

**BP America Production Company** 

200 Energy Court Farmington, NM 87401 Phone: (505) 330-9179

July 19, 2017

Randy Bayliss Senior Hydrologist New Mexico Oil Conservation Division Environmental Bureau 1220 St. Francis Drive Santa Fe, NM 87505

**Re:** Request for Permanent Closure

McCoy Gas Com A 001A - 3RP-378

API No. 30-045-22782; Unit letter F, Section 18, T31N, R10W; GPS: 36.900625°, -107.927495°

Dear Mr. Bayliss:

BP America Production Company has retained Blagg Engineering, Inc. to conduct environmental monitoring of groundwater at the McCoy Gas Com A 001A, a currently active natural gas production pad. The site is located on private property.

After the initial pit closure in 1993, cleanup efforts at the site employed "trenching technology," where several trenches were excavated to expose groundwater and remove contamination. Later, in 2013, groundwater monitoring wells were installed and sampled for four quarters demonstrating the site meet closure criteria.

The attached report requesting site closure demonstrates groundwater contaminants below the New Mexico Water Quality Control Commission's standards for all required constituents for four consecutive quarters per the BP and NMOCD agreed Groundwater Management Plan of May 2013.

If you have any questions concerning this document, please contact myself at <a href="mailto:steven.moskal@bp.com">steven.moskal@bp.com</a> or at the address or phone number listed above. Thank you for your cooperation and assistance.

Sincerely,

Steve Moskal

May My

Field Environmental Coordinator

cc: Environmental Specialists, NMOCD District III Office via email

# BP AMERICA PRODUCTION CO.

### **GROUNDWATER REMEDIATION REPORT**

McCOY GC A # 1A (F) SECTION 18, T31N, R10W, NMPM SAN JUAN COUNTY, NEW MEXICO 3RP-378

PREPARED FOR:
NEW MEXICO OIL CONSERVATION DIVISION
1220 ST. FRANCIS DRIVE
SANTA FE, NEW MEXICO 87504

**JULY 2017** 

PREPARED BY: BLAGG ENGINEERING, INC.

Consulting Petroleum / Reclamation Services P.O. Box 87 Bloomfield, New Mexico 87413

# **BP AMERICA PRODUCTION COMPANY**

# McCoy Gas Com A # 1A - Separator Pit SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub>, Sec. 18, T31N, R10W

Pit Closure Date: July-September 1993

Monitor Well Installation Date: June 2013

Monitor Well Sampling Dates: 6/27/2013, 7/25/2013, 12/12/2014, 3/3/14, 6/21/2014

#### Pit Closure and Background:

The on-site pit closure was conducted in July through September 1993 and resides on private property. Groundwater impact was identified within the source area during the pit closure activity and was reported to the New Mexico Oil Conservation Division's (NMOCD) Santa Fe office. Documentation for this work and subsequent groundwater monitoring data for the site has been previously submitted for NMOCD review. The reporting herein is for site monitoring of four (4) groundwater monitor wells (Bore Logs attached) from June 2013 to June 2014 to address the off-site remedial effort (Figure 1). This pit was acknowledged by NMOCD in the initial reporting in February 2001 which can be reviewed online at NMOCD's Administrative/Environmental Order number 3RP-378-0 (filename: pwco0118658168 0001.pdf).

#### **Groundwater Monitor Well Sampling Procedures:**

A two (2) inch submersible electrical pump with new, clear vinyl tubing was utilized during all four (4) quarterly sampling events. The groundwater samples were collected following US EPA: SW-846 protocol, were placed into laboratory supplied containers with appropriate preservative, and stored in an ice chest for express delivery to an analytical laboratory for testing under strict chain-of-custody procedures. Analytical testing for BTEX per US EPA Method 8021B was conducted.

Fluids generated during monitor well purging was managed by discarding into BP's on-site above-grade tank (**AGT**). The AGT contents are eventually disposed through approved NMOCD operational procedures for removal of produced water and/or fluids.

#### Water Quality and Gradient Information:

BP initiated quarterly sampling and testing pursuant to BP's NMOCD approved Groundwater Management Plan (**GMP**) in June 2013. A historical summary of laboratory analytical BTEX results are included within the table on the following page. Field data sheets, laboratory reports, and laboratory quality assurance/quality control information are also included within this report.

A site map (Figure 1) shows the eight (8) monitor wells relative position to the previous remedial effort areas. Groundwater contour maps generated during previous site monitoring and sampling had predominantly demonstrated a southwest flow direction.

#### **Summary and/or Recommendations:**

Hydrocarbon impacted soils and groundwater at the site appear to have been remediated via the excavation method and possibly from natural attenuation.

All monitor wells tested at non-detectable levels during the four (4) consecutive sampling events and met the requirements of section 2.1 of BP's GMP. All monitor wells met section 2.2 of the GMP for anion constituents. Permanent closure of the separator pit is recommended. Site monitor wells are scheduled to be abandoned 60 days following receipt by NMOCD of this final report. Monitor well abandonment will adhere to section 6.2 of the GMP.

## **BP AMERICA PRODUCTION COMPANY**

GROUNDWATER FIELD DATA & LAB BTEX / GENERAL CHEMISTRY RESULTS

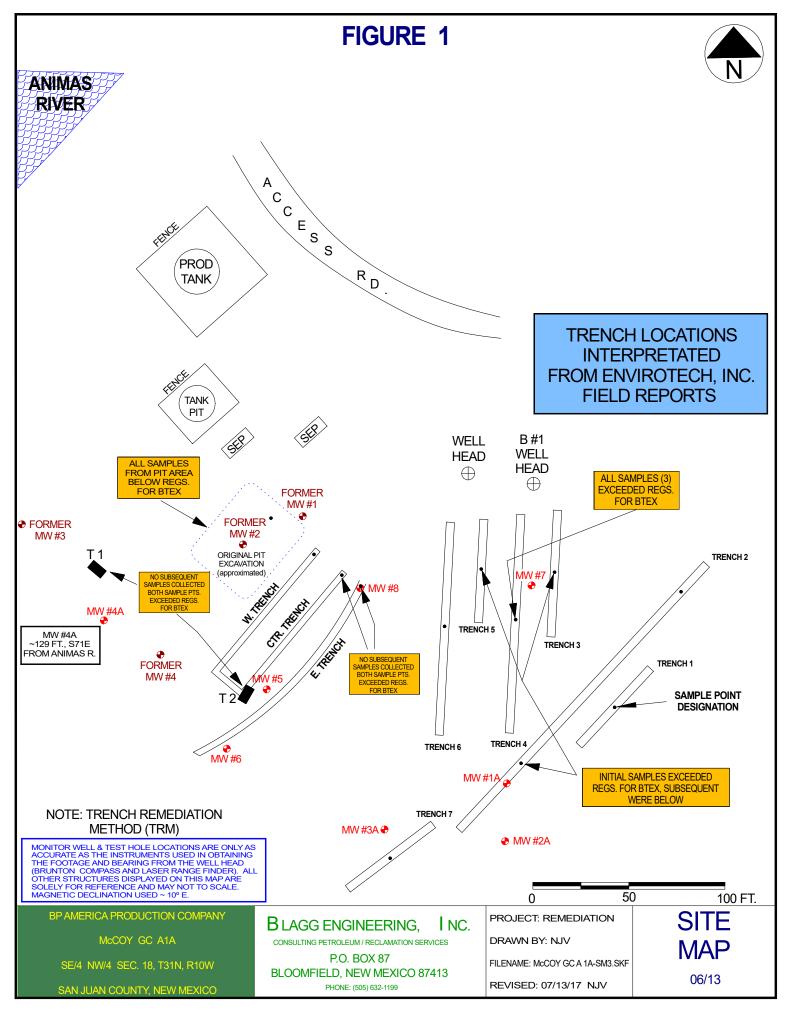
McCOY GC A # 1A UNIT F, SEC. 18, T31N, R10W REVISED DATE: June 28, 2017 Submitted by Blagg Engineering, Inc.

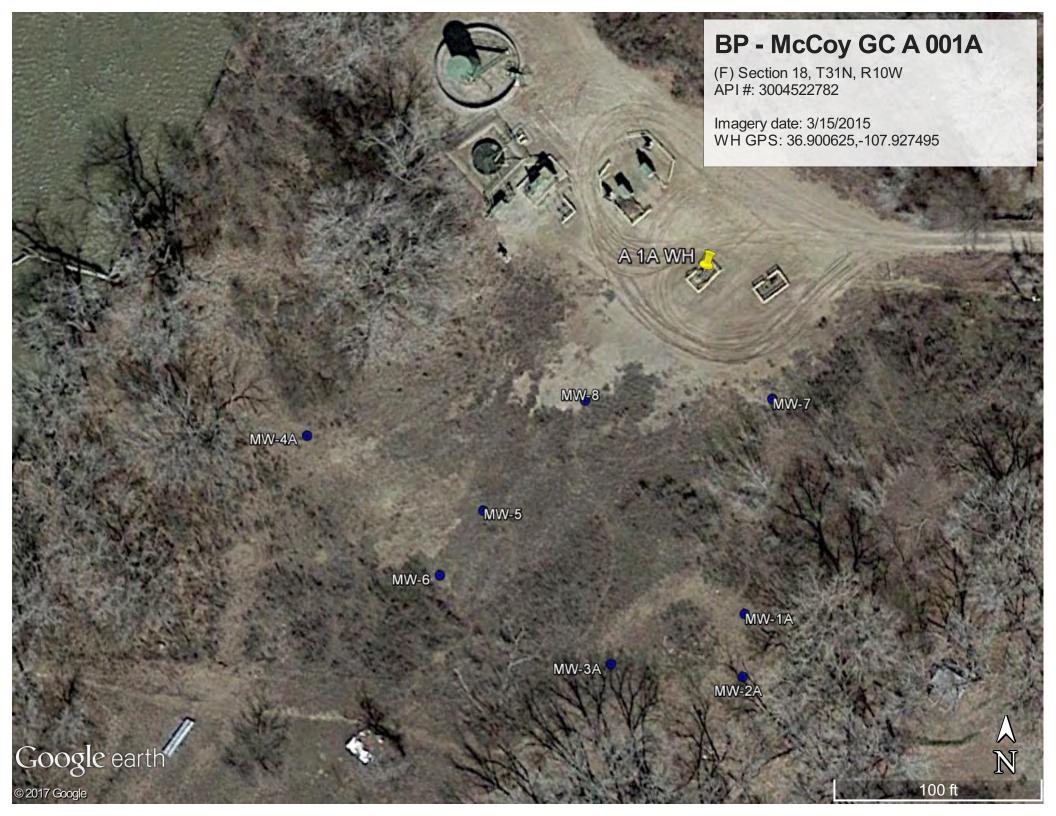
								BTEX US EPA METHOD 8021B or 8260B			
SAMPLE	WELL NAME	DEPTH TO	WELL	TDS	CONDUCT.	рН	FREE PHASE	BENZENE	TOLUENE	ETHYL	TOTAL
DATE	/ NUMBER	WATER	DEPTH				PRODUCT			BENZENE	XYLENES
		(ft)	(ft)	(mg/L)	(umhos)		(ft)	(ppb)	(ppb)	(ppb)	(ppb)
27 1 12	D 4) A / #4 A	0.01	10.70		726	7.70		ND	ND	ND	ND
27-Jun-13	MW #1A	9.91	18.70	see below	726	7.70		ND	ND	ND	ND
25-Jul-13		10.35			NA 1.000	NA 7.57		- ND	- ND	- ND	-
12-Dec-13		8.73			1,000	7.57		ND	ND	ND	ND
3-Mar-14		8.98			1,000	7.33		ND	ND	ND	ND
27-Jun-13	MW #2A	10.23	18.70	see below	473	7.50		ND	ND	ND	ND
27-Jun-13	MW #3A	10.04	17.50	see below	552	7.60		ND	ND	ND	ND
25-Jul-13	MW #4A	9.12	14.00	see below	800	7.47		ND	ND	ND	ND
12-Dec-13		8.13			1,200	7.51		ND	ND	ND	ND
3-Mar-14		8.26			1,200	7.23		ND	ND	ND	ND
21-Jun-14		7.20			900	7.22		ND	ND	ND	ND
25-Jul-13	MW #5	8.61	19.30	see below	900	7.47		ND	ND	ND	ND
12-Dec-13		7.36			1,000	7.53		ND	ND	ND	ND
3-Mar-14		7.54			1,400	7.39		ND	ND	ND	ND
21-Jun-14		6.69			800	7.26		ND	ND	ND	ND
25-Jul-13	MW #6	9.08	18.46	see below	1,400	7.57		ND	ND	ND	ND
25-Jul-13	MW #7	10.42	18.22	see below	700	7.56		ND	ND	ND	ND
12-Dec-13		8.87			1,400	7.47		ND	ND	ND	ND
3-Mar-14		9.10			2,000	7.41		ND	ND	ND	ND
21-Jun-14		8.38			600	7.51		ND	ND	ND	ND
25-Jul-13	MW #8	9.88	16.60	see below	1,100	7.47		ND	ND	ND	ND
12-Dec-13		8.52			1,100	7.50		ND	ND	ND	ND
3-Mar-14		8.71			1,300	7.27		ND	ND	ND	ND
21-Jun-14		7.83			900	7.30		ND	ND	ND	ND
				NMW	QCC GROUNI	OWATER S	TANDARDS	10	750	750	620

	SAMPLE DATE	WELL NAME /NUMBER	Fluoride (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Iron (mg/L)	TDS (mg/L)
	06/27/13	MW #1A	0.43	73.0	340	ND	0.31	850
	06/27/13	MW #2A	0.43	47	190	ND	0.31	650
	06/27/13	MW #3A	0.45	83	360	ND	0.67	920
	07/25/13	MW #4A	0.53	30	180	0.21	0.73	596
	07/25/13	MW #5	0.42	47.0	240	ND	1.8	718
	07/25/13	MW #6	0.34	140	690	ND	0.2	1460
	07/25/13	MW #7	0.33	25	170	ND	0.034	352
	07/25/13	MW #8	0.40	120	310	ND	0.96	952
NMWQCC GROUI	1.60	250	600	10	1.0	1,000		

NOTES:

- 1) ND INDICATES NOT DETECTED AT THE REPORTING LIMITS (less than regulatory standards of at least a magnitude of 10).
- 2) NMWQCC INDICATES NEW MEXICO WATER QUALITY CONTROL COMMISSION.
- 3) pH NMWQCC standards range between 6 -9
- 4) TDS Total Dissolved Solids
- 5) ppb Parts per billion
- 6) mg/L Milligrams per liter





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

MW # 1A

BORING #..... <u>BH - 9</u> MW #..... PAGE #.....

# BORE/TEST HOLE REPORT

CLIENT:

LOCATION NAME: CONTRACTOR: **EQUIPMENT USED:**  BP AMERICA PRODUCTION CO

McCOY GC A#1A API #: 3004522782 UNIT F, SEC. 18, T31N, R10W

**BLAGG ENGINEERING, INC. / KYVEK FIELD SERVICES** 

MOBILE DRILL RIG (CME 95) - TUBEX SYSTEM.

163 FEET, S7E FROM WELL HEAD. GPS COORD.: 36.900180,-107.927425 **BORING LOCATION:** 

DATE STARTED 06/17/13 DATE FINISHED 06/25/13 OPERATOR..... KΡ LOGGED BY..... NJV

**DEPTH** LITHOLOGY SCHEMATIC INTERVAL (FT.) 1 TOS 1.20 2 3 4 6 Y 8 9 10 11

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### FIELD CLASSIFICATION AND REMARKS

**GROUND SURFACE** 

TOP OF CASING APPROXIMATELY 2.50 FT. ABOVE GRADE.

MODERATE BROWN SILTY SAND TO SILTY CLAY, NON COHESIVE TO SLIGHTLY PLASTIC, DRY TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 6.0 FT. BELOW GRADE).

GROUNDWATER ~ 7.85 ft. BELOW GRADE; MEASURED 07/27/2013.

MODERATE BROWN SAND & GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (6.0 - 17.0 FT. BELOW GRADE).

NOTES:

TD -16.20

- SILTY SAND TO SILTY CLAY.

- SAND & GRAVEL.

**TOS** - Top of screen interval.

- Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.50 ft. above grade to 1.20 ft. below grade, 0.010 slotted screen between 1.20 to 16.20 ft. below grade, sand packed annular to grade. Steel well protector with locking hinged lid encompass exposed casing, slip capped top end of casing, & secured with padlock.

DRAWING: MCCOY GC A 1A MW1A-BH9. SKF DATE: 06/24/17

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

MW # 2A

# BORE/TEST HOLE REPORT

CLIENT:

LOCATION NAME: CONTRACTOR:

**EQUIPMENT USED:** 

BP AMERICA PRODUCTION CO

McCOY GC A #1A API #: 3004522782 UNIT F, SEC. 18, T31N, R10W

**BLAGG ENGINEERING, INC. / KYVEK FIELD SERVICES** 

MOBILE DRILL RIG (CME 95) - TUBEX SYSTEM.

193 FEET, S6E FROM WELL HEAD.

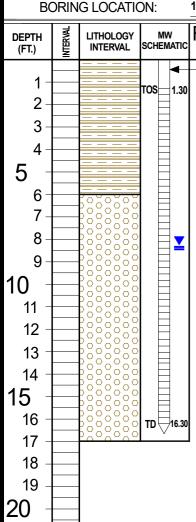
GPS COORD.: 36.900100.-107.927429

BORING #..... <u>BH - 8</u> MW #..... PAGE #.....

DATE STARTED 06/14/13

DATE FINISHED \_\_06/14/13

OPERATOR..... ΚP LOGGED BY..... NJV



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### FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROXIMATELY 2.40 FT. ABOVE GRADE.

MODERATE BROWN SILTY SAND TO SILTY CLAY, NON COHESIVE TO SLIGHTLY PLASTIC, DRY TO SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 6.0 FT. BELOW GRADE).

GROUNDWATER ~ 8.25 ft. BELOW GRADE; MEASURED 07/25/2013.

MODERATE BROWN SAND & GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (6.0 - 17.0 FT. BELOW GRADE).

NOTES:

- SILTY SAND TO SILTY CLAY.

- SAND & GRAVEL.

**TOS** - Top of screen interval.

Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.40 ft. above grade to 1.30 ft. below grade, 0.010 slotted screen between 1.30 to 16.30 ft. below grade, sand packed annular to grade. Steel well protector with locking hinged lid encompass exposed casing, slip capped top end of casing, & secured with padlock.

DRAWING: MCCOY GC A 1A MW2A-BH8. SKF DATE: 06/24/17

P.O. BOX 87 BLOOMFIELD, NM 87413

MW # 3A

BORING #..... <u>BH - 7</u> MW #.....

(505) 632-1199

# BORE/TEST HOLE REPORT

CLIENT:

LOCATION NAME: CONTRACTOR:

**EQUIPMENT USED:** BORING LOCATION: BP AMERICA PRODUCTION CO

UNIT F, SEC. 18, T31N, R10W McCOY GC A #1A API #: 3004522782

BLAGG ENGINEERING, INC. / KYVEK FIELD SERVICES

MOBILE DRILL RIG (CME 95) - TUBEX SYSTEM.

190.5 FEET, S13WE FROM WELL HEAD. GPS COORD.: 36.900116,-107.927645

PAGE #..... DATE STARTED \_\_06/14/13 DATE FINISHED \_\_06/14/13 OPERATOR..... \_ ΚP LOGGED BY..... NJV

	אוואוכ	G LOCATIO	JIN.	_
DEPTH (FT.)	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	F
1- 2- 3- 4- 5- 6- 7- 8- 9- 10- 12- 13- 14- 15-			TD 15.00	

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### FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROXIMATELY 2.50 FT. ABOVE GRADE.

MODERATE BROWN SILTY SAND TO SILTY CLAY, NON COHESIVE TO SLIGHTLY PLASTIC, DRY TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 6.0 FT. BELOW GRADE).

GROUNDWATER ~ 7.94 ft. BELOW GRADE; MEASURED 07/25/2013.

MODERATE BROWN SAND & GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (6.0 - 16.0 FT. BELOW GRADE).

- SILTY SAND TO SILTY CLAY.

**TOS** - Top of screen interval.

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

Monitor well consist of 2 inch PVC piping - casing from 2.50 ft. above grade to grade, 0.010 slotted screen between 0.00 to 15.00 ft. below grade, sand packed annular to grade. Steel well protector with locking hinged lid encompass exposed casing, slip capped top end of casing, & secured with padlock.

DRAWING: MCCOY GC A 1A MW3A-BH7. SKF DATE: 06/24/17

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

MW # 4A

# BORE/TEST HOLE REPORT

CLIENT:

LOCATION NAME: CONTRACTOR:

**EQUIPMENT USED: BORING LOCATION:**  BP AMERICA PRODUCTION CO

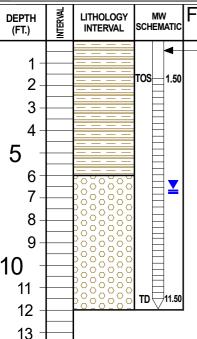
UNIT F, SEC. 18, T31N, R10W McCOY GC A #1A API #: 3004522782

**BLAGG ENGINEERING, INC. / KYVEK FIELD SERVICES** MOBILE DRILL RIG (CME 95) - TUBEX SYSTEM.

204.5 FEET. S68W FROM WELL HEAD. GPS COORD.: 36.900416.-107.928144

MW #..... \_\_\_ PAGE #..... DATE STARTED \_\_06/13/13 DATE FINISHED \_\_06/13/13 OPERATOR..... \_ ΚP LOGGED BY..... NJV

BORING #..... BH - 6



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## FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROXIMATELY 2.50 FT. ABOVE GRADE.

MODERATE BROWN SILTY SAND TO SILTY CLAY, NON COHESIVE TO SLIGHTLY PLASTIC, DRY TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 6.0 FT. BELOW GRADE).

GROUNDWATER ~ 6.62 ft. BELOW GRADE; MEASURED 07/27/2013.

MODERATE BROWN SAND & GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO DENSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (6.0 - 12.0 FT. BELOW GRADE).

AUGER REFUSAL AT 12 FT. BELOW GRADE.

NOTES:

- SILTY SAND TO SILTY CLAY.

- SAND & GRAVEL.

**TOS** - Top of screen interval.

Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.50 ft. above grade to 1.50 ft. below grade, 0.010 slotted screen between 1.50 to 11.50 ft. below grade, sand packed annular to 0.50 ft. below grade, bentonite grout remaining annular to grade. Steel well protector with locking hinged lid encompass exposed casing, slip capped top end of casing, & secured with padlock.

DRAWING: MCCOY GC A 1A MW4A-BH6. SKF DATE: 06/24/17

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

MW # 5

# BORE/TEST HOLE REPORT

CLIENT:

LOCATION NAME: CONTRACTOR:

**EQUIPMENT USED: BORING LOCATION:**  BP AMERICA PRODUCTION CO

UNIT F, SEC. 18, T31N, R10W McCOY GC A #1A API #: 3004522782

**BLAGG ENGINEERING, INC. / KYVEK FIELD SERVICES** 

MOBILE DRILL RIG (CME 95) - TUBEX SYSTEM.

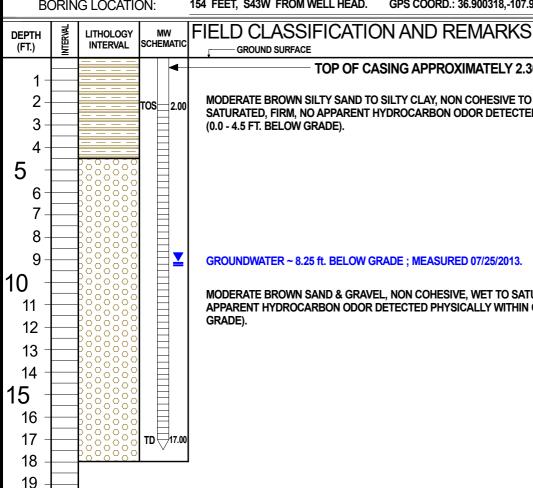
154 FEET, S43W FROM WELL HEAD. GPS COORD.: 36.900318.-107.927854

GROUND SURFACE

BORING #..... \_ BH - 10 MW #..... PAGE #..... DATE STARTED \_\_06/26/13 DATE FINISHED \_\_06/26/13 OPERATOR..... \_ ΚP

NJV

LOGGED BY.....



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### TOP OF CASING APPROXIMATELY 2.30 FT. ABOVE GRADE.

MODERATE BROWN SILTY SAND TO SILTY CLAY, NON COHESIVE TO SLIGHTLY PLASTIC, DRY TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 4.5 FT. BELOW GRADE).

GROUNDWATER ~ 8.25 ft. BELOW GRADE; MEASURED 07/25/2013.

MODERATE BROWN SAND & GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (4.5 - 18.0 FT. BELOW GRADE).

- SILTY SAND TO SILTY CLAY.

- SAND & GRAVEL.

**TOS** - Top of screen interval.

Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.30 ft. above grade to 2.00 ft. below grade, 0.010 slotted screen between 2.00 to 15.00 ft. below grade, sand packed annular to 1.0 ft. below grade, bentonite grout remaining to grade. Steel well protector with locking hinged lid encompass exposed casing, slip capped top end of casing, & secured with padlock.

DRAWING: MCCOY GC A 1A MW5-BH10. SKF DATE: 06/24/17

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

MW # 6

BORING #..... \_\_ BH - 11 MW #..... PAGE #.....

\_\_06/26/13

\_06/26/13

# BORE/TEST HOLE REPORT

CLIENT:

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LOCATION NAME: CONTRACTOR:

**EQUIPMENT USED: BORING LOCATION:**  BP AMERICA PRODUCTION CO

McCOY GC A #1A API #: 3004522782 UNIT F, SEC. 18, T31N, R10W

**BLAGG ENGINEERING, INC. / KYVEK FIELD SERVICES** 

MOBILE DRILL RIG (CME 95) - TUBEX SYSTEM.

191 FEET, S41W FROM WELL HEAD. GPS COORD.: 36.900232.-107.927926 OPERATOR..... \_ KΡ LOGGED BY..... NJV

DATE STARTED

DATE FINISHED

LITHOLOGY **DEPTH** SCHEMATIC INTERVAL (FT.) 1 TOS 0.91 2 3 4 6 7

FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROXIMATELY 2.55 FT. ABOVE GRADE.

MODERATE BROWN SILTY SAND TO SILTY CLAY, NON COHESIVE TO SLIGHTLY PLASTIC, DRY TO SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 6.0 FT. BELOW GRADE).

GROUNDWATER ~ 6.53 ft. BELOW GRADE: MEASURED 07/25/2013.

MODERATE BROWN SAND & GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (6.0 - 17.0 FT. BELOW GRADE).

12 13 14 15 TD -15.91 16 17 18

NOTES:

- SILTY SAND TO SILTY CLAY.



- SAND & GRAVEL.

**TOS** - Top of screen interval.

Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.55 ft. above grade to 0.91 ft. below grade, 0.010 slotted screen between 0.91 to 15.91 ft. below grade, sand packed annular to grade. Steel well protector with locking hinged lid encompass exposed casing, slip capped top end of casing, & secured with padlock.

DRAWING: MCCOY GC A 1A MW6-BH11. SKF DATE: 06/24/17

P.O. BOX 87 BLOOMFIELD, NM 87413

MW # 7

(505) 632-1199

# BORE/TEST HOLE REPORT

CLIENT:

LOCATION NAME:

CONTRACTOR: **EQUIPMENT USED:**  BP AMERICA PRODUCTION CO

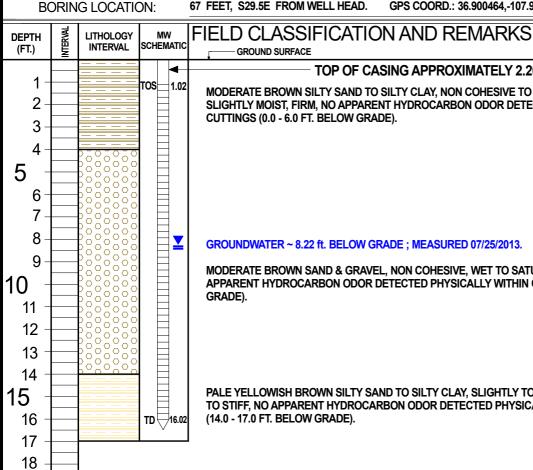
GROUND SURFACE

McCOY GC A #1A API #: 3004522782 UNIT F, SEC. 18, T31N, R10W

**BLAGG ENGINEERING, INC. / KYVEK FIELD SERVICES** 

MOBILE DRILL RIG (CME 95) - TUBEX SYSTEM.

67 FEET, S29.5E FROM WELL HEAD. GPS COORD.: 36.900464.-107.927381 BORING #..... \_\_ BH - 12 MW #..... 7 PAGE #..... DATE STARTED 06/26/13 DATE FINISHED \_06/26/13 OPERATOR..... KΡ LOGGED BY..... NJV



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## TOP OF CASING APPROXIMATELY 2.20 FT. ABOVE GRADE.

MODERATE BROWN SILTY SAND TO SILTY CLAY, NON COHESIVE TO SLIGHTLY PLASTIC, DRY TO SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 6.0 FT. BELOW GRADE).

GROUNDWATER ~ 8.22 ft. BELOW GRADE; MEASURED 07/25/2013.

MODERATE BROWN SAND & GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (4.0 - 14.0 FT. BELOW GRADE).

PALE YELLOWISH BROWN SILTY SAND TO SILTY CLAY, SLIGHTLY TO MEDIUM PLASTIC, WET, FIRM TO STIFF, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (14.0 - 17.0 FT. BELOW GRADE).

- SILTY SAND TO SILTY CLAY. ( ) O

- SAND & GRAVEL.

**TOS** - Top of screen interval.

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

Monitor well consist of 2 inch PVC piping - casing from 2.55 ft. above grade to 0.91 ft. below grade, 0.010 slotted screen between 0.91 to 15.91 ft. below grade, sand packed annular to grade. Steel well protector with locking hinged lid encompass exposed casing, slip capped top end of casing, & secured with padlock.

DRAWING: MCCOY GC A 1A MW7-BH12. SKF DATE: 06/24/17

P.O. BOX 87 BLOOMFIELD, NM 87413

MW # 8

(505) 632-1199

# BORE/TEST HOLE REPORT

CLIENT:

LOCATION NAME:

CONTRACTOR: **EQUIPMENT USED:** 

**BORING LOCATION:** 

BP AMERICA PRODUCTION CO

UNIT F, SEC. 18, T31N, R10W McCOY GC A #1A API #: 3004522782

**BLAGG ENGINEERING, INC. / KYVEK FIELD SERVICES** 

MOBILE DRILL RIG (CME 95) - TUBEX SYSTEM.

82 FEET. S43W FROM WELL HEAD.

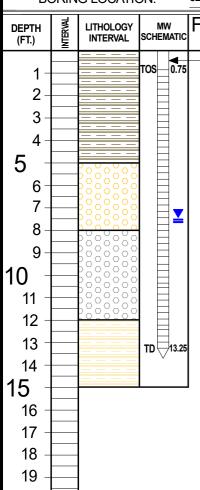
GPS COORD.: 36.900462.-107.927687

BORING #..... BH - 5 MW #.....

PAGE #..... DATE STARTED \_\_06/12/13

DATE FINISHED \_\_06/12/13

OPERATOR..... ΚP LOGGED BY..... NJV



21 22

23

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25 26 27

#### FIELD CLASSIFICATION AND REMARKS GROUND SURFACE

#### TOP OF CASING APPROXIMATELY 2.45 FT. ABOVE GRADE.

DARK YELLOWISH BROWN SILTY SAND TO SILTY CLAY (FILL MATERIAL), NON COHESIVE TO SLIGHTLY PLASTIC, DRY TO SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (0.0 - 5.0 FT. BELOW GRADE).

DARK YELLOWISH ORANGE TO BROWN SAND & GRAVEL, NON COHESIVE, WET TO SATURATED, FIRM TO DENSE. NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (5.0 - 8.0 FT. BELOW GRADE).

GROUNDWATER ~ 7.43 ft. BELOW GRADE; MEASURED 07/27/2013.

SAME AS ABOVE EXCEPT DARK GRAY & SATURATED THROUGHOUT (8.0 - 12.0 FT, BELOW GRADE).

PALE YELLOWISH BROWN SILTY SAND TO SILTY CLAY, SLIGHTLY TO MEDIUM PLASTIC, WET, FIRM TO STIFF. NO APPARENT HYDROCARBON ODOR DETECTED PHYSICALLY WITHIN CUTTINGS (12.0 - 15.0 FT. BELOW GRADE).

AUGER REFUSAL AT 15 FT. BELOW GRADE.

NOTES:

- SILTY SAND TO SILTY CLAY.

- SAND & GRAVEL.

**TOS** - Top of screen interval.

Total depth/bottom extent of monitor well.

Monitor well consist of 2 inch PVC piping - casing from 2.45 ft. above grade to 0.75 ft. below grade, 0.010 slotted screen between 0.75 to 13.25 ft. below grade, sand packed annular to grade. Steel well protector with locking hinged lid encompass exposed casing, slip capped top end of casing, & secured with padlock.

DRAWING: MCCOY GC A 1A MW8-BH5. SKF DATE: 06/24/17

# Analytical Report Lab Order 1306C41

# Date Reported: 7/9/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW-1A

 Project:
 McCoy GC A 1A
 Collection Date: 6/27/2013 9:09:00 AM

 Lab ID:
 1306C41-001
 Matrix: AQUEOUS
 Received Date: 6/28/2013 10:00:00 AM

Analyses	Result	RL Q	Qual U	nits	DF	<b>Date Analyzed</b>	Batch
EPA METHOD 8021B: VOLATILES						Analyst	:: NSB
Benzene	ND	1.0	۲	ıg/L	1	7/1/2013 3:48:15 PM	R11690
Toluene	ND	1.0	۲	ıg/L	1	7/1/2013 3:48:15 PM	R11690
Ethylbenzene	ND	1.0	۲	ıg/L	1	7/1/2013 3:48:15 PM	R11690
Xylenes, Total	ND	2.0	۲	ıg/L	1	7/1/2013 3:48:15 PM	R11690
Surr: 4-Bromofluorobenzene	109	69.4-129	9	%REC	1	7/1/2013 3:48:15 PM	R11690
EPA METHOD 300.0: ANIONS						Analyst	:: JRR
Fluoride	0.43	0.10	r	ng/L	1	7/1/2013 10:30:22 PM	R11696
Chloride	73	10	r	ng/L	20	7/1/2013 11:07:35 PM	R11696
Sulfate	340	10	r	ng/L	20	7/1/2013 11:07:35 PM	R11696
Nitrate+Nitrite as N	ND	1.0	r	ng/L	5	7/2/2013 5:07:29 AM	R11696
EPA METHOD 200.7: DISSOLVED M	IETALS					Analyst	:: ELS
Iron	0.31	0.020	* r	ng/L	1	7/3/2013 9:50:13 AM	R11729
SM2540C MOD: TOTAL DISSOLVED	SOLIDS					Analyst	: KS
Total Dissolved Solids	850	100	* r	ng/L	1	7/2/2013 5:11:00 PM	8185

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 1 of 8
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

### Lab Order 1306C41 Date Reported: 7/9/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering Client Sample ID: MW-2A

**Project:** McCoy GC A 1A **Collection Date:** 6/27/2013 9:51:00 AM 1306C41-002 Lab ID: Matrix: AQUEOUS Received Date: 6/28/2013 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	<b>Date Analyzed</b>	Batch
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	1.0	μg/L	1	7/1/2013 4:18:37 PM	R11690
Toluene	ND	1.0	μg/L	1	7/1/2013 4:18:37 PM	R11690
Ethylbenzene	ND	1.0	μg/L	1	7/1/2013 4:18:37 PM	R11690
Xylenes, Total	ND	2.0	μg/L	1	7/1/2013 4:18:37 PM	R11690
Surr: 4-Bromofluorobenzene	107	69.4-129	%REC	1	7/1/2013 4:18:37 PM	R11690
EPA METHOD 300.0: ANIONS					Analys	t: <b>JRR</b>
Fluoride	0.33	0.10	mg/L	1	7/1/2013 11:20:01 PM	R11696
Chloride	47	10	mg/L	20	7/1/2013 11:32:25 PM	R11696
Sulfate	190	10	mg/L	20	7/1/2013 11:32:25 PM	R11696
Nitrate+Nitrite as N	ND	1.0	mg/L	5	7/2/2013 5:57:08 AM	R11696
EPA METHOD 200.7: DISSOLVED M	METALS				Analys	t: ELS
Iron	0.061	0.020	mg/L	1	7/3/2013 10:04:53 AM	R11729
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS				Analys	t: <b>KS</b>
Total Dissolved Solids	605	100	* mg/L	1	7/2/2013 5:11:00 PM	8185

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

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- J Analyte detected below quantitation limits
- RSD is greater than RSDlimit O
- RPD 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
- Page 2 of 8 Sample pH greater than 2 for VOA and TOC only. P
- RL Reporting Detection Limit

# Lab Order **1306C41**Date Reported: **7/9/2013**

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW-3A

 Project:
 McCoy GC A 1A
 Collection Date: 6/27/2013 10:29:00 AM

 Lab ID:
 1306C41-003
 Matrix: AQUEOUS
 Received Date: 6/28/2013 10:00:00 AM

**Analyses** Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8021B: VOLATILES** Analyst: NSB 7/1/2013 4:48:52 PM Benzene ND 1.0 μg/L R11690 1 Toluene ND 1.0 μg/L 7/1/2013 4:48:52 PM R11690 Ethylbenzene ND 1.0 μg/L 7/1/2013 4:48:52 PM R11690 1 Xylenes, Total ND μg/L 7/1/2013 4:48:52 PM R11690 2.0 Surr: 4-Bromofluorobenzene 69.4-129 %REC 108 7/1/2013 4:48:52 PM R11690 **EPA METHOD 300.0: ANIONS** Analyst: JRR Fluoride 0.45 0.10 mg/L 7/1/2013 11:44:49 PM R11696 83 Chloride 10 mg/L 7/1/2013 11:57:14 PM R11696 Sulfate 360 10 mg/L 7/1/2013 11:57:14 PM R11696 Nitrate+Nitrite as N ND 1.0 mg/L 7/2/2013 6:09:32 AM R11696 **EPA METHOD 200.7: DISSOLVED METALS** Analyst: ELS 0.67 0.020 mg/L 7/3/2013 10:09:49 AM R11729 **SM2540C MOD: TOTAL DISSOLVED SOLIDS** Analyst: KS **Total Dissolved Solids** 920 100 mg/L 7/2/2013 5:11:00 PM 8185

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 3 of 8
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

C	hain-	of-Cu	stody Record	Turn-Around	Time:		HALL ENVIRONMENTAL														
Client:	BLAG	6 Engl	ca Box 87	Standard Project Name				i alla con												OR	
	BP	America	CA P		r. 4 GC 1	Δ 4 Δ	-			,	www	/.hall	lenvi	ironr	nent	al.co	mc				
Mailing	Address	P.O. 1	30× 87		9 90 1	-1 11 1		490	01 H	awki	ns N	IE -	Alb	uque	erque	e, Ni	M 87	109			
	BLOOM	FIELD /	VM 87413	Project #:	•			Τe	el. 50	5-34	5-39					-	4107	7			
			32-1199				Analysis Request														
email o	r Fax#:		to ten	Project Mana	ger:																
QA/QC	Package: idard		□ Level 4 (Full Validation)	J.	BUGG	### (8021) #### (8021) ##### (8021) ####################################			RO/M			SIMS)	ľ	<b>PB</b>	2 PCB's					9)	
Accred					J- BLACE		(A)			3	んである	Î									
□ NEL		□ Othe	r	The second secon		□ No · · ·	1TBE + TPH  1TBE +			至	or N										
	(Type) _	<u> </u>		Sample Tem	berature:	1.0	構	186	B (6	þ	٦	6	leta	الگ	icid	8	<u> </u>		15	1	\( \)
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 130641	BTEX + MEBE	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions(FC)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	<b>TDS</b>		Nitrate	Air Bubbles (Y
h1/13	0909		MW-1A	3 VOA 3 PVC	MCL/HAU3/ H2504	-00	X							X				X	X	X	
и	0951	И	MW-ZA	V	ìţ	-002	X							X				X	X	X	
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Date:	Time:	Réfinquishe	tu Waller	Received by:	Man =	Date Time (1/28/13)	$\mid \mathcal{B} \mid$	SP.	(O	uta	ct	2 6	Te	ff	Pe	ece					

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1306C41

09-Jul-13

Client: Blagg Engineering
Project: McCoy GC A 1A

Sample ID: MB SampType: MBLK TestCode: EPA Method 200.7: Dissolved Metals

Client ID: PBW Batch ID: R11729 RunNo: 11729

Prep Date: Analysis Date: 7/3/2013 SeqNo: 333269 Units: mg/L

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

Iron ND 0.020

Sample ID: LCS SampType: LCS TestCode: EPA Method 200.7: Dissolved Metals

Client ID: LCSW Batch ID: R11729 RunNo: 11729

Prep Date: Analysis Date: 7/3/2013 SeqNo: 333270 Units: mg/L

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

Iron 0.53 0.020 0.5000 0 106 85 115

#### 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 4 of 8

# Hall Environmental Analysis Laboratory, Inc.

WO#: **1306C41** 

09-Jul-13

Client: Project:	Blagg Eng McCoy G	_									
Sample ID: MB			ype: <b>ME</b>	BLK	Tes	tCode: El	PA Method	300.0: Anions	<u> </u>		
Client ID: PBV	1		າ ເD: <b>R1</b>		F	RunNo: 1	1696				
Prep Date:		Analysis D				SeqNo: 3		Units: mg/L			
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		ND	0.10	Or it value	Of It Itol Val	701120	LOWLINIK	- iigiiLiiiii	70111 2	THE DELITION	Quai
Chloride		ND	0.50								
Sulfate		ND	0.50								
Nitrate+Nitrite as N		ND	0.20								
Sample ID: LCS		SampT	ype: <b>LC</b>	s	Tes	tCode: El	PA Method	300.0: Anions	\$		
Client ID: LCS	w	Batch	n ID: <b>R1</b>	1696	F	RunNo: 1	1696				
Prep Date: Analysis Date: 7/1/2013					Ş	SeqNo: 3	32107	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.48	0.10	0.5000	0	95.9	90	110			
Chloride		4.5	0.50	5.000	0	90.6	90	110			
Sulfate		9.2	0.50	10.00	0	92.2	90	110			
Nitrate+Nitrite as N		3.3	0.20	3.500	0	94.1	90	110			
Sample ID: 1306C15-007AMS SampType: MS					Tes	tCode: El	PA Method	300.0: Anions	3		
Client ID: Bato	hQC	Batch	1D: <b>R1</b>	1696	F	RunNo: 1	1696				
Prep Date:		Analysis D	ate: <b>7/</b>	1/2013	\$	SeqNo: 3	32119	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		18	0.50	5.000	12.63	108	89.9	119			
Sample ID: 1306	C15-007AMSE	<b>)</b> SampT	ype: <b>M</b> \$	SD	Tes	tCode: El	PA Method	300.0: Anions	6		
Client ID: Bato	hQC	Batch	1D: <b>R1</b>	1696	F	RunNo: 1	1696				
Prep Date:		Analysis D	ate: 7/	1/2013	5	SeqNo: 3	32120	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		18	0.50	5.000	12.63	105	89.9	119	0.793	20	
Sample ID: 1306	6C41-001BMS	SampT	ype: <b>M</b> \$	6	Tes	tCode: El	PA Method	300.0: Anions	3		
Client ID: MW-	-1A	Batch	n ID: <b>R1</b>	1696	F	RunNo: 1	1696				
Prep Date:		Analysis D	ate: 7/	1/2013		SeqNo: 3	32155	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.91	0.10	0.5000	0.4280	96.6	76.9	114			
Sample ID: 1306	C41-001BMS	SampT	ype: <b>M</b> \$	SD	Tes	tCode: El	PA Method	300.0: Anions	3		
Client ID: MW-	-1A	Batch	n ID: <b>R1</b>	1696	F	RunNo: 1	1696				
Prep Date:		Analysis D				SeqNo: 3		Units: mg/L			
								-			

#### Qualifiers:

Analyte

Value exceeds Maximum Contaminant Level.

Result

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

%RPD

**RPDLimit** 

Page 5 of 8

Qual

ND Not Detected at the Reporting Limit

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

SPK value SPK Ref Val %REC LowLimit

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1306C41

09-Jul-13

Client: Blagg Engineering
Project: McCoy GC A 1A

Sample ID: 1306C41-001BMSD SampType: MSD TestCode: EPA Method 300.0: Anions

Client ID: MW-1A Batch ID: R11696 RunNo: 11696

Prep Date: Analysis Date: 7/1/2013 SeqNo: 332156 Units: mg/L

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

Fluoride 0.91 0.10 0.5000 0.4280 97.0 76.9 114 0.219 20

#### 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 6 of 8

### Hall Environmental Analysis Laboratory, Inc.

60

22

22

2.0

60.00

20.00

20.00

WO#: **1306C41** 

09-Jul-13

Client: Blagg Engineering
Project: McCoy GC A 1A

Sample ID: **B9** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles** 

Client ID: PBW Batch ID: R11690 RunNo: 11690

Prep Date: Analysis Date: 7/1/2013 SeqNo: 331778 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 20.00 110 69.4 129

Sample ID: 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSW Batch ID: R11690 RunNo: 11690 Prep Date: Analysis Date: 7/1/2013 SeqNo: 331779 Units: µg/L Analyte **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual LowLimit 21 1.0 20.00 n 104 80 120 Benzene Toluene 21 1.0 20.00 0 104 80 120 Ethylbenzene 21 20.00 0 104 80 120 1.0 Xylenes, Total 63 2.0 60.00 0 105 80 120 22 Surr: 4-Bromofluorobenzene 20.00 112 69.4 129

Sample ID: 1306C42-001AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: **BatchQC** Batch ID: R11690 RunNo: 11690 Analysis Date: 7/1/2013 SeaNo: 331784 Units: µg/L Prep Date: Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Benzene 20 1.0 20.00 99.5 80 120 Toluene 20 1.0 20.00 0 97.8 80 120 20 1.0 20.00 0 99.4 80 120 Ethylbenzene

0

100

110

80

69.4

69.4

120

129

129

0

Sample ID: 1306C42-001AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles Batch ID: R11690 Client ID: BatchQC RunNo: 11690 Prep Date: Analysis Date: 7/1/2013 SeqNo: 331785 Units: µg/L SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result **PQL** LowLimit Qual 20 1.0 20.00 0 101 80 120 1.25 20 Benzene Toluene 20 1.0 20.00 0 100 80 120 2.46 20 Ethylbenzene 20 1.0 20.00 0 101 80 120 1.18 20 Xylenes, Total 61 2.0 60.00 0 102 80 120 2.11 20

#### Qualifiers:

Xylenes, Total

Surr: 4-Bromofluorobenzene

Surr: 4-Bromofluorobenzene

\* 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

111

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

Page 7 of 8

0

### Hall Environmental Analysis Laboratory, Inc.

WO#: 1306C41

%RPD

**RPDLimit** 

Qual

09-Jul-13

**Client:** Blagg Engineering **Project:** McCoy GC A 1A

Sample ID: MB-8185 SampType: MBLK TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW Batch ID: 8185 RunNo: 11709

Prep Date: 7/1/2013 Analysis Date: 7/2/2013 SeqNo: 332553 Units: mg/L

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

LowLimit

Total Dissolved Solids ND 20.0

Sample ID: LCS-8185 SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: LCSW Batch ID: 8185 RunNo: 11709

**PQL** 

Result

Prep Date: 7/1/2013 Analysis Date: 7/2/2013 SeqNo: 332554 Units: mg/L

SPK value SPK Ref Val

%REC Analyte HighLimit Total Dissolved Solids 1020 20.0 1000 0 102 120

Sample ID: 1306C26-003AMS SampType: MS TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: **BatchQC** Batch ID: 8185 RunNo: 11709

Prep Date: 7/1/2013 Analysis Date: 7/2/2013 SeqNo: 332566 Units: mg/L

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

Total Dissolved Solids 12400 40.0 2000 10530

Sample ID: 1306C26-003AMSD SampType: MSD TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: **BatchQC** Batch ID: 8185 RunNo: 11709

Prep Date: 7/1/2013 Analysis Date: 7/2/2013 SeqNo: 332567 Units: mg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC I owl imit HighLimit %RPD **RPDLimit** Qual

Total Dissolved Solids 2000 80 12800 40.0 10530 112 120 2.86 5

#### **Qualifiers:**

Value exceeds Maximum Contaminant Level.

Е Value above quantitation range

Analyte detected below quantitation limits

O RSD is greater than RSDlimit

RPD outside accepted recovery limits

В Analyte detected in the associated Method Blank

Η Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

Page 8 of 8



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 Client Name: BLAGG Work Order Number: 1306C41 06/28/13 Received by/date: anne Sham 6/28/2013 10:00:00 AM Logged By: Anne Thorne 6/29/2013 Completed By: **Anne Thorne** 07/01/13 Reviewed By: Chain of Custody Not Present 🗹 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 Yes 🗸 No 🗌 NA 🗌 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 🗸 No 🗌 Yes 🗸 6. Sample(s) in proper container(s)? Yes 🗸 7. Sufficient sample volume for indicated test(s)? Yes 🔽 No 8. Are samples (except VOA and ONG) properly preserved? Yes 🗀 No 🔽 NA 🗌 9. Was preservative added to bottles? No VOA Vials Yes 🗍 No 10. VOA vials have zero headspace? Yes  $\square$ No 🔽 11. Were any sample containers received broken? # of preserved bottles checked Yes 🗸 No 🗆 for pH: 12. Does paperwork match bottle labels? ualess noted) (Note discrepancies on chain of custody) Adjusted No 🗌 Yes 🗹 13. Are matrices correctly identified on Chain of Custody? No 🔲 Yes 🔽 14. Is it clear what analyses were requested? Yes 🔽 Checked b No 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗌 NA 🔽 No 🗌 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 Temp °C | Condition | Seal Intact | Seal No | Cooler No Seal Date Signed By 1.0 Good Yes

#### MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

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

McCOY GC A # 1A - BLOW & SEP. PITS HALL ENVIRONMENTAL LABORATORY (S) USED:

UNIT F, SEC. 18, T31N, R10W

Date: July 25, 2013 DEVELOPER / SAMPLER :

Filename: McCoy GC A 1A mw log 2013-07-25.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.)
1A	101.82	91.47	10.35	18.70	-	-	-	-	-
2A	101.97	91.32	10.65	18.70	-	-	-	-	-
3A	101.63	91.19	10.44	17.50	-	ı	-	-	-
4A	100.33	91.21	9.12	14.00	1130	7.47	800	15.9	2.50
5	99.82	91.21	8.61	19.30	1045	7.47	900	16.0	5.25
6	100.20	91.12	9.08	18.46	1000	7.57	1,400	14.8	4.50
7	102.32	91.90	10.42	18.22	0830	7.56	700	16.0	4.00
8	101.44	91.56	9.88	16.60	0915	7.47	1,100	18.5	3.25
INSTRUMENT CALIBRATIONS =						4.01/7.00/10.00	2,800		_
	DATE O TIME					07/05/40	0000		

DATE & TIME =

07/25/13 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 ".

Installations: MW #8 - 6/12/13; #4A - 6/13/13; #2A & #3A - 6/14/13; #1A - 6/25/13; #5, #6, & #7 - 6/26/13.

Initially developed MW #'s 1A, 2A, 3A, 4A, & 8 on 6/21/13 . Excellent recovery in all wells.

Initially developed MW # 1A on 6/26/13. Excellent recovery (purged 25 gallons).

Initially developed MW #'s 5, 6, & 7 on 7/24/13. Excellent recovery in all wells.

Monitor well top survey conducted on 7/23/13.

Used submersible pump and vinyl clear tubing for purging & sampling . Collected samples from MW #'s 4A, 5, 6, 7, & 8 for BTEX per US EPA Method 8021B & general chemistry parameters.

Top of casing: MW #1A  $\sim$  2.50 ft., #2A  $\sim$  2.50 ft., #3A  $\sim$  2.50 ft., #4A  $\sim$  2.50 ft., #5  $\sim$  2.30 ft., #6  $\sim$  2.55 ft.,

#7 ~ 2.20 ft., #8 ~ 2.45 ft. above grade.

on-site	7:30 AM	temp.	65 F
off-site	11:30 AM	temp.	79 F
sky cond.		Mostly sunny	/
wind speed	0 - 5	direct.	E - ENE

Lab Order **1307C32**Date Reported: **8/8/2013** 

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: MW #4A

 Project:
 McCoy GC A #1A
 Collection Date: 7/25/2013 11:30:00 AM

 Lab ID:
 1307C32-001
 Matrix: AQUEOUS
 Received Date: 7/26/2013 10:10:00 AM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8021B: VOLATILES** Analyst: NSB 7/30/2013 4:47:28 PM Benzene ND 1.0 μg/L R12296 1 Toluene ND 1.0 μg/L 7/30/2013 4:47:28 PM R12296 Ethylbenzene ND 7/30/2013 4:47:28 PM R12296 1.0 μg/L 1 Xylenes, Total ND μg/L 7/30/2013 4:47:28 PM R12296 2.0 Surr: 4-Bromofluorobenzene %REC 98.9 69.4-129 7/30/2013 4:47:28 PM R12296 **EPA METHOD 300.0: ANIONS** Analyst: JRR Fluoride 0.53 0.10 mg/L 7/29/2013 12:33:01 PM R12280 Chloride 30 10 mg/L 7/29/2013 12:45:26 PM R12280 Sulfate 180 10 mg/L 7/29/2013 12:45:26 PM R12280 Nitrate+Nitrite as N 0.21 1.0 mg/L 7/30/2013 1:59:41 AM R12280 **EPA METHOD 200.7: DISSOLVED METALS** Analyst: JLF 0.73 0.020 mg/L 7/29/2013 2:49:59 PM R12249 SM2540C MOD: TOTAL DISSOLVED SOLIDS Analyst: KS **Total Dissolved Solids** 596 40.0 mg/L 7/31/2013 7:05:00 PM

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 of 10
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# Lab Order **1307C32**Date Reported: **8/8/2013**

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #5

 Project:
 McCoy GC A #1A
 Collection Date: 7/25/2013 10:45:00 AM

 Lab ID:
 1307C32-002
 Matrix: AQUEOUS
 Received Date: 7/26/2013 10:10:00 AM

Analyses	Result	RL Ç	Qual U	nits	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	1.0	ŀ	ug/L	1	7/30/2013 5:17:33 PM	R12296
Toluene	ND	1.0	ŀ	ug/L	1	7/30/2013 5:17:33 PM	R12296
Ethylbenzene	ND	1.0	ŀ	ug/L	1	7/30/2013 5:17:33 PM	R12296
Xylenes, Total	ND	2.0	ŀ	ug/L	1	7/30/2013 5:17:33 PM	R12296
Surr: 4-Bromofluorobenzene	97.5	69.4-129	Q.	%REC	1	7/30/2013 5:17:33 PM	R12296
EPA METHOD 300.0: ANIONS						Analyst	:: JRR
Fluoride	0.42	0.10	r	mg/L	1	7/29/2013 1:35:03 PM	R12280
Chloride	47	10	r	mg/L	20	7/29/2013 1:47:28 PM	R12280
Sulfate	240	10	r	mg/L	20	7/29/2013 1:47:28 PM	R12280
Nitrate+Nitrite as N	ND	1.0	r	mg/L	5	7/30/2013 2:12:05 AM	R12280
EPA METHOD 200.7: DISSOLVED N	METALS					Analyst	:: JLF
Iron	1.8	0.10	* r	mg/L	5	7/29/2013 2:56:59 PM	R12249
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS					Analyst	: KS
Total Dissolved Solids	718	40.0	* r	mg/L	1	7/31/2013 7:05:00 PM	8626

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 of 10
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order **1307C32**Date Reported: **8/8/2013** 

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #6

 Project:
 McCoy GC A #1A
 Collection Date: 7/25/2013 10:00:00 AM

 Lab ID:
 1307C32-003
 Matrix: AQUEOUS
 Received Date: 7/26/2013 10:10:00 AM

Analyses	Result	RL Q	ual Units	DF	<b>Date Analyzed</b>	Batch
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	1.0	μg/L	1	7/30/2013 5:47:50 PM	R12296
Toluene	ND	1.0	μg/L	1	7/30/2013 5:47:50 PM	R12296
Ethylbenzene	ND	1.0	μg/L	1	7/30/2013 5:47:50 PM	R12296
Xylenes, Total	ND	2.0	μg/L	1	7/30/2013 5:47:50 PM	R12296
Surr: 4-Bromofluorobenzene	97.5	69.4-129	%REC	1	7/30/2013 5:47:50 PM	R12296
EPA METHOD 300.0: ANIONS					Analyst	:: JRR
Fluoride	0.34	0.10	mg/L	1	7/29/2013 1:59:53 PM	R12280
Chloride	140	10	mg/L	20	7/29/2013 2:12:17 PM	R12280
Sulfate	690	10	mg/L	20	7/29/2013 2:12:17 PM	R12280
Nitrate+Nitrite as N	ND	1.0	mg/L	5	7/30/2013 2:24:30 AM	R12280
EPA METHOD 200.7: DISSOLVED N	METALS				Analyst	:: JLF
Iron	0.24	0.020	mg/L	1	7/29/2013 2:59:29 PM	R12249
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS				Analyst	: KS
Total Dissolved Solids	1460	40.0	* mg/L	1	7/31/2013 7:05:00 PM	8626

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 3 of 10
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# Lab Order **1307C32**Date Reported: **8/8/2013**

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #7

 Project:
 McCoy GC A #1A
 Collection Date: 7/25/2013 8:30:00 AM

 Lab ID:
 1307C32-004
 Matrix: AQUEOUS
 Received Date: 7/26/2013 10:10:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	1.0	μg/L	1	7/30/2013 6:18:10 PM	R12296
Toluene	ND	1.0	μg/L	1	7/30/2013 6:18:10 PM	R12296
Ethylbenzene	ND	1.0	μg/L	1	7/30/2013 6:18:10 PM	R12296
Xylenes, Total	ND	2.0	μg/L	1	7/30/2013 6:18:10 PM	R12296
Surr: 4-Bromofluorobenzene	96.7	69.4-129	%REC	1	7/30/2013 6:18:10 PM	R12296
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Fluoride	0.33	0.10	mg/L	1	7/29/2013 2:24:42 PM	R12280
Chloride	25	10	mg/L	20	7/29/2013 2:37:07 PM	R12280
Sulfate	170	10	mg/L	20	7/29/2013 2:37:07 PM	R12280
Nitrate+Nitrite as N	ND	1.0	mg/L	5	7/30/2013 2:36:54 AM	R12280
EPA METHOD 200.7: DISSOLVED M	METALS				Analyst	: JLF
Iron	0.034	0.020	mg/L	1	7/29/2013 3:13:04 PM	R12249
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS				Analyst	: KS
Total Dissolved Solids	552	40.0	* mg/L	1	7/31/2013 7:05:00 PM	8626

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 4 of 10
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# Lab Order **1307C32**Date Reported: **8/8/2013**

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #8

 Project:
 McCoy GC A #1A
 Collection Date: 7/25/2013 9:15:00 AM

 Lab ID:
 1307C32-005
 Matrix: AQUEOUS
 Received Date: 7/26/2013 10:10:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	1.0	μg/L	1	7/30/2013 10:19:55 PM	R12296
Toluene	ND	1.0	μg/L	1	7/30/2013 10:19:55 PM	R12296
Ethylbenzene	ND	1.0	μg/L	1	7/30/2013 10:19:55 PM	R12296
Xylenes, Total	ND	2.0	μg/L	1	7/30/2013 10:19:55 PM	R12296
Surr: 4-Bromofluorobenzene	99.9	69.4-129	%REC	1	7/30/2013 10:19:55 PM	R12296
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Fluoride	0.40	0.10	mg/L	1	7/29/2013 2:49:31 PM	R12280
Chloride	120	10	mg/L	20	7/30/2013 11:19:17 PM	R12299
Sulfate	310	10	mg/L	20	7/30/2013 11:19:17 PM	R12299
Nitrate+Nitrite as N	ND	1.0	mg/L	5	7/30/2013 2:49:19 AM	R12280
EPA METHOD 200.7: DISSOLVED ME	TALS				Analyst	: JLF
Iron	0.96	0.020	* mg/L	1	7/29/2013 3:17:58 PM	R12249
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analyst	: KS
Total Dissolved Solids	952	40.0	* mg/L	1	7/31/2013 7:05:00 PM	8626

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

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7/25/13	1130	WATER	MW # 4A	40 ml VOA - 2	HCl & Cool	7001	٧													٧	
7/25/13	1130	WATER	MW # 4A	500 mi - 1	Cool	-001								٧	٧					<u>۷</u>	ightharpoons
7/25/13	1130	WATER	MW#4A 70/25	250 ml - 1	HNO₃ & Cool	-001									,	٧				<u>۷</u>	$\perp$
7/25/13	1130	WATER	MW#4A % /Z	,250 ml - 1	H₂SO <sub>4</sub>	-001											٧		'	<u>۷</u>	$\bot$
7/25/13	1045	WATER	MW # 5	40 ml VOA - 2	HCl & Cool	-002	٧										Ш			<u>۷</u>	$\perp$
7/25/13	1045	WATER	MW # 5	500 ml - 1	Cool	-002								٧	۷				_	<u>۷</u>	$\bot$
7/25/13	1645	WATER	MW#5 1 125	_250 ml - 1	HNO <sub>3</sub> & Cool	$-\infty2$										٧			4	<u>۷</u>	$\downarrow$
7/25/13	1045	WATER	MW#5 97 25	-250 ml - 1	H <sub>2</sub> SO <sub>4</sub>	-002											V		_	<u>۷ </u>	_
7/25/13	1000	WATER	MW # 6	40 ml VOA - 2	HCl & Cool	-003	٧										Ш		-	<b>√</b>	$\bot$
7/25/13	1000	WATER	MW # 6	500 ml - 1	Cool	-003								٧	٧				$\perp$	Ⅵ	4
7/25/13	/00 <i>0</i>	WATER	MW#6 917	250 ml - 1	HNO <sub>3</sub> & Cool	-03										۷			4	٧	$\dashv$
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Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1307/32	BTEX <del>+ N</del>	BTEX + MTBE	TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310	RCRA 8 Metals	Anions ( <b>F,CI,NO3,NO2,PO</b>	Total Dissolved Solids	Iron, Ferrous (filtered)	Nitrate N			윤 .	5 pt. composite
7/25/13	0830	WATER	MW # 7	40 ml VOA - 2	HCl & Cool	-004	٧												7	٧	
7/25/13	0830	WATER	MW # 7	500 ml - 1	Cool	- 004		:						٧	٧				$\neg \neg$	v	
7/25/13	0830	WATER	l	250 mi - 1	HNO <sub>3</sub> & Cool	-004										٧			T	<b>V</b>	
7/25/13	0830	WATER	MW#7 2V/Z	250 mi - 1	H <sub>2</sub> SO <sub>4</sub>	-004											٧		1	<b>٧</b>	
7/25/13	0915	WATER	MW # 8	40 ml VOA - 2	HCl & Cool	-005	٧												1	٧	
7/25/13	0915	WATER	MW#8	500 ml - 1	Cool	-005								٧	٧				7	۷	
7/25/13	0915	WATER		258 ml - 1	HNO <sub>3</sub> & Cool	-003										٧			_ֈ՝	٧L	
7/25/13	0915	WATER	MW#8 92 12.	5 256 ml - 1	H₂SO <sub>4</sub>	-005											٧		<u> </u>	۷↓	$\perp$
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Date: Time: Relinquished by:  7) 25 13 1750				Received by:	07/26/	Date Time	Blagg Engineering, Inc. P.O. Box 87 Bioomfield, NM 87413														
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# Hall Environmental Analysis Laboratory, Inc.

WO#: 1307C32

08-Aug-13

Client:	Blagg Eng										
Project:	McCoy G	C A #IA									
Sample ID	MB	SampTy	ype: ME	BLK	Tes	tCode: El	PA Method	200.7: Dissol	ved Metal	s	
Client ID:	PBW	Batch	ID: <b>R1</b>	2249	F	RunNo: 1	2249				
Prep Date:		Analysis Da	ate: 7/	29/2013	5	SeqNo: 3	48395	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		ND	0.020								
Sample ID	LCS	SampT	ype: <b>LC</b>	s	Tes	tCode: El	PA Method	200.7: Dissol	ved Meta	s	
Client ID:	LCSW	Batch	ID: <b>R1</b>	2249	F	RunNo: 1	2249				
Prep Date:		Analysis Da	ate: <b>7/</b>	29/2013	9	SeqNo: 3	48396	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.52	0.020	0.5000	0	104	85	115			
Sample ID	1307C06-002AMS	SampT	ype: <b>M</b> \$	6	Tes	tCode: El	PA Method	200.7: Dissol	ved Meta	s	
Client ID:	BatchQC	Batch	ID: <b>R1</b>	2249	F	RunNo: 1	2249				
Prep Date:		Analysis Da	ate: 7/	29/2013	5	SeqNo: 3	48606	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.51	0.020	0.5000	0	102	70	130			
Sample ID	1307C06-002AMSI	<b>D</b> SampTy	ype: <b>M</b> \$	SD	Tes	tCode: El	PA Method	200.7: Dissol	ved Meta	s	
Client ID:	BatchQC	Batch	ID: <b>R1</b>	2249	F	RunNo: 1	2249				
Prep Date:		Analysis Da	ate: <b>7/</b>	29/2013	9	SeqNo: 3	48607	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.51	0.020	0.5000	0	101	70	130	0.189	20	
Sample ID	MB2	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	200.7: Dissol	ved Meta	s	
Client ID:	PBW	Batch	ID: <b>R1</b>	2249	F	RunNo: 1	2249				
Prep Date:		Analysis Da	ate: 7/	29/2013	\$	SeqNo: 3	48643	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	_	ND	0.020		_			_		_	
Sample ID	LCS2	SampT	ype: <b>LC</b>	s	Tes	tCode: El	PA Method	200.7: Dissol	ved Meta	s	
Client ID:	LCSW	Batch	ID: <b>R1</b>	2249	F	RunNo: 1	2249				

#### Qualifiers:

Prep Date:

Analyte

Iron

\* Value exceeds Maximum Contaminant Level.

Analysis Date: 7/29/2013

PQL

0.020

Result

0.49

- 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

LowLimit

Units: mg/L

HighLimit

%RPD

**RPDLimit** 

Qual

ND Not Detected at the Reporting Limit

SeqNo: 348644

98.5

SPK value SPK Ref Val %REC

0.5000

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

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# Hall Environmental Analysis Laboratory, Inc.

WO#: 1307C32

08-Aug-13

Client: Project:	Blagg Eng McCoy G	_									
Sample ID	МВ	SampT	ype: <b>ME</b>	BLK	Tes	tCode: E	PA Method	300.0: Anions	5		
Client ID:	PBW	Batch	ID: <b>R1</b>	2280	F	RunNo: 1	2280				
Prep Date:		Analysis Da	ate: <b>7/</b>	29/2013	9	SeqNo: 3	49184	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		ND	0.10								
Chloride		ND	0.50								
Sulfate		ND	0.50								
Nitrate+Nitrite	as N	ND	0.20								
Sample ID	LCS-b	SampTy	ype: <b>LC</b>	s	Tes	tCode: E	PA Method	300.0: Anions	3		
Client ID:	LCSW	Batch	ID: <b>R1</b>	2280	F	RunNo: 1	2280				
Prep Date:		Analysis Da	ate: <b>7/</b>	29/2013	5	SeqNo: 3	49186	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.48	0.10	0.5000	0	95.1	90	110			
Chloride		4.6	0.50	5.000	0	91.9	90	110			
Sulfate		9.6	0.50	10.00	0	96.4	90	110			
Nitrate+Nitrite	as N	3.3	0.20	3.500	0	94.9	90	110			
Sample ID	1307C42-001BMS	SampTy	ype: <b>M</b> \$	3	Tes	tCode: E	PA Method	300.0: Anions	3		
Client ID:	BatchQC	Batch	ID: <b>R1</b>	2280	F	RunNo: 1	2280				
Prep Date:		Analysis Da	ate: <b>7/</b>	29/2013	5	SeqNo: 3	49188	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite	as N	4.2	0.20	3.500	0.7739	99.2	90	110			
Sample ID	1307C42-001BMS	<b>D</b> SampTy	/pe: <b>M</b> \$	SD	Tes	tCode: E	PA Method	300.0: Anions	6		
Client ID:	BatchQC	Batch	ID: R1	2280	F	RunNo: 1	2280				
Prep Date:		Analysis Da	ate: <b>7/</b>	29/2013	\$	SeqNo: 3	49189	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite a	as N	4.2	0.20	3.500	0.7739	97.6	90	110	1.27	20	
Sample ID	1307C06-001AMS	SampTy	ype: <b>M</b> \$		Tes	tCode: E	PA Method	300.0: Anions	<u> </u>		
Client ID:	BatchQC	Batch	ID: <b>R1</b>	2280	F	RunNo: 1	2280				
Prep Date:		Analysis Da	ate: <b>7/</b>	29/2013	5	SeqNo: 3	49211	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		1.2	0.10	0.5000	0.7415	94.3	76.9	114			

#### Qualifiers:

Chloride

\* Value exceeds Maximum Contaminant Level.

11

0.50

5.000

5.837

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

89.9

119

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

104

P Sample pH greater than 2 for VOA and TOC only.

RL Reporting Detection Limit

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# Hall Environmental Analysis Laboratory, Inc.

WO#: **1307C32** 

08-Aug-13

Project:	McCoy GC A #1A
Client:	Blagg Engineering

Troject.	Miccoy G	C 11    111									
Sample ID	1307C06-001AMSI	<b>)</b> SampTy	/pe: <b>MS</b>	SD	Tes	tCode: El	PA Method	300.0: Anions	5		
Client ID:	BatchQC	Batch	ID: <b>R1</b>	2280	F	RunNo: 1	2280				
Prep Date:		Analysis Da	ate: <b>7/</b>	29/2013	S	SeqNo: 3	49212	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		1.2	0.10	0.5000	0.7415	93.1	76.9	114	0.479	20	
Chloride		11	0.50	5.000	5.837	104	89.9	119	0.0543	20	
Sample ID	МВ	SampTy	/pe: <b>ME</b>	BLK	Tes	tCode: El	PA Method	300.0: Anions	3		
Client ID:	PBW	Batch	ID: <b>R1</b>	2299	F	RunNo: 1	2299				
Prep Date:		Analysis Da	ate: <b>7/</b>	30/2013	S	SeqNo: 3	49762	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	0.50								
Sulfate		ND	0.50								
Sample ID	LCS	/pe: LC	s	Tes	tCode: El	PA Method	300.0: Anions	3			
Client ID:	LCSW	DSW Batch ID: R12299					2299				
Prep Date:		Analysis Da	ate: <b>7/</b>	30/2013	S	SeqNo: 3	49763	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		4.5	0.50	5.000	0	90.9	90	110			
Sulfate		9.3	0.50	10.00	0	92.7	90	110			
Sample ID	1307D14-001AMS	SampTy	/pe: <b>MS</b>	3	Tes	tCode: El	PA Method	300.0: Anions	3		
Client ID:	BatchQC	Batch	ID: <b>R1</b>	2299	F	RunNo: 1	2299				
Prep Date:		Analysis Da	ate: <b>7/</b>	30/2013	5	SeqNo: 3	49765	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		11	0.50	5.000	5.341	103	89.9	119			
Sample ID	1307D14-001AMSI	<b>)</b> SampTy	/pe: <b>MS</b>	BD	Tes	tCode: El	PA Method	300.0: Anions			
Client ID:	BatchQC	Batch	ID: <b>R1</b>	2299	F	RunNo: 1	2299				
Prep Date:		Analysis Da	ate: <b>7/</b>	30/2013	5	SeqNo: 3	49766	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-											

#### Qualifiers:

Chloride

\* Value exceeds Maximum Contaminant Level.

10

0.50

5.000

5.341

- 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

102

89.9

119

0.792

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

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20

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307C32

08-Aug-13

Client: Blagg Engineering
Project: McCoy GC A #1A

Sample ID 5ML RB	SampT	уре: МЕ	BLK	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBW	Batch	Batch ID: R12296			RunNo: 1	2296				
Prep Date:	Analysis D	oate: <b>7/</b>	30/2013	8	SeqNo: 3	49720	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	69.4	129			

Sample ID 100NG BTEX LO	CS SampT	ype: LC	s	Tes	TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSW	Batch	n ID: <b>R1</b>	2296	F	RunNo: 1	2296						
Prep Date:	Analysis D	ate: 7/	30/2013	S	SeqNo: 3	49721	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	19	1.0	20.00	0	95.9	80	120					
Toluene	19	1.0	20.00	0	96.8	80	120					
Ethylbenzene	19	1.0	20.00	0	96.8	80	120					
Xylenes, Total	60	2.0	60.00	0	100	80	120					
Surr: 4-Bromofluorobenzene	20		20.00		102	69.4	129					

#### 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

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## **QC SUMMARY REPORT**

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1307C32** 

08-Aug-13

Client: Blagg Engineering
Project: McCoy GC A #1A

Sample ID MB-8626 SampType: MBLK TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW Batch ID: 8626 RunNo: 12322

Prep Date: 7/30/2013 Analysis Date: 7/31/2013 SeqNo: 350334 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-8626 SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: LCSW Batch ID: 8626 RunNo: 12322

Prep Date: 7/30/2013 Analysis Date: 7/31/2013 SeqNo: 350335 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 1307C41-002BMS SampType: MS TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: BatchQC Batch ID: 8626 RunNo: 12322

Prep Date: 7/30/2013 Analysis Date: 7/31/2013 SeqNo: 350353 Units: mg/L

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

Total Dissolved Solids 1350 20.0 1000 337.0 102 80 120

Sample ID 1307C41-002BMSD SampType: MSD TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: BatchQC Batch ID: 8626 RunNo: 12322

Prep Date: 7/30/2013 Analysis Date: 7/31/2013 SeqNo: 350354 Units: mg/L

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

Total Dissolved Solids 1360 20.0 1000 337.0 102 80 120 0.295 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



4901 Hawkins NE

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

Sample Log-In Check List

Albuquerque, NM 87109

Client Name:	BLAGG	Work Order Nur	nber: 1307C32		RcptNo:	1
Received by/da	ite:	5 07/261	13_	<u></u>		
Logged By:	Michelle Ga	rcia 7/26/2013 10:10:0	00 AM	Microll Gare	uie	
Completed By:	Miche(le Ga	rcia 7/26/20∫3 3:29:18	I <sub>P</sub> M	Michaels Gone Michaels Gone	un	
Reviewed By:		07/29	113	•		
Chain of Cu	stody	0				
	als intact on sar	mple bottles?	Yes 🗌	No 🗌	Not Present	
2. Is Chain of	Custody comple	ete?	Yes 🗹	No 🗌	Not Present	
3. How was th	ne sample delive	ered?	Courier			
<u>Log In</u>						
4. Was an at	tempt made to d	cool the samples?	Yes 🗸	No 🗆	na 🗆	
5. Were all sa	amples received	at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆	
6. Sample(s)	in proper contai	iner(s)?	Yes 🗹	No 🗆		
7. Sufficient s	ample volume f	or indicated test(s)?	Yes 🗹	No 🗆		
8. Are sample	es (except VOA	and ONG) properly preserved?	Yes 🗹	No 🗆		
9. Was prese	rvative added to	bottles?	Yes 🗌	No 🗹	NA $\square$	
10.VOA vials	have zero heads	space?	Yes 🗹	No 🗆	No VOA Vials	
11. Were any	sample containe	ers received broken?	Yes	No 🗹	# of preserved	
	rwork match bo epancies on cha		Yes 🔽	No 🗆	bottles checked for pH:	r >12 unless noted)
13. Are matrice	es correctly iden	itified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?	10
14. Is it clear w	hat analyses w	ere requested?	Yes 🔽	No 📙	<b>O</b> f the second second	506.
	olding times able by customer for a		Yes 🗹	No □	Checked by:	n14
(II IIO, IIOtii	y customer for a	autionzation.)				$\bigcirc$
Special Han	dling (if app	olicable)				
		screpancies with this order?	Yes	No 🗀	NA 🗹	
Pers	on Notified:	D	ate:		<u>.</u>	]
By W	/hom:		y	Phone  Fax	☐ In Person	
Rega	arding:				1	
Clier	t Instructions:					
17. Additional	remarks:					
18. <u>Cooler In</u>	formation					
Cooler		Condition   Seal Intact   Seal N   Good   Yes	lo Seal Date	Signed By		
T A SAME AND THE SAME AND	***************************************		The second secon			

## **BLAGG ENGINEERING, INC.**

#### MONITOR WELL DEVELOPMENT & / OR SAMPLING DATA

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

McCOY GC A #1A - BLOW & SEP. PITS LABORATORY (S) USED : HALL ENVIRONMENTAL

UNIT F, SEC. 18, T31N, R10W

Date: December 12, 2013 DEVELOPER / SAMPLER: N J V

Filename : McCoy GC A 1A mw log 2013-12-12.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.)
1A	101.82	93.09	8.73	18.70	1025	7.57	1,000	11.5	5.00
2A	101.97	92.93	9.04	18.70	-	-	-	-	-
3A	101.63	92.70	8.93	17.50	-	-	-	-	-
4A	100.33	92.20	8.13	14.00	1125	7.51	1,200	12.8	2.75
5	99.82	92.46	7.36	19.30	1420	7.53	1,000	13.4	5.75
6	100.20	-	-	18.46	-	ı	-	-	-
7	102.32	93.45	8.87	18.22	1230	7.47	1,400	13.7	4.50
8	101.44	92.92	8.52	16.60	1325	7.50	1,100	15.5	4.00
INSTRUMENT CALIBRATIONS =						4.01/7.00/10.00	2,800		

INSTRUMENT CALIBRATIONS = 4.01/7.00/10.00

DATE & TIME = 12/09/13

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

(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 ".

Installations: MW #8 - 6/12/13; #4A - 6/13/13; #2A & #3A - 6/14/13; #1A - 6/25/13; #5, #6, & #7 - 6/26/13.

Monitor well top survey conducted on 7/23/13.

Used submersible pump and vinyl clear tubing for purging & sampling. Collected samples from MW #'s 4A, 5, 6, 7, & 8 for BTEX per US EPA Method 8021B & general chemistry parameters.

Top of casing: MW #1A  $\sim$  2.50 ft., #2A  $\sim$  2.50 ft., #3A  $\sim$  2.50 ft., #4A  $\sim$  2.50 ft., #5  $\sim$  2.30 ft., #6  $\sim$  2.55 ft.,

#7 ~ 2.20 ft., #8 ~ 2.45 ft. above grade.

on-site	9:30 AM	temp.	22 F
off-site	2:30 PM	temp.	42 F
sky cond.		Sunny	
wind speed	0 - 5	direct.	E - ESE

Lab Order 1312581

Date Reported: 12/18/2013

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #1A

 Project:
 McCoy GC A #1A
 Collection Date: 12/12/2013 10:25:00 AM

 Lab ID:
 1312581-001
 Matrix: AQUEOUS
 Received Date: 12/13/2013 10:40:00 AM

**Analyses** Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 μg/L 12/17/2013 2:35:45 PM R15572 Toluene ND 1.0 μg/L 12/17/2013 2:35:45 PM R15572 Ethylbenzene ND 1.0 12/17/2013 2:35:45 PM R15572 μg/L Xylenes, Total ND 2.0 μg/L 12/17/2013 2:35:45 PM R15572 Surr: 4-Bromofluorobenzene %REC 12/17/2013 2:35:45 PM R15572 96.2 85-136

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
- 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

Lab Order 1312581

Date Reported: 12/18/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering Client Sample ID: MW #4A

**Project:** McCoy GC A #1A **Collection Date:** 12/12/2013 11:25:00 AM

Lab ID: 1312581-002 Matrix: AQUEOUS **Received Date:** 12/13/2013 10:40:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Analy	st: NSB
Benzene	ND	1.0	μg/L	1 12/17/2013 3:06:10 P	M R15572
Toluene	ND	1.0	μg/L	1 12/17/2013 3:06:10 F	M R15572
Ethylbenzene	ND	1.0	μg/L	1 12/17/2013 3:06:10 F	M R15572
Xylenes, Total	ND	2.0	μg/L	1 12/17/2013 3:06:10 F	M R15572
Surr: 4-Bromofluorobenzene	95.6	85-136	%REC	1 12/17/2013 3:06:10 F	M R15572

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

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Η 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.
- Reporting Detection Limit

#### Lab Order 1312581

Date Reported: 12/18/2013

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering Client Sample ID: MW #5

**Project:** McCoy GC A #1A **Collection Date:** 12/12/2013 2:20:00 PM

Lab ID: 1312581-003 Matrix: AQUEOUS **Received Date:** 12/13/2013 10:40:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Analys	st: NSB
Benzene	ND	1.0	μg/L	1 12/17/2013 3:36:26 P	M R15572
Toluene	ND	1.0	μg/L	1 12/17/2013 3:36:26 P	M R15572
Ethylbenzene	ND	1.0	μg/L	1 12/17/2013 3:36:26 P	M R15572
Xylenes, Total	ND	2.0	μg/L	1 12/17/2013 3:36:26 P	M R15572
Surr: 4-Bromofluorobenzene	95.1	85-136	%REC	1 12/17/2013 3:36:26 P	M R15572

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

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Η 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.
- Reporting Detection Limit

12/17/2013 4:06:43 PM R15572

Lab Order 1312581

Date Reported: 12/18/2013

## Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

CLIENT: Blagg Engineering Client Sample ID: MW #7

92.0

 Project:
 McCoy GC A #1A
 Collection Date: 12/12/2013 12:30:00 PM

 Lab ID:
 1312581-004
 Matrix: AQUEOUS
 Received Date: 12/13/2013 10:40:00 AM

**Analyses** Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 μg/L 12/17/2013 4:06:43 PM R15572 Toluene ND 1.0 μg/L 12/17/2013 4:06:43 PM R15572 Ethylbenzene ND 1.0 12/17/2013 4:06:43 PM R15572 μg/L Xylenes, Total ND 2.0 μg/L 12/17/2013 4:06:43 PM R15572

85-136

%REC

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
- 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 4 of 6
  - P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Lab Order 1312581

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/18/2013

CLIENT: Blagg Engineering Client Sample ID: MW #8

**Project:** McCoy GC A #1A **Collection Date:** 12/12/2013 1:25:00 PM

**Lab ID:** 1312581-005 **Matrix:** AQUEOUS **Received Date:** 12/13/2013 10:40:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Analy	st: NSB
Benzene	ND	1.0	μg/L	1 12/17/2013 4:36:57 P	M R15572
Toluene	ND	1.0	μg/L	1 12/17/2013 4:36:57 P	M R15572
Ethylbenzene	ND	1.0	μg/L	1 12/17/2013 4:36:57 P	M R15572
Xylenes, Total	ND	2.0	μg/L	1 12/17/2013 4:36:57 P	M R15572
Surr: 4-Bromofluorobenzene	96.5	85-136	%REC	1 12/17/2013 4:36:57 P	M R15572

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
- 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 5 of P Sample pH greater than 2 for VOA and TOC only.
- DI Denouting Detection Limit
- RL Reporting Detection Limit

		<u> </u>	- 10 mg 1 10 0 0 1 m								LI A			BIT	#T1			64 E		• # #
Client:	BLAC	GG ENGR	. / BP AMERICA	☑ Standard	Rush															AL
. —-				Project Name					Sala	4									V I C	ORY
Mailing A	ddress:	P.O. BO	X 87	-	McCoy GC A	\ # 1A	www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109													
-		BLOOM	FIELD, NM 87413	Project #:	•	<u> </u>								,						
Phone #:		(505) 63	32-1199	1			Tel. 505-345-3975 Fax 505-345-4107  Analysis Request													
email or I	Fax#:			Project Manag	ger:				1											
QA/QC Pa	-		Level 4 (Full Validation)		NELSON V	ELEZ	(8021B)	only)	/ MRO)			S)		04,504	į					
Accredita				Sampler:	NELSON V	ELEZ 92V	<b>}</b>	(Gas	DRO/	<del>[</del> <del>[</del> <del>[</del>	17	SIM		1,20	Solids	red	2			mple
□ NELAF		□ Other		On Ice:	∠ErYes erature: Lv	□ No	1#	IPH.	_	418.1)	504	827	<u>s</u>	03,1	d So	(filte	Nitrite			te sa
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		BTEX ******	BTEX + MTBE +	TPH 8015B (GRO	TPH (Method	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	Total Dissolved	Iron, Ferrous (filtered)	Nitrate N / Ni		o les con est est est est	5 pt. composite sample
12/12/13	1025	WATER	MW # 1A	40 ml VOA - 2	HCi & Cool	-001	V							_	-	_	_		1	
																		<del>-  </del>	+	<del>'  </del>
12/12/13	1125	WATER	MW # 4A	40 ml VOA - 2	HCI & Cool	-002	V											$\vdash$	\_\v	,
30 V																			+	+
12/12/13	$\sim$	WATER_		40 mil voa - 2	HC & COOL		7		$\Rightarrow$			$\neg$			_			$\rightrightarrows$	-	
			· · · · · · · · · · · · · · · · · · ·									$\dashv$		$\dashv$				_	+	+
12/12/13	1420	WATER	MW # 5	40 ml VOA - 2	HCl & Cool	7003	V				_		$\dashv$		i			$\dashv$	v	+-
							<u> </u>					$\neg$				-		$\dashv$	+*	+
12/12/13	1230	WATER	MW # 7	40 ml VOA - 2	HCl & Cool	-004	V		7		_	_		_		_		_	V	,
																$\dashv$	$\dashv$	+	┿	+-
12/12/13	1325	WATER	MW # 8	40 ml VOA - 2	HCl & Cool	-005	٧						-			_		$\dashv$	\_\v	,   -
				<u> </u>														-	+	+-}
///	Time:	Relinquishe	g by	Received by:	]	Date Time	Ren	narks	 5:	!			I		I		l			<u> </u>
12/12/13	1453	90	lut	Mustin	I dal tu	12/12/13 1453	BIL	L DIF	RECTI	LY TO	BP:									
Date:		Relinquishe	d by:	Received by:		Date Time	Jef	f Pea	ce, 2	00 E	nergy	y Coı	urt, F	armi	ingto	n, N	M 87	401		
12/12/13	747	1 /	is the Walter		12	13/13/1046					der i									
	If necessa	ry, samples su	bmitted to Hall Environmental may be s	ubcontracted to other a	accredited laboratorie	s. This serves as notice of	this po	ssibili	y. An	y sub-	contra	cted d	lata wi	li be c	learly	notate	d on ti	ne analy	tical re	oort.

## **QC SUMMARY REPORT**

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1312581

18-Dec-13

Client: Blagg Engineering
Project: McCoy GC A #1A

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

Sample ID 100NG BTEX LO	e ID 100NG BTEX LCS SampType: LCS				TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSW	Batch	n ID: <b>R1</b>	5572	F	RunNo: 1	5572				
Prep Date:	Analysis D	ate: 12	2/17/2013	8	SeqNo: 4	48256	Units: µg/L			
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 6 of 6



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 Wdrk Order Number: 1312581 RcptNo: 1 Received by/date: 12/13/2013 10:40:00 AM Logged By: **Ashley Gallegos** Completed By: Ashley, Gallegos 12/13/2013 11:04:05 AM Reviewed By: Chain of Custody Not Present **✓** No 🗌 1. Custody seals intact on sample bottles? Yes 🗌 No 🗌 2. Is Chain of Custody complete? Yes 🗸 Not Present 3. How was the sample delivered? Courier Log In 4. Was an attempt made to cool the samples? No 🗌 NA L Yes 🗸 NA 🗌 No 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes 🔽 No 🗆 Yes 🗸 Sample(s) in proper container(s)? No 🗀 7. Sufficient sample volume for indicated test(s)? Yes 🗸 No 8. Are samples (except VOA and ONG) properly preserved? 9. Was preservative added to bottles? Yes No 🗸 NA Yes 🗸 10. VOA vials have zero headspace? No 📖 No VOA Vials 🗔 Yes No 🗸 11, Were any sample containers received broken? # of preserved bottles checked Yeş 🗸 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? Yes 🗸 Yes 🗸 14. Is it clear what analyses were requested? No No . Checked by: Yes 🗸 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? Yes No NA 🗸 Person Notified: Date: By Whom: Via: eMail Phone Fax Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Temp °C Condition Seal Intact | Seal No | Seal Date Signed By Good

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

BP AME	RICA PR	OD. CO.		CHAIN-OF-C		N / A				
		PITS		LABORATOR	RY(S) USED	:	HALL ENVIR	RONMENTAL		
		2014-03-03.xls	;	[						
WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)		
(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.	h = 1 ft.)	-		<del>-</del>		
Comments or note well diameter if not standard 2 ".  Used submersible pump and vinyl clear tubing for purging & sampling . Collected samples from MW #'s 4A, 5, 6, 7, & 8 for BTEX per US EPA Method 8021B & general chemistry parameters.  Top of casing: MW #1A ~ 2.50 ft., #2A ~ 2.50 ft., #3A ~ 2.50 ft., #4A ~ 2.50 ft., #5 ~ 2.30 ft., #6 ~ 2.55 ft.,										
	March 3, 20  McCoy GC A  WELL ELEV. (ft)  101.82 101.97 101.63 100.33 99.82 100.20 102.32 101.44  Volume of (i.e. 2" MW Ideally a mage or note we der US EPA Metally and mage of US EPA Metally and Metally and Metally and Metally and Metally and Metally and Metally	March 3, 2014  McCoy GC A 1A mw log 2  WELL WATER ELEV. (ft) (ft)  101.82 92.84 101.97 92.67 101.63 92.47 100.33 92.07 99.82 92.28 100.20 92.13 102.32 93.22 101.44 92.73  Volume of water purge (i.e. 2" MW r = (1/12) ft Ideally a minimum of sericle or note well diameter in the company of the	March 3, 2014   McCoy GC A 1A mw log 2014-03-03.xls	March 3, 2014  McCoy GC A 1A mw log 2014-03-03.xls  WELL WATER DEPTH TO TOTAL DEPTH (ft) (ft) (ft) (ft) (ft)  101.82 92.84 8.98 18.70 101.97 92.67 9.30 18.70 101.63 92.47 9.16 17.50 100.33 92.07 8.26 14.00 99.82 92.28 7.54 19.30 100.20 92.13 8.07 18.46 102.32 93.22 9.10 18.22 101.44 92.73 8.71 16.60  INSTRUMENT CALIBRATIO DATE & TIME =  Volume of water purged from well prior to service. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW Ideally a minimum of three (3) wellbore voluings or note well diameter if not standard 2 ".  ersible pump and vinyl clear tubing for purging & samplinger US EPA Method 8021B & general chemistry parameter uses the service of the serv	March 3, 2014	March 3, 2014   DEVELOPER   PROJECT	March 3, 2014	March 3, 2014   DEVELOPER / SAMPLER:   N   MCOy GC A 1A mw log 2014-03-03.xls   PROJECT MANAGER:   N   PROJECT M		

on-site	9:45 AM	temp.	43 F
off-site	2:45 PM	temp.	56 F
sky cond.		Sunny	
wind speed	0 - 10	direct.	E - SSE

#### Lab Order **1403156**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/12/2014

**CLIENT:** Blagg Engineering Client Sample ID: MW # 1A

 Project:
 McCoy GC A # 1A
 Collection Date: 3/3/2014 10:40:00 AM

 Lab ID:
 1403156-001
 Matrix: AQUEOUS
 Received Date: 3/5/2014 10:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	st: <b>JMP</b>
Benzene	ND	1.0	μg/L	1	3/10/2014 2:34:29 PM	R17212
Toluene	ND	1.0	μg/L	1	3/10/2014 2:34:29 PM	R17212
Ethylbenzene	ND	1.0	μg/L	1	3/10/2014 2:34:29 PM	R17212
Xylenes, Total	ND	2.0	μg/L	1	3/10/2014 2:34:29 PM	R17212
Surr: 4-Bromofluorobenzene	108	82.9-139	%REC	1	3/10/2014 2:34:29 PM	R17212

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 6

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

#### Lab Order **1403156**

Date Reported: 3/12/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

1403156-002

Lab ID:

**Project:** McCoy GC A # 1A

Matrix: AQUEOUS Received Date: 3/5/2014 10:20:00 AM

Client Sample ID: MW # 4A

**Collection Date:** 3/3/2014 11:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	t: <b>JMP</b>
Benzene	ND	1.0	μg/L	1	3/10/2014 3:04:32 PM	R17212
Toluene	ND	1.0	μg/L	1	3/10/2014 3:04:32 PM	R17212
Ethylbenzene	ND	1.0	μg/L	1	3/10/2014 3:04:32 PM	R17212
Xylenes, Total	ND	2.0	μg/L	1	3/10/2014 3:04:32 PM	R17212
Surr: 4-Bromofluorobenzene	94.9	82.9-139	%REC	1	3/10/2014 3:04:32 PM	R17212

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 2 of 6

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

#### Lab Order **1403156**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/12/2014

**CLIENT:** Blagg Engineering Client Sample ID: MW # 5

 Project:
 McCoy GC A # 1A
 Collection Date: 3/3/2014 12:40:00 PM

 Lab ID:
 1403156-003
 Matrix: AQUEOUS
 Received Date: 3/5/2014 10:20:00 AM

Analyses	ses Result RL Qual Units					
EPA METHOD 8021B: VOLATILES					Analy	st: <b>JMP</b>
Benzene	ND	1.0	μg/L	1	3/10/2014 3:34:37 PM	R17212
Toluene	ND	1.0	μg/L	1	3/10/2014 3:34:37 PM	R17212
Ethylbenzene	ND	1.0	μg/L	1	3/10/2014 3:34:37 PM	R17212
Xylenes, Total	ND	2.0	μg/L	1	3/10/2014 3:34:37 PM	R17212
Surr: 4-Bromofluorobenzene	110	82.9-139	%REC	1	3/10/2014 3:34:37 PM	R17212

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 3 of 6

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

#### Lab Order **1403156**

Date Reported: 3/12/2014

Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering Client Sample ID: MW # 7

 Project:
 McCoy GC A # 1A
 Collection Date: 3/3/2014 1:40:00 PM

 Lab ID:
 1403156-004
 Matrix: AQUEOUS
 Received Date: 3/5/2014 10:20:00 AM

Analyses	Result	RL Qu	DF	Date Analyzed	Batch	
EPA METHOD 8021B: VOLATILES					Analy	st: JMP
Benzene	ND	1.0	μg/L	1	3/10/2014 4:04:56 PM	1 R17212
Toluene	ND	1.0	μg/L	1	3/10/2014 4:04:56 PM	1 R17212
Ethylbenzene	ND	1.0	μg/L	1	3/10/2014 4:04:56 PM	1 R17212
Xylenes, Total	ND	2.0	μg/L	1	3/10/2014 4:04:56 PM	1 R17212
Surr: 4-Bromofluorobenzene	111	82.9-139	%REC	1	3/10/2014 4:04:56 PM	1 R17212

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 4 of 6

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

#### Lab Order 1403156

Date Reported: 3/12/2014

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: MW # 8

**Project:** McCoy GC A # 1A **Collection Date:** 3/3/2014 2:35:00 PM

**Lab ID:** 1403156-005 **Matrix:** AQUEOUS **Received Date:** 3/5/2014 10:20:00 AM

Analyses	Result RL Qual Units				Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	t: <b>JMP</b>
Benzene	ND	1.0	μg/L	1	3/10/2014 4:35:09 PM	R17212
Toluene	ND	1.0	μg/L	1	3/10/2014 4:35:09 PM	R17212
Ethylbenzene	ND	1.0	μg/L	1	3/10/2014 4:35:09 PM	R17212
Xylenes, Total	ND	2.0	μg/L	1	3/10/2014 4:35:09 PM	R17212
Surr: 4-Bromofluorobenzene	94.1	82.9-139	%REC	1	3/10/2014 4:35:09 PM	R17212

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 5 of 6

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

Cr	<u>nain-c</u>	of-Cus	tody Record	Turi-Albuna Time.						H	IA	HALL ENVIRONMENTAL											
Client:	BLAG	G ENGR.	/ BP AMERICA		Rush _	42 marini				A	N	AL	YS.	SIS	S L	AE	30	RA	TOI	RY	•		
	<u></u>			Project Name:							ww۱	w.ha	llen	viro	nme	ntal.	com	1					
Mailing Ad	dress:	P.O. BOX	( 87	N	1cCoy GC A	# 1A		49	01 H	awki	ins f	NE -	Alb	uqu	erqu	ıe, N	M 8	7109					
	·	BLOOM	FIELD, NM 87413	Project #:				Te	el. 50	5-34	15-3	975	F	ax .	505-	345	410	7			_		
Phone #:		(505) 63	2-1199	1								Α	naly	/sis	Rec	ues	t						
email or Fa	ax#:			Project Manag	er:		<u>~</u>							4)									
QA/QC Pad Standa	-		Level 4 (Full Validation)		NELSÓN VE	LEZ	(8021B)	only)	/ MRO)			/IS)		PO4,SC						ē e			
Accreditati		· · · · · · · · · · · · · · · · · · ·		Sampler:	<b>NELSON VE</b>	LEZ AV	eten.	(Gas	DRO,	ਜ਼	(1)	SI		VO <sub>2,</sub>	Solids	red	z			l m			
□ NELAP		□ Other		On ice:	∕DX <b>(</b> Yes	□ No	1	ТРН	_	418.1)	504	827	S	03,1	d Sc	(filtered)	Nitrite			te s	1		
□ EDD (T	ype)			Sample Tempe	erature: (👈	)	#	+	(GRO		por	ò	etal	C,N	olve		Ž		జ	posi	٤		
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1403156	BTEX <del>←M</del>	BTEX + MTBE	TPH 8015B	TPH (Method	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	Total Dissolved	Iron, Ferrous	Nitrate N		Grab sample	5 pt. composite sample	Air Dubble		
3/3/14	1040	WATER	MW # 1A	40 ml VOA - 2	HCl & Cool	-001	٧												_ √				
3/3/14	1145	WATER	MW # 4A	40 mi VOA - 2	HCI & Cool	-002	٧												٧				
3/3/14	1240	WATER	MW # 5	40 ml VOA - 2	HCl & Cool	-003	٧												٧				
3/3/14	1340	WATER	MW # 7	40 ml VOA - 2	HCl & Cool	-00ef	٧												٧				
· · · · · · · · · · · · · · · · · · ·																							
3/3/14	1435	WATER	MW # 8	40 ml VOA - 2	HCl & Cool	-605	V												_ ∨				
																				_			
										ļ											L		
Date:	Time:	Relinquish	ed by:	Received by:		Date Time	1	nark															
14/14	1430	10	ling	1/3/1/25 L/3/LE / 1/19 1/30 L		1			LY T						_								
Date:	Time:	Relinquish	. 0 1	Received by:	$\Delta$	Date Time	1									on, N	8 MI	7401					
4/14	1734	(4	m t Walto		03/	05/Xf 1020	FII	ום צו	urcha	se O	raer	ın er	nali	irom	ΒΡ.								

## **QC SUMMARY REPORT**

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1403156** 

12-Mar-14

Client: Blagg Engineering
Project: McCoy GC A # 1A

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles PBW Client ID: Batch ID: R17212 RunNo: 17212 Analysis Date: 3/10/2014 SeqNo: 495257 Prep Date: 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 ND Xylenes, Total 2.0 Surr: 4-Bromofluorobenzene 21 20.00 105 82.9 139

Sample ID 100NG BTEX LC	S Samp	Гуре: <b>LC</b>	TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSW	Batc	h ID: <b>R1</b>	7212	F	RunNo: 1	7212				
Prep Date:	Analysis [	Date: 3/	10/2014	SeqNo: 495258			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	97.3	80	120			
Toluene	19	1.0	20.00	0	97.4	80	120			
Ethylbenzene	20	1.0	20.00	0	98.4	80	120			
Xylenes, Total	59	2.0	60.00	0	98.3	80	120			
Surr: 4-Bromofluorobenzene	18		20.00		89.2	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 6 of 6



пан 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 Numb	er: 1403156		RcptNo:	1
Received by/date:	03/05/14			<del>-</del> •	_
Logged By: Lindsay Mangin	3/5/2014 10:20:00 A	М	Junky Hartys		
Completed By: Lindsay Mangin	3/5/2014 2:07:43 PM		Ambiel Haller		
100	1 1		()		
	03/05/14 €	1545			
Chain of Custody		🗆			
1 Custody seals intact on sample bottles?	•	Yes ∐	No ∐ □	Not Present	
2. Is Chain of Custody complete?		Yes 🗸	No 🗀	Not Present 🗌	
3. How was the sample delivered?		. <u>Courier</u>			
<u>Log In</u>					
4. Was an attempt made to cool the samp	eles?	Yes 🔽	No 🗆	na 🗀	
5. Were all samples received at a tempera	ature 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 t	est(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) pr	operly 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 t	proken?	Yes	No 🗹		
				# of preserved bottles checked	
12. Does paperwork match bottle labels?		Yes 🔽	No 🗆	for pH:	r >12 unless noted)
(Note discrepancies on chain of custody		Yes 🗸	No 🗆	Adjusted?	1 > 12 unless noted)
<ul><li>13. Are matrices correctly identified on Cha</li><li>14. Is it clear what analyses were requested</li></ul>		Yes ✔ Yes ✔	No 🗆		
15. Were all holding times able to be met?	1 f	Yes 🗹	No 🗆	Checked by:	
(If no, notify customer for authorization.)	)	100 🖭	[		<del>"</del>
Special Handling (if applicable)					
16. Was client notified of all discrepancies	with this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified:	Date		A VALVE PROPERTY		
By Whom:	Via:		Phone  Fax	In Person	
Regarding:			<u> </u>		
Client Instructions:	<u> </u>				
17. Additional remarks:			<u> </u>		_
18. Cooler information					
Cooler No   Temp °C   Condition   1.0   Good	Seal Intact   Seal No   Yes	Seal Date	Signed By		

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

BP AME	RICA PR	OD. CO.		CHAIN-OF-C		N / A						
		PITS		LABORATOR	RY (S) USED	:	HALL ENVIRONMENTAL					
		2014-06-21.xls	;	Ε								
WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)				
(i.e. 2" MW	-		<del>-</del>									
Comments or note well diameter if not standard 2 ".  Used submersible pump and vinyl clear tubing for purging & sampling . Collected samples from MW #'s 4A, 5, 6, 7, & 8 for BTEX per US EPA Method 8021B & general chemistry parameters.  Top of casing: MW #1A ~ 2.50 ft., #2A ~ 2.50 ft., #3A ~ 2.50 ft., #4A ~ 2.50 ft., #5 ~ 2.30 ft., #6 ~ 2.55 ft.,												
	June 21, 20 McCoy GC A  WELL ELEV. (ft)  101.82 101.97 101.63 100.33 99.82 100.20 102.32 101.44  Volume of (i.e. 2" MW Ideally a mage or note we der US EPA Metally and ser US EPA Meta	C A # 1A - BLOW & SEP.   EC. 18, T31N, R10W	WELL   WATER   DEPTH TO     ELEV.   ELEV.   WATER     (ft)   (ft)   (ft)     101.82   93.39   8.43     101.97   93.21   8.76     101.63   93.09   8.54     100.33   93.13   7.20     99.82   93.13   6.69     100.20   93.01   7.19     102.32   93.94   8.38     101.44   93.61   7.83     INSTRUMENT DATE & TIME     Volume of water purged from well     (i.e. 2" MW   r = (1/12) ft.   h = 1 ft.)     Ideally a minimum of three (3) we have so or note well diameter if not standard ersible pump and vinyl clear tubing for purger US EPA Method 8021B & general chemister     General September 1	Description   Description	LABORATOR   C. A # 1A - BLOW & SEP. PITS   EC. 18, T31N, R10W	LABORATORY (S) USED	LABORATORY (S) USED :   C A # 1A - BLOW & SEP. PITS   EC. 18, T31N, R10W	LABORATORY (S) USED:   HALL ENVIR				

on-site	7:45 AM	temp.	60 F
off-site	11:45 AM	temp.	80 F
sky cond.		Sunny	
wind speed	5 - 10	direct.	Е

## Date Reported: 6/26/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #4A

 Project:
 McCoy GC A #1A
 Collection Date: 6/21/2014 9:35:00 AM

 Lab ID:
 1406A66-001
 Matrix: AQUEOUS
 Received Date: 6/24/2014 7:46:00 AM

Analyses	yses Result RL Qual Units						Batch
EPA METHOD 8021B: VOLATILES						Analys	st: NSB
Benzene	ND	1.0	Р	μg/L	1	6/24/2014 2:23:31 PM	R19462
Toluene	ND	1.0	Р	μg/L	1	6/24/2014 2:23:31 PM	R19462
Ethylbenzene	ND	1.0	Р	μg/L	1	6/24/2014 2:23:31 PM	R19462
Xylenes, Total	ND	2.0	Р	μg/L	1	6/24/2014 2:23:31 PM	R19462
Surr: 4-Bromofluorobenzene	110	82.9-139	Р	%REC	1	6/24/2014 2:23:31 PM	R19462

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 5

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

Date Reported: 6/26/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #5

 Project:
 McCoy GC A #1A
 Collection Date: 6/21/2014 10:35:00 AM

 Lab ID:
 1406A66-002
 Matrix: AQUEOUS
 Received Date: 6/24/2014 7:46:00 AM

Analyses Result RL Qual Un				DF Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES				Analy	st: NSB
Benzene	ND	1.0	μg/L	1 6/24/2014 2:52:16 PM	/ R19462
Toluene	ND	1.0	μg/L	1 6/24/2014 2:52:16 PM	/ R19462
Ethylbenzene	ND	1.0	μg/L	1 6/24/2014 2:52:16 PM	/ R19462
Xylenes, Total	ND	2.0	μg/L	1 6/24/2014 2:52:16 PM	/ R19462
Surr: 4-Bromofluorobenzene	106	82.9-139	%REC	1 6/24/2014 2:52:16 PM	/ R19462

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 2 of 5

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

## Date Reported: 6/26/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #7

 Project:
 McCoy GC A #1A
 Collection Date: 6/21/2014 8:40:00 AM

 Lab ID:
 1406A66-003
 Matrix: AQUEOUS
 Received Date: 6/24/2014 7:46:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	1.0	μg/L	1	6/24/2014 3:20:55 PM	R19462
Toluene	ND	1.0	μg/L	1	6/24/2014 3:20:55 PM	R19462
Ethylbenzene	ND	1.0	μg/L	1	6/24/2014 3:20:55 PM	R19462
Xylenes, Total	ND	2.0	μg/L	1	6/24/2014 3:20:55 PM	R19462
Surr: 4-Bromofluorobenzene	108	82.9-139	%REC	1	6/24/2014 3:20:55 PM	R19462

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 3 of 5

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

Date Reported: 6/26/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: MW #8

 Project:
 McCoy GC A #1A
 Collection Date: 6/21/2014 11:40:00 AM

 Lab ID:
 1406A66-004
 Matrix: AQUEOUS
 Received Date: 6/24/2014 7:46:00 AM

**Analyses** Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8021B: VOLATILES** Analyst: NSB 6/24/2014 3:49:36 PM Benzene ND 1.0 μg/L R19462 Toluene ND 1.0 μg/L 6/24/2014 3:49:36 PM R19462 Ethylbenzene ND 1.0 6/24/2014 3:49:36 PM R19462 μg/L μg/L Xylenes, Total ND 2.0 6/24/2014 3:49:36 PM R19462 Surr: 4-Bromofluorobenzene 109 %REC R19462 82.9-139 6/24/2014 3:49:36 PM

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 4 of 5

- $P \hspace{0.5cm} \hbox{Sample pH greater than 2.} \\$
- RL Reporting Detection Limit

nain-d	of-Cus	tody Record	Turn-Around Time.						ŀ	ΗA	ĽL	E	NV	/IF	80	NI	4EN	ITA	L	
BLAG	G ENGR.	/ BP AMERICA	✓ Standard	Rush _																•
			Project Name:							ww	w.ha	illen	viro	nme	ntal.	.com	1			
dress:	P.O. BO	K 87	, v	IcCoy GC A	# 1A		49	01 F	lawk	cins I	NE -	Alb	uqu	erqu	ıe, N	IM 8	7109			
	BLOOM	FIELD, NM 87413	Project #:				Te	i. 50	)5-3	45-3	975	- 1	ax	505-	345	-410	7			
	(505) 63	2-1199									F	Anal	ysis	Rec	ļues	ŧ				
ex#:			Project Manag	er:		Ě							)4)							
-		Level 4 (Full Validation)		NELSON VE	ELEZ	(8021	only)	/ MRO)			AS)		.PO4,SC		(				<u>e</u>	
			Sampler:	<b>NELSON VE</b>	LEZ G√	4	(Gas	RO /	<del> </del>	1)	SIN		Š Š	lids	red	z			m g m	
	☐ Other		On Ice:	X Yes	□ No	Ħ	TPH	3/c	418	504	827	ړ	03,1	d So	filte	rrite			te s	l
уре)			Sample Tempe	rature:	13	畫	+ ₩	(GR(	ğ	poc	৯	etal	S.	olve	Sus (	Ĭ.		e e	osii	
Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALNO.	BTEX 1	BTEX + MTE	TPH 8015B	TPH (Meth	EDB (Meth	PAH (8310	RCRA 8 M	Anions (F,	Total Disso	Iron, Ferro	e S		Grab sam	5 pt. comp	
0935	WATER	MW # 4A	40 ml VOA - 2	HCl & Cool	-001	٧												٧		
1035	WATER	MW # 5	40 ml VOA - 2	HCl & Cool	-002	٧												٧		Į
						<u> </u>													<u> </u>	L
0840	WATER	MW # 7	40 ml VOA - 2	HCI & Cool	-003	<b>√</b>												٧	<u> </u>	ļ
1140	WATER	MW#8	40 ml VOA - 2	HCl & Cool	-201	 												V	<del> </del>	H
					W-1	<u> </u>													-	t
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							-												<u> </u>	┙
Time:	Relinquish	eg by:	Received by:	bete	Date Time 6/23/14 /6/0	ВІ	LL DI	REC					<b>F</b>			N.B. 4. C	7401			
Time:	Mari	otu Waller	Regeived by:	Dalle	Date OU 24 14	D <sub>Ei</sub>	nd Pı	urch	ase C	order	in e	mail	from	BP.				tical res	oort.	
	BLAG  Idress:  Idress	BLAGG ENGR.  Idress: P.O. BOX BLOOMI (505) 63  ax#: ckage: ard	BLOOMFIELD, NM 87413 (505) 632-1199  ax#: ckage: ard	BLAGG ENGR. / BP AMERICA  BLAGG ENGR. / BP AMERICA  Project Name:    Project Name:   Project #:	BLAGG ENGR. / BP AMERICA  Project Name:  McCoy GC A  BLOOMFIELD, NM 87413  (505) 632-1199  ax#:  Project Manager:  NELSON VE  Gn Jce:  Sample:  NELSON VE  Gn Jce:  Sample Temperature:  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Y	BLAGG ENGR. / BP AMERICA  BLOOMFIELD, NM 87413  (505) 632-1199  ax#:  chage: ard	BLAGG ENGR. / BP AMERICA  Project Name:  McCoy GC A # 1A  BLOOMFIELD, NM 87413  (505) 632-1199  ax#:  Axis:  Axis: Axis: Axis: Axis: Axis: Axis: Axis	BLAGG ENGR. / BP AMERICA  Project Name:  McCoy GC A # 1A  BLOOMFIELD, NM 87413  (505) 632-1199  America   Project Manager:  Project Manager:  NELSON VELEZ  NELSON VELEZ  NELSON VELEZ  NO  Sampler: NELSON VELEZ  NO  Sample Preservative Type   HEAL 160  Time   Matrix   Sample Request ID   Container Type and # Preservative Type ALC 160  1035   WATER   MW # 4A   40 ml VOA - 2   HCl & Cool   - OO1   V    1035   WATER   MW # 5   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 8   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 7   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 7   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 7   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 7   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 7   40 ml VOA - 2   HCl & Cool   - OO2   V    1140   WATER   MW # 7   40 ml VOA - 2   HCl & C	BLAGG ENGR. / BP AMERICA  Project Name:    McCoy GC A # 1A	BLAGG ENGR. / BP AMERICA  Project Name:    McCoy GC A # 1A	BLAGG ENGR. / BP AMERICA    Standard   Rush   Project Name:   Www.   Ash.   Rush   Project Name:   Rush   Project Name:   Rush   Project Name:   Rush   Project Name:   Rush   Rush   Rush   Rush   Project Name:   Rush   Rush	BLAGG ENGR. / BP AMERICA  Project Name:  McCoy GC A # 1A  Project Manager:  Asage:  As	BLAGG ENGR. / BP AMERICA  Standard Rush Project Name:  McCoy GC A # 1A  BLOOMFIELD, NM 87413 (505) 632-1199  ax#:  Project Manager.  Kage: ard Level 4 (Full Validation) ion: Other  Other  Time Matrix Sample Request ID  Osample Request ID  Time Matrix Sample Request ID  Osample Request	BLAGG ENGR. / BP AMERICA    Standard   Rush   Rush   Rosemarks:   Project Name:   Rush   Rush   Rush   Rush   Rush   Rush   Rosemarks:   Rush   Project Name:   Rush   Rush   Rush   Rush   Rosemarks:   Rush   Rush	BLAGG ENGR. / BP AMERICA  Project Name:  McCoy GC A # 1A  Project #:  Project #:  Project #:  Project Manager:  Kage:  Analysis Received by:  Project Manager:  NELSON VELEZ  Nelson Velez	BLAGG ENGR. / BP AMERICA    Project Name:   Project Mame:   Project Manager:   Project Ma	BLAGG ENGR. / BP AMERICA  Project Name:  McCoy GC A # 1A  Project #:  McCoy GC A # 1A  BLOOMFIELD, NM 87413  Project #:  Proje	BLAGG ENGR. / BP AMERICA    Standard   Rush   Project Name:   Necoy GC A # 1A   April 1   April	BLAGG ENGR. / BP AMERICA    Project Name:	BLAGG ENGR. / BP AMERICA    Standard   Rush   Project Name:   Www.hallenvironmental.com   4901 Hawkins NE - Albuquerque, NN 87109   Tel. 505-345-3975   Fax 505-345-4107     Sospies   Project Manager:   NELSON VELEZ   Right   Right

## **QC SUMMARY REPORT**

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1406A66** 

26-Jun-14

Client: Blagg Engineering
Project: McCoy GC A #1A

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles PBW Client ID: Batch ID: R19462 RunNo: 19462 Prep Date: Analysis Date: 6/24/2014 SeqNo: 563622 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 ND Xylenes, Total 2.0 Surr: 4-Bromofluorobenzene 22 20.00 110 82.9 139

Sample ID 100NG BTEX LC	CS SampT	ype: LC	s	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSW	Batch	Batch ID: R19462			RunNo: 19462					
Prep Date:	Analysis D	Analysis Date: 6/24/2014			SeqNo: <b>563623</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	80	120			
Toluene	21	1.0	20.00	0	105	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	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 5 of 5



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: 1406A66 Client Name: Received by/date: Michell Concin Michell Concin Michelle Garcia 6/24/2014 7:46:00 AM Logged By: 6/24/2014 8:51:25 AM Completed By: Michelle Garcia Reviewed By: 00/24/14 -0 Chain of Custody No 🗌 Not Present Yes 🗔 1 Custody seals intact on sample bottles? Yes 🗸 No Not Present 2. Is Chain of Custody complete? Courier 3. How was the sample delivered? Log In No 🗆 NA 🗆 Yes 🗹 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 Yes 🗸 Yes 🔽 Sample(s) in proper container(s)? Yes 🗹 No 7. Sufficient sample volume for indicated test(s)? Nο 8. Are samples (except VOA and ONG) properly preserved? Yes No 🗹 NA 🗆 Yes 9. Was preservative added to bottles? No 🗌 No VOA Vials Yes 🗸 10.VOA vials have zero headspace? No 🗹 Yes 11. Were any sample containers received broken? # of preserved bottles checked No 🗌 Yes 🗹 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? Yes V No 🗆 14. Is it clear what analyses were requested? Yes No 🗌 Checked by:  $\overline{\mathbf{V}}$ Yes 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes No 🗆 NA 🗹 16. Was client notified of all discrepancies with this order? Person Notified: Date: eMail Phone Fax In Person By Whom: Via: 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