an attempt made to cool the samples? Yes V No Were all samples received at a temperature of >0° C to 6.0°C Yes V No 7. Sample(s) in proper container(s)? Yes V No 8 Sufficient sample volume for indicated test(s)? 9. Are samples (except VOA and ONG) properly preserved? Yes V No Yes No V NA 10. Was preservative added to bottles? Yes ✓ No ☐ No VOA Vials ☐ 11. VOA vials have zero headspace? Yes No V 12. Were any sample containers received broken? # of preserved Yes 🗸 No 🗌 13. Does paperwork match bottle labels? bottles checked (Note discrepancies on chain of custody) for pH: Yes V No (<2 or >12 unless noted) 14. Are matrices correctly identified on Chain of Custody? Adjusted? Yes V No 15. Is it clear what analyses were requested? Yes V No 16. Were all holding times able to be met? (If no, notify customer for authorization.) Checked by: Special Handling (if applicable) Yes No NA 🗸 17. Was client notified of all discrepancies with this order? Person Notified: Date By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 18. Additional remarks: 19. Cooler Information Cooler No Temp °C Condition Seal Intact | Seal No Seal Date Signed By 1.0 Good Yes

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CHAIN-OF-CUSTODY #:

2,800

0600

4.01/7.00/10.00

N/A

GCU # 169 HALL ENVIRONMENTAL LABORATORY (S) USED: UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : Date: May 29, 2013 GCU 169 mw log 05-29-13.xls PROJECT MANAGER: Filename: WELL WELL WATER DEPTH TO TOTAL SAMPLING На CONDUCT TEMP. VOLUME ELEV. ELEV. WATER **DEPTH** (umhos) (celcius) **PURGED** # TIME (ft) (ft) (ft) (ft) (gal.) 100.00 91.92 8.08 20.00 0815 7.32 1,100 13.1 5.75 7.00 1,300 13.4 5.25 2 98.23 89.02 9.21 20.00 0915 3 97.71 89.44 8.27 20.00 1010 6.92 1,400 13.6 5.75 4 99.21 90.35 8.86 20.00 1110 7.02 1,200 13.4 5.50 7.04 12.8 5 100.80 91.69 9.11 20.00 1210 1,200 5.25 6 100.92 92.62 8.30 20.00 1315 7.21 1,100 13.7 5.75

NOTES: Volume of water purged from well prior to sampling; $V = pi \times r2 \times h \times 7.48 \text{ gal./ft3} \times 3 \text{ (wellbores)}$. (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

DATE & TIME =

INSTRUMENT CALIBRATIONS =

Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water.

Comments or note well diameter if not standard 2 ".

CLIENT: BP AMERICA PROD. CO.

Excellent recovery in all MW's. MW #6 - dark gray with slight apparent hydrocarbon odor detected physically), all other wells - light brownish tint. Purged well using 2 inch submersible electric pump, new/clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from all MW's for BTEX per US EPA Method 8260B & general chemistry constituents.

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 \sim 2.00 ft. above grade .

on-site	7:15 AM	temp	52 F
off-site	1:15 PM	temp	69 F
sky cond.		Sunny	
wind speed	5 - 15	direct.	WSW-WNW

Lab Order 1305B97

Date Reported: 6/10/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #1

Project: GCU #169

Collection Date: 5/29/2013 8:15:00 AM

Lab ID: 1305B97-001

Matrix: AQUEOUS Received Date: 5/31/2013 10:15:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Fluoride	0.36	0.10	mg/L	1	5/31/2013 8:56:25 PM	R11029
Chloride	9.2	0.50	mg/L	1	5/31/2013 8:56:25 PM	R11029
Sulfate	170	10	mg/L	20	5/31/2013 9:08:50 PM	R11029
Nitrate+Nitrite as N	4.2	1.0	mg/L	5	6/1/2013 12:15:02 AM	R11029
EPA METHOD 200.7: DISSOLVED I	METALS				Analyst	: JLF
Iron	0.037	0.020	mg/L	1	6/4/2013 2:46:41 PM	R11088
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS				Analyst	: KS
Total Dissolved Solids	646	40.0	* mg/L	1	6/5/2013 6:04:00 PM	7747

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

- 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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 1
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1305B97

Date Reported: 6/10/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #2

Project: GCU #169

Collection Date: 5/29/2013 9:15:00 AM

Lab ID: 1305B97-002

Matrix: AQUEOUS

Received Date: 5/31/2013 10:15:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: JRR
Fluoride	0.37	0.10	mg/L	1	5/31/2013 9:46:05 PM	R11029
Chloride	14	0.50	mg/L	1	5/31/2013 9:46:05 PM	R11029
Sulfate	270	10	mg/L	20	5/31/2013 9:58:30 PM	R11029
Nitrate+Nitrite as N	3.0	1.0	mg/L	5	6/1/2013 12:27:27 AM	R11029
EPA METHOD 200.7: DISSOLVE	D METALS				Analys	t: JLF
Iron	0.042	0.020	mg/L	1	6/4/2013 2:52:01 PM	R11088
SM2540C MOD: TOTAL DISSOL	VED SOLIDS				Analys	t: KS
Total Dissolved Solids	840	40.0	* mg/L	1	6/5/2013 6:04:00 PM	7747

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

- 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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Do
- Not Detected at the Reporting Limit Page 2 of 10
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1305B97

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/10/2013

CLIENT: Blagg Engineering Client Sample ID: MW #3

 Project:
 GCU #169
 Collection Date: 5/29/2013 10:10:00 AM

 Lab ID:
 1305B97-003
 Matrix: AQUEOUS
 Received Date: 5/31/2013 10:15:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	2.0	P	μg/L	2	5/31/2013 8:38:12 PM	R11006
Toluene	ND	2.0	P	μg/L	2	5/31/2013 8:38:12 PM	R11006
Ethylbenzene	ND	2.0	Р	μg/L	2	5/31/2013 8:38:12 PM	R11006
Xylenes, Total	ND	4.0	P	µg/L	2	5/31/2013 8:38:12 PM	R11006
Surr: 4-Bromofluorobenzene	91.3	69.4-129	Р	%REC	2	5/31/2013 8:38:12 PM	R11006
EPA METHOD 300.0: ANIONS						Analyst	JRR
Fluoride	0.31	0.10		mg/L	1	5/31/2013 10:10:55 PM	R11029
Chloride	17	0.50		mg/L	1	5/31/2013 10:10:55 PM	R11029
Sulfate	200	10		mg/L	20	5/31/2013 10:23:19 PM	R11029
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/1/2013 12:39:52 AM	R11029
EPA METHOD 200.7: DISSOLVED MET	ΓALS					Analyst	JLF
Iron	ND	0.020		mg/L	1	6/4/2013 3:05:05 PM	R11088
SM2540C MOD: TOTAL DISSOLVED S	OLIDS					Analyst	KS
Total Dissolved Solids	814	40.0	*	mg/L	1	6/5/2013 6:04:00 PM	7747

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

- 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

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

Lab Order 1305B97

Date Reported: 6/10/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #4

 Project:
 GCU #169
 Collection Date: 5/29/2013 11:10:00 AM

 Lab ID:
 1305B97-004
 Matrix: AQUEOUS
 Received Date: 5/31/2013 10:15:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Fluoride	0.35	0.10	mg/L	1	5/31/2013 10:35:43 PM	R11029
Chloride	9.7	0.50	mg/L	1	5/31/2013 10:35:43 PM	R11029
Sulfate	160	10	mg/L	20	5/31/2013 10:48:08 PM	R11029
Nitrate+Nitrite as N	3.3	1.0	mg/L	5	6/1/2013 12:52:17 AM	R11029
EPA METHOD 200.7: DISSOLVED M	ETALS				Analyst	: JLF
Iron	ND	0.020	mg/L	1	6/4/2013 3:10:20 PM	R11088
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analyst	: KS
Total Dissolved Solids	672	40.0	* mg/L	1	6/5/2013 6:04:00 PM	7747

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

- 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

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 4 of 10
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1305B97

Date Reported: 6/10/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #5

 Project:
 GCU #169
 Collection Date: 5/29/2013 12:10:00 PM

 Lab ID:
 1305B97-005
 Matrix: AQUEOUS
 Received Date: 5/31/2013 10:15:00 AM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: JRR 0.40 0.10 5/31/2013 11:00:33 PM R11029 Fluoride mg/L 0.50 5/31/2013 11:00:33 PM R11029 Chloride 14 mg/L 1 Sulfate 140 10 mg/L 5/31/2013 11:12:58 PM R11029 Nitrate+Nitrite as N 1.0 6/1/2013 1:04:42 AM R11029 ND mg/L **EPA METHOD 200.7: DISSOLVED METALS** Analyst: JLF 6/4/2013 3:19:10 PM R11088 1.2 0.10 mg/L SM2540C MOD: TOTAL DISSOLVED SOLIDS Analyst: KS 6/5/2013 6:04:00 PM 7747 Total Dissolved Solids 715 100 mg/L

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

- 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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Page 5 of 10
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1305B97**Date Reported: **6/10/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #6

 Project:
 GCU #169
 Collection Date: 5/29/2013 1:15:00 PM

 Lab ID:
 1305B97-006
 Matrix: AQUEOUS
 Received Date: 5/31/2013 10:15:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	5.0	μg/L	5	5/31/2013 11:09:34 PM	R11006
Toluene	14	5.0	μg/L	5	5/31/2013 11:09:34 PM	R11006
Ethylbenzene	220	5.0	μg/L	5	5/31/2013 11:09:34 PM	R11006
Xylenes, Total	910	10	μg/L	5	5/31/2013 11:09:34 PM	R11006
Surr: 4-Bromofluorobenzene	128	69.4-129	%REC	5	5/31/2013 11:09:34 PM	R11006
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Fluoride	0.45	0.10	mg/L	1	5/31/2013 11:25:24 PM	R11029
Chloride	10	0.50	mg/L	1	5/31/2013 11:25:24 PM	R11029
Sulfate	48	10	mg/L	20	5/31/2013 11:37:49 PM	R11029
Nitrate+Nitrite as N	ND	1.0	mg/L	5	6/1/2013 1:17:07 AM	R11029
EPA METHOD 200.7: DISSOLVED ME	TALS				Analyst	: JLF
Iron	0.60	0.020	* mg/L	1	6/4/2013 3:21:25 PM	R11088
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analyst	: KS
Total Dissolved Solids	545	100	* mg/L	1	6/5/2013 6:04:00 PM	7747

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

- 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

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

C	Chain-of-Custody Record				Time:		HALL ENVIRON ENTAL															
Client:	BLAG	G ENGR.	/ BP AMERICA	Standard Standard	Rush _														ATC			
				Project Name:					Phaggater ex		ww	w.ha	allen	viro	nme	ntal	.con	n				
Mailing A	ddress:	P.O. BO	X 87	1	GCU # 16	9		49	01 H	lawk	ins	NE -	- Alb	uqu	ierq	ue, N	MIN	3710	19			
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50)5-34	15-3	975		Fax	505	-345	-410)7				
Phone #:		(505) 63	2-1199	1			1					I	Anal	ysis	Red	ques	st					1
email or F	ax#:			Project Manag	jer:		<u>~</u>							(4)						T	T	
QA/QC Pad Standa	-		Level 4 (Full Validation)		NELSON VE	ELEZ	(8021B)	only)	(MRO)			15)		PO4,504)			עוד	_			e l	
Accreditat	tion:			Sampler:	NELSON VE	LEZ grv	-4	TPH (Gas	DRO/	1	1)	8270SIMS)	カン	(F,CI,NO3,NO2,	Solids	red)	Ł				sample	
□ NELAF)	☐ Other		On Ice:	r≸ Yes	□ No	Ŧ	TPH	_	418.1)	504.1)	827(S	6		filte	1					:
□ EDD (1	Гуре)	1		Sample Temperature: \- \C			+	(GR			ŏ	etal	CI,N	olve) snc	1		.	ole	osit	11	
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1305B97	BTEX ←₩	BTEX + MTBE	TPH 8015B (GRO	TPH (Method	EDB (Method	PAH (8310	RCRA 8 Metals	Anions (F,	Total Dissolved	Iron, Ferrous (filtered)	Nitrate N			rab	5 pt. composite	A1. 7. 1. 1. 1
5/29/13	0815	WATER	MW # 1	500 ml - 1	Cool	-001								٧	٧				,	٧		
5/29/13	0815	WATER	MW # 1	250 ml - 1	HNO ₃ & Cool	-001										٧				٧		_
5/29/13	0815	WATER	MW # 1	250 ml - 1	H ₂ SO ₄	-001											٧			٧		_
5/29/13	0915	WATER	MW # 2	500 ml - 1	Cool	-002								٧	٧					٧		_
5/29/13	0915	WATER	MW # 2	250 ml - 1	HNO ₃ & Cool	-002										٧			,	٧		_
5/29/13	0915	WATER	MW # 2	250 ml - 1	H₂SO ₄	-002											٧			٧		_
5/29/13	1010	WATER	MW # 3	40 ml VOA - 2	HCI & Cool	-003	٧												<u> </u>	٧		_
5/29/13	1010	WATER	MW # 3	500 mi - 1	Cool	-003								٧	٧				<u>'</u>	٧		_
5/29/13	1010	WATER	MW # 3	250 ml - 1	HNO ₃ & Cool	- 003										٧				٧		_
5/29/13	1010	WATER	MW # 3	250 ml - 1	H ₂ SO ₄	-03											٧			٧	_	_
																				_	\perp	_
Date: 5/30/13				Received by: Date Time Remarks: Pg. 10F. BILL DIRECTLY TO BP: Loff Roses 200 Energy Court Formington NIM 87001																		
Date:	10000		Received by: Date Time				Jeff Peace, 200 Energy Court, Farmington, NM 87401															
2/30/13	930/13 1745 (mustul Jastens)		1	व्याहित्व	1015	Find Purchase Order in email from BP.																

C	Chain-of-Custody Record			Lurn-Around L	ime:		,	1 1	1	-	IA	LL	EI	VV	/IF	20	N	EN	ITA	\L	
Client:	BLAG	G ENGR.	/ BP AMERICA		Rush				_									RA			r
				Project Name:													.com				
Mailing A	ddress:	P.O. BO	X 87	1	GCU # 16	9		490)1 H									7109			
		BLOOM	FIELD, NM 87413	Project #:						5-34							-410				
Phone #:		(505) 63	2-1199	1								A	naly	sis	Rec	lues	t	E			
email or F	ax#:			Project Manag	er:									4)					T		
QA/QC Pad			Level 4 (Full Validation)		NELSON VE	LEZ	(8021B)	only)	(MRO)			15)		PO2,504)						a	
Accreditat	tion:			Sampler:	NELSON VE	LEZ	4	TPH (Gas	DRO/	8.1)	1)	8270SIMS)		Q 2,	Solids	(filtered)	1			sample	
□ NELAP)	☐ Other		On Ice:	□ Yes	□ No	#	TPH	_	418	504.1)	827	S	P	d So	filte	iffe			te sa	NIN
□ EDD (T	Гуре)			Sample Temperature:					(GRO	poc			etal	(F,CI,NO	olve		1		ole	oosit	2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1305/397	BTEX ←M	BTEX + MTBE	TPH 8015B	TPH (Method	EDB (Method	PAH (8310 or	RCRA 8 Metals	Anions (F,	Total Dissolved	Iron, Ferrous	Nitrate N		Grab sample	5 pt. composite	Att. B. Liller
5/29/13	1110	WATER	MW # 4	500 ml - 1	Cool	-004								٧	٧				٧		
5/29/13	1110	WATER	MW # 4	250 ml - 1	HNO ₃ & Cool	-004										٧			٧		
5/29/13	1110	WATER	MW # 4	250 ml - 1	H₂SO ₄	-004											٧		٧		
5/29/13	1210	WATER	MW # 5	500 mł - 1	Cool	-005								٧	٧				٧		
5/29/13	1210	WATER	MW # 5	250 ml - 1	HNO ₃ & Cool	-005										٧			٧		
5/29/13	1210	WATER	MW # 5	250 ml - 1	H ₂ SO ₄	-005											٧		٧		
5/29/13	1315	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-0de	٧												٧		L
5/29/13	1315	WATER	MW # 6	500 ml - 1	Cool	-000								٧	٧				٧		
5/29/13	1315	WATER	WW # 6	250 ml - 1	HNO ₃ & Cool	-006										٧			٧		
5/29/13	1315	WATER	MW # 6	250 ml - 1	H₂SO ₄	-000											٧		٧		
																			\perp	_	L
Date:	Time: 83:5	Relinquished by: () Il Ble 49		Received by:	1 20010	Date Time 5/35/13 835	Remarks: Pg. 20F2 BILL DIRECTLY TO BP:														
Date:	Time:			Received by: Date Time				Jeff Peace, 200 Energy Court, Farmington, NM 87401													
5/30/13	0/13/1745 / Mustine Walle			(throntracted to other	accredited laboratorie	s. This serves as nation of	Find Purchase Order in email from BP. of this possibility. Any sub-contracted data will be clearly notated on the analytical report.														

Hall Environmental Analysis Laboratory, Inc.

WO#:

1305B97

10-Jun-13

Client:

Blagg Engineering

Project:

GCU #169

Sample ID MB

SampType: MBLK

TestCode: EPA Method 200.7: Dissolved Metals

Client ID: **PBW**

Batch ID: R11088

RunNo: 11088

Analysis Date: 6/4/2013

%REC

Units: mg/L

HighLimit

Prep Date:

SeqNo: 313880

LowLimit

%RPD

RPDLimit

Qual

Analyte Iron

Result PQL ND 0.020

SampType: LCS

TestCode: EPA Method 200.7: Dissolved Metals

Client ID: LCSW Prep Date:

Sample ID LCS

Batch ID: R11088

RunNo: 11088 SeqNo: 313881

Units: mg/L

Analyte

Analysis Date: 6/4/2013

SPK value SPK Ref Val %REC

LowLimit

%RPD **RPDLimit**

Qual

PQL

106

115

0.020

Iron

SPK value SPK Ref Val

85

HighLimit

0.5000

0

Result 0.53







Qualifiers: Value exceeds Maximum Contaminant Level.

E Value above quantitation range Analyte detected below quantitation limits

O RSD is greater than RSDlimit Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Н Not Detected at the Reporting Limit

Sample pH greater than 2 for VOA and TOC only.

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RPD outside accepted recovery limits

Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: 1305B97

10-Jun-13

Client:

Blagg Engineering

Project:

GCU #169

Sample ID MB SampType: MBLK TestCode: EPA Method 300.0: Anions Client ID: PBW Batch ID: R11029 RunNo: 11029 Prep Date: Analysis Date: 5/31/2013 SeqNo: 311788 Units: mg/L %RPD **RPDLimit** Qual Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Fluoride ND 0.10 ND Chloride 0.50 ND 0.50 Sulfate Nitrate+Nitrite as N ND 0.20

Sample ID LCS	SampT	ype: LC	S	Test	PA Method	300.0: Anions	5			
Client ID: LCSW	Batch	ID: R1	1029	R	tunNo: 1	1029				
Prep Date:	Analysis D	ate: 5/	31/2013	S	SeqNo: 3	11789	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.9	90	110			
Chloride	4.6	0.50	5.000	0	91.1	90	110			
Sulfate	9.4	0.50	10.00	0	93.7	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.7	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

- 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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 8 of 10

Hall Environmental Analysis Laboratory, Inc.

WO#: 1305B97

10-Jun-13

Client: Blagg Engineering

Project: GCU #169

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBW Batch ID: R11006 RunNo: 11006 Prep Date: Analysis Date: 5/31/2013 SeqNo: 311533 Units: µg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual ND 1.0 Benzene Toluene ND 1.0 ND 1.0 Ethylbenzene ND Xylenes, Total 2.0 Surr: 4-Bromofluorobenzene 19 20.00 92.7 69.4 129

Sample ID 100NG BTEX LCS	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	ID: R1	1006	F	RunNo: 1	1006				
Prep Date:	Analysis D	ate: 5 /	31/2013	S	SeqNo: 3	11534	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.9	80	120			
Toluene	19	1.0	20.00	0	96.3	80	120			
Ethylbenzene	20	1.0	20.00	0	97.9	80	120			
Xylenes, Total	59	2.0	60.00	0	99.1	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		96.7	69.4	129			

Sample ID 1305B22-001AMS	SampT	SampType: MS TestCode: EPA Method 8021B: Volatiles											
Client ID: BatchQC	Batch	ID: R1	1006	F	RunNo: 1	1006							
Prep Date:	Analysis D	ate: 5/	31/2013	8	SeqNo: 3	11540	Units: µg/L						
Analyte	Result	PQL	SPK value	alue SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit C									
Benzene	110	5.0	100.0	10.86	103	80	120						
Toluene	100	5.0	100.0	8.760	93.7	80	120						
Ethylbenzene	120	5.0	100.0	25.18	94.0	80	120						
Xylenes, Total	1200	10	300.0	808.2	123	80	120			S			
Surr: 4-Bromofluorobenzene	100		100.0		104	69.4	129						

Sample ID 1305B22-001AMS												
Client ID: BatchQC	Batch	ID: R1	1006	F	RunNo: 1	1006						
Prep Date:	Analysis D	ate: 5/	31/2013	S	SeqNo: 3	11541	Units: µg/L					
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual											
Benzene	110	110 5.0 100.0 10.86 103 80 120 0.0529 20										
Toluene	100	5.0	100.0	8.760	94.5	80	120	0.826	20			
Ethylbenzene	120	5.0	100.0	25.18	94.0	80	120	0.0168	20			
Xylenes, Total	1100	10	0 300.0 808.2 109 80 120 3.68 20									
Surr: 4-Bromofluorobenzene	100		100.0		103	69.4	129	0	0			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD 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 for VOA and TOC only.

RL Reporting Detection Limit

Page 9 of 10

Hall Environmental Analysis Laboratory, Inc.

WO#: **1305B97**

10-Jun-13

Client:

Blagg Engineering

Project:

GCU #169

Sample ID MB-7747 SampType: MBLK TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW Batch ID: 7747 RunNo: 11104

Prep Date: 6/4/2013 Analysis Date: 6/5/2013 SeqNo: 314064 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-7747 SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: LCSW Batch ID: 7747 RunNo: 11104

Prep Date: 6/4/2013 Analysis Date: 6/5/2013 SeqNo: 314065 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Total Dissolved Solids 1020 20.0 1000 0 102 80 120

Sample ID 1305B81-002BMS SampType: MS TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: BatchQC Batch ID: 7747 RunNo: 11104

Prep Date: 6/4/2013 Analysis Date: 6/5/2013 SeqNo: 314073 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Total Dissolved Solids 1230 20.0 1000 212.0 101 80 120

Sample ID 1305B81-002BMSD SampType: MSD TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: BatchQC Batch ID: 7747 RunNo: 11104

Prep Date: 6/4/2013 Analysis Date: 6/5/2013 SeqNo: 314074 Units: mg/L

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

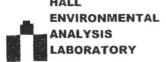
Total Dissolved Solids 1240 20.0 1000 212.0 103 80 120 1.38 5

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

- 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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 10 of 10



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Work Order Number: 1305B97 RcptNo: 1 Client Name: BLAGG Received by/date: Michelle Garria 5/31/2013 10:15:00 AM Logged By: Michelle Garcia 5/31/2013 11:25:11 AM Completed By: Michelle Garcia Reviewed By: AT 05/3///3 Chain of Custody Not Present ✔ No Yes 1 Custody seals intact on sample bottles? Not Present No 2. Is Chain of Custody complete? Yes ✓ 3. How was the sample delivered? Courier Log In No NA 4. Was an attempt made to cool the samples? Yes NA 5. Were all samples received at a temperature of >0° C to 6.0°C No 6. Sample(s) in proper container(s)? Yes No 7. Sufficient sample volume for indicated test(s)? No Yes 8. Are samples (except VOA and ONG) properly preserved? No Yes NA No 9. Was preservative added to bottles? Yes No VOA Vials No 10. VOA vials have zero headspace? Yes No 11. Were any sample containers received broken? Yes # of preserved bottles checked for pH: 12. Does paperwork match bottle labels? Yes No 12 unless noted) (Note discrepancies on chain of custody) Adjusted' No 13. Are matrices correctly identified on Chain of Custody? No 14. Is it clear what analyses were requested? Checked by 15. Were all holding times able to be met? No Yes (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA V Date: Person Notified: 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 1.0 Good Yes

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY #: N/A GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W August 24, 2013 DEVELOPER / SAMPLER : Date: PROJECT MANAGER: NJV GCU 169 mw log 08-24-13.xls Filename: WELL WELL WATER DEPTH TO TOTAL SAMPLING На CONDUCT TEMP. VOLUME # ELEV. ELEV. WATER **DEPTH** TIME (umhos) (celcius) **PURGED** (ft) (ft) (ft) (gal.) (ft) 100.00 92.57 7.43 20.00 20.00 98.23 89.56 8.67 2 3 97.71 89.99 7.72 20.00 0855 7.51 1,000 16.9 6.00 99.21 90.94 8.27 20.00 4 _ _ 5 100.80 92.40 8.40 20.00 6 100.92 93.38 20.00 7.68 19.5 6.00 7.54 0940 800 INSTRUMENT CALIBRATIONS = 2.800 4.01/7.00/10.00 DATE & TIME = 08/20/13 0600 NOTES: Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2". Excellent recovery in MW #3 & #6. MW #3 - brown tint in appearance, MW #6 - dark gray with slight apparent hydrocarbon odor detected physically). Used subsersible pump and vinyl clear tubing in both MW's for purging and sampling. Collected samples from MW #3 & #6 for BTEX per US EPA Method 80210B. Top of casing MW #1 ~ 2.00 ft., MW #2 ~ 2.00 ft., MW #3 ~ 2.00 ft., MW #4 ~ 2.00 ft., MW #5 ~ 2.00 ft., MW #6 ~ 2.00 ft. above grade

on-site	8:15 AM	temp	68 F
off-site	9:45 AM	temp	71 F
sky cond.		Cloudy	
wind speed	0 - 5	direct.	CALM

Analytical Report

Lab Order 1308C28

Received Date: 8/28/2013 10:00:00 AM

Date Reported: 9/4/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW # 3

Project: GCU # 169 Collection Date: 8/24/2013 8:55:00 AM Matrix: AQUEOUS

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8260: VOLATILES SHORT LIST** Analyst: DJF ND 1.0 9/3/2013 1:22:02 PM µg/L R13042 Toluene ND 1.0 µg/L 1 9/3/2013 1:22:02 PM R13042 Ethylbenzene ND 1.0 μg/L 1 9/3/2013 1:22:02 PM R13042 Xylenes, Total ND 2.0 9/3/2013 1:22:02 PM R13042 µg/L Surr: 1,2-Dichloroethane-d4 84.6 70-130 %REC 9/3/2013 1:22:02 PM R13042 Surr: 4-Bromofluorobenzene 86.1 70-130 %REC 9/3/2013 1:22:02 PM R13042 Surr: Dibromofluoromethane 85.4 %REC 9/3/2013 1:22:02 PM 70-130 1 R13042 Surr: Toluene-d8 93.4 70-130 %REC 9/3/2013 1:22:02 PM R13042

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

Qualifiers:

Lab ID:

1308C28-001

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

 - Sample pH greater than 2 for VOA and TOC only P
- Reporting Detection Limit

Analytical Report Lab Order 1308C28

Date Reported: 9/4/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW # 6

Project: GCU # 169 Collection Date: 8/24/2013 9:40:00 AM 1308C28-002 Lab ID: Matrix: AQUEOUS Received Date: 8/28/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST				Analys	t: DJF
Benzene	ND	5.0	μg/L	5	9/3/2013 1:54:04 PM	R13042
Toluene	17	5.0	μg/L	5	9/3/2013 1:54:04 PM	R13042
Ethylbenzene	230	5.0	μg/L	5	9/3/2013 1:54:04 PM	R13042
Xylenes, Total	1100	10	µg/L	5	9/3/2013 1:54:04 PM	R13042
Surr: 1,2-Dichloroethane-d4	87.5	70-130	%REC	5	9/3/2013 1:54:04 PM	R13042
Surr: 4-Bromofluorobenzene	85.7	70-130	%REC	5	9/3/2013 1:54:04 PM	R13042
Surr: Dibromofluoromethane	81.3	70-130	%REC	5	9/3/2013 1:54:04 PM	R13042
Surr: Toluene-d8	87.5	70-130	%REC	5	9/3/2013 1:54:04 PM	R13042

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- J Analyte detected below quantitation limits
- RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Not Detected at the Reporting Limit Page 2 of 3 Sample pH greater than 2 for VOA and TOC only. P
- Reporting Detection Limit

CI	hain-d	of-Cus	stody Record	Turn-Around	ime:		١,	1	r 1	1	44	11	F	N	/TE	20	N	E	NT	ΓΔΙ	í
Client:	BLAG	G ENGR.	/ BP AMERICA	✓ Standard	Rush _													RA			
				Project Name:					-								.com				
Mailing Ad	ddress:	P.O. BO	X 87	1	GCU # 16	9		49	01 H									37109	9		
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50)5-3	45-3	975		Fax	505	-345	-410	17			
Phone #:		(505) 63	2-1199	1							H	1	Anal	ysis	Red	ques	st				
email or F	ax#:			Project Manag	er:									4)				1)	T		T
QA/QC Pad Standa			Level 4 (Full Validation)		NELSON VI	ELEZ	FMB's (8021B)	only)	/ MRO)			15)		PO4,SO	PCB's			ter - 300.1)			e
Accreditat	ion:			Sampler:	NELSON VI	ELEZ gov	8	(Gas	RO/	1)	1	8270SIMS)		102,	/ 8082			/ wa			mp
□ NELAP		☐ Other		On Ice:	∧⊈ Yes	⊡ No.	1	TPH	0/c	418	504	827(رم	03,1	ss / 8		(A)	0.00			e sa
□ EDD (T	ype)	T T		Sample Tempe	erature: 1.0		1	3E +	(GR(pou	pou	P	etal	CI,N	cide	(A)	ıi-V	il - 3		e l	osit
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + NATE	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water		Grab sample	5 pt. composite sample
8/24/13	0855	WATER	MW # 3	40 ml VOA - 2	HCl & Cool	-101	٧													٧	
																			\Box		
8/24/13	0940	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-007	٧													٧	
																			T		
Date:	Time:	Relinquish	ed by:	Received by:	•	Date Time		nark													
3/27/13	1045	10	lnUf	Christin	Laceton	8/27/13 1045		LL DI													
Date: 8 27)13	Time:	Relinquished by: Receive				Date Time		ff Pe nd Pu							_	on, I	8 MI	7401			<
פון תון		17 Christa Ucasa If necessary samples submitted to Hall Environmental may be subcontracted			accredited laboratorie	S This serves as notice of										/ notat	ted on	the and	alytical	report	. /

Hall Environmental Analysis Laboratory, Inc.

WO#:

1308C28

04-Sep-13

Client: Blagg Engineering

Project: GCU # 169

Sample ID 5ml rb	SampT	SampType: MBLK TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch	ID: R1	3042	F	RunNo: 1	3042				
Prep Date:	Analysis D	ate: 9/	3/2013	8	SeqNo: 3	72381	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: 1,2-Dichloroethane-d4	8.3		10.00		83.2	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130			
Surr: Dibromofluoromethane	8.4		10.00		84.2	70	130			
Surr: Toluene-d8	8.7		10.00		86.6	70	130			

Sample ID 100ng lcs	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260: Volatile	s Short L	ist	
Client ID: LCSW	Batch	ID: R1	3042	F	RunNo: 1	3042				
Prep Date:	Analysis D	ate: 9/	3/2013	8	SeqNo: 3	72382	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	91.1	70	130			
Toluene	18	1.0	20.00	0	91.5	82.2	124			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.6	70	130			
Surr: 4-Bromofluorobenzene	8.8 10.00 88.5 70						130			
Surr: Dibromofluoromethane	8.0	10.00		70	130					
Surr: Toluene-d8	8.5	8.5 10.00 85.4 70 130								

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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 3 of 3



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

RcptNo: 1 BLAGG Work Order Number: 1308C28 Client Name: Received by/date: Logged By: Lindsay Mangin 8/28/2013 10:00:00 AM 8/28/2013 10:45:57 AM Completed By: Lindsay Mangin 08/28/13 Reviewed By: Chain of Custody No Not Present ✓ 1 Custody seals intact on sample bottles? Yes Not Present No 2. Is Chain of Custody complete? Yes V 3 How was the sample delivered? Courier Log In NA No 4. Was an attempt made to cool the samples? 5. Were all samples received at a temperature of >0° C to 6.0°C NA : No Yes No 6. Sample(s) in proper container(s)? Yes No 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? Yes No 9. Was preservative added to bottles? Yes No V NA 10. VOA vials have zero headspace? Yes 🗸 No No VOA Vials 11. Were any sample containers received broken? Yes No 1 # of preserved bottles checked for pH: No 12. Does paperwork match bottle labels? Yes V (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 13. Are matrices correctly identified on Chain of Custody? No Yes No 14. Is it clear what analyses were requested? Checked by: 15. Were all holding times able to be met? No Yes V (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA V Person Notified: Date: By Whom: Via: In Person eMail Phone Fax Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact | Seal No Yes

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY #: N/A

GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT I, SEC. 35, T29N, R12W

Date: December 11, 2013 DEVELOPER / SAMPLER : N J V

PROJECT MANAGER: NJV Filename: GCU 169 mw log 12-11-13.xls

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1	100.00	92.42	7.58	20.00	-	-	-	-	-
2	98.23	89.46	8.77	20.00	-	-	-	-	-
3	97.71	89.90	7.81	20.00	-	-	-	-	-
4	99.21	90.81	8.40	20.00	-	-	-	-	-
5	100.80	92.21	8.59	20.00	-	-	-	-	-
6	100.92	93.27	7.65	20.00	1010	7.59	800	12.3	6.00
			INSTRUMENT	CALIBRATIC	ONS =	4.01/7.00/10.00	2,800		

12/09/13 DATE & TIME =

NOTES: Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water.

0600

Comments or note well diameter if not standard 2".

Excellent recovery in MW #6. MW #6 - dark gray with slight apparent hydrocarbon odor detected physically). Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per

US EPA Method 8260B

Top of casing MW #1 ~ 2.00 ft., MW #2 ~ 2.00 ft., MW #3 ~ 2.00 ft., MW #4 ~ 2.00 ft., MW #5 ~ 2.00 ft., MW #6 ~ 2.00 ft. above grade.

on-site	9:30 AM	temp	14 F
off-site	10:30 AM	temp	20 F
sky cond.		Sunny	
wind speed	0 - 5	direct.	CALM

Analytical Report

Lab Order 1312585

Date Reported: 12/18/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

1312585-001

Client Sample ID: MW #6

Project: GCU #169

Lab ID:

Collection Date: 12/11/2013 10:10:00 AM Received Date: 12/13/2013 10:40:00 AM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8021B: VOLATILES** Analyst: NSB 12/17/2013 10:08:43 PM R15572 ND 5.0 µg/L Toluene 5 5.1 5.0 12/17/2013 10:08:43 PM R15572 µg/L Ethylbenzene 12/17/2013 10:08:43 PM R15572 240 5.0 µg/L 5 Xylenes, Total 880 10 µg/L 5 12/17/2013 10:08:43 PM R15572 Surr: 4-Bromofluorobenzene 148 85-136 S %REC 12/17/2013 10:08:43 PM R15572

Matrix: AQUEOUS

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

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 Page 1
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

OI	Idill-C	JI-Gus	stody Necord				ΙГ			ŀ	HA	LL	. E	NV	/IF	CO	N	E	N	AL
Client:	BLAG	G ENGR.	/ BP AMERICA		☐ Rush _					_										RY
				Project Name:							ww	w.ha	allen	viro	nme	ntal	.com	1		
Mailing Ad	dress:	P.O. BO	X 87	1	GCU # 16	9		49	01 H	ławl	kins	NE -	- Alb	ouqu	erqu	ue, N	1M 8	37109)	
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50	05-3	45-3	975	-	Fax	505-	345	-410)7		
Phone #:		(505) 63	2-1199									1	Anal	ysis	Rec	lues	t			
email or F	ax#:	***		Project Manag	jer:									4)				(1:		
QA/QC Pad			Level 4 (Full Validation)		NELSON VI	ELEZ	0218)	(Gas only)	/ MRO)			(S)		PO4,SO	2 PCB's			ter - 300.1)		e
Accreditat		□ Other		Sampler: On tce:	NELSON VI	ELEZ LV	MB's (8021B)	+ TPH (Gas	/ DRO /	18.1)	04.1)	8270SIMS)		3,NO2,	5 / 8082		A)	300.0 / water		composite sample
□ EDD (T				Sample Temp	to a but the last an out to the things of the particular to a period	o .	1	E + T	(GRO	od 4	od 5	or 8	tals	N,	ide	4	-40	1 1	2	e osite
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1312585	BTEX NATE	BTEX + MTBE	TPH 8015B (TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil	neaco deno	5 pt. compos
12/11/13	1010	WATER	MW # 34 6	40 ml VOA - 2	HCl & Cool	-001	٧												1	
	Addition of the Control of the Contr		ARILLIA																	1
																			\top	
-												-							\top	
									-										\top	+
																				+
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														_			\Box		_	+
							-						-						+	+
																	\vdash	$\overline{}$	+	+
	COPPER OF COLUMN TO THE STATE OF COLUMN TO SERVICE						-											\vdash	+	+
Date;	Time:	Relinquishe	egl by:	Received by:		Date Time	Rer	 nark	s:					L						
2/12/13	1453	91.	My y	Mouatin	Walter	12/12/13 1433	ВІ	LL DI	RECT		O BF						1840	7404		
Date: 12/12/13	Time:	Relinquishe	ed by:	Received by:		Date Time	1				Ener Order					on, N	1INI 8.	7401		
	If necessa	ary samples s	ubmitted to Hall Environmental may be s	ubcontracted to other	accredited laboratorie		f this p	ossibi	lity. A	ny sub	o-contr	acted	data v	vill be	clearly	notat	ed on	the ana	llytical re	eport.

Hall Environmental Analysis Laboratory, Inc.

WO#: 1312585

18-Dec-13

Client: Blagg Engineering

Project: GCU #169

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBW Batch ID: R15572 RunNo: 15572 Prep Date: Analysis Date: 12/17/2013 SegNo: 448255 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 ND 1.0 Ethylbenzene Xylenes, Total ND 2.0 Surr: 4-Bromofluorobenzene 20 20.00 97.8 85 136

Sample ID 100NG BTEX LC	S SampT	SampType: LCS TestCode: EPA Method 8021B: Volatiles										
Client ID: LCSW	Batch	1D: R1	5572	F	RunNo: 1	5572						
Prep Date:	Analysis D	Analysis Date: 12/17/2013 SeqNo: 448256 U										
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	21	1.0	20.00	0	105	80	120					
Toluene	21	1.0	20.00	0	105	80	120					
Ethylbenzene	21	1.0	20.00	0	103	80	120					
Xylenes, Total	63	2.0	60.00	0	105	80	120					
Surr: 4-Bromofluorobenzene	20		20.00		102	85	136					

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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 2 of 2

HALL NTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

Sample Log-In Check List

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Client Name:	BLAGG	Work Order Numb	er: 1312585		RcptNo: 1	
Received by/date	KM	12/13/15				
Logged By:	Ashley Gallegos	12/13/2013 10:40:00) AM	A		i
Completed By:	Ashley Gallegos	12/13/2013 11:15:26	S AM	A		
Reviewed By:	din			Ü		
Chain of Cust	odv					
	s intact on sample bottles	?	Yes	No 🗌	Not Present	
	ustody complete?		Yes 🗸	No 🗌	Not Present	
	sample delivered?		Courier			
Log In						
4. Was an atter	mpt made to cool the sam	ples?	Yes 🗸	No 🔝	NA ·	
5. Were all sam	nples received at a temper	rature of >0° C to 6.0°C	Yes 🗸	No 🗔	NA	
6. Sample(s) in	proper container(s)?		Yes 🗸	No 🗀		
7. Sufficient sar	mple volume for indicated	test(s)?	Yes 🗸	No 🗆		
8. Are samples	(except VOA and ONG) p	properly preserved?	Yes 🗸	No 🗔		
9. Was preserve	ative added to bottles?		Yes	No 🗸	NA 🗀	
10.VOA vials ha	ave zero headspace?		Yes 🗸	No	No VOA Vials	
11, Were any sa	ample containers received	broken?	Yes	No 🗸	# of proported	
	vork match bottle labels?		Yes 🗸	No 🛄	# of preserved bottles checked for pH: (<2 or >12 unle	ess noted)
	pancies on chain of custoo correctly identified on Ch		Yes 🗸	No 🗆	Adjusted?	33 Hoteu)
	at analyses were requeste		Yes 🗸	No 🗆		
15. Were all hold	ding times able to be met?		Yes 🗸	No 🗌	Checked by:	
(ii iio, iiotii)	outernor for dunion Laties	,				
Special Hand	lling (if applicable)		AT 1	21613		
16. Was client n	otified of all discrepancies	with this order?	Yes X	No	MA	
Persor	Notified:	Date	,	AND THE PROPERTY OF THE PROPERTY OF		
By Wh	-/10	Via:	eMail 🔀	Phone E Fax	In Person	
Regard	Instructions:	See Below				
17. Additional re	-	ul co di	Th ic	mar I d	6 4 5 7 7	
	pa ,	4V Sample	TO 12	MIN TO	o /A IZREPS	
18. <u>Cooler Info</u> Cooler No	1	Seal Intact Seal No Yes	Seal Date	Signed By		

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CHAIN-OF-CUSTODY #:

N/A

GCU # 169 HALL ENVIRONMENTAL LABORATORY (S) USED: UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : NJV February 26, 2014 Date: GCU 169 mw log 02-26-14.xls PROJECT MANAGER: Filename: WELL WELL WATER DEPTH TO TOTAL SAMPLING Hq CONDUCT TEMP. VOLUME # ELEV. ELEV. WATER DEPTH (umhos) (celcius) **PURGED** TIME (ft) (ft) (ft) (ft) (gal.) 100.00 92.06 7.94 20.00 98.23 89.20 9.03 20.00 2 97.71 89.63 8.08 3 20.00 4 99.21 90.50 8.71 20.00 100.80 5 91.84 8.96 20.00 100.92 6 92.95 7.97 20.00 1315 6.90 900 11.3 6.00 INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800 02/24/14 DATE & TIME = 0600 NOTES: Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2".

Excellent recovery in MW #6. MW #6 - dark gray with slight apparent hydrocarbon odor detected physically).

Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per
US EPA Method 8021B.

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 \sim 2.00 ft. above grade.

on-site	12:15 PM	temp	57 F
off-site	1:20 PM	temp	60 F
sky cond.		Mostly sunny	
wind speed	0 - 10	direct.	W

CLIENT: BP AMERICA PROD. CO.

Analytical Report

Lab Order 1402B44

Date Reported: 3/5/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW # 6

Project: GCU #169 **Collection Date:** 2/26/2014 1:15:00 PM

Lab ID: 1402B44-001 **Matrix:** AQUEOUS **Received Date:** 2/28/2014 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	t: JMP
Benzene	5.2	1.0	μg/L	1	2/28/2014 4:03:05 PM	R17037
Toluene	1.8	1.0	μg/L	1	2/28/2014 4:03:05 PM	R17037
Ethylbenzene	180	10	μg/L	10	3/3/2014 1:41:52 PM	R17069
Xylenes, Total	560	20	μg/L	10	3/3/2014 1:41:52 PM	R17069
Surr: 4-Bromofluorobenzene	126	85-136	%REC	10	3/3/2014 1:41:52 PM	R17069

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

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

Page 1 of 3

- P Sample pH greater than 2.
- RL Reporting Detection Limit

CI	hain-d	of-Custody Record		Turr-Around 1	IIIIE.	Turn-Around nine.					44		F	N	/TE	20	NF	ИE	NT	ΔΙ	
Client:	BLAG	G ENGR.	/ BP AMERICA	✓ Standard Project Name:	Rush_					A	N.	AL	YS	SI:	S L	.AE	30	RA			
Mailing Ad	ddress:	P.O. BO	X 87	-	GCU # 16	9		49	01 H						nme Ierai			i 37109	ı		
			FIELD, NM 87413	Project #:						5-34					505						
Phone #:		(505) 63	2-1199									A	Anal	ysis	Rec	ques	t				
email or F	ax#:			Project Manag	jer:									4				1)			T
QA/QC Pad			Level 4 (Full Validation)		NELSON VI	ELEZ	48's (8021B)	(Aluo	/ MRO)			15)		PO4,50	2 PCB's			ter - 300.1)			<u>e</u>
Accreditat	ion:			Sampler:	NELSON VI	ELEZ nv	-8	(Gas	/ DRO /	F	1)	8270SIMS)		102,	8082			/ wa		1	samble
□ NELAP)	□ Other		On Ice:	YuYes	□ No	1	TPH		418.	504.1)	8270		03,	_		JA)	0.00			e So
□ EDD (T	ype)	-		Sample Tempe	erature;	(- ()	1	+	(GR(bo	po	ō	stals	Z,	cide	(A)	i-VC	il - 3		e i	Sol
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1	BTEX - NATE	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method	PAH (8310	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water	-	Grab sample	5 pt. composite
2/26/14	1315	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-001	٧												1	V	
			1																		
																				T	T
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																				\top	+
										\neg									\top	\top	\dagger
					*														\top	\top	\dagger
																			\top	\top	T
																			\top	\top	+
										\neg									\top	\top	\dagger
																		\top	\top	+	+
Date: /	Time:	Relinquishe	ed by:	Received by:	L	Date Time	Ren	nark	I S:					L							
27/14	1600	The	lan V g	Whister Daeter 2/27/14 1400			ВІ	LL DI	RECT												1
Date:	Time: 1728	Relinquishe	ed by: U	Date Date Time 02 28/14			l	ff Pea nd Pu								on, N	1M 8	7401			
Tailla	If necessar			Subcontracted to other accordited laboratories. This serves or relies				o of this possibility. Any sub-contracted data will be clearly notated on the analytical report													

Hall Environmental Analysis Laboratory, Inc.

WO#: 1402B44

05-Mar-14

Client: Blagg Engineering

GCU #169 Project:

1 Toject.							and the same of th				
Sample ID	5ML RB	SampTy	pe: ME	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	PBW	Batch	ID: R1	7037	F	RunNo: 1	7037				
Prep Date:		Analysis Da	ate: 2/	28/2014	5	SeqNo: 4	90141	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								
Surr: 4-Brome	ofluorobenzene	20		20.00		102	85	136			
Sample ID	100NG BTEX LCS	SampTy	pe: LC	s	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	LCSW	Batch	ID: R1	7037	F	RunNo: 1	7037				
Prep Date:		Analysis Da	ate: 2/	28/2014	\$	SeqNo: 4	90142	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		19	1.0	20.00	0	97.2	80	120			
Toluene		20	1.0	20.00	0	98.4	80	120			
Surr: 4-Brom	ofluorobenzene	23		20.00		114	85	136			
Sample ID	5ML RB	SampTy	/pe: ME	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	PBW	Batch	ID: R1	7069	F	RunNo: 1	7069				
Prep Date:		Analysis Da	ate: 3/	3/2014	(SeqNo: 4	190953	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene		ND	1.0								
Xylenes, Total		ND	2.0								
Surr: 4-Brom	ofluorobenzene	21		20.00		104	85	136			
Sample ID	100NG BTEX LCS	SampTy	/pe: LC	s	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	LCSW	Batch	ID: R1	7069	F	RunNo: 1	7069				
Prep Date:		Analysis Da	ate: 3/	3/2014	(SeqNo: 4	90954	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene		20	1.0	20.00	0	98.9	80	120			
Xylenes, Total		59	2.0	60.00	0	98.9	80	120			
Surr: 4-Brom	ofluorobenzene	22		20.00		111	85	136			
Sample ID	1402B46-001AMS	SampTy	/pe: M \$	3	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	BatchQC	Batch	ID: R1	7069	F	RunNo: 1	7069				
Prep Date:		Analysis Da	ate: 3/	3/2014	(SeqNo: 4	190966	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene		39	2.0	40.00	0	97.7	69.4	135			
Xylenes, Total		120	4.0	120.0	0.9800	98.5	72.4	135			

Qualifiers:

Value exceeds Maximum Contaminant Level.

44

Value above quantitation range

Surr: 4-Bromofluorobenzene

- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded

85

136

111

- Not Detected at the Reporting Limit ND
- P Sample pH greater than 2.

40.00

Reporting Detection Limit

Page 2 of 3

Hall Environmental Analysis Laboratory, Inc.

WO#:

1402B44

05-Mar-14

Client:

Blagg Engineering

Project:

GCU #169

Sample ID	1402B46-001AMSD	SampT	ype: MS	SD .	8021B: Volat	iles					
Client ID:	BatchQC	Batch	ID: R1	7069							
Prep Date:	F	Analysis Date: 3/3/2014 SeqNo: 490967 Unit									
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene		39	2.0	40.00	0	98.5	69.4	135	0.877	20	
Xylenes, Total		120	4.0	120.0	0.9800	98.0	72.4	135	0.548	20	
Surr: 4-Brom	ofluorobenzene	46		40.00		114	85	136	0	0	

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

Page 3 of 3



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: BLAGG	Work Order Numbe	er: 1402B44			RcptNo:	1
Received by/date:	02/28/14				-	
Logged By: Lindsay Mangin	2/28/2014 10:00:00 A	M	Jumpy!	Homes		
Completed By: Lindsay Mangin	2/28/2014 2:14:00 PM	A	Simbul.	Hoppo		
Reviewed By:	02/28/201	11/		U		
Chain of Custody	001001001					2
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				
<u>Log In</u>						
4. Was an attempt made to cool the sample	s?	Yes 🗸	No		NA \square	
5. Were all samples received at a temperature	re of >0° C to 6.0°C	Yes 🗸	No		NA 🗀	
6. Sample(s) in proper container(s)?		Yes 🗸	No			
7. Sufficient sample volume for indicated tes	t(s)?	Yes 🗸	No			
8. Are samples (except VOA and ONG) prop	erly 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 bro	ken?	Yes	No	V	# of preserved	1
12. Does paperwork match bottle labels?		Yes 🗸	No		bottles checked for pH:	>12 upless noted)
(Note discrepancies on chain of custody)	of Custody?	Yes 🗸	No		Adjusted?	>12 unless noted)
13. Are matrices correctly identified on Chain14. Is it clear what analyses were requested?	of Custody?	Yes V	No		_	
15. Were all holding times able to be met?		Yes 🗸	No		Checked by:	
(If no, notify customer for authorization.)				1		
Special Handling (if applicable)						
16. Was client notified of all discrepancies with	h this order?	Yes 🗌	No	~	NA 🗆	
Person Notified:	Date:					
By Whom:	Via:	eMail	Phone	Fax	☐ In Person	
Regarding:	- 1	1,000,100,100	and the second second second			
Client Instructions:	the same of the sa		to the section of the section		German F. S. andrew and a	
17. Additional remarks:						
	Seal Intact Seal No	Seal Date	Signed I	Ву		

BLAGG ENGINEERING, INC. MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT:		N/A											
GCU # 169 UNIT I, SE	C. 35, T29N,	R12W			LABORATOR	RY(S) USED	:	HALL ENVIR	RONMENTAL				
Date : Filename :	May 27, 2	2014 Iw log 05-27	-14.xls		1		/ SAMPLER : MANAGER :		1 V				
WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)				
1 2	100.00 98.23	91.85 89.04	8.15 9.19	20.00	-	-	-	-	-				
3 4	97.71 99.21	89.49 90.34	8.22 8.87	20.00 20.00	-	-	-	-	-				
5 6	100.80 100.92	91.59 92.51	9.21 8.41	20.00	1050	7.24	900	16.0	5.75				
NOTES:	(i.e. 2" MW	r = (1/12) ft	DATE & TIMI ed from well h = 1 ft.)	prior to sa (i.e. 4" MW	ampling; V = r = (2/12) ft.			3) X 3 (wellb 0.49 gal./ft.					
			if not standa ‡6 - dark gra		t annarent hv	drocarbon oc	dor detected i	ohysically)					
Purged well valve attach	using 2 inch	submersible	e electric pump g end of tubir	, new / clea	ar vinyl tubing	, and with b	orass adjustal	ole flow					
	Top of casing MW #1 ~ 2.00 ft., MW #2 ~ 2.00 ft., MW #3 ~ 2.00 ft., MW #4 ~ 2.00 ft., MW #5 ~ 2.00 ft., MW #6 ~ 2.00 ft. above grade.												

on-site	10:00 AM	temp	67 F
off-site	11:00 AM	temp	73 F
sky cond.		Sunny	
wind speed	0 - 5	direct.	SE

Analytical Report

Lab Order: 1405D12

Date Reported: 6/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT:

Blagg Engineering

Project:

Lab ID:

GCU # 169

Client Sample ID: MW # 6

1405D12-001

Lab Order:

1405D12

Collection Date: 5/27/2014 10:50:00 AM

Matrix: AQUEOUS

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8021B: VOLATILES						Ana	alyst: NSB
Benzene	ND	5.0		μg/L	5	6/3/2014 2:52:11 A	M R18994
Toluene	8.7	5.0		μg/L	5	6/3/2014 2:52:11 A	M R18994
Ethylbenzene	240	5.0		μg/L	5	6/3/2014 2:52:11 A	M R18994
Xylenes, Total	1100	10		μg/L	5	6/3/2014 2:52:11 A	M R18994
Surr: 4-Bromofluorobenzene	158	82.9-139	S	%REC	5	6/3/2014 2:52:11 A	M R18994

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 1 of 2

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Client:	BLAG		/ BP AMERICA	✓ Standard Project Name:	Standard Rush Project Name:						N	Αl	.Y:	SI S	S L	A	N BO	RA			
Mailing A	ddress:	P.O. BO	X 87	-	GCU # 16	9		49	01 H	lawk							8 MI		9		
		BLOOM	FIELD, NM 87413	Project #:)5-3							-410				
Phone #:		(505) 63	2-1199									1	Anal	ysis	Red	ques	st				
email or F	ax#:			Project Manag	jer:									-				1)			T
QA/QC Pad	•		Level 4 (Full Validation)		NELSON VE	ELEZ	√8's (8021B)	BTEX + MTBE + TPH (Gas only)	MRO)			(S)		04,50	PCB's			er - 300.1)			a)
Accreditat	ion:			Sampler:	NELSON VI	ELEZ GNV	8	Gas	RO/	1)	1)	SIN		02,1	3082			water			mp
□ NELAP	>	□ Other		On Ice:	X Yes	□ No	1	PH	0/0	118.	504.	3270		N,EC	8/8		(A)	0.00			e sa
□ EDD (1	Гуре)			Sample Tempe	erature: 2. j	10	1	E + 1	GRC	7 po	po	or 8	tals	J,N	cide	F	i-V0	II - 3(e	osit
Date	Time	Matrix	Sample Request ID	Container Preservative					TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 /		Grab sample	5 pt. composite sample
5/27/14	1050	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-601	٧													٧	
														-							
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														_					\dashv	\dashv	\top
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Date:	Time:	Relinquishe	ed by:	Received by: Date Time				nark		-11/-	0.00										
29/14 Date:	1444 Time:	Relinquishe	ad by:	Received by: Date Time				LL DI ff Pea					ourt,	Farn	ningt	on, I	8 MV	7401			
lalid	1747	C has	to I Dania	Celin Sun 05/30/14 11:12				nd Pu							_						
Lyin	If necessa	ry, samples si	ubmitted to Hall Environmental may be s	a subcontracted to other accredited laboratories. This serves as notice of				ossibil	ity. Ar	ny sub	-contr	acted	data v	vill be	clearly	notal	ed on	the an	alutica	Ironar	,

Hall Environmental Analysis Laboratory, Inc.

WO#: **1405D12**

04-Jun-14

Client:

Blagg Engineering

Project:

GCU # 169

Sample ID 5ML RB	SampT	SampType: MBLK TestCode: EPA Method 8021B: Volatiles								
Client ID: PBW	Batch	ID: R1	8994	R	lunNo: 1	8994				
Prep Date:	Analysis D	ate: 6/	2/2014	S	SeqNo: 5	48807	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	22		20.00		109	82.9	139			
Sample ID 100NG BTEX LCS	SampT	SampType: LCS TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSW	Batch ID: R18994 RunNo: 18994									
Prep Date:	Analysis D	ate: 6/	2/2014	S	SeqNo: 5	48808	Units: µg/L			

Sample ID 100NG BTEX LC	CS SampT	ype: LC	S	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	ID: R1	8994	F	RunNo: 1	8994				
Prep Date:	Analysis D	ate: 6/	2/2014	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit		%RPD	RPDLimit	Qual	
Benzene	19	1.0	20.00	0	97.2	80	120			
Toluene	19	1.0	20.00	0	96.7	80	120			
Ethylbenzene	19	1.0	20.00	0	96.2	80	120			
Xylenes, Total	60 2.0 60.00 0 99.9 80						120			
Surr: 4-Bromofluorobenzene	22	22 20.00 110 82.9								

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

Page 2 of 2



4901 Hawkins NE Albuquerque, NM 87109

Sample Log-In Check List

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Client Name:	BLAGG	Work Order Num	ber: 1405D12		RcptNo:	RcptNo: 1						
Received by/d	ate: CS	05/30/14	/			-						
Logged By:	Michelle Garcia	5/30/2014 11:12:00	AM	Michell Go	nun							
Completed By	Michelle Garcia	5/30/2014 3:04:56 [PM	Microst Go Microst Go	nua)							
Reviewed By:	And	neledis		. ,								
Chain of Cu	stody	05/244		-								
1. Custody s	eals intact on sample	bottles?	Yes	No 🗌	Not Present							
2. Is Chain o	Custody complete?		Yes 🗸	No 🗌	Not Present							
3. How was t	he sample delivered	?	Courier									
Log In												
4. Was an a	tempt made to cool t	the samples?	Yes 🗹	No 🗌	NA 🗌							
5. Were all s	amples received at a	temperature of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆							
6. Sample(s)	in proper container(s)?	Yes 🗹	No 🗌								
7. Sufficient	sample volume for in	dicated test(s)?	Yes 🗹	No 🗌								
8. Are sample	es (except VOA and	ONG) properly preserved?	Yes 🗹	No 🗌								
9. Was prese	ervative added to bott	tles?	Yes	No 🗹	NA 🗌							
10 VOA vials	have zero headspac	22	Yes 🗸	No 🗌	No VOA Vials							
	sample containers re		Yes	No 🗹	THO VOX VIGIS							
11. Well ally	sample containers re	scelved blokelil	163 —	110	# of preserved							
12. Does pape	erwork match bottle la	abels?	Yes 🗸	No 🗌	bottles checked for pH:							
(Note disc	repancies on chain o	f custody)				r >12 unless noted)						
13. Are matric	es correctly identified	on Chain of Custody?	Yes 🗸	No 🗆	Adjusted?							
	vhat analyses were re		Yes 🗹	No L	04 4 44							
	olding times able to be y customer for author		Yes 🗸	No 🗌	Checked by:							
(11 770) 11011	, 5051511161 161 444116	122001.)										
Special Han	dling (if applica	ble)										
		pancies with this order?	Yes 🗌	No 🗌	NA 🗸							
Pers	on Notified:	Date		AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUM								
By V	Vhom:	Via:	eMail	Phone Fax	In Person							
Rega	arding:											
Clier	nt Instructions:											
17. Additional	remarks:					-						
18. Cooler In												
Cooler	No Temp °C Co 2.1 Goo	ondition Seal Intact Seal No	Seal Date	Signed By								
Γ'	2.1 (500	u ites										

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CHAIN-OF-CUSTODY #:

N/A

GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W NJVDate: August 25, 2014 DEVELOPER / SAMPLER : GCU 169 mw log 08-25-14.xls PROJECT MANAGER: Filename: WATER DEPTH TO CONDUCT **VOLUME** WELL WELL TOTAL SAMPLING рН TEMP. # ELEV. ELEV. WATER **DEPTH** TIME (umhos) (celcius) **PURGED** (ft) (ft) (gal.) (ft) (ft) 100.00 92.39 7.61 20.00 98.23 88.43 9.80 20.00 3 97.71 89.80 7.91 20.00 4 99.21 90.80 8.41 20.00 -5 100.80 92.16 8.64 20.00 7.86 7.45 6 100.92 93.06 20.00 1000 800 19.4 6.00 INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800 08/25/14 0600 DATE & TIME = Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). NOTES: (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2 ".

Excellent recovery in MW #6	. MW #6 - dark gray wi	h slight apparent hydrocarbon	odor detected physically).

Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per US EPA Method 8021B.

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 \sim 2.00 ft. above grade.

on-site	9:00 AM	temp	68 F
off-site	10:15 AM	temp	75 F
sky cond.	_	Mostly sun	ny
wind speed	0 -10	direct.	E ESE

CLIENT: BP AMERICA PROD. CO.

Analytical Report Lab Order 1408D05

Date Reported: 8/28/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW # 6

 Project:
 GCU # 169
 Collection Date: 8/25/2014 10:00:00 AM

 Lab ID:
 1408D05-001
 Matrix: AQUEOUS
 Received Date: 8/26/2014 7:45:00 AM

Analyses	Result	RL (Qual U	J nits	DF Date Analyzed Bate	eh
EPA METHOD 8021B: VOLATILES					Analyst: NSE	3
Benzene	ND	5.0		µg/L	5 8/26/2014 11:34:24 PM R208	809
Toluene	12	5.0		µg/L	5 8/26/2014 11:34:24 PM R208	809
Ethylbenzene	190	5.0		μg/L	5 8/26/2014 11:34:24 PM R208	809
Xylenes, Total	980	10		μg/L	5 8/26/2014 11:34:24 PM R208	809
Surr: 4-Bromofluorobenzene	143	82.9-139	S	%REC	5 8/26/2014 11:34:24 PM R208	809

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

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

Page 1 of 2

- P Sample pH greater than 2.
- RL Reporting Detection Limit

С	hain-d	of-Cus	stody Record	Turn-Around Time.			١,	1	f I	ŀ	A	LL	E	NV	/IF	30	NI	ME	N.	AL	
Client:	BLAG	G ENGR.	/ BP AMERICA		Rush		1												TC		
				Project Name:					talen er								.com				
Mailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 H	awk	ins l	NE -	Alb	ouqu	ıerqı	ıe, N	1M 8	37109	}		
marine and a second sec		BLOOM	FIELD, NM 87413	Project #:				Te	l. 50	5-34	45-3	975	ſ	Fax	505-	-345	-410	17			
Phone #:		(505) 63	2-1199									A	hnal	ysis	Red	ques	t				
email or F	ax#:			Project Manag	er:									4				1.			
QA/QC Pad Standa			Level 4 (Full Validation)		NELSON VI	ELEZ	(80218)	TPH (Gas only)	MRO)			15)		05,50	PCB's			ter - 300.1)			e l
Accreditat	ion:			Sampler:	NELSON VI	ELEZ nv	8	(Gas	DRO/	1)	1)SIN		102,	8082			/ water			E
□ NELAP)	☐ Other		On Ice:-	†≰ Yes	□ No	1	TPH	-	418.1)	504.1)	8270SIMS)		03,1	_		(A)	300.0 /			e sa
□ EDD (1	ype)			Sample Tempe	rature: 2	<u>.</u>	1	+	(GRC	po	po	ō	stals	Ž	cide	(A)	i-VC			e e	OSIL
Date	Time	Matrix	Sample Request ID	Container Preservative Type and # Type				BTEX + MTBE	TPH 8015B (GRO	TPH (Method	EDB (Method	PAH (8310	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil	-	Grab sample	5 pt. composite sample
8/25/14	1000	WATER	MW # 6	40 ml VOA - 2	HCI & Cool	-001	٧													٧	
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Literature																					
Date:	Time:	Relinquish	ed by:	Received by: Date Time R			Ren	nark						L							
3/25/14	1540	1	and I	1 \(\)			BILL DIRECTLY TO BP:														
Date: 8 25 1-4	Time: Relinquished by:			Received by:	W.	Date Time	1	ff Pea								on, N	IM 8	7401			
1- 1-		sary, samples submitted to Hall Environmental may be subcontracted to other acceledited laboratories. This serves as notice			es. This serves as notice of	f this p	ossibil	ity. Ar	y sub-	-contra	acted	data v	vill be	clearly	notat	ed on	the ana	alytical	report.		

Hall Environmental Analysis Laboratory, Inc.

WO#:

1408D05

28-Aug-14

Client:

Blagg Engineering

Project:

GCU # 169

Sample ID 5ML RB	SampT	SampType: MBLK TestCode: EPA Metho					8021B: Volati	iles		
Client ID: PBW	Batch	1D: R2	0809	R	RunNo: 20	0809				
Prep Date:	Analysis D	ate: 8/	26/2014	S	SeqNo: 6	05937	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	21		20.00		104	82.9	139			

Sample ID 100NG BTEX LC	S SampT	SampType: LCS TestCode: EPA Method 8021B: Volatiles										
Client ID: LCSW	Batch	n ID: R2	0809	F	RunNo: 2	0809						
Prep Date:	Analysis Date: 8/26/2014 SeqNo: 605938 Unit											
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	20	1.0	20.00	0	98.2	80	120					
Toluene	20	1.0	20.00	0	98.9	80	120					
Ethylbenzene	20	1.0	20.00	0	101	80	120					
Xylenes, Total	64	2.0	60.00	0	107	80	120					
Surr: 4-Bromofluorobenzene	23		20.00		117	82.9	139					

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

Page 2 of 2



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: 1408D05 RcptNo: 1 Received by/date: Logged By: Lindsay Mangin 8/26/2014 7:45:00 AM Completed By: Lindsay Mangin 8/26/2014 8:38:13 AM 08/26/14 Reviewed By: Chain of Custody Not Present ✔ No 1 Custody seals intact on sample bottles? Yes Not Present No 2. Is Chain of Custody complete? Yes V 3 How was the sample delivered? Courier Log In NA 4. Was an attempt made to cool the samples? No Yes 5. Were all samples received at a temperature of >0° C to 6.0°C NA No 6. Sample(s) in proper container(s)? No No 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? No Yes NA 9. Was preservative added to bottles? No Yes No VOA Vials 10. VOA vials have zero headspace? No Yes 11. Were any sample containers received broken? Yes No V # of preserved bottles checked for pH: 12. Does paperwork match bottle labels? No Yes (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 13. Are matrices correctly identified on Chain of Custody? No No 14. Is it clear what analyses were requested? Checked by 15. Were all holding times able to be met? No (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA V Person Notified: Date: By Whom: Via: In Person eMail Phone Fax Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No | Temp °C | Condition Seal Intact | Seal No Seal Date Good Yes

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY #: N/A GCU # 169 HALL ENVIRONMENTAL LABORATORY (S) USED: UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : November 25, 2014 Date: GCU 169 mw log 11-25-14.xls PROJECT MANAGER: Filename: SAMPLING WELL WELL WATER **DEPTH TO** TOTAL рН CONDUCT TEMP. **VOLUME** # ELEV. ELEV. WATER **DEPTH** TIME (umhos) (celcius) **PURGED** (gal.) (ft) (ft) (ft) (ft) 1 100.00 20.00 98.23 20.00 2 -97.71 20.00 3 99.21 20.00 4 5 100.80 20.00 6 100.92 7.64 6.00 7.60 20.00 1500 800 14.3 2.800 INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 DATE & TIME = 11/24/14 0600 Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). NOTES: (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) 2.00" well diameter = Ideally a minimum of three (3) wellbore volumes: 0.49 gal./ft. of water. Comments or note well diameter if not standard 2". Excellent recovery in MW #6. MW #6 - dark gray with slight apparent hydrocarbon odor detected physically). Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per US EPA Method 8021B. Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 ~ 2.00 ft. above grade

on-site	2:15 PM	temp	45 F
off-site	3:30 PM	temp	44 F
sky cond.		Mostly sun	ny
wind speed	15 - 20	direct.	WNW

Analytical Report Lab Order 1411B02

Date Reported: 12/2/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

Project: GCU #169

Collection Date: 11/25/2014 3:00:00 PM

Lab ID: 1411B02-001 Matrix: AQUEOUS

Received Date: 11/26/2014 7:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	5.0	μg/L	5	11/27/2014 1:26:44 AM	M R22836
Toluene	ND	5.0	μg/L	5	11/27/2014 1:26:44 AM	/ R22836
Ethylbenzene	180	5.0	μg/L	5	11/27/2014 1:26:44 AM	R22836
Xylenes, Total	920	10	μg/L	5	11/27/2014 1:26:44 AM	M R22836
Surr: 4-Bromofluorobenzene	139	66.6-167	%REC	5	11/27/2014 1:26:44 AM	M R22836

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

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

Page 1 of 2

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Cl	nain-c	of-Cus	stody Record	lum-Around	ime.					8	HA	LL	E	N	/IF	20	NI	MЕ	NT	AL	
Client:	BLAG	G ENGR.	/ BP AMERICA	Standard Project Name:	Rush _					ŀ	٩N	AL	YS	SIS	S L	A	во	RA			
Mailing Ad	ldress:	P.O. BO	X 87		GCU # 16	9		49	01 H								.com 8 MV	n 37109)		
		BLOOM	FIELD, NM 87413	Project #:				Τε	el. 50)5-3	45-3	975	1	Fax	505	-345	-410)7			
Phone #:		(505) 63	2-1199									ľ	Anai	ysis	Rec	ques	st				
email or Fa	ax#:			Project Manag	er:									-4				=			
QA/QC Pad Standa			Level 4 (Full Validation)		NELSON VE	LEZ	(8021B)	TPH (Gas only)	(MRO)			15)		PO4,50	2 PCB's			ter - 300.1)		e	
Accreditati	on:			Sampler:	NELSON VE	LEZ nv	(8)	(Gas	DRO /	1)	1	8270SIMS)		03	8082			/ water		dm	
□ NELAP		☐ Other		On Ice:	Yes	□ No	1	IPH	-	418.1)	504.1)	8270	10	03,7	-		(AC	.300.0			
□ EDD (T	ype)	,		Sample Tempe	erature:	13	1	+	(GR(5	etal	N,	cide	(A))/-i		9	oosit	3
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MATE	BTEX + MTBE	TPH 8015B (GRO	TPH (Method	EDB (Method	PAH (8310	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil	Cook comy		
11/25/14	1500	WATER	MW # 6	40 ml VOA - 2	HCI & Cool	-001	٧												1	ORY Grab sample 5 pt. composite sample	I
																			-	+	+
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Date: 1/25/14	Time: Relinquished by:			Received by	(1)001-	Date Time		nark U Di	s: REC	FLY T	го в	P:									
Date: 25 14	Time. 1815	Refinquished by. Date Time			Date Time						gy Co in e					NM 8	37401				

Hall Environmental Analysis Laboratory, Inc.

WO#:

1411B02

02-Dec-14

Client:

Blagg Engineering

Project:

GCU #169

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBW Batch ID: R22836 RunNo: 22836 Prep Date: Analysis Date: 11/26/2014 SeqNo: 673944 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 ND 1.0 Ethylbenzene Xylenes, Total ND 2.0 Surr: 4-Bromofluorobenzene 19 20.00 95.6 66.6 167

Sample ID 100NG BTEX LC	S SampT	SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSW	Batch	Batch ID: R22836			RunNo: 22836					
Prep Date:	Analysis D	Analysis Date: 11/26/2014			SeqNo: 673945					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.4	80	120			
Toluene	20	1.0	20.00	0	101	80	120			
Ethylbenzene	20	1.0	20.00	0	102	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		107	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

Page 2 of 2



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com RcptNo: 1 Work Order Number: 1411B02 Client Name: BLAGG. Received by/date 11/26/2014 7:00:00 AM Logged By: Ashley Gallegos 11/26/2014 10:11:17 AM Completed By: **Ashley Gallegos** Reviewed By: 11/26/14 Chain of Custody Not Present Y No 1 Custody seals intact on sample bottles? Not Present Yes V 2. Is Chain of Custody complete? 3 How was the sample delivered? Courier Log In NA 🗍 Yes 🗸 No 4. Was an attempt made to cool the samples? NA . No [5. Were all samples received at a temperature of >0° C to 6.0°C Yes Yes V 6. Sample(s) in proper container(s)? No 7. Sufficient sample volume for indicated test(s)? No 8. Are samples (except VOA and ONG) properly preserved? NA 🗌 No V 9. Was preservative added to bottles? Yes No VOA Vials No 🗌 10.VOA vials have zero headspace? Yes V No 11. Were any sample containers received broken? # of preserved bottles checked for pH: No 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 13. Are matrices correctly identified on Chain of Custody? No 14. Is it clear what analyses were requested? Checked by No 15. Were all holding times able to be met? Yes (If no, notify customer for authorization.) Special Handling (if applicable) No 🗌 Yes 🗌 NA 🗸 16. Was client notified of all discrepancies with this order? Person Notified: Date: In Person By Whom: Via: eMail Phone Fax Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp ºC Condition Seal Intact Seal No Seal Date Signed By

1.3

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY #: N/A GCU #169 LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W Date: March 10, 2015 DEVELOPER / SAMPLER : GCU 169 mw log 03-10-15.xls PROJECT MANAGER: Filename: WELL WELL WATER DEPTH TO TOTAL SAMPLING На CONDUCT TEMP. **VOLUME PURGED** # ELEV. ELEV. WATER **DEPTH** TIME (umhos) (celcius) (ft) (ft) (ft) (ft) (gal.) 100.00 91.99 8.01 20.00 2 98.23 89.15 9.08 20.00 97.71 89.53 8.18 20.00 3 -90.46 8.75 20.00 99.21 5 100.80 91.78 9.02 20.00 6 100.92 92.84 8.08 20.00 0905 7.21 900 9.6 4.50 INSTRUMENT CALIBRATIONS = 2,800 4.01/7.00/10.00 03/10/15 0630 DATE & TIME = Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). NOTES: (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2". Excellent recovery in MW #6. MW #6 - dark gray with slight apparent hydrocarbon odor detected physically). Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow

valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft.,

on-site	8:15 AM	temp	45 F
off-site	9:15 AM	temp	51 F
sky cond.		Sunny	
wind speed	0 - 10	direct.	E - ESE

US EPA Method 8021B

MW #6 ~ 2.00 ft. above grade.

Lab Order 1503483

Date Reported: 3/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

GCU #169

Client Sample ID: MW #6

Collection Date: 3/10/2015 9:05:00 AM

Lab ID: 1503483-001

Project:

Matrix: AQUEOUS

Received Date: 3/11/2015 8:10:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	2.5		µg/L	5	3/12/2015 4:23:31 PM	R24802
Toluene	ND	5.0		μg/L	5	3/12/2015 4:23:31 PM	R24802
Ethylbenzene	150	5.0		μg/L	5	3/12/2015 4:23:31 PM	R24802
Xylenes, Total	420	10		μg/L	5	3/12/2015 4:23:31 PM	R24802
Surr: 4-Bromofluorobenzene	153	80-120	S	%REC	5	3/12/2015 4:23:31 PM	R24802

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

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

Page 1 of 2

- P Sample pH Not In Range
- RL Reporting Detection Limit

C	hain-d	of-Cus	stody Record	Turn-Around 1	Гime:			1	r 1	5-	ŧΔ	11		NV	/T F	30	NI	ME	NT	ΔΙ	
Client:	BLAG	G ENGR.	/ BP AMERICA	✓ Standard	Rush													RA			
				Project Name:							ww	w.ha	allen	viro	nme	ntal	.com	i			
Mailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 H	lawk	ins I	NE -	- Alk	ouqu	erqu	ue, N	1M 8	7109	1		
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50)5-34	15-3	975		Fax	505-	-345	-410	7			
Phone #:		(505) 63	2-1199						-				Anal	ysis	Red	ques	it				
email or F	ax#:			Project Manag	jer:	(A.) E. () (Mark 1 - A. () (Mark 1 -	~							(4)							T
QA/QC Pa	-		Level 4 (Full Validation)		NELSON V	ELEZ	(8021B)	only)	MRO)			(S		05,50							0)
Accreditat				Sampler:	NELSON V	ELEZ TV	1	TPH (Gas	DRO /	1)	1	8270SIMS)		02,1	ids	red)	z				sample
□ NELAF	>	□ Other		On Ice:	⊠ Yës	□ No 🎺	1	PH (-	118.	504	3270		03,N	Sol	filte	rite				e sa
□ EDD (Гуре)			Sample Temp	erature: 📝	u /	1	+	GRC	7 po	po		tals	Ž	lvec	ns (ž			e e	= (
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1503483	BTEX +★	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Total Dissolved Solids	Iron, Ferrous (filtered)	Nitrate N / Nitrite N		-	Grab sample	5 pt. composite
3/10/15	0905	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-001	٧												1	٧	T
																		1	T	1	
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BERNARIO ANALIS CONTRACTOR	ļ						-							-	-			\dashv	+	+	-
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Date: 3/10/15	Time:	Relinquish	ed/by:	Received by:		Date Time	Rer	nark	s:	-											
-110/12	1609	1/11	my	Chrut	Walle	3/10/15/609				CTLY			C				N/A 4	0740	11		
Date:	Time:	Relinquish	ed by: U	Received by:		Date Time	1					-		т, ға	rmin	gton	, NIVI	8740	T		
110/15	1840	1 hr	A Walte		12	11/15 0×10		Payk	ey: _	ZEV	(HU)	LKF	VIE	-							

Hall Environmental Analysis Laboratory, Inc.

Client:

Blagg Engineering

Project:

GCU #169

Sample ID 5ML RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBW	Batch	ID: R2	4802	F	RunNo: 2	4802				
Prep Date:	Analysis D	ate: 3/	12/2015	S	SeqNo: 7	30484	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	22		20.00		112	80	120			

Sample ID 100NG BTEX LC	S SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	n ID: R2	4802	F	RunNo: 2	4802				
Prep Date:	Analysis D	ate: 3/	12/2015	8	SeqNo: 7	30485	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	80	120			
Toluene	21	1.0	20.00	0	107	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	63	2.0	60.00	0	105	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		120	80	120			S

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit 0
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- Reporting Detection Limit

Page 2 of 2

WO#:

1503483

13-Mar-15



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

Sample Log-In Check List

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com RcptNo: 1 Client Name: BLAGG Work Order Number: 1503483 Received by/date: Logged By: **Ashley Gallegos** 3/11/2015 8:10:00 AM 3/11/2015 3:33:20 PM Completed By: **Ashley Gallegos** Reviewed By: TO Chain of Custody No _ Not Present 1. Custody seals intact on sample bottles? Yes No 🗌 Not Present Yes 🗸 2. Is Chain of Custody complete? 3 How was the sample delivered? Courier Log In NA 🗌 No 🗌 Yes V 4. Was an attempt made to cool the samples? NA [... No 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes V No 6. Sample(s) in proper container(s)? Yes 🗸 No 7. Sufficient sample volume for indicated test(s)? No Yes 🗸 8. Are samples (except VOA and ONG) properly preserved? No 🗸 NA 🗌 Yes 9. Was preservative added to bottles? Yes 🗸 No VOA Vials No 10. VOA vials have zero headspace? Yes No 🗸 11. Were any sample containers received broken? # of preserved bottles checked No 🗌 for pH: 12. Does paperwork match bottle labels? Yes V (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 13. Are matrices correctly identified on Chain of Custody? No _ Yes V Yes 🗸 No 14. Is it clear what analyses were requested? Checked by: Yes 🗸 No . 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes NA V 16. Was client notified of all discrepancies with this order? No _ 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	2.1	Good	Yes			

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. N/A CHAIN-OF-CUSTODY #: GCU # 169 HALL ENVIRONMENTAL LABORATORY (S) USED: UNIT I, SEC. 35, T29N, R12W NJVMay 14, 2015 DEVELOPER / SAMPLER : Date: GCU 169 mw log 2015-05-14.xls PROJECT MANAGER: Filename: CONDUCT WELL WELL WATER DEPTH TO TOTAL SAMPLING рН TEMP. VOLUME **PURGED** # ELEV. ELEV. WATER DEPTH TIME (umhos) (celcius) (ft) (gal.) (ft) (ft) (ft) 100.00 20.00 98.23 20.00 3 97.71 20.00 4 99.21 20.00 --_ -5 100.80 20.00 7.14 900 4.00 6 100.92 8.58 0845 13.3 20.00 INSTRUMENT CALIBRATIONS = 2,800 4.01/7.00/10.00 05/11/15 0600 DATE & TIME = NOTES: Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./f(3) X 3 (wellbores). (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2 ". Excellent recovery in MW #6. MW #6 - dark gray with slight apparent hydrocarbon odor detected physically). Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per US EPA Method 8021B

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft.,

on-site	7:50 AM	temp	53 F
off-site	9:00 AM	temp	55 F
sky cond.		Cloudy	
wind speed	5 - 15	direct.	NE - ESE

MW #6 ~ 2.00 ft. above grade.

Lab Order 1505686

Date Reported: 5/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW # 6

Project: GCU #169

Collection Date: 5/14/2015 8:45:00 AM

Lab ID: 1505686-001

Matrix: AQUEOUS

Received Date: 5/15/2015 7:26:00 AM

Analyses	Result	RL Q	Qual U	nits	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	2.9	2.5	۲	ug/L	5	5/15/2015 1:54:53 PM	R26234
Toluene	ND	5.0	1	ug/L	5	5/15/2015 1:54:53 PM	R26234
Ethylbenzene	230	5.0	۲	ug/L	5	5/15/2015 1:54:53 PM	R26234
Xylenes, Total	1000	10	۲	ug/L	5	5/15/2015 1:54:53 PM	R26234
Surr: 4-Bromofluorobenzene	134	80-120	S 9	%REC	5	5/15/2015 1:54:53 PM	R26234

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

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

Page 1 of 2

- P Sample pH Not In Range
- RL Reporting Detection Limit

C	hain-d	of-Cus	stody Record	Turn-Around T	ime:			- F - 1	1 1	Н	A	LL	EI	NV	/IF	30	NI	ME	NT	ΆI		
lient:	BLAG	G ENGR.	/ BP AMERICA		Rush_													RA				
			A Marie Congression of the Control o	Project Name:													.com					
/lailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 H									37109)			
		BLOOM	FIELD, NM 87413	Project #:	***************************************					5-34							-410					•
hone #:	ALAN BARRETTE SUN	(505) 63	2-1199	1								Α	naly	/sis	Red	ques	t					
mail or F	ax#:			Project Manag	er:	A de la constitución de la const	<u> </u>							4)								
⊋A/QC Pad ✓ Standa	77		Level 4 (Full Validation)		NELSON V	ELEZ	(8021B)	only)	MRO)			lS)		PO4,50							۵	
ccreditat				Sampler:	NELSON V	ELEZ nv	4	(Gas	RO/	1	1	8270SIMS)		102,	lids	red)	z				sample	
NELAF)	☐ Other		On Ice: 🔑	ALYes .	. E. No	#	TPH	0/0	418.1)	504.1)	8270		03,1	d So	filte	Nitrite N				e sa	Ž.
☐ EDD (1	ype)			Sample Tempe	erature:	12	4	. + J	(GRC	pol	pou	ō	etals	Z,	olve) sno	N. Z.) je	osit	(∠ 0
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1505686	BTEX ←№1	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO	TPH (Method	EDB (Method	PAH (8310	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Total Dissolved Solids	Iron, Ferrous (filtered)	Nitrate N		-	ap	5 pt. composite	Air Bubbles (Y or N)
5/14/15	0845	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-001	٧												١.	٧		
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Date: /14/15	(S37)	The iniquising	landy		Jalle 5	4		BILL I	DIRE	CTLY			-			_1	A/A A	0740	11			
Date:	Time:	Relinquish		Received by: Date Time Jeff Peace, 200 Energy Court, Farmington, NM 87401																		

Hall Environmental Analysis Laboratory, Inc.

WO#: **1505686**

18-May-15

Client:

Blagg Engineering

Project:

GCU #169

Sample ID 100NG BTEX LCS	SampT	ype: LC	S	Test	Code: El	PA Method	8021B: Volati	iles		
Client ID: LCSW	Batch	ID: R2	6234	R	unNo: 20	6234				
Prep Date:	Analysis D	ate: 5/	15/2015	S	eqNo: 7	79458	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	106	80	120			
Xylenes, Total	62	2.0	60.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		94.3	80	120			
Sample ID 5ML RB	SampT	ype: ME	BLK	Test	Code: El	PA Method	8021B: Volati	les		
Sample ID 5ML RB Client ID: PBW		ype: ME			Code: El		8021B: Volati	les		
Client ID: PBW		1D: R2	6234	R		6234	8021B: Volati	iles		
Client ID: PBW	Batch	1D: R2	6234 15/2015	R	eqNo: 7	6234		iles %RPD	RPDLimit	Qual
Client ID: PBW Prep Date:	Batch Analysis D	n ID: R2 ate: 5 /	6234 15/2015	R	eqNo: 7	6234 79481	Units: µg/L		RPDLimit	Qual
Client ID: PBW Prep Date: Analyte	Batch Analysis D Result	n ID: R2 rate: 5 /	6234 15/2015	R	eqNo: 7	6234 79481	Units: µg/L		RPDLimit	Qual
Client ID: PBW Prep Date: Analyte Benzene	Batch Analysis D Result ND	PQL 1.0	6234 15/2015	R	eqNo: 7	6234 79481	Units: µg/L		RPDLimit	Qual
Client ID: PBW Prep Date: Analyte Benzene Toluene	Batch Analysis D Result ND ND	PQL 1.0	6234 15/2015	R	eqNo: 7	6234 79481	Units: µg/L		RPDLimit	Qual

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

VIRONMENTAL ANALYSIS LABORATORY

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

BLAGG RcptNo: 1 Client Name: Work Order Number: 1505686 Received by/date: Logged By: Lindsay Mangin 5/15/2015 7:26:00 AM Completed By: 5/15/2015 8:08:52 AM Lindsay Mangin A5-15-15 Reviewed By: Chain of Custody Not Present 1. Custody seals intact on sample bottles? Yes No Yes No Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In No 🗌 NA [4. Was an attempt made to cool the samples? NA | 5. Were all samples received at a temperature of >0° C to 6.0°C No | No Sample(s) in proper container(s)? No 7. Sufficient sample volume for indicated test(s)? No 8. Are samples (except VOA and ONG) properly preserved? No 🏕 NA 🗌 9. Was preservative added to bottles? Yes 10. VOA vials have zero headspace? No L No VOA Vials Yes 11. Were any sample containers received broken? No Yes # of preserved bottles checked for pH: No 🗌 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 13. Are matrices correctly identified on Chain of Custody? No No 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? No Checked by: (If no, notify customer for authorization.) Special Handling (if applicable) Yes No 🗌 16. Was client notified of all discrepancies with this order? 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 1.2 Good

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY #: N/A

GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT I, SEC. 35, T29N, R12W

DEVELOPER / SAMPLER : Date: August 26, 2015

GCU 169 mw log 2015-08-26.xls PROJECT MANAGER: Filename: NJV

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1	100.00	-	-	20.00	y=,	-	-	-	-
2	98.23	-	-	20.00	-	-	-	-	-
3	97.71	-	-	20.00	-	-	-	-	-
4	99.21	-	-	20.00	-	-	-	-	-
5	100.80	-	-	20.00	-		-	-	-
6	100.92	-	8.43	20.00	0845	7.05	1,000	17.5	4.25
			INSTRU	JMENT CALI	BRATIONS =	4.01/7.00/10.00	2,800		

DATE & TIME = 08/19/15 0600

NOTES: Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water.

Comments or note well diameter if not standard 2".

Excellent recovery in MW #6. MW #6 - dark gray with slight apparent hydrocarbon odor detected physically). Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow

valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per

US EPA Method 8021B

Top of casing MW #1 ~ 2.00 ft., MW #2 ~ 2.00 ft., MW #3 ~ 2.00 ft., MW #4 ~ 2.00 ft., MW #5 ~ 2.00 ft.,

MW #6 ~ 2.00 ft. above grade.

on-site	7:45 AM	temp	65 F
off-site	8:45 AM	temp	64 F
sky cond.		Cloudy	
wind speed	0 - 5	direct.	E

Lab Order 1508E35 Date Reported: 9/4/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW # 6

Project: GCU # 169 Collection Date: 8/26/2015 8:35:00 AM

Lab ID: 1508E35-001 Matrix: AQUEOUS Received Date: 8/28/2015 8:25:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SH	HORT LIST					Analys	t: DJF
Benzene	ND	2.0	D	µg/L	2	9/2/2015 4:28:19 PM	A28626
Toluene	16	2.0	D	µg/L	2	9/2/2015 4:28:19 PM	A28626
Ethylbenzene	240	20		µg/L	20	9/2/2015 4:00:44 PM	A28626
Xylenes, Total	1300	30		μg/L	20	9/2/2015 4:00:44 PM	A28626
Surr: 1,2-Dichloroethane-d4	106	70-130	D	%REC	2	9/2/2015 4:28:19 PM	A28626
Surr: 4-Bromofluorobenzene	103	70-130	D	%REC	2	9/2/2015 4:28:19 PM	A28626
Surr: Dibromofluoromethane	113	70-130	D	%REC	2	9/2/2015 4:28:19 PM	A28626
Surr: Toluene-d8	95.3	70-130	D	%REC	2	9/2/2015 4:28:19 PM	A28626

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 2 J
- P Sample pH Not In Range
- RL Reporting Detection Limit

Chain-of-Custody Record Client: BLAGG ENGR. / BP AMERICA		Turn-Around 1	Time:		١,		1 1		dΕ	11	F	N	/TF	3O	NI	MEI	TI.	1		
Client:	BLAG	G ENGR.	/ BP AMERICA		Rush_													RA		
				Project Name:							ww	w.ha	allen	viro	nme	ental	.con	1		
Mailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 F	lawl								37109		
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50	05-3	45-3	975		Fax	505	-345	-410	7		
Phone #:	***************************************	(505) 63	32-1199									I	Anal	ysis	Rec	ques	st			
email or F	ax#:			Project Manag	jer:									(4					T	
QA/QC Pa			Level 4 (Full Validation)		NELSON VI	ELEZ	(8021B)	only)	MRO)			S)		05'70						d)
Accredita				Sampler:	NELSON VI	ELEZ 97V	_	Gas	RO/	1)	F	or 8270SIMS)		02,1	ids	red)	z			sample
□ NELAF	•	☐ Other			X Yes	⊠ No	1	PH (0/0	118.	504.1)	3270		03,8	Sol	Filte	Nitrite			
□ EDD (Гуре)			Sample Tempe	erature: 2 3	+0.3cx=26	4	+ +	(GRC	po 7	po	or 8	tals	Z,	lvec	ns (i	Z.		<u>e</u>	osit
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + NATBE	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method	PAH (8310	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Total Dissolved Solids	Iron, Ferrous (filtered)	Nitrate N /		Grab sample	5 pt. composite
8/26/13	0835	WATER	MW # 6				V												V	
1			77 711111111111111111111111111111111111																	
																			+	+
							T												+	++
							+	-			-								+	+-+
							+	_					_	-					+-	+-+
							+-	-			-		_			-	-		+	++
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								_						_				-		-
Date:	Time:	Relinquishe	ad by	Received by: Date Time Re			Rer	nark	s:											
8/2/15	leco	16	1	Mistu	Walle "	8/27/15 /1600	1	BILL					^^*	+ Eas	rmin	aton	NINA	87401		
Date:	Time:	Relinguishe	ed by:	Theceived by.									i, rdi	(1111)	RION	, 1917	0/401			
8/27/15/1910 Musto Walle ((Bit. Ashle 08/28/15 0825 Paykey: ZEVHO1REME																	

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508E35

04-Sep-15

Client: Blagg Engineering

Project: GCU # 169

Sample ID rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260: Volatile	s Short L	ist	
Client ID: PBW	Batch	ID: A2	8626	F	RunNo: 2	8626				
Prep Date:	Analysis D	ate: 9/	2/2015	S	SeqNo: 8	66329	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	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.8		10.00		98.1	70	130			
Sample ID 100ng lcs	SampT	ype: LC	s	Tes	tCode: El	PA Method	8260: Volatile	es Short L	.ist	
Client ID: LCSW	Batch	ID: A2	8626	F	RunNo: 2	8626				
Prep Date:	Analysis D	ate: 9/	2/2015	5	SeaNo: 8	66330	Units: ua/L			

Client ID: LCSW	Batch	1D: A2	8626							
Prep Date:	Analysis D	ate: 9/	2/2015	S	SeqNo: 80	66330	Units: µg/L			
Analyte	Result	Result PQL SPK value SPK Ref Val %REC LowLimit Hig						%RPD	RPDLimit	Qual
Benzene	20 1.0 20.00 0 98.9 70					130				
Toluene	19	1.0	20.00	0	97.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	11		10.00	00 108 70			130			
Surr: Toluene-d8	9.7		10.00		70	130				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- 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 Or	der Number	1508E	35			Rcpt	No:	1
Received by/date	03	A	08/2	8/15			(Standy)	Alson .			
Logged By:	Lindsay Ma		8/28/2015				03	" Lange			
Completed By:	Lindsay Ma	ngin	8/31/2015	6:21:43 AM			Jumby	Homes			
Reviewed By:	6		08/3	1/15							1
Chain of Cus	tody//	71 (///							
1. Custody sea	als intact on sai	mple bottles?			Yes		No		Not Present		
2. Is Chain of C	Custody comple	ete?			Yes		No		Not Present		
3. How was the	e sample delive	ered?			Cour	ier					
Log In											
	empt made to o	cool the samples	?		Yes		No		NA		
5. Were all sar	mples received	at a temperature	e of >0° C to	6.0°C	Yes	*	No		NA [
6. Sample(s) ii	n proper conta	iner(s)?			Yes		No				
7. Sufficient sa	imple volume f	or indicated test(s)?		Yes		No				
8. Are samples	(except VOA	and ONG) prope	rly preserved	1?	Yes		No				
9. Was present	vative added to	bottles?			Yes		No		NA		
10.VOA vials ha	ave zero heads	space?			Yes		No		No VOA Vials		
11. Were any sa	ample containe	ers received brok	en?		Yes		No				
									# of preserved bottles checked	d	
12. Does paper	work match bot	ttle labels?			Yes		No		for pH:		
	pancies on cha					r#1			Adjusted		>12 unless noted)
		tified on Chain of	f Custody?		Yes		No		Aujusteu	•	
14. Is it clear wh					Yes		No		Checked	hvr	
15. Were all hole (If no, notify	customer for a				Yes		No		Checked	Dy.	
0											
Special Hand	iling (if app	licable)									
16. Was client n	notified of all dis	screpancies with	this order?		Yes		No		NA		
Person	n Notified:			Date:		MARKET MILE A		desire (a de la Comi			
By Wh	nom:	i in terminina (million interiorità della della della della della della mandera anno anno anno anno anno anno a	- ATRICA CONTRACTOR CO	Via:	eMa	il 🗌	Phone	Fax	n Person		
Regar	ding:		CONTROL CONTROL OF THE PARTY OF	Ca Militar Marchilladora Indonesia, esta decembra, esta	A STATE OF THE PARTY OF THE PAR				nis casaras de Primario de Referencia política que casa de Angelo del propiero	ew.	
Client	Instructions:	ki dini dike dileki dike atah mengelimbi atau mengelimbi atau mengelimbi.		Mineral and Company of the Company o	la markalistakudista	tivi, Arkani Arkani tivi Tarinarin	ini fishi kecimalik kinaba kelimen, mening	ALGERICA STATE AND ADDRESS.		interestes."	
17. Additional re	emarks:										
18. Cooler Info	ormation										
Cooler N		Condition S	eal Intact	Seal No	Seal Da	ate	Signed	Ву			
1	2.6	Good Ye	s								

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CHAIN-OF-CUSTODY #:

N/A

GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W December 2, 2015 DEVELOPER / SAMPLER : Date: GCU 169 mw log 2015-12-02.xls PROJECT MANAGER: Filename: CONDUCT TEMP. WELL WELL WATER DEPTH TO TOTAL SAMPLING На **VOLUME** # ELEV. ELEV. WATER DEPTH TIME (umhos) (celcius) **PURGED** (ft) (ft) (ft) (ft) (gal.) 100.00 92.07 7.93 20.00 98.23 20.00 2 3 97.71 89.63 8.08 20.00 4 99.21 90.56 8.65 20.00 5 100.80 91.88 8.92 20.00 6 100.92 92.86 8.06 20.00 1315 7.23 900 12.7 5.75 INSTRUMENT CALIBRATIONS = 2,800 4.01/7.00/10.00 DATE & TIME = 12/02/15 0600

NOTES: Volume of water purged from well prior to sampling; $V = pi \times r2 \times h \times 7.48 \text{ gal./ft3} \times 3 \text{ (wellbores)}$.

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water.

Comments or note well diameter if not standard 2".

CLIENT: BP AMERICA PROD. CO.

Excellent recovery in MW #6. MW #6 - medium gray with slight apparent hydrocarbon odor detected physically.

Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per

US EPA Method 8021B.

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 \sim 2.00 ft. above grade.

on-site	12:30 PM	temp	34 F
off-site	1:30 PM	temp	35 F
sky cond.		Partly cloud	dy
wind speed	0 - 5	direct.	E-SE

Lab Order 1512207

Date Reported: 12/11/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

Project: GCU #169 Collection Date: 12/2/2015 1:15:00 PM

Lab ID: 1512207-001 Matrix: AQUEOUS

Received Date: 12/4/2015 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SH	ORT LIST				Analys	t: DJF
Benzene	ND	1.0	μg/L	1	12/9/2015 10:33:15 PM	A30730
Toluene	3.7	1.0	μg/L	1	12/9/2015 10:33:15 PM	A30730
Ethylbenzene	180	10	μg/L	10	12/10/2015 4:52:52 PN	A30773
Xylenes, Total	910	15	μg/L	10	12/10/2015 4:52:52 PN	A30773
Surr: 1,2-Dichloroethane-d4	104	70-130	%REC	1	12/9/2015 10:33:15 PM	A30730
Surr: 4-Bromofluorobenzene	91.4	70-130	%REC	1	12/9/2015 10:33:15 PN	A30730
Surr: Dibromofluoromethane	99.5	70-130	%REC	1	12/9/2015 10:33:15 PM	A30730
Surr: Toluene-d8	98.0	70-130	%REC	1	12/9/2015 10:33:15 PM	A30730

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 2 J

- P Sample pH Not In Range
- Reporting Detection Limit

Chain-oi-Custody Record		Turn-Around T	Time:		The second second			1-	10	11	F	M	/T1	30	1840	ME	ИТ	'A!			
Client:	BLAG	G ENGR.	/ BP AMERICA	Standard Project Name:	Rush					B	N	AL	Y	SIS	S L	LAI	ВО	RA			
				. Tojout Ivaine					TORSE OF STREET		ww	w.h.	aller	nviro	nme	enta	l.com	n			
Mailing Ad	ddress:	P.O. BOX	K 87		GCU # 16	19		49	01 H	ławk	ins	NE -	- All	buqu	jerq	ue, I	NM 8	87109	7		
		BLOOMF	FIELD, NM 87413	Project #:			and the second	Te	el. 50	75-34	15-3	975		Fax	505	-345	5-410)7			
Phone #:		(505) 632	2-1199									torus lines	4.5.00	lysis	Red	que	st				
email or Fa	3x#:			Project Manag	ler:		-							10							
QA/QC Pac Standa	-		Level 4 (Full Validation)		NELSON VE	ELEZ	(8021B)	(Aluo	(MRO)			(5)		004,50						Million and the state of the st	e
Accreditati				Sampler:	NELSON VE	ELEZ 77V		Gas	/ DRO /	1	1)	SIM		102,	lids	red	z				sample
□ NELAP		□ Other_			⊠ Yes	□ No	丰	TPH	0/0	418.1)	504.	3270		D3,N	1 50	filte	Nitrite			The state of the s	e Sa
□ EDD (T	ype)			Sample Tempe	erature: 1.3		1	E +	(GRC	7 po	pot	or 8	stals	N,D	lvec	us (Nit			alc	oosite
Date	Time	Matrix	Sample Request ID	Container Preservative Type and # Type HEAL No.			BTEX ←₩∓	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO	TPH (Method	EDB (Method 504.1)	PAH (8310 or 82705IMS)	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Total Dissolved Solids	Iron, Ferrous (filtered)				de !	5 pt. composite
12/2/15	1315	WATER	MW # 6				٧							Ì		Ī			-	٧	
				40 ml VOA - 2 HCl & Cool -00/ V					The second second					-	-	-			The same of the sa	+	
									1000000					-					1	1	
																				1	
															-			Business and the second		+	
														1							
														-	-				and the second		
																				士	
ate 12/3/15	Time 1732	Relinquishee	In V	1 chr. 1 12 31 15 1732			BIL	marks	RECTI												
		Received by	12/1	Date Time	200 VIE			y Cou HIXO				ton,	NM	874	101 /	Attn.:	S. M	loska	n and		
12/17	If necessary, samples submitted to Hall Environmental movines		Thomason de	141	-1/1	1															

Hall Environmental Analysis Laboratory, Inc.

WO#: **1512207**

11-Dec-15

Client: Blagg Engineering

Project: GCU #169

Troject.								
Sample ID rb	SampTyp	e: MBLK	TestCode	EPA Method	8260: Volatile	s Short L	ist	
Client ID: PBW	Batch ID	D: A30730	RunN	: 30730				
Prep Date:	Analysis Date	e: 12/9/2015	SeqN	938973	Units: µg/L			
Analyte	Result F	PQL SPK value	SPK Ref Val %R	EC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0						
Toluene	ND	1.0						
Surr: 1,2-Dichloroethane-d4	10	10.00	9	9.6 70	130			
Surr: 4-Bromofluorobenzene	10	10.00		01 70				
Surr: Dibromofluoromethane	9.9	10.00	9	9.3 70				
Surr: Toluene-d8	9.5	10.00	9	5.0 70	130			
Sample ID 100ng lcsc	SampTyp	e: LCS	TestCod	EPA Method	8260: Volatile	s Short L	ist	
Client ID: LCSW	Batch II	D: A30730	RunN	30730				
Prep Date:	Analysis Date	e: 12/9/2015	SeqN	938974	Units: µg/L			
Analyte	Result F	PQL SPK value	SPK Ref Val %R	EC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0 20.00	0	06 70	130			
Toluene	21	1.0 20.00	0	03 70	130			
Surr: 1,2-Dichloroethane-d4	11	10.00		05 70	130			
Surr: 4-Bromofluorobenzene	9.6	10.00	9	6.0 70				
Surr: Dibromofluoromethane	11	10.00		05 70				
Surr: Toluene-d8	10	10.00	9	9.6 70	130			
Sample ID rb	SampTyp	e: MBLK	TestCod	EPA Method	8260: Volatile	es Short L	ist	
Client ID: PBW	Batch II	D: A30773	RunN	30773				
Prep Date:	Analysis Date	e: 12/10/2015	SeqN	940002	Units: µg/L			
Analyte	Result F	PQL SPK value	SPK Ref Val %R	EC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0						
Xylenes, Total	ND	1.5						
Surr: 1,2-Dichloroethane-d4	10	10.00		02 70				
Surr: 4-Bromofluorobenzene	10	10.00		9.7 70				
Surr: Dibromofluoromethane	11	10.00		07 70				
Surr: Toluene-d8	9.5	10.00	9	4.8 70	130			
Sample ID 100ng Ics	SampTyp	e: LCS	TestCod	EPA Method	d 8260: Volatile	es Short L	ist	
Client ID: LCSW	Batch II	D: A30773	RunN	30773				
Prep Date:	Analysis Date	e: 12/10/2015	SeqN	940003	Units: %REC			
Analyte			SPK Ref Val %R			%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10	10.00		03 70				
Surr: 4-Bromofluorobenzene	9.6	10.00		6.4 70				
Surr: Dibromofluoromethane	10	10.00	9	9.6 70	130			
Surr: Toluene-d8	9.5	10.00	9	4.8 70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- 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

BLAGG Work Order Number: 1512207 RcptNo: 1 Client Name: 12/04/15 Received by/date 12/4/2015 8:00:00 AM Logged By: Joe Archuleta 12/4/2015 11:16:30 AM Completed By: Joe Archuleta Reviewed By Chain of Custody Yes Not Present 1 Custody seals intact on sample bottles? No [Not Present 2. Is Chain of Custody complete? Yes 🖈 3. How was the sample delivered? Courier Log In No NA 1 4. Was an attempt made to cool the samples? NA 🗔 5. Were all samples received at a temperature of >0° C to 6.0°C No _ 6. Sample(s) in proper container(s)? No 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? NA [No M 9. Was preservative added to bottles? Yes No VOA Vials No L 10.VOA vials have zero headspace? Yes No 🐗 11. Were any sample containers received broken? # of preserved bottles checked for pH: No 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 13. Are matrices correctly identified on Chain of Custody? 14 Is it clear what analyses were requested? No . Checked by: 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes No L 16. Was client notified of all discrepancies with this order? Person Notified Date: By Whom: eMail Phone Fax Via: In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Signed By 1.3 Good Yes

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY #: N/A GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : February 23, 2016 Date: Filename: GCU 169 mw log 2016-02-23.xls PROJECT MANAGER: CONDUCT **VOLUME** WELL WELL WATER DEPTH TO TOTAL SAMPLING На TEMP. ELEV. **DEPTH PURGED** # ELEV. WATER TIME (umhos) (celcius) (gal.) (ft) (ft) (ft) (ft) 100.00 91.59 8.41 20.00 2 98.23 20.00 3 97.71 89.17 8.54 20.00 4 99.21 90.12 9.09 20.00 5 100.80 91.35 9.45 20.00 6 100.92 92.30 8.62 20.00 1250 6.98 900 9.3 5.00 INSTRUMENT CALIBRATIONS = 2,800 4.01/7.00/10.00 02/23/16 DATE & TIME = 0630 Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). NOTES: (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2 ". Excellent recovery in MW #6. MW #6 - medium gray with slight apparent hydrocarbon odor detected physically. Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per US EPA Method 8021B. Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft.,

on-site	12:00 PM	temp	39 F
off-site	1:30 PM	temp	42 F
sky cond.		Cloudy	
wind speed	0 - 10	direct.	W - NW

MW #6 ~ 2.00 ft. above grade.

Lab Order 1602A70 Date Reported: 3/1/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

Project: GCU #169

Collection Date: 2/23/2016 1:30:00 PM

Lab ID: 1602A70-001

Matrix: AQUEOUS

Received Date: 2/25/2016 7:20:00 AM

Analyses	Result	PQL (Qual U	nits	DF	Date Analyzed	Batch		
EPA METHOD 8021B: VOLATILES						Analyst	: NSB		
Benzene	ND	1.0	μ	ıg/L	1	2/26/2016 10:31:40 AM	R32443		
Toluene	1.9	1.0	μ	ıg/L	1	2/26/2016 10:31:40 AM	R32443		
Ethylbenzene	200	10	μ	ıg/L	10	2/26/2016 10:07:00 AM	R32443		
Xylenes, Total	750	20	μ	ıg/L	10	2/26/2016 10:07:00 AM	R32443		
Surr: 4-Bromofluorobenzene	374	65-127	S %	%Rec	1	2/26/2016 10:31:40 AM	R32443		

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

lient:		Turn-Around	Time:			1 1		н	ΔΙ		FN	VT	RO	NF	МE	Т	AL			
lient:	BLAG	G ENGR.	/ BP AMERICA	☑ Standard	☐ Rush _												RA			
				Project Name	:				-10-20	\	vwv	v.hal	lenvi	ronm	enta	l.con	n			
1ailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 H	awki	ns N	1E -	Albu	quero	ηue, Ι	NN 8	37109)		
		BLOOM	FIELD, NM 87413	Project #:				Te	l. 50	5-34	5-39	975	Fax	505	-345	-410	7			
hone #:		(505) 63	2-1199									Ar	nalys	is Re	que	st				
mail or F	ax#:			Project Manag	ger:		~						7	4	T					
A/QC Pa	•		Level 4 (Full Validation)		NELSON V	ELEZ	**************************************	s only)	/ MRO)			(S)	00.00	26					4	
ccredita	tion:			Sampler:	NELSON VI	ELEZ 97V	1	(Ga	ORO	1)	1)	OSIN	Š	shiles	red	z			alames	
NELAF	•	□ Other			⊠ Yes	□No	Ŧ	TPH	1/0	418	504	827	5	d So	filte	rite			9	N N
EDD (Гуре)			Sample Temp	erature: /, 2		BTEX ← NATBE	3E +	(GR	pou	pod	0	etal	olve	sno (/ Nitrite N		.	ole Sei	2
Date	Time	Matrix	Sample Request ID	Container Type and # Preservative Type HEAL No. WOZATO 40 ml VOA - 2 HCl & Cool COO				BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Total Dissolved Solids	Iron, Ferrous (filtered)	Nitrate N		-	Grab sample	Air Bubbles (Y or N)
2/23/16	1330	WATER	MW # 6				٧				1							7	V	
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			***************************************	***************************************							\top	\neg	\top					1		
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ate:	Time:	Relinquishe	ed by:	Received by: Date Time			Ren	l nark	s:											
2/24/16	1609	7	MnVj	Christ	- Walter	21.	14.09 BILL DIRECTLY TO BP:													
ate:	Time:	Relinquishe	ed by:	Received by:	1	Date Time							gton,	8 MV	/401	Att	n.: Jo	nn R	itchie	9
24/16	1814	Thus	to Welter		DZ	25/16 0720	VI	D: _		VRIT	<u>w</u>	FEC					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			THE L
	If necessary	samóles sub	mitted to Hall Environmental may be sul	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.

WO#: **1602A70**

01-Mar-16

Client:

Blagg Engineering

Project:

GCU #169

Sample ID 5ML RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	les		
Client ID: PBW	Batch	ID: R3	2443	R	RunNo: 3	2443				
Prep Date:	Analysis Da	ate: 2/	26/2016	S	SeqNo: 9	92135	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	21		20.00		106	65	127			

Sample ID 100NG BTEX LCS	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	les		
Client ID: LCSW	Batch	ID: R3	2443	F	RunNo: 3	2443				
Prep Date:	Analysis D	ate: 2/	26/2016	S	SeqNo: 9	92136	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.8	80	120			
Toluene	19	1.0	20.00	0	94.9	80	120			
Ethylbenzene	19	1.0	20.00	0	95.8	80	120			
Xylenes, Total	58	2.0	60.00	0	96.5	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		119	65	127			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



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: 1602A70 RcptNo: 1 moz125/16 Received by/date: anne Sham Logged By: 2/25/2016 7:20:00 AM Anne Thorne 2/25/2016 Completed By: Anne Thorne 02/25/16 Reviewed By: Chain of Custody Not Present No 🗌 Yes 1 Custody seals intact on sample bottles? No 🗌 Yes 🗸 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In NA 🗌 Yes V No _ 4. Was an attempt made to cool the samples? NA 🗍 No 🗌 Yes 🗸 5. Were all samples received at a temperature of >0° C to 6.0°C 6. Sample(s) in proper container(s)? Yes V No _ Yes 🗸 No 7. Sufficient sample volume for indicated test(s)? No ~ 8. Are samples (except VOA and ONG) properly preserved? No V NA 🗌 Yes 🗌 9. Was preservative added to bottles? No VOA Vials Yes 🗸 No 10. VOA vials have zero headspace? No V 11. Were any sample containers received broken? Yes # of preserved bottles checked for pH: Yes V No L 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗌 13. Are matrices correctly identified on Chain of Custody? Yes V No 14. Is it clear what analyses were requested? Checked by: Yes 🗸 No L 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes No NA V 16. Was client notified of all discrepancies with this order? 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 11.2 Good Yes

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. N/ACHAIN-OF-CUSTODY #: GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : NJV Date: June 6, 2016 GCU 169 mw log 2016-06-06.xls PROJECT MANAGER: NJVFilename: WELL WATER DEPTH TO TOTAL CONDUCT TEMP. **VOLUME** WELL SAMPLING Hq ELEV. **DEPTH PURGED** # ELEV. WATER TIME (umhos) (celcius) (ft) (ft) (ft) (ft) (gal.) 100.00 91.15 8.85 20.00 2 98.23 _ _ 20.00 3 97.71 88.77 8.94 20.00 4 99.21 89.68 9.53 20.00 -5 100.80 90.88 9.92 20.00 6 100.92 91.79 9.13 7.30 900 14.9 5.25 20.00 0925 INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800 DATE & TIME = 06/02/16 0700 Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). NOTES: (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2 ". Excellent recovery in MW #6. MW #6 - medium gray with slight apparent hydrocarbon odor detected physically. Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per US EPA Method 8021B. Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 ~ 2.00 ft. above grade.

on-site	8:40 AM	temp	73 F
off-site	9:40 AM	temp	77 F
sky cond.		Mostly sun	ny
wind speed	0 - 10	direct.	ENE - E

Lab Order 1606468

Date Reported: 6/16/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

Project: GCU 169

Collection Date: 6/6/2016 9:25:00 AM

Lab ID: 1606468-001

Matrix: AQUEOUS Received Date: 6/9/2016 8:00:00 AM

Analyses	Result	PQL (Qual U	J nits	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analys	st: NSB
Benzene	2.0	1.0		μg/L	1	6/13/2016 10:41:42 A	M B34875
Toluene	5.2	1.0		μg/L	1	6/13/2016 10:41:42 A	M B34875
Ethylbenzene	170	20		μg/L	20	6/14/2016 1:45:10 PM	B34904
Xylenes, Total	840	40		μg/L	20	6/14/2016 1:45:10 PM	B34904
Surr: 4-Bromofluorobenzene	295	87.9-146	S	%Rec	1	6/13/2016 10:41:42 A	M B34875

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

C	hain-d	of-Cus	stody Record	Turn-Around	Time:		HALL ENVIRON			E	NT	ΓΑΙ	L									
lient:	BLAG	G ENGR.	/ BP AMERICA	✓ Standard	Rush _		ANALYSI															
				Project Name:				A			www	w.ha	llen	viro	nme	ntal	.con	1				
1ailing A	ddress:	P.O. BO	X 87	1	GCU # 16	9		49	01 H	lawk									9			
		BLOOM	FIELD, NM 87413	Project #:				Te	l. 50)5-34	15-3	975	1	Fax	505	-345	-410	7				
hone #:		(505) 63	2-1199									Α	nal	ysis	Red	ques	st					
mail or F	ax#:			Project Manag	jer:		9															
A/QC Pa			Level 4 (Full Validation)		NELSON VE	LEZ	**************************************	+ TPH (Gas only)	/ MRO)			15)		PO4,50							e	
ccreditat	tion:			Sampler:	NELSON VE	ELEZ 97V	8)	(Gas	DRO/	1.	1.	OSIN		VO2,	ds			A) Balance s sample N)				
NELAF		□ Other			and the same of the property of the same o	□ No	1	TPH	-	418	504	827	S	03,1	Solids		OA)	s Ba			te s	N N
3 EDD (1	Гуре)	T		Sample Temp	erature: 13) 	1	BE +	(GR	pou	hod	00	etal	C,N	lved	(A)	ni-V	tion		ble	posi) (Y
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MTBE + TPH (Gas only) BTEX + MTBE + TPH (Gas only) TPH 8015B (GRO / DRO / MRO) TPH (Method 418.1) EDB (Method 504.1) PAH (8310 or 8270SIMS) RCRA 8 Metals Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Total Dissolved Solids 8260B (VOA) 8270 (Semi-VOA) Anions / Cations Balance					rab	5 pt. composite	Air Bubbles (Y or N)								
6/6/16	0925	WATER	MW # 6	40 ml VOA - 2	HCI & Cool	-001	٧							_		~				V	-	4
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ate; 5/8/16	Time:	Relinquishe	my	Received by:	illaelta	Date Time 6/8/16 1815	Remarks: BILL DIRECTLY TO BP: 200 Energy Court, Farmington, NM 87401 Attn.: John Ritchie															
ate: 8/16	Time:	Relinquishe	ed by: Ucelt	Received by:	D Owled	Date Time		0 Ene		/DRI	NKJ	WA1		_						itchie		

Hall Environmental Analysis Laboratory, Inc.

WO#: 1606468

16-Jun-16

Client:

Blagg Engineering

Project: GCU 16	59						Water Company of the			
Sample ID 5ML RB	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: PBW	Batch	n ID: B3	4875	F	RunNo: 3	4875				
Prep Date:	Analysis D	oate: 6/	13/2016	S	SeqNo: 1	077031	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								
Surr: 4-Bromofluorobenzene	22		20.00		110	87.9	146			
Sample ID 100NG BTEX LC	S SampT	ype: LC	S	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	n ID: B3	4875	F	RunNo: 3	4875				
Prep Date:	Analysis D	ate: 6/	13/2016	S	SeqNo: 1	077032	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.4	80	120			
Toluene	19	1.0	20.00	0	94.7	80	120			
Surr: 4-Bromofluorobenzene	23		20.00		115	87.9	146			ww.
Sample ID 5ML RB	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: PBW	Batch	n ID: B3	4904	F	RunNo: 3	4904				
Prep Date:	Analysis D	oate: 6/	14/2016	S	SeqNo: 1	078033	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	22		20.00		110	87.9	146			
Sample ID 100NG BTEX LC	S SampT	ype: LC	S	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	n ID: B3	4904	R	RunNo: 3	4904				
Prep Date:	Analysis D	ate: 6/	14/2016	S	SeqNo: 1	078034	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	18	1.0	20.00	0	89.8	80	120		·	
Xylenes, Total	54	2.0	60.00	0	89.7	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		119	87.9	146			

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix Analyte detected in the associated Method Blank

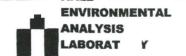
Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified



4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com

Client Name:	BLAGG	Work Order Num	er: 1606468		RcptNo:	1
Received by/date	e: XV	Polylo 1	10			
Logged By:	Ashley Gallegos	6/9/2016 8:00:00 AM	И	A		
Completed By:	Ashley Gallegos	6/9/2016 12:35:52 F	PM	A		
Reviewed By:	Q ₁	06/09/16		V		
Chain of Cus	tody					
1. Custody sea	als intact on sample bott	les?	Yes	No 🗆	Not Present	
2. Is Chain of C	Custody complete?		Yes 🗸	No 🗌	Not Present	
3. How was the	e sample delivered?		Courier			
Log In						
4. Was an atte	empt made to cool the s	amples?	Yes 🗸	No 🗌	NA 🗆	
5. Were all san	mples received at a tem	perature of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆	
6. Sample(s) in	n proper container(s)?		Yes 🗸	No 🗌		
7. Sufficient sa	mple volume for indicat	ed test(s)?	Yes 🔽	No 🗌		
8. Are samples	(except VOA and ONG	i) properly preserved?	Yes 🗸	No 🗆		
9. Was preserv	vative added to bottles?		Yes	No 🗸	NA 🗆	
10. VOA vials ha	ave zero headspace?		Yes 🗹	No 🗌	No VOA Vials	
11. Were any sa	ample containers receiv	ed broken?	Yes	No 🔽	# of preserved	
40.0			🗖	N	bottles checked	
	work match bottle labels pancies on chain of cus		Yes 🗹	No 🗆	for pH: (<2 o	r >12 unless noted)
	s correctly identified on (Yes 🗸	No 🗌	Adjusted?	
14. Is it clear wh	nat analyses were reque	sted?	Yes 🗸	No 🗌		
	ding times able to be me customer for authorizat		Yes 🗸	No 🗌	Checked by:	
Special Hand	lling (if applicable)				
16. Was client n	otified of all discrepance	es with this order?	Yes	No 🗆	NA 🗸	
Persor	n Notified:	Date				
By Wh	nom:	Via:	eMail []	Phone Fax	In Person	
Regard	ding:					
Client	Instructions:					
17. Additional re	emarks:					
18. Cooler Info				A		
Cooler No	o Temp °C Condit	ion Seal Intact Seal No Yes	Seal Date	Signed By		
	1.0	103				

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY #: N/A GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : Date: August 18, 2016 GCU 169 mw log 2016-08-18.xls PROJECT MANAGER: Filename: WELL WELL WATER **DEPTH TO** TOTAL SAMPLING На CONDUCT TEMP. **VOLUME PURGED** # ELEV. ELEV. WATER DEPTH TIME (umhos) (celcius) (ft) (ft) (ft) (ft) (gal.) 100.00 20.00 2 98.23 20.00 3 97.71 20.00 99.21 20.00 4 5 100.80 20.00 5.50 6 100.92 92.12 8.80 20.00 1250 7.27 900 19.8 INSTRUMENT CALIBRATIONS = 2.800 4.01/7.00/10.00 DATE & TIME = 08/18/16 0630 Volume of water purged from well prior to sampling; V = pi X r2 X h X 7,48 gal./ft3) X 3 (wellbores). NOTES: (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2". Excellent recovery in MW #6. MW #6 - medium gray with slight apparent hydrocarbon odor detected physically. Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per US EPA Method 8021B. Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft.,

on-site	12:00 PM	temp	46 F
off-site	1:00 PM	temp	52 F
sky cond.		Cloudy	
wind speed	0 - 5	direct.	W

MW #6 ~ 2.00 ft. above grade.

Lab Order **1608C14**

Date Reported: 8/25/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW # 6

Project: GCU 169

Collection Date: 8/18/2016 12:50:00 PM

Lab ID: 1608C14-001

Matrix: AQUEOUS

Received Date: 8/20/2016 9:15:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	1.0	μg/L	1	8/24/2016 3:09:28 PM	B36734
Toluene	6.4	1.0	μg/L	1	8/24/2016 3:09:28 PM	B36734
Ethylbenzene	170	10	μg/L	10	8/24/2016 3:58:31 PM	B36734
Xylenes, Total	920	20	μg/L	10	8/24/2016 3:58:31 PM	B36734
Surr: 4-Bromofluorobenzene	110	87.9-146	%Rec	10	8/24/2016 3:58:31 PM	B36734

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

C	hain-d	of-Cus	stody Record	Jurn-Around i	ime:		HALL ENVIRONMENTAL					L										
Client:	BLAGG LIVER. / DF AIVILLICA				Rush															OR		
				Project Name:							ww	w.ha	illen	viro	nme	ntal	.com	1				
Mailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 H	ławk	ins	NE -	Alk	ouqu	erqı	ue, N	IM 8	710	9			
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50) 5 -34	45-3	975		Fax .	505-	-345	-410	7				
Phone #:		(505) 63	2-1199	1		Analysis Request					t											
email or F	ax#:			Project Manag	ger:									4)						\top		
QA/QC Pad Standa	-		Level 4 (Full Validation)		NELSON V	ELEZ	849 (8021B)	only)	(MRO)			15)		004,50							e	
Accreditat	ion:			Sampler:	NELSON VI	ELEZ 97V	8) \$	TPH (Gas	/ DRO /	1)	1)	8270SIMS)		102,	Js			Balance			du	
□ NELAP	•	□ Other		On Ice:	ヹ Yes	□ No	1	TPH	0/0	418	504.1)	827		03,1	Solic		(A)	s Bal			te S	N N
□ EDD (7	ype)			Sample Temp	erature: ${\it \le}$,	8.	1	+	(GR(por	pou	o	etal	Z,	ved	(A)	i-V	tion		Se	osit	(۲ ه
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1						8260B (VOA)	8270 (Semi-VOA)	Anions / Cations		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)				
8/18/16	1250	WATER	MW # 6	40 ml VOA - 2	HCI & Cool	-001	٧													٧		
																				\top		
																					\top	
																				\top	\top	
															_	-			\dashv	+	\dashv	
				-															\neg	+	\dashv	
																			\dashv	\dashv	\dashv	
																-		\vdash	\dashv	\dashv	\dashv	
										-						-			-	\dashv	\dashv	
				-			-								-	-			\dashv	\dashv	\dashv	
													_	_		-			\dashv	\dashv	-	
Data	Time	Dellassisk		Descived by		Data Time														\perp		
8/19/16	10	Relinquish	hilf	Received by:	a Wheek	Date Time 8/19/16/1057	BILL DIRECTLY TO BP:															
Date: 8/19/14	Time:	Relinquish	ht Wall	Received by:	081	Date Time 2016/915	VII			Cour VDR				, NM -	18/4	101	Attn	ı.: J0	nn K	ICCNI	e	
	If necessa	iry, samples s	ubmitted to Hall Environmental may be s	ubcontracted to other	accredited laboratorie	es. This serves as notice of	s as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.															

Hall Environmental Analysis Laboratory, Inc.

54

20

2.0

60.00

20.00

WO#:

1608C14

25-Aug-16

Client:

Blagg Engineering

Project:

Xylenes, Total

Surr: 4-Bromofluorobenzene

GCU 169

Sample ID 5ML RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBW	Batch	ID: B3	6734	F	RunNo: 3	6734				
Prep Date:	Analysis D	ate: 8/	24/2016	5	SeqNo: 1	138368	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	20		20.00		98.7	87.9	146			
Sample ID 100NG BTEX LC	S SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSW	Batch	ID: B3	6734	F	RunNo: 3	6734				
Prep Date:	Analysis D	ate: 8/	24/2016	5	SeqNo: 1	138369	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.8	80	120			
Toluene	19	1.0	20.00	0	94.4	80	120			
Ethylbenzene	18	1.0	20.00	0	91.9	80	120			

0

89.5

101

80

87.9

120

146

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits

P Sample pH Not In Range

- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Allaryte detected in the associated Method Bian



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	16080	214		RcptNo:	1
Received by/dat	Lindsay Mangin	8/20/2016 9:15:00 AM			Sinabuf Horago		
Completed By:	Lindsay Mangin	8/20/2016 11:56:08 AI			Smaker Hoom		
Reviewed By:	Jc 08/23/16				05.00		
Chain of Cus	1)						
	als intact on sample bottles?		Yes		No 🗌	Not Present	
2. Is Chain of (Custody complete?		Yes		No 🗆	Not Present	
3. How was the	e sample delivered?		Cour	ier			
Log In							
4. Was an atte	empt made to cool the samples	?	Yes		No 🗌	NA 🗌	
5. Were all sai	mples received at a temperature	e of >0° C to 6.0°C	Yes		No 🗌	NA 🗌	
6. Sample(s) i	in proper container(s)?		Yes	*	No 🗌		
7. Sufficient sa	ample volume for indicated test(s)?	Yes		No 🗌		
8. Are samples	s (except VOA and ONG) prope	rly preserved?	Yes		No 🗌		
9. Was preser	vative added to bottles?		Yes		No 🏕	NA 🗌	
10.VOA vials h	nave zero headspace?		Yes		No 🗌	No VOA Vials	
11. Were any s	sample containers received brok	en?	Yes		No 🐼	# of preserved	
	rwork match bottle labels? epancies on chain of custody)		Yes		No 🗌	bottles checked for pH:	or >12 unless noted)
	es correctly identified on Chain o	f Custody?	Yes		No 🗌	Adjusted?	
	hat analyses were requested?		Yes		No 🗌		
	olding times able to be met? y customer for authorization.)		Yes	₩.	No []	Checked by:	
Special Hand	dling (if applicable)						
16. Was client	notified of all discrepancies with	this order?	Yes		No 🗌	NA 🖈	
Perso	on Notified:	Date:			A PROPERTY OF THE PROPERTY OF		
By W	hom:	Via:	eM.	ail	Phone Fax	In Person	
Rega	rding:					Control of the Contro	
Client	t Instructions:		CHIEFE COLORES FORES			Photographic Control of the Control	
17. Additional	remarks:						
18. Cooler Info	ormation						
Cooler N	No Temp °C Condition S	Seal Intact Seal No	Seal D	ate	Signed By		
1	3.8 Good Ye	S				I	

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT :	BP AME	RICA PR	OD. CO.		CHAIN-OF-C	USTODY#:		N	/ A
GCU # 169 UNIT I, SE	C. 35, T29N,	, R12W			LABORATOR	RY(S) USED	:	HALL ENVIF	RONMENTAL
Date : Filename :	December 1		12-13.xls		С		/ SAMPLER : MANAGER :		1 V
WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
1 2	100.00 98.23	-	-	20.00		-	-	-	-
3 4 5	97.71 99.21 100.80	-	-	20.00 20.00 20.00	-	-	-	-	-
6	100.92	92.45	8.47 INSTRU	20.00	0950 BRATIONS =	7.02	800 2,800	12.6	5.00
NOTES:				prior to s	E & TIME = [ampling; V = r = (2/12) ft		0600 X 7.48 gal./	[ft3) X 3 (well	bores).
Comments			ee (3) wellbo		:	2.00" well d	iameter =	0.49 gal./ft.	of water.
Purged well valve attach	using 2 inch	submersible	e electric pum	p, new/cle	slight apparen ar vinyl tubing ted sample fr	g, and with	brass adjusta	able flow	у.
Top of casi	ng MW #1 ^	~ 2.00 ft M	IW #2 ~ 2.0	0 ft MW #	#3 ~ 2.00 ft.	. MW #4 ~	2.00 ft M\	N #5 ~ 2.00	O ft. ,
	2.00 ft. above			, ,		,	,		

on-site	9:00 AM	temp	29 F 31 F		
off-site	10:00 AM	temp			
sky cond.	Cloudy				
wind speed	0 - 10	direct.	ESE		

Analytical Report

Lab Order 1612888

Date Reported: 12/27/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

Project: GCU #169

Collection Date: 12/13/2016 9:50:00 AM

Lab ID: 1612888-001

Matrix: AQUEOUS

Received Date: 12/16/2016 7:15:00 AM

Analyses	Result PQL Qu		al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SH	ORT LIST				Anal	yst: RAA
Benzene	ND	5.0	μg/L	5	12/22/2016 11:54:00	AM SLW395
Toluene	ND	5.0	μg/L	5	12/22/2016 11:54:00	AM SLW395
Ethylbenzene	140	5.0	μg/L	5	12/22/2016 11:54:00	AM SLW395
Xylenes, Total	580	7.5	μg/L	5	12/22/2016 11:54:00	AM SLW395
Surr: 1,2-Dichloroethane-d4	92.8	70-130	%Rec	5	12/22/2016 11:54:00	AM SLW395
Surr: 4-Bromofluorobenzene	98.8	70-130	%Rec	5	12/22/2016 11:54:00	AM SLW395
Surr: Dibromofluoromethane	92.0	70-130	%Rec	5	12/22/2016 11:54:00	AM SLW395
Surr: Toluene-d8	101	70-130	%Rec	5	12/22/2016 11:54:00	AM SLW395

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

CI	Chain-of-Custody Record Client: BLAGG ENGR. / BP AMERICA				Turn-Around Time:			HALL ENVIRONMENTAL														
Client:	BLAG	G ENGR.	/ BP AMERICA		Rush_												ВО					
				Project Name:							ww	w.ha	allen	viro	nme	ental	l.com	n				
Mailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 F	ławk	ins	NE -	- Alk	ouqu	erq	ue, N	8 MV	3710	9			
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50)5-34	45-3	975		Fax :	505	-345	-410)7				
Phone #:		(505) 63	32-1199									1	Anal	ysis	Red	ques	st					
email or F	ax#:			Project Manag	jer:									4)							\Box	
QA/QC Pad Standa			Level 4 (Full Validation)		NELSON VI	ELEZ	B+ (8021B)	only)	/ MRO)			15)		PO4,SO							е	
Accreditat	ion:			Sampler:	NELSON VI	ELEZ 97V	8(8)	TPH (Gas	DRO /	1)	1)	or 8270SIMS)		102,	s			ance			sample	
□ NELAP	,	□ Other		On Ice:	/ Yes	□ No		IPH	-	418	504	827(,,	03,1	Solic		8	s Bal			e sa	S
□ EDD (1	ype)			Sample Temp	rature: 🌖 🗲	2	1	+	(GRO	pol	pot	or	etals	N,	ved	F	j-V	tions		ole	osit	(Y o
Date	Date Time Matrix Sample Request IE		Container Type and #	Preservative Type	HEAL NO. \6\7_888	BTEX - NATE	BTEX + MTBE	TPH 8015B	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Total Dissolved Solids	8260B (VOA)	8270 (Semi-VOA)	Anions / Cations Balance		rab	5 pt. composite	Air Bubbles (Y or N)	
12/13/16	0950	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-001	٧													٧		
				40 IIII VOA - 2 NCI & COOI =																		
																				\neg	\neg	
																			\neg	1	\dashv	
		<u> </u>					 										\vdash			\dashv	+	
									_		_		-		-		\vdash			+	+	
		-					-	_				-	-			-		-	\neg	\dashv	-	
							-	-	-		-	-	-		_	-			\vdash	\dashv	\dashv	
WAN							-	-	_				-				\vdash		-	\dashv	\dashv	
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							_									_				\dashv	\dashv	
Date: Time: Relinquished by:			Received by:	i \ .	Date Time	Rer	nark	s:														
12/15/16 1721 7/mV			1/ Mbli	e Whele	12/15/14/72/	1			LY T							•						
Date:	Time:	Relinquish	ed by:	Received by:	X.	Date Time	1							, NM	1874	101	Attr	1.: JO	nn R	itchi	e	
1415/14	IBB	Mb	to Wille		12	16/16 0715		D: _		VDR				_								
	If necessary, samples submitted to Hall Environmental may be			subcontracted to other	accredited laboratorie	es. This serves as notice of	f this p	ossibi	lity. A	ny sub	-contr	acted	data v	will be	clearly	y notat	ted on	the an	alytica	repor	t.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612888

27-Dec-16

Client:

Blagg Engineering

Project:

GCU #169

rroject: GCO#1	109									
Sample ID 100ng LCS	SampTy	pe: LC	S	Tes	tCode: E	PA Method	8260: Volatile	s Short L	ist	
Client ID: LCSW	Batch	ID: SL	W39559	F	RunNo: 3	39559				
Prep Date:	Analysis Da	ate: 12	2/21/2016	S	SeqNo: 1	239951	Units: %Rec	:		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.6	70	130			
Surr: Toluene-d8	9.9		10.00		99.5	70	130			
Sample ID rb	SampTy	pe: ME	BLK	Tes	tCode: E	PA Method	8260: Volatile	s Short L	.ist	
Client ID: PBW	Batch	ID: SL	W39559	F	RunNo: 3	39559				
Prep Date:	Analysis Da	ate: 12	2/21/2016	S	SeqNo: 1	239952	Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			
Sample ID 100ng lcs	SampTy	pe: LC	S	Tes	tCode: E	PA Method	8260: Volatile	s Short L	.ist	
Client ID: LCSW	Batch	ID: SL	W39586	F	RunNo: 3	39586				
Prep Date:	Analysis Da	ate: 12	2/22/2016	S	SeqNo: 1	240940	Units: µg/L			
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.8	70	130			
Toluene	20	1.0	20.00	0	99.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.5	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130		-	
Sample ID rb	SampTy	pe: ME	BLK	Tes	tCode: E	PA Method	8260: Volatile	s Short L	.ist	
Client ID: PBW	Batch	ID: SL	W39586	F	RunNo: 3	9586				
Prep Date:	Analysis Da	ate: 12	2/22/2016	S	SeqNo: 1	240943	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								
	ND	1.0								
•										
•	ND	1.5								
•		1.5	10.00		94.2	70	130			
Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene	ND	1.5	10.00 10.00		94.2 102	70 70	130 130			
Xylenes, Total Surr: 1,2-Dichloroethane-d4	ND 9.4	1.5								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits

Page 2 of 2

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



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 Na	ame:	BLAGG		Work Order Number	r: 16128	88		RcptNo:	1
Received	by/date	E LN	\	12/16/16			· ·		
Logged B	Зу:	Andy Jans	son	12/16/2016 7:15:00 A	М		and more		
Complete	ed By:		Jansson	12/16/16			W//		
Reviewed			X	12/11/M					
Chain o	f Cust	tody		· chapte					
		\	ample bottles?		Yes		No 🗌	Not Present	
2. Is Ch	ain of C	sustody comp	lete?		Yes	V	No 🗌	Not Present	
3. How	was the	sample deliv	ered?		Couri	er			
Log In									
4. Was	an atte	mpt made to	cool the samples?		Yes	Y	No 🗌	NA 🗆	
5. Were	e all sam	nples received	d at a temperature	of >0° C to 6.0°C	Yes	V	No 🗌	NA 🗆	
6. Sam	ple(s) in	proper conta	niner(s)?		Yes	v	No 🗌		
7. Suffic	cient sar	mple volume	for indicated test(s	s)?	Yes	V	No 🗌		
8. Are s	amples	(except VOA	and ONG) proper	ly preserved?	Yes	V	No 🗌		
9. Was	preserv	ative added to	o bottles?		Yes		No 🗸	NA 🗌	
10.VOA	vials ha	ive zero head	space?		Yes		No 🗌	No VOA Vials	
11. Were	e any sa	ample contain	ers received broke	en?	Yes		No 🗸	# of preserved	
40 -								bottles checked	
		vork match bo pancies on ch	ain of custody)		Yes	V	No 🗀	for pH: (<2 c	or >12 unless noted)
			ntified on Chain of	Custody?	Yes	V	No 🗌	Adjusted?	
14. Is it o	clear wh	at analyses w	ere requested?		Yes	V	No 🗌		
		ding times abl	e to be met? authorization.)		Yes	✓	No 🗌	Checked by:	
(II III)	, 1100119	oustorner for t	addionzation.						
Special	Hand	ling (if app	olicable)						
16. Was	client no	otified of all di	iscrepancies with t	this order?	Yes		No 🗌	NA 🗹	
	Person	Notified:		Date	COLORS STATE OF THE STATE OF TH	NAME OF THE OWNER, OWNE			
	By Wh	om:		Via:	eMa	il 🔲	Phone Fax	in Person	
	Regard	ding:				-	Y WAS	Chicago de la companya de la company	
	Client I	Instructions:					THE PERSON NAMED IN	A	
17. Addi	itional re	emarks:							
18. <u>Coo</u>	ler Info								
	ooler No			eal Intact Seal No	Seal Da	ite	Signed By		
1		3.3	Good Yes	<u> </u>					

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY#: N/A

GCU # 169 LABORATORY (S) USED: HALL ENVIRONMENTAL

UNIT I, SEC. 35, T29N, R12W

Date: February 23, 2017 DEVELOPER / SAMPLER: N J V

Filename: GCU 169 mw log 2017-02-23.xls PROJECT MANAGER: N J V

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1	100.00	91.44	8.56	20.00	-	-	-	-	-
2	98.23	-	-	20.00	-	-	-	-	-
3	97.71	89.11	8.60	20.00	-	-	-	-	-
4	99.21	90.04	9.17	20.00	-	-	-	-	-
5	100.80	91.18	9.62	20.00	-	-	-	-	-
6	100.92	92.14	8.78	20.00	1505	7.35	800	9.2	5.50

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800
DATE & TIME = 02/23/17 0600

NOTES: Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water.

Comments or note well diameter if not standard 2 ".

Excellent recovery in MW #6. MW #6 - medium gray with slight apparent hydrocarbon odor detected physically.

Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per

US EPA Method 8021B.

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 \sim 2.00 ft. above grade.

on-site	2:15 PM	temp	42 F
off-site	3:15 PM	temp	42 F
sky cond.		Partly cloud	ly
wind speed	10 - 20	direct.	West

Analytical Report Lab Order 1702A93

Date Reported: 3/3/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #6

 Project:
 GCU 169
 Collection Date: 2/23/2017 3:05:00 PM

 Lab ID:
 1702A93-001
 Matrix: AQUEOUS
 Received Date: 2/24/2017 8:08:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES S	HORT LIST				Analys	t: DJF
Benzene	ND	5.0	μg/L	5	3/1/2017 2:52:59 PM	B41093
Toluene	ND	5.0	µg/L	5	3/1/2017 2:52:59 PM	B41093
Ethylbenzene	73	5.0	μg/L	5	3/1/2017 2:52:59 PM	B41093
Xylenes, Total	210	7.5	μg/L	5	3/1/2017 2:52:59 PM	B41093
Surr: 1,2-Dichloroethane-d4	98.0	70-130	%Rec	5	3/1/2017 2:52:59 PM	B41093
Surr: 4-Bromofluorobenzene	92.4	70-130	%Rec	5	3/1/2017 2:52:59 PM	B41093
Surr: Dibromofluoromethane	91.6	70-130	%Rec	5	3/1/2017 2:52:59 PM	B41093
Surr: Toluene-d8	98.2	70-130	%Rec	5	3/1/2017 2:52:59 PM	B41093

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

C	Chain-of-Custody Record		Turn-Around 1	Fime:						Ah			MZ	/TE	20	R.I	E	N.	'AI		
Client:	BLAG	G ENGR.	/ BP AMERICA	✓ Standard	Rush _													RA			
				Project Name:				or mark	7.7	-							.com				
Mailing A	ddress:	P.O. BO	X 87	1	GCU # 16	9		49	01 H	ławk								7109	}		
		BLOOM	FIELD, NM 87413	Project #:				Te	el. 50)5-3	45-3	975		Fax	505	-345	-410	7			
Phone #:	gynapolitiki odny omnovih podlavá	(505) 63	2-1199	1								F	Anal	ysis	Red	ques	ŧ	14			
email or F	ax#:			Project Manag	ger:									4							
QA/QC Pad Standa	-		Level 4 (Full Validation)		NELSON VE	ELEZ	HP1- (8021B)	only)	MRO)			(S)		05,50							e
Accreditat	ion:			Sampler:	NELSON VE	LEZ 97V	8)	(Gas	DRO /	1)	1)	NISC		102,	S			ance			du
O NELAP		□ Other		On Ice:		-□ No	1	TPH	-	418	504	827(03,1	Solids		(AC	s Bal			e sa
□ EDD (1	ype)			Sample Temp	erature: /-(1	+	(GRC	por	pou	or	stals	Ž	ved	(A)	i-VC	tion		e e	osit
Date			Container Type and #	Preservative Type	HEAL No.	BTEX - NATE	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Total Dissolved	8260B (VOA)	8270 (Semi-VOA)	Anions / Cations Balance		Grab sample	5 pt. composite sample	
2/23/17	1505	WATER	MW # 6	40 ml VOA - 2 HCl & Cool - 00]			٧													٧	
2																					

																					\neg
																			\neg	1	7
																			寸	1	\dashv
																					\exists
																			十		
-																			\top	1	\forall
																			\dashv	+	\forall
																			\neg	1	\exists
																			\dashv	\dashv	+
Date:	Time:	Relinquishe	ed by:	Received by:	1	Date Time	Ren	nark	s:												
423/17			Christa Walle 3/23/17 /611		BILL DIRECTLY TO BP: 200 Energy Court, Farmington, NM 87401 Attn.: John Ritchie																
Date: 2/23/17	Date: Time: Relinquished by: //		Received by:	MA	Date Time 02/24/17 DE	VID: VDRINKWJA1															

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

10

10

10.00

10.00

WO#: 1702A93

03-Mar-17

Client:

Blagg Engineering

Project:

GCU 169

Sample ID rb	SampT	ype: ME	BLK	Tes	PA Method	lethod 8260: Volatiles Short List							
Client ID: PBW	Batch	n ID: B4	1093	F	RunNo: 4	1093							
Prep Date:	Analysis D	ate: 3/	1/2017	5	SeqNo: 1	287202	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	1.5											
Surr: 1,2-Dichloroethane-d4	11		10.00		112	70	130						
Surr: 4-Bromofluorobenzene	9.1		10.00		91.4	70	130						
Surr: Dibromofluoromethane	11		10.00		108	70	130						
Surr: Toluene-d8	9.9		10.00		99.2	70	130						
Sample ID 100ng Ics	SampT	ype: LC	s	Tes	tCode: E	PA Method	8260: Volatile	es Short L	ist				
Client ID: LCSW	Batch	n ID: B4	1093	F	RunNo: 4	1093							
Prep Date:	Analysis D	ate: 3/	1/2017	5	SeqNo: 1	287203	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	20	1.0	20.00	0	101	70	130						
Toluene	20	1.0	20.00	0	98.6 70		130						
Surr: 1,2-Dichloroethane-d4	10		10.00		102 70								
Surr: 4-Bromofluorobenzene	9.7	9.7 10.00 97.4 70					130						

99.8

101

70

70

130

130

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Surr: Dibromofluoromethane

Surr: Toluene-d8

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 2 of 2



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

Work Order Number: 1702A93 RcptNo: 1 BLAGG Client Name: Received by/date: Logged By: 2/24/2017 8:08:00 AM Ashley Gallegos Completed By: Ashley Gallegos 2/24/2017 9:03:57 AM Reviewed By: Chain of Custody Yes No Not Present ✓ 1 Custody seals intact on sample bottles? No Yes 🗸 Not Present 2. Is Chain of Custody complete? 3 How was the sample delivered? Courier Log In No NA [] 4. Was an attempt made to cool the samples? Yes 🗸 NA No [5. Were all samples received at a temperature of >0° C to 6.0°C No 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 NA 9. Was preservative added to bottles? Yes No V No VOA Vials Yes 🗸 No 10. VOA vials have zero headspace? No 🗸 Yes 11. Were any sample containers received broken? # of preserved bottles checked No . for pH: 12. Does paperwork match bottle labels? Yes 🗸 (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No L 13. Are matrices correctly identified on Chain of Custody? Yes V No Yes 🗸 14. Is it clear what analyses were requested? Checked by: No 🗌 Yes V 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) No 16. Was client notified of all discrepancies with this order? Yes NA V 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 1.0 Good Yes

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO. CHAIN-OF-CUSTODY # : N/A GCU #169 HALL ENVIRONMENTAL LABORATORY (S) USED: UNIT I, SEC. 35, T29N, R12W DEVELOPER / SAMPLER : May 26, 2017 Date: GCU 169 mw log 2017-05-26.xls Filename: PROJECT MANAGER: CONDUCT **VOLUME** WELL WELL WATER DEPTH TO TOTAL SAMPLING рН TEMP. ELEV. DEPTH **PURGED** # ELEV. WATER TIME (umhos) (celcius) (ft) (ft) (ft) (ft) (gal.) 100.00 20.00 2 98.23 20.00 97.71 20.00 3 4 99.21 20.00 5 100.80 20.00 6 100.92 9.19 20.00 7.12 1.000 14.2 5.00 1245 INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00 2,800 DATE & TIME = 05/26/17 0600 Volume of water purged from well prior to sampling: V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). NOTES: (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water. Comments or note well diameter if not standard 2". Excellent recovery in MW #6. MW #6 - medium gray with slight apparent hydrocarbon odor detected physically. Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per US EPA Method 8021B. Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft., MW #6 ~ 2.00 ft. above grade.

on-site	11:50 AM	temp	73 F
off-site	12:55 PM	temp	75 F
sky cond.		Mostly suni	ny
wind speed	0 - 10	direct.	WSW

Analytical Report

Lab Order 1705F00

Date Reported: 6/2/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

Project: GCU 169

Collection Date: 5/26/2017 12:45:00 PM

Lab ID: 1705F00-001

Matrix: AQUEOUS

Received Date: 5/31/2017 7:15:00 AM

Analyses	Result PQL Qual Units			DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SH	ORT LIST				Analys	t: RAA
Benzene	ND	2.5	μg/L	5	6/1/2017 6:49:00 PM	R43196
Toluene	ND	2.5	μg/L	5	6/1/2017 6:49:00 PM	R43196
Ethylbenzene	72	2.5	μg/L	5	6/1/2017 6:49:00 PM	R43196
Xylenes, Total	160	5.0	μg/L	5	6/1/2017 6:49:00 PM	R43196
Surr: 1,2-Dichloroethane-d4	95.7	70-130	%Rec	5	6/1/2017 6:49:00 PM	R43196
Surr: 4-Bromofluorobenzene	106	70-130	%Rec	5	6/1/2017 6:49:00 PM	R43196
Surr: Dibromofluoromethane	99.9	70-130	%Rec	5	6/1/2017 6:49:00 PM	R43196
Surr: Toluene-d8	102	70-130	%Rec	5	6/1/2017 6:49:00 PM	R43196

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 2
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

CI	Chain-of-Custody Record		Turn-Around	Time:					8-	A I		F	NI V	/TC	20	P.E.P.	ME	ENI-	ΓΑΙ			
Client:	BLAC	G ENGR	/ BP AMERICA	☑ Standard	☐ Rush _															OR		
				Project Name	2						ww	w.h	aller	wiro	nme	enta	l.con	n				
Mailing A	ddress:	P.O. BO	X 87		GCU # 16	9		49	01 H	ławk	ins	NE -	- All	ouqu	ierq	ue, I	VIVI 8	3710	19			
		BLOOM	FIELD, NM 87413	Project #:				Te	1. 50	05-34	45-3	975		Fax	505-	345	-410	7				
Phone #:	TO PERSON PROCESSING SERVICES AND	(505) 63	2-1199									MATERIAL DES	10000000	ysis	Red	que	st				No. of	
email or l	Fax#.			Project Mana	ger:				S. H.C.W.						B2150					2005 cm 172		
QA/QC Pa			Level 4 (Full Validation)		NELSON VE	ELEZ	(80218)	(Aluo	/ MRO)			(5)		05,50							c.	
Accredita	tion:		***************************************	Sampler:	NELSON VE	ELEZ 97V	8) 94	(Gas	DRO /	1	1)	SIM		0,5	un.			Balance			mple	
□ NELAF	-	□ Other		On Ice.	Z Yes	□ No	1	TPH (Gas	-	118.	504.	8270SIMS)		N'EO	Solic)A.)				es a	Z
□ EDD (Type)	_		Sample Temp	erature: /	3	1	+	(GR(7 po	po	5	tals	Z,	yed	(A	-VC	Cations		a	osit	70
Date	te Time Matrix Sample Request I		Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX MI	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Total Dissolved Solids	8260B (VOA)	8270 (Semi-VOA)	Anions / Ca		de	5 pt. composite sample	Air Bubbles (Y or N)
5/26/17	1245	WATER	MW # 6	40 ml VOA - 2	HCI & Cool	-061	٧		-	,										٧		
		The state of the s																				
Date: 5/30/17	Time: Relinguished by		Received by	lan-11	Date Time 05/3///7	Remarks: BILL DIRECTLY TO BP:																
Date:	Time. Relinguished by:		Received by: Date Time									-							Moski CU16			
	f necessary samples submitted to Hall Environmental may be			becomested to other:	accrecised suboratories	s. This serves as notice of	of this	possib	dity.	Any su	rb-con	tracts	d pale	s will b	e clea	ETY DO	talee o	on the	analyt	ical rep	эоп.	analasa salahar

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1705F00

02-Jun-17

Client:

Blagg Engineering

Project:

GCU 169

Sample ID 100ng lcs	SampT	ype: LC	S	Tes	tCode: El	PA Method	8260: Volatile	es Short L	ist	
Client ID: LCSW	Batch	n ID: R4	3196	F	RunNo: 4	3196				
Prep Date:	Analysis D	ate: 6/	1/2017	S	SeqNo: 1	360075	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.0	70	130			
Toluene	20	1.0	20.00	0	99.6	70	130			
Ethylbenzene	20	1.0	20.00	0	101	70	130			
Xylenes, Total	60	1.5	60.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			
Sample ID rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260: Volatile	es Short L	ist	
Sample ID rb Client ID: PBW		ype: ME			tCode: El		8260: Volatile	es Short L	.ist	
		n ID: R4	3196	F		3196	8260: Volatile	es Short L	ist	
Client ID: PBW	Batch	n ID: R4	3196 1/2017	F	RunNo: 4	3196		%RPD	.ist RPDLimit	Qual
Client ID: PBW Prep Date:	Batch Analysis D	n ID: R4	3196 1/2017	F	RunNo: 4 SeqNo: 1	3196 360076	Units: µg/L			Qual
Client ID: PBW Prep Date: Analyte	Batch Analysis D Result	n ID: R4 Date: 6 /	3196 1/2017	F	RunNo: 4 SeqNo: 1	3196 360076	Units: µg/L			Qual
Client ID: PBW Prep Date: Analyte Benzene	Batch Analysis D Result ND	PQL	3196 1/2017	F	RunNo: 4 SeqNo: 1	3196 360076	Units: µg/L			Qual
Client ID: PBW Prep Date: Analyte Benzene Toluene	Batch Analysis D Result ND ND	PQL 1.0 1.0	3196 1/2017	F	RunNo: 4 SeqNo: 1	3196 360076	Units: µg/L			Qual
Client ID: PBW Prep Date: Analyte Benzene Toluene Ethylbenzene	Batch Analysis D Result ND ND ND	PQL 1.0 1.0	3196 1/2017	F	RunNo: 4 SeqNo: 1	3196 360076	Units: µg/L			Qual
Client ID: PBW Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Batch Analysis D Result ND ND ND ND ND ND	PQL 1.0 1.0	3196 1/2017 SPK value	F	RunNo: 4 SeqNo: 1 %REC	3196 360076 LowLimit	Units: µg/L HighLimit			Qual
Client ID: PBW Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4	Result ND 9.8	PQL 1.0 1.0	3196 1/2017 SPK value	F	RunNo: 4 SeqNo: 1 %REC 98.2	3196 360076 LowLimit	Units: µg/L HighLimit			Qual
Client ID: PBW Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene	Result ND ND ND ND ND ND 11	PQL 1.0 1.0	3196 1/2017 SPK value 10.00 10.00	F	RunNo: 4 SeqNo: 1 %REC 98.2 106	3196 360076 LowLimit 70 70	Units: µg/L HighLimit			Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 2 of 2



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: 1705F00		RcptNo:	1
Received By: Anne Thor	ne 5/31/2017 7:1	5:00 AM	anne Am	_	
Completed By: Richie Eria	acho 5/31/2017 9:4	3:00 AM	72/		
Reviewed By: \(\mathcal{L} \) Z	195 5/51/17		1		
Chain of Custody	,				
1. Custody seals intact on sa	ample bottles?	Yes	No 🗌	Not Present	
2. Is Chain of Custody comp	elete?	Yes 🗸	No 🗀	Not Present	
3. How was the sample deliv	vered?	Courier			
Log In					
4. Was an attempt made to	cool the samples?	Yes 🗸	No 🗆	NA 🗌	
5. Were all samples received	d at a temperature of >0° C to 6.0	0°C Yes ✓	No 🗌	NA 🗌	
6. Sample(s) in proper conta	ainer(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 t	o bottles?	Yes	No 🗸	NA 🗌	
10.VOA vials have zero head	Ispace?	Yes	No 🗌	No VOA Vials	
11. Were any sample contain	ners received broken?	Yes	No 🗸	# of preserved	William Village of the Control of th
12.Does paperwork match bo	ottle lahels?	Yes 🗸	No 🗆	bottles checked for pH:	
(Note discrepancies on ch		163	NV		r >12 unless noted
13. Are matrices correctly ide	ntified on Chain of Custody?	Yes 🗸	No 🗌	Adjusted?	37 1 2000 12 00
14. Is it clear what analyses w	vere requested?	Yes 🗸	No 🗆		
15. Were all holding times ab (If no, notify customer for		Yes 🗸	No 🗌	Checked by:	
Special Handling (if app					
16. Was client notified of all d	liscrepancies with this order?	Yes 🗆	No 🗆	NA 🗹	
Person Notified:		Date:			İ
By Whom:		Via: eMail	Phone Fax	In Person	
Regarding:					r.
Client Instructions:	}				١
17. Additional remarks:					
18. Cooler Information	La mula su da				
Cooler No Temp °C 1 1.3		al No Seal Date	Signed By		
1.3	Good		, j		

BLAGG ENGINEERING, INC.

MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

CLIENT: BP AMERICA PROD. CO.

CHAIN-OF-CUSTODY #:

N/A

GCU # 169

UNIT I, SEC. 35, T29N, R12W

LABORATORY (S) USED:

HALL ENVIRONMENTAL

Date:

September 6, 2017

DEVELOPER / SAMPLER :

Filename:

GCU 169 mw log 2017-09-06.xls

PROJECT MANAGER:

WELL	WELL	WATER	DEPTH TO	TOTAL	SAMPLING	рН	CONDUCT	TEMP.	VOLUME
#	ELEV.	ELEV.	WATER	DEPTH	TIME		(umhos)	(celcius)	PURGED
	(ft)	(ft)	(ft)	(ft)					(gal.)
1	100.00	91.38	8.62	20.00	-	-	-	-	<u>;=</u>
2	98.23	-	-	20.00	-	-	-	-	-
3	97.71	88.88	8.83	20.00	1045	7.08	900	17.0	5.50
4	99.21	90.82	8.39	20.00	-	-	-	-	-
5	100.80	92.16	8.64	20.00	-	- "	-	-	-
6	100.92	92.03	8.89	20.00	1145	7.11	800	17.6	5.50

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00

DATE & TIME = 09/06/17

0630

NOTES:

Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores).

(i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.)

Ideally a minimum of three (3) wellbore volumes: 2.00" well diameter = 0.49 gal./ft. of water.

Comments or note well diameter if not standard 2".

Excellent recovery in MW #6. MW #6 - medium gray with slight apparent hydrocarbon odor detected physically.

Purged well using 2 inch submersible electric pump, new / clear vinyl tubing, and with brass adjustable flow

valve attachment added near sampling end of tubing. Collected sample from MW #6 only for BTEX per

US EPA Method 8021B

Top of casing MW #1 \sim 2.00 ft., MW #2 \sim 2.00 ft., MW #3 \sim 2.00 ft., MW #4 \sim 2.00 ft., MW #5 \sim 2.00 ft.,

MW #6 \sim 2.00 ft. above grade.

on-site	9:50 AM	temp	73 F
off-site	11:50 AM	temp	81 F
sky cond.		Sunny	
wind speed	5 - 10	direct.	ENE - ESE

Analytical Report

Lab Order 1709432

Date Reported: 9/14/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project: GCU 169

Client Sample ID: MW #3

Collection Date: 9/6/2017 10:45:00 AM

Lab ID: 1709432-001

Matrix: AQUEOUS

Received Date: 9/8/2017 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	1.0	μg/L	1	9/13/2017 9:51:33 PM	B45593
Toluene	ND	1.0	μg/L	1	9/13/2017 9:51:33 PM	B45593
Ethylbenzene	ND	1.0	µg/L	1	9/13/2017 9:51:33 PM	B45593
Xylenes, Total	ND	2.0	μg/L	1	9/13/2017 9:51:33 PM	B45593
Surr: 4-Bromofluorobenzene	110	72.5-140	%Rec	1	9/13/2017 9:51:33 PM	B45593

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 3
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1709432

Date Reported: 9/14/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #6

Project: GCU 169

Collection Date: 9/6/2017 11:45:00 AM

Lab ID: 1709432-002

Matrix: AQUEOUS Received Date: 9/8/2017 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	5.0	μg/L	5	9/13/2017 10:15:14 F	M B45593
Toluene	ND	5.0	μg/L	5	9/13/2017 10:15:14 F	M B45593
Ethylbenzene	52	5.0	μg/L	5	9/13/2017 10:15:14 P	M B45593
Xylenes, Total	220	10	μg/L	5	9/13/2017 10:15:14 P	M B45593
Surr: 4-Bromofluorobenzene	119	72.5-140	%Rec	5	9/13/2017 10:15:14 P	M B45593

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 3
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

C	hain-	of-Cus	stody Record	Turn-Around	Time:		1		1 5		HA		E	R.I.Y	/ T E	20	N PA P I	ME	NT	CA	9
Client:	BLAC	G ENGR.	/ BP AMERICA	Standard	Rush														AT(
				Project Name						,										28	. 4
Mailing A	ddress:	P.O. BO	¥ 87	-	GCU # 16	SQ.		40					aller						_		
			FIELD, NM 87413	Project #:	000 # 10	13												3710	9		
-				-110,000				Te	el. 51	05-3	45-3						5-410)7			2122
Phone #: email or F	F 44	(505) 63	32-1199	-									Anal	ysis	Red	que	st				
				Project Manag	ger									14)							
QA/QC Pa	-		Level 4 (Full Validation)		NELSON V	ELEZ	84 (8021B)	TPH (Gas only)	MRO)			(5)		04,50						Topic Control of the	a.
Accredita	tion:			Sampler:	NELSON VI	ELEZ nv	8 (8(Gas	DRO /	1)	1)	SIN		02,6	8			auce			npl
□ NELAF	>	□ Other		On Ice:	A Yes	□ No	1	Hd	10	418.1)	8	270		3.N	Solids		B	Cations Balance			es a
□ EDD (Type)			Sample Temp	erature: 2.1	le	1	+	GRO	od 4	od 5	01.8	tals	N.	S pa	4	-40	ons		9	osite
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX - WITE	BTEX + MTBE	TPH 80158 (GRO	TPH (Method	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Total Dissolved	8260B (VOA)	8270 (Semi-VOA)	Anions / Cat		Grab sample	5 pt. composite sample
9/6/17	1045	WATER	MW # 3	40 ml VOA - 2	HCI & Cool	701	٧													٧	
				The state of the s																-	
9/6/17	1145	WATER	MW # 6	40 ml VOA - 2	HCI & Cool	C02	٧													٧	
			Bullet (1944) Anni																		
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Date/	Time:	Relinquishe	ес Бу.	Received by:		Date Time	Ren	nark	5:												
9/7/17	1647	20	he Uj	1 Pm	Lot	9/2/2 1647	BI	LL DI	RECT		O BE										
Date	Time	Relinquishe	ed by:	Received by:		Date Time							-						ve M		
9/7/17	1810		hubit	1 All	-	Date Time 9/03/17 0700	VI	D: \	VMO	56H	QFEC	_ \	NB2	ELE	MEN	11:	L1-0()169-	E:GC	J169	j

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1709432

14-Sep-17

Client: Blagg Engineering

Project: GCU 169

Sample ID RB TestCode: EPA Method 8021B: Volatiles SampType: MBLK Client ID: **PBW** Batch ID: **B45593** RunNo: 45593 Prep Date: Analysis Date: 9/13/2017 SeqNo: 1446434 Units: µg/L %RPD **RPDLimit** Qual Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit Benzene ND 1.0 ND Toluene 1.0 Ethylbenzene ND 1.0 Xylenes, Total ND 20.00 103 72.5 140 Surr: 4-Bromofluorobenzene 21

Sample ID 100NG BTEX LC	SB SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volati	iles		
Client ID: LCSW	Batch	ID: B4	5593	R	RunNo: 4	5593				
Prep Date:	Analysis D	ate: 9/	13/2017	S	SeqNo: 1	446435	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	71.7	126			
Toluene	20	1.0	20.00	0	99.6	73.3	119			
Ethylbenzene	20	1.0	20.00	0	102	80	120			
Xylenes, Total	64	2.0	60.00	0	106	80	120			
Surr: 4-Bromofluorobenzene	22		20.00		108	72.5	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 3 of 3



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com Client Name BLAGG Work Order Number: 1709432 RcptNo: 1 anne Him Received By: Anne Thorne 9/8/2017 7:00:00 AM anne Am Completed By: Anne Thorne 9/8/2017 2:27:09 PM 9/11 LB Reviewed By: Chain of Custody Yes No Not Present V 1. Custody seals intact on sample bottles? Yes 🗸 No 🗌 Not Present 2. Is Chain of Custody complete? 3 How was the sample delivered? Courier Log In NA No | Yes 🗸 4. Was an attempt made to cool the samples? No NA 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes V Yes V No . 6. Sample(s) in proper container(s)? Yes V No 7. Sufficient sample volume for indicated test(s)? Yes V No 8. Are samples (except VOA and ONG) properly preserved? Yes No V NA 9. Was preservative added to bottles? No VOA Vials Yes 🗸 No 🗌 10. VOA vials have zero headspace? No V Yes 11. Were any sample containers received broken? # of preserved bottles checked No 🗌 for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗍 13. Are matrices correctly identified on Chain of Custody? No 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? Yes V No 🗌 Checked by: (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗌 NA V 16. Was client notified of all discrepancies with this order? No . Person Notified: Date By Whom: eMail Phone Fax Via: In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Seal Intact | Seal No Cooler No Temp °C Condition Seal Date Signed By 2.6 Good

APPENDIX E

1996 Pit Closures and 2003 BGT Closure Documentation District I
P.O. Box 1980, Hobbs, NM
District II
D. Drawer DD, Artesia, NM 88211
Strict III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico Energy, Minerals and Natural Resources Department

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

OIL CONSERVATION DIVISION

P.O. Box 2088 Santa Fe, New Mexico 87504-2088

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company	Telephone: (505) · 326-9200								
Address: 200 Amoco Court, Farmington	n, New Mexico 87401								
Facility Or: 664 169 Well Name									
Location: Unit or Qtr/Qtr Sec I Sec 35 T 29N R 12W County SAN JUAN									
Pit Type: Separator Dehydrator Other Blow									
Land Type: BLM, State, Fee _/, Other UNIT AGMT,									
(Attach diagram) Reference: wellhead X Footage from reference:	200 ce: 30 Degrees East North X								
DIFECTION FOR LOTS OF COMME	of X West South								
Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points) 20								
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)O								
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)0								
	RANKING SCORE (TOTAL POINTS): 20								

Date Remediation St	arted:	Date Completed:	2-7-96
Remediation Method:		Approx. cubic yards	
(Check all appropriate		Insitu Bioremediation	
860010114			
	Ocher		
	V		
Remediation Location (ie. landfarmed onsite, name and location of offsite facility)	n: Onsite <u>X</u> Off	site	-
General Description	Of Remedial Action	1:	
Excavatio	on of solus -		
	AERATE CONTAMI	MATER - EXPOSE	TO SUN.
Ground Water Encoun	tered: No	Yes X Depth 6	
Final Pit: Closure Sampling:	Sample location	see Attached Documents	
(if multiple samples, attach sample results and diagram of sample	Sample depth	6' - 6. W. MULTIPLE	4
locations and depths)		-7-26 FUML Sample time	
	Sample Results		
	Benzene(ppm)		
		om)	
		ce(ppm)	
	ТРН	*	
Ground Water Sample	Yes X No _	(If yes, attach sample re	sults)
I HEREBY CERTIFY THE		ABOVE IS TRUE AND COMPLETE	TO THE BEST
DATE 4-9-96		BIINCI.	1
SIGNATURE BASI	VAW AND TITE	NAME Buddy D. Sha E Environmental Con	Rdinator

CLIENT: AMO CO P.O.	BLAGG ENGINEERI BOX 87, BLOOMFIEI (505) 632-1	LD, NM 87413	C.D.C. NO: AVALT.
FIELD RE	PORT: PIT CLOSUR	E VERIFICATI	ON 1/2
LOCATION: 6C4 169 QUAD/UNIT: I SEC. 35 TWP: 2	9 N RNG: 12 W BM: NM (DATE STARTED: 1-25-96 DATE FINISHED: 2-7-86
QTR/FOOTAGE: NE/SE	CONTRACTOR:	PAUL	SPECIALIST: PEO
EXCAVATION APPROX80	FT. x _ 70 FT. x _ 8	FT. DEEP. CUBI	C YARDS: [950
DISPOSAL FACILITY:			
LAND USE: AGRICULTURA	LEASE - ZE	FORMA	TION: DATON
FIELD NOTES & REMARKS: P			
DEPTH TO GROUNDWATER: 6' N			E WATER: 21000
NMBCD RANKING SCORE: 20 N			
SOIL AND EXCAVATION DESCRIP	FANN ALT + TEST HOLE		
COCCECIED MALLER ZHINDRES	711 711 1001 1100	. •	
	FIELD 418.1 CALCULAT.		
SAMPLE I.D. LA	B No: WEIGHT (g) mL. FREON	DILUTION READING CALC	2. ppm
SCALE			
PIT PERIMETER	R OVM RESULTS	PIT	PROFILE
	SAMPLE FIELD HEADS PAD (Appr	PACE (1)	
	2		
,	4 5		
The state of the s		1	
1	1		6' V
E-100'E SAMPLE	SURPACE		
3,	PIT WHOM BYEY	>	
	THI BTER		
war			
TRAVEL MOTES.	25-96 ONSITE	1-25.96	1300
			FORM REVISED 7/95

FIELD REPORT: CLOSURE VERIFICATION PAGE NO. 2 of 2 LOCATION: NAME GEAN WELL # 169 PT. FLOW DATE STANDED QUARDURANT I SEG 35 TEP 29 RIG [2 W PM NM CNTYS] STOWN OF THE SEG 35 TEP 29 RIG	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	C.O.C. ND:
QUAD/UNIT. I SEC 35 TWP29N RNG. 12W PM. NM CNTY ST ST DY GTE/FUNITAGE CONTRACTOR: P. VEASQUE? EXCAVATION APPROX 70 FT x 80 FT x 9' FT. DEEP. CUBIC YARDAGE: 1950 DISPOSAL PACILITY: 0N-5/7E REMEDIATION METHOD: LAND USE: LANGE LEASE: FORMATION: DK FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY FT. FROM WELLIFAD. DEPTH TO CREUMINATED SO! NEAREST VATER SOURCE; 2000/ NEAREST SARFAGE WATER ADMINISTRATED AND EXCAVATION DESCRIPTION: SCALE O FT PIT PERIMETER N WEIGHT (2) ML FRECH DILUTION READING CALC. ppm SCALE O FT PIT PERIMETER N RESULTS TIME SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm RESULTS FIELD 4181 CALCULATIONS STEEL TANK INSTALLED CONDUCTOR OF THE SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm RESULTS TO TO THE SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm RESULTS FIELD 4181 CALCULATIONS STEEL TANK INSTALLED CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm RESULTS TO TO TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm RESULTS TO TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO LOCATE A TO COMMENTER CONTROL SAMPLE LD. LAH NO: WEIGHT (2) ML FRECH DILUTION READING CALC. ppm TO LOCATE A TO COMMENTE	FIELD REPORT: CLOSURE VERIFICATION	PAGE No: 2 of 2
DISPOSAL FACILITY: ON 577E REMEDIATION METHOD: LAND USE: RONGE LEASE: PORMATION: DK FIELD NOTES & REMARKS: PIT LOCATED APPRUXIMATELY DEPTH TO DROUNDWATER 550 NEAREST VAILER SIDERCY 7000/ NEAREST SUFFACE VATER 70000/. NMOCD RANKING SCORE 20 NMOCD THE CLOSURE STO 700 PPM SCALE O FT PIT PERIMETER N RESULTS THE SAMPLE LO LAB NO: WEIGHT (g) THE FRESH DILUTION READING CALC ppm SCALE O FT PIT PERIMETER N RESULTS THE SAMPLE LO LAB NO: WEIGHT (g) THE FRESH DILUTION READING CALC ppm SCALE O FT PIT PERIMETER N RESULTS THE SAMPLE LO LAB NO: WEIGHT (g) THE FRESH DILUTION READING CALC ppm SCALE O FT PIT PERIMETER N RESULTS THE SAMPLE LO LAB NO: WEIGHT (g) THE FRESH DILUTION READING CALC ppm SCALE O FT PIT PERIMETER N RESULTS THE SAMPLE SAMPLES SAM	QUAD/UNIT: I SEC:35 TWP:29N RNG: 12W PM: NM CNTY: 57 ST:Nm	DATE FINISHED: 2.7-96
DEPTH TO GROUNDVATER \$50 NEAREST VATER SOURCE \$70.00 NEAREST SURFACE VATER. \$7000 NEAREST SURFACE VATER	DISPOSAL FACILITY: 00-5/7E REMEDIATION METHOD LAND USE: RANGE LEASE: FOR	D: MATION: <i>OK</i>
SCALE O FT PIT PERIMETER N RESULTS RESULTS O POWER STATE OF THE SAMPLE LD. LAB NO. WEIGHT (Q) ML. FREON DILUTION READING CALC. ppm O FT PIT PERIMETER N RESULTS RESULTS O POWER STATE OF THE SAMPLE LD. SAMPLE CONTROL OF THE STATE OF THE SAMPLE CALC. PPM O PT PIT PERIMETER N RESULTS O PT RESUL	DEPTH TO GROUNDWATER <50 NEAREST WATER SOURCE: >1000/ NEAREST SURFACE	WATER: 2000 1
SCALE O FT PIT PERIMETER N RESULTS OVM	SOB AND EXCAVATION DESCRIPTION:	PIT ABANDONED
SAMPLE POD (ppm) 30 15 15 15 15 15 15 15 15 15 1	SCALE O FT PIT PERIMETER NO OVM RESULTS TIME SAMPLE LD. LAB No: WEIGHT (g) ml. FREON DIL OVM RESULTS	PROFILE (ADDITIONAL)
TRAVEL NOTES	SAMPLE FIFEST HEADSPACE PD (ppm) 1	JOEWALL UT. GAY
LATIVITIES CONTRACTOR	TRAVEL NOTES:	WOWATER



PURGEABLE AROMATICS

Blagg Environmental, Inc.

Project ID:

Amoco/GCU 169

Report Date:

Date Sampled:

Date Received:

Date Analyzed:

Sample ID:

Pit Water

01/29/96

Lab ID:

2522

01/25/96

Sample Matrix:

Water

01/25/96 01/26/96

Preservative:

Condition:

Cool, HgCl₂

Intact

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	5.00
Toluene	29.8	5.00
Ethylbenzene	110	5.00
m,p-Xylenes	1,190	200
o-Xylene	84.0	5.00

M		
Total B	FEX	1,410
	Pinanta State	A TANAMININA TO THE TANAMININA

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate

Percent Recovery

Acceptance Limits

Trifluorotoluene

106

88 - 110%

Reference:

Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209,

Oct. 1984.

Comments:

Duis Mb

Analyst armon



PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:

GCU 169 Blow Pit

Report Date:

02/09/96

Sample ID:

PW 2 @ GW (8')

Date Sampled:

02/07/96

Lab ID: Sample Matri 2598

Date Received:

02/07/96

Sample Matrix:

Water

Date Analyzed:

02/07/96

Preservative: Condition:

Intact

Cool, HgCl₂

Farget Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	1.20	0.20
Toluene	1.34	0.20
Ethylbenzene	1.82	0.20
m,p-Xylenes	37.8	0.40
o-Xylene	4.18	0.20

Almo Carlos Company		-AXTERNATION OF THE PARTY OF TH	1000
Total RTFX		Section As	
TOTAL BIEN	46	.3	1.150
	· · · · · · · · · · · · · · · · · · ·	min'. NATA	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate

Percent Recovery

Acceptance Limits

Trifluorotoluene

103

88 - 110%

Deine/hl

Reference:

Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209,

Oct. 1984.

Comments:

anica aimon

Review



General Water Quality Blagg Engineering, Inc.

Project ID:

GCU 169 Blow Pit

Date Reported:

02/09/96

Sample ID:

PW2 @ GW (8')

Date Sampled:

02/07/96

Laboratory ID:

2598

Time Sampled:

8:40

Sample Matrix:

Water

Date Received:

02/07/96

Parameter		Analytical Result	Units
General	Lab pH	. 7.5	s.u.
	Lab Conductivity @ 25° C	2,660	μmhos/cm
	Total Dissolved Solids @ 180°C	2,100	mg/L
	Total Dissolved Solids (Calc)	2,100	mg/L
Anions	Total Alkalinity as CaCO ₃	. 453	mg/L
	Bicarbonate Alkalinity as CaCO ₃	. 453	mg/L
	Carbonate Alkalinity as CaCO ₃	NA	mg/L
	Hydroxide Alkalinity as CaCO ₃	. NA	mg/L
	Chloride	. 80.0	mg/L
	Sulfate	1,080	mg/L
	Nitrate + Nitrite - N	NA	
	Nitrate - N	NΑ	
	Nitrite - N	NA	
Cations	Total Hardness as CaCO ₃	. 1,000	mg/L
	Calcium	376	mg/L
	Magnesium	. 14.7	mg/L
	Potassium	< 5.0	mg/L
	Sodium	270	mg/L
Data Validation			Acceptance Level
	Cation/Anion Difference	3.04	+/- 5 %
	TDS (180):TDS (calculated)	1.0	1.0 - 1.2

Reference

U.S.E.P.A. 600/4-79-020, <u>Methods for Chemical Analysis of Water and Wastes</u>, 1983. <u>Standard Methods For The Examination Of Water And Wastewater</u>, 18th ed., 1992.

Review



PURGEABLE AROMATICS

Blagg Environmental, Inc.

Project ID:

Amoco/GCU 169

Report Date:

01/29/96

Sample ID:

TH - 1

Date Sampled:

01/25/96

Lab ID:

2523

Date Received:

01/25/96

Sample Matrix:

Water

Date Analyzed:

01/25/96

Preservative:

Cool, HgCl₂

Condition:

Cool

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50

	Total BTEX		ND	
--	------------	--	----	--

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate

Percent Recovery

Acceptance Limits

Trifluorotoluene

98

88 - 110%

Reference:

Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209,

Oct. 1984.

Comments:

Doniethe

CHAIN OF CUSTODY Page_ ORGANIC ANALYSES WATER ANALYSES **METALS** COMMENTS 807 S. CAPILTON • FARMINGTON, NM 87401 • (505) 326-2395 PROJECT MANAGER: Chlorinated Pesticides / PCBs (608 / 8080) Polynuclear Aromatic Hydrocarbons (8100) Analytica Lab I.D.; Base / Neutral / Acid GC/MS (625 / 8270) /TKN Aromatic HCs BTEX/MTBE (602 / 8020) Volatiles GC/MS (624 / 8240 / 8260) BURGG Company: Chlorinated Hydrocarbons (8010) NO3-Address: SDWA Volatiles (502.1 / 503.1) BOD / Fecal / Total Coliform RCRA Metals TCLP (1311) Specific Anions (specify): Phone: Nutrients: NH4+ / NO2 Fax: RCRA Metals (Total) Solids: TDS / TSS / Priority Pollutants Specific Cations Other (specify): Other (specify): Oil and Grease Other (specify): Cation / Anion Bill To: Company: Address: Lab ID Sample ID Matrix 1-25-96 1345 WATER 1400 WATER Project Information Sample Receipt Sampled By: Relinquished By: Relinquished By: Proj.#: 80303 No. Containers: 1-25-96 Proj. Name: Gun 169 Custody Seals: Y / N / NA Please Fill Out Thoroughly. P. O. No: Received Intact: REI RET Shipped Via: 1445 Received Cold: Shaded areas Required Turnaround Time (Prior Authorization Required for Rush) Received By: for lab use only. Received By: Received By: Signature Date: Signature Date: White/Yellow: Analytica Pink: Client Company: Time: Company:

Phone: Company: Address: Company: Analytica Lab I.D.: PROJECT MANAGER ARIVE Petroleum Hydrocarbons (418.1) Gasoline / Diesel (mod. 8015) Gasoline (GRO) Aromatic HCs BTEXMTBE (602 (8020) Chlorinated Hydrocarbons (8010) SDWA Volatiles (502.1 / 503.1) Chlorinated Pesticides / PCBs (608 / 8080) Herbicides (615 / 8150) Volatiles GC/MS (624 / 8240 / 8260) Base / Neutral / Acid GC/MS (625 / 8270) Polynuciear Aromatic Hydrocarbons (8100) CHAIN OF CUSTODY TCLP Extraction Other (specify): Cation / Anion Specific Cations (specify): WATER ANALYSES Specific Anions (specify): BOD / Fecal / Total Coliform Solids: TDS / TSS / SS Nutrients: NH4+ / NO2- / NO3- / TKN Qil and Grease Other (specify): Priority Pollutants RCRA Metals (Total) RCRA Metals TCLP (1311) Other (specify): ANDON/CATION SAMPLE PRISERV BT-X SOMPLE Page / of COMMENTS

Fax:

Address:

Sample ID

Matrix

Lab ID

2/1/96 0840 WATER

Proj. #: GCU

Project Information

Proj. Name: 820w

Custody Seals: Y / N /

롲

No. Containers:

Sample Receipt

Sampled By:

Relinquished By:

Relinquished By:

Required Turnaround Time (Prior Authorization Required for Rush)

Received By

Received By:

Received By:

White/Yellow: Analytica

Pink: Client

for lab use only Shaded areas

0840

BLACE-

1130

Time:

Please Fill Out Thoroughly.

Received Cold: Received Intact

Shipped Via:

BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>60303</u> 6.0.C. NO: <u>400-477-4</u>
FIELD REPORT: CLOSURE VERIFICATION	
QUAD/UNIT: I SEC:35 TWP:29N RNG/ZW PM:NM CNTY:5J STNM	DATE STARTED: 1-31-96 DATE FINISHED: ENVIRONMENTAL SPECIALIST:
EXCAVATION APPROX. 67 FT. x 35 FT. x 9 FT. DEEP. CUBIC DISPOSAL FACILITY: 00-517E REMEDIATION METHOD LAND USE: LANGUAGE ACRICUL. LEASE: FEE FOR:	: LANDFARMED
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 150 FT. NOTE OF THE PROXIMATELY 150 FT. NEAREST SURFACE	
I SIIII AND EXLAVATION DESCRIPTION	CHECK ONE: PIT ABANDONED STEEL TANK INSTALLED
TEPARATOR WHIT SHOWS INTERVALS OF 4' OF LT. TO DK. GRAY DISCLED LIMITED DUE TO SURROUNDING SURFACE EQUIPMENT & NEARBY BURIED 10" 2-00. TH 1: 4 2000 mS FIELD 418.1 CALCULATIONS TIME SAMPLE I.D. LAB NO: WEIGHT (g) mL. FREON DILL SCALE	
REMOTE SAMPLE SAMPLE SELD HEADSPACE PLO (ppm) TO SAMPLE SAMPLE SELD HEADSPACE PLO (ppm) TO SAMPLE SAMPLES THIRTY ZOOR PROFILE A MONOMER 41 OSCIONOTION TO! GOV. 41 FIRELINE GOV. 41 FIRELINE GOV. 41 FIRELINE FIRELIN	
TRAVEL NOTES: CALLOUT 1-31-96 more	17-2 96 - 24

1-31



EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	PW 1 @ GW (8')	Date Reported:	02-07-96
Chain of Custody:	4 695	Date Sampled:	02-07-96
Laboratory Number:	9987	Date Received:	02-07-96
Sample Matrix:	Water	Date Analyzed:	02-07-96
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

			Det.
	Concentration	Dilution	Limit
Parameter	(ug/L)	Factor	(ug/L)
Benzene	ND	1	0.3
Toluene	24.7	1	0.4
Ethylbenzene	2.8	1	0.3
p,m-Xylene	110	1	0.5
o-Xylene	22.9	1	0.3
Total BTEX	160		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	101 %
	Bromofluorobenzene	100 %

References:

Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA,

July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846,

USEPA, Sept. 1994.

Comments:

GCU 169 Separator Pit.

Analyst L. Capleer

Stacy W Sendler



PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:

GCU 169 Separator Pit

Report Date:

02/08/96

Sample ID:

TH 1 @ GW (8')

Date Sampled:

01/31/96

Lab ID:

2557

Date Received:

02/01/96

Sample Matrix:

Water

Date Analyzed:

02/07/96

Preservative: Condition:

Cool, HgCl2 Intact

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	8.94	0.20
Ethylbenzene	1.13	0.20
m,p-Xylenes	11.9	0.40
o-Xylene	1.20	0.20

	7.50000-		7/38/4
a distant	N. N. S.		130 M. O.
Total B	TEV	22.0	
· Otal L	1LX	23.2	
		and a second	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate

Percent Recovery

Acceptance Limits

Trifluorotoluene

96

88 - 110%

Reference:

Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209,

Oct. 1984.

Comments:

anua aumon Analyst

Dung Pale



General Water Quality Blagg Engineering, Inc.

Project ID:

GCU 169/Separator Pit

Date Reported:

02/08/96

Sample ID:

PW1 at GW (8')

Date Sampled:

02/07/96

Laboratory ID:

2597

Time Sampled:

8:20

Sample Matrix:

Water

Date Received:

02/07/96

Parameter		Analytical Result	Units.
General	Lab pH	7.4	s.u.
	Lab Conductivity @ 25° C	3,100	μmhos/cm
	Total Dissolved Solids @ 180°C	2,550	mg/L
	Total Dissolved Solids (Calc)	2,540	mg/L
Anions	Total Alkalinity as CaCO ₃	453	mg/L
	Bicarbonate Alkalinity as CaCO ₃	453	mg/L
	Carbonate Alkalinity as CaCO ₃	NA	mg/L
	Hydroxide Alkalinity as CaCO ₃	NA	mg/L
	Chloride	102	mg/L
	Sulfate	1,370	mg/L
	Nitrate + Nitrite - N	NA	
	Nitrate - N	NA	
	Nitrite - N	NA	
Cations	Total Hardness as CaCO ₃	919	mg/L
	Calcium	324	mg/L
	Magnesium	27.0	mg/L
	Potassium	5.0	mg/L
	Sodium	440	mg/L
Data Validation			Acceptance Level
	Cation/Anion Difference	3.53	+/- 5 %
	TDS (180):TDS (calculated)	1.0	1.0 - 1.2

Reference

U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983. Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Quio MG Review

CHAIN OF CUSTODY

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	Required Turnaround	Shipped Via:	P. O. No:	Proj. Name: SEP	Proj. #: GCU /	Project Informat						PWIEGW(8)	Puzze Gods	Sample ID	PROJECT MANA Analytica Lab I.D Company: Address: Phone: Fax: Bill To: Company: Address:	ENVIRONMENTAL LABO
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	d for Rush)			N / NA		ipt								Lab ID		
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White/Yellow: Analytica Pink: Client	for lab use only.	Shaded areas		Please Fill Out Thoroughly.									SEP. PIT		MESRV.	COMMENTS
	Date: Signature Date: Swedure	ed By: Received By: Received By: Date: Signature Date: Speaking Date: Date: Signature	naround Time (Prior Authorization Required for Rush) Received By: Signature Signature Signature Date: Signature Date: Dat	Received Colds: Company: Time: Company: 0 Time: Company: Company: Time: Company: 0 Time: Company: Time: Company: 0 Time: Company: 1/30 1	SEP. P/T Custody Seals: Y / N / NA / / / / / / 2/1/96 / / / / / / / / / / / / / / / / / /	Moderntainers Signature Date:	roject Information Sample Receipt Sampled By: Relinquished By: Signature roject Information Sample Receipt Sampled By: Relinquished By: Sampled By: Sample Receipt Sampled By: Sampled By: Sampled By: Date: Sampled By: Date: Sampled By: Company: Time: Company: Time: Sample Receipt Signature Date: Sampled By: Date: ate: Date: Date: Date: Date: Da	roject Information Sample Receipt Sampled By: Relinquished By: Relinquished By: Relinquished By: Relinquished By: Synature Sampled By: Synature Synature Synature Synature Synature Synature Synature Company: Time: Company: Time: Company: Time: Company: Time: Company: Time: Synature	roject Information Sample Receipt Sampled By: Recur 169 - No. Containers: No. Container	roject Information Sample Receipt Sampled By: Sampled	roject Information Sample Receipt Sampled By: Residual Seases Y IN INA Company: Hecelogistinate: Received Cold Tumaround Time (Prior Authorization Required for Rush) Received By: Company: Time: Company:	Popularion Sample Receipt Sampled By: Becu 169 - No. Companies Symular General Code Received Code No. Company Received By: Received B	Company: Image: SEP. PIT Custocy State: Received Cold. Image: SEP. PIT Custocy State: Imag	Per Gird Action Sample Receipt Sampled By: Section Page Page		

Company: Address: Address: Company: Phone: Analytica Lab I.D.: PROJECT MANAGER: THICGW(8) 1-31-96 P. O. No: Proj. #: Required Turnaround Time (Prior Authorization Required for Rush) Received By Shipped Via: Proj. Name Cock Sample ID CARLTON • FARMINGTON, NM 87401 • (505) 326-2395 Project Information 8030 169 W Date 10.50 Received Intact Custody Seeds: Y / N / NA No. Containers: Received Cold: Time Sample Receipt WATER Matrix ABOVE Petroleum Hydrocarbons (418.1) Sampled By BUREC Gasoline / Diesel (mod. 8015) Gasoline (GRO) Aromatic HCs TEXMTBE (602 8020) ORGANIC ANALYSES Chlorinated Hydrocarbons (8010) SDWA Volatiles (502.1 / 503.1) Chlorinated Pesticides / PCBs (608 / 8080) Time: Herbicides (615 / 8150) Volatiles GC/MS (624 / 8240 / 8260) Base / Neutral / Acid GC/MS (625 / 8270) Relinquished By: Received By: Polynuclear Aromatic Hydrocarbons (8100) CHAIN OF CUSTODY TCLP Extraction Other (specify): Cation / Anion Specific Cations (specify): 2-1-96 WATER ANALYSES 0900 Specific Anions (specify): BOD / Fecal / Total Coliform Solids: TDS / TSS / SS Received By Relinquished Nutrients: NH4+ / NO2- / NO3- / TKN Oil and Grease Other (specify): Ву Priority Pollutants RCRA Metals (Total) METALS RCRA Metals TCLP (1311) Time Other (specify): SEPARATOR Please Fill Out Thoroughly. White/Yellow: Analytica Shaded areas for lab use only. COMMENTS Pink: Client

CHAIN OF CUSTODY RECORD

Client/Project Name			Project Location	55	D. PIT										
BAGG / A	MOCO		Project Location	9					ANA	LYSI\$/P	ARAME	TERS			
Sampler: (Signature)	- 0		Chain of Custody Ta	pe No.										Remarks	
Sampler (Signature)	el.					No. of Contiguers	30								
Sample No./ Identification	Sample Date	Sample Time	Lab Number		Sample Matrix	No	875X								
PW1 @ GW (8')	2-7-96	0820	9987	WA	MEIS_	2	1						PRESERU	- HgC	+ COUL

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							 	1							
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															<u>-</u>
Relinquished by: (Signature)	Tel.			2/3/96	1	Received by:	Signature		P	al				Date 2/7/96	Time
Relinquished by: (Signature)	7			-///6	1100	Received by: (S	Signature		,	Cop	in	-		41140	1100
Relinquished by: (Signature)						Received by: (Signature)							
				<u>L</u>											

ENVIROTECH INC.

5796 U.S. Highway 64-3014 Farmington, New Mexico 87401 (505) 632-0615

san juan repre Form 578-81

VUL

District | P.O. Bes 1988, Hebbs, NM State of New Mexico
Energy, Minerals and Natural Resources Department

SUBMIT 1 COPY TO

APPROPRIATE

DISTRICT OFFICE

AND 1 COPY TO

SANTA PE OFFICE

District []

out that III

1000 Ris Snow Rd., Amec, KM

OIL CONSERVATION DIVISION P.O. BOX 2088 SANTA FE, NEW MEXICO 87504-2088

PIT REMEDIATION AND CLOSURE REPORT

Operator: BP AMERIC	A PRODUCTION CO.	Т	elephone: (505) 326-9200
	Y COURT, FARMINGTO	N. NM 87401	
Facility or Well Name:	5-CU #169		
Location: Unit or Qtr/Qtr	Sec Sec35	TagN R W Count	y San Juan
, , , , , , , , , , , , , , , , , , , ,	Dehydrator Other		
Land Type: BLM	State, Fee, Oth	ier	
Pit Location:	Pit dimensions: length	NA , width NA	A, depthNA
(Attach diagram)	Reference: wellhead X		
1	Footage from reference:		
		20 Degrees	East North
			of West South
Depth To Groundwater: (Vertical distance from		Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) (0 points)
high water elevation of groundwater)		0.0000. 1202 200 200	(v points)
Wallbard David Aller A		¥	(00 1 - 4 -)
Wellhead Protection Area (Less than 200 feet from a private	•	Yes No	(20 points) (0 points)0
domestic water source, or; less than 1000 feet from all other water sources)			
Distance To Surface Wate	p**	Less than 100 feet	(20 points)
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks,	• ,	100 feet to 1000 feet Greater than 1000 feet	(20 points) (10 points) (0 points)
irrigation canals and ditches)		Canada man IVVV IVVI	(o points)
		RANKING SCORE (TOT	AL POINTS):
revised: 09/11/02			bel1202.wpd

Date Remediation Star	rted:	Date Completed: 2-13-03
Remediation Method:	Excavation X	Approx. cubic yards NA
(Check all appropriate sections)	Landfarmed	Insitu Bioremediation
	Other CLOSE AS 18	**************************************
Remediation Location: (i.e. landfarmed oaslte, name and location of offsite facility)	Onsite X Offsite	n√
General Description of	f Remedial Action: Excavation	n. Test hole advanced. No remediation necessary.
Groundwa-	ter Impact. mw	REQUIRED FOLLOWING BP'S GROUNDWATER
MANAGEMENT	- PLAN. STEEL TAN	K REPLACED WI DOUBLE WALL STEEL TANK.
Groundwater Encount	ered: No X Yes X	Depth 9'
Closure Sampling: (if multiple samples, attach sample results and diagram of sample		Test hole bottom) water sample e 9
	Soil: Benzene (ppm) Water: Benzene (ppb) 4.8
	Total BTEX (ppm	
	4.	Ethylbenzene (ppb) 310
	TPH (ppm	
Groundwater Sample:	3.	AU T
I HEREBY CERTIFY KNOWLEDGE AND	THAT THE INFORMATION ABO BELIEF	OVE IS TRUE AND COMPLETE TO THE BEST OF MY
DATE 2-13-	PRINTE	ED NAME Jeffrey C. Blagg
SIGNATURE	Ly C 369GAND TI	rle President P.E. # 11607
revised: 03/27/02 /		beil202 чт

BLAGG ENGINEERING, INC. - (BEI)

P.O. Box 87. Bloomfield. New Mexico 87413 Phone: (505) 632-1199 Fax: (505) 632-3903

March 6, 2003

Mr. Roger Anderson Chief of Environmental Bureau State of New Mexico Oil Conservation Division (NMOCD) 2040 So. Pacheco Santa Fe, New Mexico 87505

RE: Groundwater Impact

BP America Production Company (BP): GCU 169 Well site - Separator Pit (II) Legal Description: Unit I, Sec. 35, T29N, R12W, San Juan County, New Mexico

Dear Mr. Anderson:

Initial groundwater sample analytical results at the above referenced well site during pit closure activity indicated contamination to be above the State of New Mexico Water Quality Control Commission's regulatory standards for total Xylenes. Sampling of the Separator pit (II) was conducted February 11, 2003. Depth to water was estimated at nine (9) feet below grade. Listed below is the summary analytical results for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) from the groundwater sample collected within the pit:

Parameter	Separator Pit (II) (parts per billion)
Benzene	4.8
Toluene	150
Ethylbenzene	310
Total Xylenes	2.920

Telecommunication notification was submitted to Mr. William Olson's voice recorder on March 6, 2003 at approximately 9:45 am. BP will implement its Groundwater Management Plan to address the findings related to this situation.

If you have any questions concerning this information, please do not hesitate to contact us at (505) 632-1199. Thank you for your cooperation.

Respectfully submitted, Blagg Engineering, Inc.

Nelson Velez

Staff Geologist

Denny Foust, Environmental Geologist, NMOCD, Aztec, NM

Brittany Benko, Environmental Coordinator, BP America Production Company, Farmington, NM

NV/nv

cc:

BLAGG ENGINEERING	LOCATION NO: BO303
CLIENT: BP P.O. BOX 87, BLOOMFIELD). NM 87413
(505) 632-1199	COCR NO: 12154
(000) 002-1100	
F ELD REPORT: PIT CLOSURE VERIF	ICATION PAGE No: of
LOCATION: NAME: GCL WELL# 169 TYPE	SEP. TT DATE STARTED: Z/10/03
QUAD/UNIT: I SEC: 35 TWP: 29N RNG: /ZW PM: NM CNTY: 5	DATE CIMICHED.
	FARSDONIASTAL
QTR/FOOTAGE: 23605/11/5 & NE/SE CONTRACTOR: LAL	The state of the s
EXCAVATION APPROX. NA FT. x NA FT. x NA FT.	
DISPOSAL FACILITY: DN -5/TE REMEDIA	ATION METHOD: BP'S GMP
LAND USE: KANGE AGRICULTURAL LEASE: FEE	FORMATION: DK
FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY /	FT. NZOE FROM WELLHEAD.
	NEAREST SURFACE WATER:
NMOCD RANKING SCORE: 30 NMOCD TPH CLOSURE STD: /00 PI	
SOIL AND EXCAVATION DESCRIPTION:	OVM CALIB. READ. = 50.8 ppm OVM CALIB. GAS = 100 ppm RF = 0.52
	OVM CALIB. GAS = 100 ppm RF = 0.52 TIME: 2:25 am/m DATE: 2/10/03
SOIL TYPE: SAND/ SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTH	
SOIL COLOR: OK. YELL. ORANGE / LT. GRAY BLACK	
COHESION (ALL OTHERS): (ION COHESIVE) SLIGHTLY COHESIVE / COHESIVE / HIGHLY	COHESIVE
CONSISTENCY (NON COHESIVE SOILS): 4005E/FRM DENSE / VERY DENSE	(Weyn y By Agens
PLASTICITY (CLAYO): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC - CHAYO & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD	HIGHLY PLASTIC
MOISTURE: DRY / SLIGHTLY MOIST (MOIST) WET (SATURATED) SUPER SATURATED	
DISCOLORATION/STAINING OBSERVED: YES! NO EXPLANATION - BLOCK - 2"-4	"ABOUE IT. GROY / IT. GRAY WIN GW
HC ODOR DETECTED TEST NO EXPLANATION - TEST HOLE & OUM SAN	mple
SAMPLE TYPE: GRABYCOMPOSITE - # OF PTS	PIT MALL STEEL TO IN
GROWDWATER MLD RECOURTED	About Siege I Hove.
IMPACT	
FIELD 418.1 CALC	ULATIONS
SCALE SAMP. TIME SAMP. ID LAB NO. WEIGHT (g)	mL FREON DILUTION READING CALC. (ppm)
0 FT	
PIT PERIMETER ♠N	TESTHOLE PROFILE
OVM	
READING	
FENCE SAMPLE FIELD HEADSPACE 1D (PPM) / TIM	g
16' 1007.5-8 580 / 1852	2
7, 3@	6 8.6.
10	97 BOTTOM
7.4, 5@	7"-4" 8115
Engine 2	1 4 - 9 BLACK 2
N3 FORMER DO	7 7 (2)
8.T.B.	H. GRAYEN Z' INTERMENT
8.T.B. FORMER TANK 100.1 7.8.76 8.6.	7 7 (2)
-2 ~6	7 7 (2)
To LAB SAMPLES	7 7 (2)
TO PROD. SAMPLES SAMPLE ANALYSIS TIME	U. GRAYEN Z'
TO PROD. SAMPLES SAMPLE ANALYSIS TIME	U. GRAYEN Z'
TO PROD. TANK PLAB SAMPLES SAMPLE ANALYSIS TIME PLATE TANK PLA	U. GRAYEN Z'
LAB SAMPLES RED TO PROD. TANK PINT CANAL SIS TIME TANK PINT CANAL SIS TIME XYLENES - FRILED	U. GRAYEN Z'
TO PROD. TANK PLAB SAMPLES SAMPLE ANALYSIS TIME PLATE TANK PLA	U. GRAYEN Z'

612 E. Murray Drive Farmington, NM 87401

Off: (505) 327-1072

iiná bá

P.O. Box 2606 Farmington, NM 87499

Fax: (505) 327-1496

Date: 18-Feb-03

CLIENT:

Blagg Engineering

Work Order:

0302007

Project:

BP - GCU #169 Separator Pit (II)

Lab ID:

0302007-001A

Client Sample Info: BP - GCU #169 Separator Pit II

Client Sample ID: PW1 @ GW (9ft)

Collection Date: 2/11/2003 8:45:00 AM

Matrix: AQUEOUS

Parameter	Result	PQL Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B			Analyst: JEM
Benzene	4.8	0.5	µg/L	1	2/13/2003
Ethylbenzene	310	10	µg/L	20	2/13/2003
m,p-Xylene	2500	20	μg/L	20	2/13/2003
o-Xylene	420	10	μg/L	20	2/13/2003
Toluene	150	0.5	μg/L	1	2/13/2003

Qualifiers:

ND - Not Detected at the Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above Upper Quantitation Limit - UQL

Page 1 of 1



CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499 LAB: (505) 325-5667 • FAX: (505) 327-1496

Purchase Order No.: Project No.						0	Name /Valen Valez Title											
ш	Name TEEF BLACE				· ·	RT S	Name / Value /											
	Name TEE PLACE Company LACE ENGINEERING,	1135	Dept.			P0												
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	City, State, Zip				1	~	Teleph	one N	0.	8 × -	119	7		Telefax No. 652.			1,64	1 2775
PROJECT LOCATION:							ANALYSIS DECLIECTED											
SAMPLER'S SIGNATURE:					Number of Containers													
,	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	PRES.		/ /										/ LAB ID	
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Relinquis	hed by:	***************************************	Date/	Time		Recei	ved by:		***						D	ate/Tim	e	
Method o	f Shipment:					Rush		24-48	Hours		10 Wo	rking [Days		By Da	te		
Authoriz	red by:(Client Signature <u>Must</u> Accompany R	Dat	e						s / Rem		1	6		ζ.				