

BP America Production Company

200 Energy Court Farmington, NM 87401 Phone: (505) 326-9200

December 21, 2015

Glenn Von Gonten Senior Hydrologist

New Mexico Oil Conservation Divisic

Environmental Bureau 1220 St. Francis Drive Santa Fe, NM 87505

OIL CONS. DIV DIST. 3 District Copy For Scanning Only Has NOT been processed.

DEC 2 1 2015

Request for Permanent Closure Re:

Gallegos Canvon Unit 93

API No. 3004507699; Unit letter E, Section 36, T29N, R12W; GPS: 36.68537°, -108.0568°

Dear Mr. Von Gonten:

BP America Production Company has retained Blagg Engineering, Inc. to conduct environmental remediation and groundwater monitoring at the Gallegos Canyon Unit (GCU) 93 associated with impacts from a historic earthen pit. The site is located on private property.

After the initial pit closure cleanup efforts at the site, an air sparge/vacuum extraction system was utilized in aggressively remediating on-site hydrocarbon contamination in groundwater. The system was designed to treat soils and groundwater that had not been remediated by excavation. The air sparge system was installed in 2000 and operated non-continuous for approximately 7 years to address groundwater contamination.

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 either John Ritchie (john.ritchie@bp.com) or myself (steven.moskal@bp.com) at the address or phone number listed above. Thank you for your cooperation and assistance.

Sincerely,

Steve Moskal

Field Environmental Coordinator

How Min

ce: Mr. Cory Smith, Environmental Specialist, NMOCD District III Office, 1000 Rio Brazos Road Aztec, NM

OIL CONS. DIV DIST. 3

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources DEC 2 1 2015

Form C-141 Revised August 8, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Release Notification and Corrective Action

						OPERA	TOR		☐ Initi	al Report	\boxtimes	Final Rep
Name of C	ompany: BP				(Contact: St	eve Moskal					
Address: 20	00 Energy Cou	urt, Farmin	gton, NI	M 87401		Telephone	No.: 505-326-9	497		at a second		
Facility Na	me: Gallegos	Canyon U	nit 93]	Facility Ty	e: Natural gas	well				
Surface Ov	wner: Private			Mineral C	Owner: I	Federal			API No	o. 30045507	7699	
				LOCA	ATION	OF RE	LEASE					
Jnit Letter			Range 12W	Feet from the 805	North/South	South Line	Feet from the 1,600	East/V West	Vest Line	County: Sa	an Juan	
		Latitu	de36.				le108.0568°					
CD I				NAT	URE	OF REL			37.1	D		
	ease: condensate						Release: Unkno			Recovered: n		I Indonesia
ource of Re	elease: Historic	earthen pit				Unknown	Hour of Occurren	ce:	circa 200	Hour of Dis 0	covery:	Unknown
Was Immed	iate Notice Give		Yes 🛛	No Not R	equired	If YES, To	Whom?					
By Whom?						Date and I	Hour:					
Was a Water	rcourse Reached		Yes 🛛	No		If YES, V	olume Impacting	the Wate	ercourse.			
Describe Arcontinuous f	ea Affected and from 2000-2007. BP request site	Cleanup Ao . Additiona	ction Tak Il groundy ed on 4 c	en.* Site remedia water monitoring onsecutive quarte	ation air s wells we ers of gro	sparge and g ere installed oundwater da	roundwater moni in 2008 after disc ata below regulate concentrations co	toring. Toussion wory stand	The air spa with the NM ards for B'	MOCD requir TEX. Consti	ed furth	ner
regulations a public health should their or the enviro	all operators are h or the environs operations have	required to ment. The a failed to ad tion, NMOC	report an acceptance lequately accept	d/or file certain r e of a C-141 repo investigate and r	elease no ort by the emediate	otifications a NMOCD n contaminat	knowledge and and perform correspondent of the control of the cont	ctive acti Report" d reat to gr	ions for rel loes not rel round wate	eases which ieve the oper r, surface wa	may end rator of iter, hun	danger liability nan health
							OIL CON	SERV	ATION	DIVISIO	N	
Signature: Printed Nam	ne: Steve Moska				-	Approved by	Environmental S	Specialist	:			
Γitle: Field I	Environmental C	Coordinator			1	Approval Da	te:	1	Expiration	Date:		
E-mail Addr	ress: steven.mos	kal@bp.cor	n		(Conditions o	f Approval:			Attached		
	mber 21, 2015 itional Sheets	If Necessar		ne: 505-326-9497	,							

BP AMERICA PRODUCTION CO.

GROUNDWATER REMEDIATION REPORT

GCU # 093 (E) SECTION 36, T29N, R12W, NMPM SAN JUAN COUNTY, NEW MEXICO

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

NOVEMBER 2015

PREPARED BY: BLAGG ENGINEERING, INC.

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

BP AMERICA PRODUCTION COMPANY GCU # 093 - Blow Pit SW1/4 NW1/4, Sec. 36, T29N, R12W

Pit Closure Date: February 1996

Air Sparge Installation Date: September 2000

Monitor Well Installation Date: February 14, 2012 (MW #7)

Monitor Well Sampling Dates: March 27, 2012, November 8, 2012, January 9, 2013

Pit Closure and Background:

The site's unlined earthen blow pit was located on-site and on private property. Specific closure information and succeeding monitoring activities to the end of 2007 was documented and submitted to the New Mexico Oil Conservation Division's (NMOCD) Santa Fe office in January 2008. BP elected to aggressively remediate the blow pit area with an air sparge system due to the elevated benzene levels revealed in monitor wells MW #3 and MW #6 from the previous quarterly monitoring between June 1996 and March 2004. In April 2000, upon review of the quarterly sampling data, five (5) air sparge points along with monitor well MW #6 were installed at the blow pit location (Figure 1). Between June 2000 and February 2003 the system became non-operational resulting from the temporarily shut in of the gas well (power source). The system regained operational status by May 2003 utilizing electricity available near the site. The reporting herein is for the on and off-site monitoring to address the blow pit source and its predominate northwest, down gradient flow direction areas after 2007.

Monitor Well Installation and Development Information:

Monitor well MW #7 was installed using a mobile CME-95 drill rig on February 14, 2012. A bore log showing the soil lithology, well completion, and other pertinent data is included in the report. MW #7 was initially developed on March 16, 2012 in order to remove accumulated sediment within the well bore introduced during the installation and to observe recovery tendencies during the purging operation. A two (2) inch dedicated submersible electrical pump with new, clear vinyl tubing was utilized for the initial well development.

Groundwater Monitor Well Sampling Procedures:

A two (2) inch dedicated submersible electrical pump with new, clear vinyl tubing was utilized during the sampling events. The groundwater sample was collected following US EPA: SW-846 protocol, was 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 the site's below-grade tank (**BGT**). The BGT contents was eventually disposed through approved NMOCD operational procedures for removal of produced fluids.

Water Quality and Gradient Information:

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

A site map (Figure 2) and aerial (Figure 3) shows the relative position of monitor wells MW #6 and MW #7. During the last two (2) sampling events, MW #6 was referred to as MW #A and MW #7 as MW #B. Groundwater contour maps generated during previous site monitoring and sampling had demonstrated, on average, a northwestern flow direction (approximately N22W direction).

Summary and/or Recommendations:

Following the recommendation in the 2008 report, the off-site monitor well (MW #7) northwest of MW #3 was installed to confirm that down gradient impacts were not present or were below the New Mexico Water Quality Controls Commission's (NMWQCC) groundwater closure standards. BP did adhere to the Landowner Notification Act and the private landowner granted approval to proceed with the off-site activities.

Hydrocarbon impacted soils and groundwater at the site appear to have been remediated via excavation, the utilization of an air sparge system, and possibly from natural attenuation. All on-site monitor wells tested at non-detectable or below the NMWQCC's groundwater BTEX standards for at least four (4) consecutive sampling events and met the requirements of section 2.1 of BP's GMP. MW #7 met the GMP requirements pursuant to section 2.3.

Permanent closure is recommended for the site. In early 2006, four (4) on-site monitor wells [WP #1, MW #2, MW #3, and MW #4R] were removed/grouted at the request of the current surface/property owner. Any remaining monitor wells will be abandoned at either the landowners request or when NMOCD's approves the requested permanent closure. Monitor well abandonment will adhere to section 6.2 of the GMP.

BP AMERICA PRODUCTION COMPANY

GROUNDWATER FIELD DATA & LAB BTEX RESULTS

GCU # 093 UNIT E, SEC. 36, T29N, R12W REVISED DATE: November 14, 2015 Submitted by Blagg Engineering, Inc.

CANADIC	TANGU MANAG	DESTU TO 1	MELL	TOC	I CONDUCT I	-11	TEDEE DUACE		US EPA METH		**********
SAMPLE	WELL NAME	DEPTH TO	DEPTH	TDS	CONDUCT.	pH	PRODUCT	BENZENE	TOLUENE	BENZENE	TOTAL
DATE	/ NUMBER	WATER (ft)	(ft)	Ima/I)	(umhos)		(ft)	(ppb)	(ppb)	(ppb)	(ppb)
		(it)	(it)	(mg/L)	(uninos)		(11)	(bbp)	(ppo)	(рро)	(bpb)
06/11/96	WP #1	13.96	18.00	1,750	1,700	6.5	T	288	102	557	5,644
06/24/97		13.39	00102	110000	1,700	6.7		587	111	389	840
09/17/97		13.20			1,700	6.9		ND	164	20.6	380.9
12/19/97		14.03			1,600	7.2		ND	0.4	3.8	55.1
02/24/98		14.58			1,500	7.1		6.5	ND	147	20.4
02/18/99		16.15			2,100	6.5		1.5	1.5	5.5	55.2
06/11/96	MW#2	12.43	17.50	650	800	7.4		ND	0.64	ND	3.52
06/11/96	MW#3	14.50	20.00	2,490	2,100	7.1		208	28.3	55.3	132.06
06/24/97	111111111	15,30	20100	2,100	2,700	7.0		1,207	346	446	921
06/08/98		15.31			2,100	7.0		415	232	35.7	133.9
06/22/99		14.04			2,200	7.2		266	129	54.5	142.9
05/24/00		15.47			2,100	7.2		320	72	38	55
03/19/03		15,70			2,100	7.25		16	2.2	19	9.6
08/19/03		15.60			2,400	6.93		0.62	ND	0.81	ND
11/19/03		15.30			2,600	7.02		ND	ND	1.2	ND
03/29/04		15.65			2,500	7.06		4.4	0.86	8.1	3.0
06/24/04		15.42			2,600	6.96		1.5	ND	5	1.4
12/22/04		15.33			2,500	7.00		1.0	ND	2.8	ND
06/24/97	MW#4	13.67	18.00		2.600	7.1		15,300	5,380	809	6,590
06/08/98		13.89	10.00	7 4 7 2	2,800	7.0		201	37.3	91.4	367.8
06/22/99	MW#4R	15.30	20.00		1,600	6.9		1.9	3.2	0.9	9.2
08/30/99	100	13.99			1,500	7.2		1	0.8	ND	0.9
12/13/99		14.43			1,800	7.3		2.7	6.6	ND	13.7
02/25/00	PARTIE	14,56			1,800	7.6		ND	ND	ND	ND
06/24/97	MW#5	13.83	18.00		2,000	7.2		6.9	2.9	0.8	8.2
09/17/97		13.87		1117	1,700	6.9		0.3	ND	0.2	0.8
12/19/97		14.46			1,900	7.3		ND	ND	0.3	0.4
02/24/98		14.56			1,700	7.2		10.5	4.0	ND	6.3
06/08/98	1	13.90			1,700	7.0		2.4	0.5	0.8	4.6
09/28/98		13.61			2,000	7.3		0.2	ND	ND	0.4
12/17/98		13.93			1,600	7.1		ND	0.4	0.3	3.5
02/18/99		14.38			1,700	7.3		5.6	6.5	3.8	11.3
10000							-				

BP AMERICA PRODUCTION COMPANY

GROUNDWATER FIELD DATA & LAB BTEX RESULTS

GCU # 093 UNIT E, SEC. 36, T29N, R12W REVISED DATE: November 14, 2015 Submitted by Blagg Engineering, Inc.

								BTEX	US EPA METH	OD 8021B or	8260B
SAMPLE DATE	WELL NAME / NUMBER	DEPTH TO WATER	WELL DEPTH	TDS	CONDUCT.	рН	FREE PHASE PRODUCT	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL
		(ft)	(ft)	(mg/L)	(umhos)		(ft)	(ppb)	(ppb)	(ppb)	(ppb)
05/24/00	MW #6	13.59	20.00		2,300	7.2		19	26	1.4	19.5
03/19/03		14.38		7	2,000	7.20		7.2	ND	ND	1.8
08/19/03	PAC GENE	13.62			2,500	6.89		ND	ND	ND	ND
11/19/03		13.58			2,500	7.08		160	530	27	330
03/29/04		13.87			2,200	7.09		37	29	6.3	56
06/24/04		13.70		TAR	2,500	6.98		7.5	1.4	1.9	7.3
12/22/04		13.61			2,400	7.05		6.2	ND	2.2	1.1
03/29/05		13.72			2,400	7.02		6.9	1.8	3.1	14
06/27/05		13.68			2,300	7.07		12	2.0	4.3	30
09/27/05		13.01			2,500	6.95	III III III III III III III III III II	9.1	ND	2.5	11
06/29/06		13.38			2,200	7.09		1.5	ND	1.1	6.0
10/30/06		12.91			2,400	7.05		4.8	ND	2.1	9.9
01/26/07		13.13			2,500	7.07		5.2	ND	3.0	17
03/27/12	MW #7	13.83	26.50		2,700	7.16		ND	ND	ND	ND

NOTES:

- 1) RESULTS IN BOLD RED TYPE INDICATE EXCEEDING NMWQCC STANDARDS.
- 2) RESULTS IN BOLD BLUE TYPE INDICATE BELOW NMWQCC STANDARDS AFTER PREVIOUS RESULTS IN BOLD RED TYPE EXCEEDED.

NMWQCC GROUNDWATER STANDARDS

10

750

750

620

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

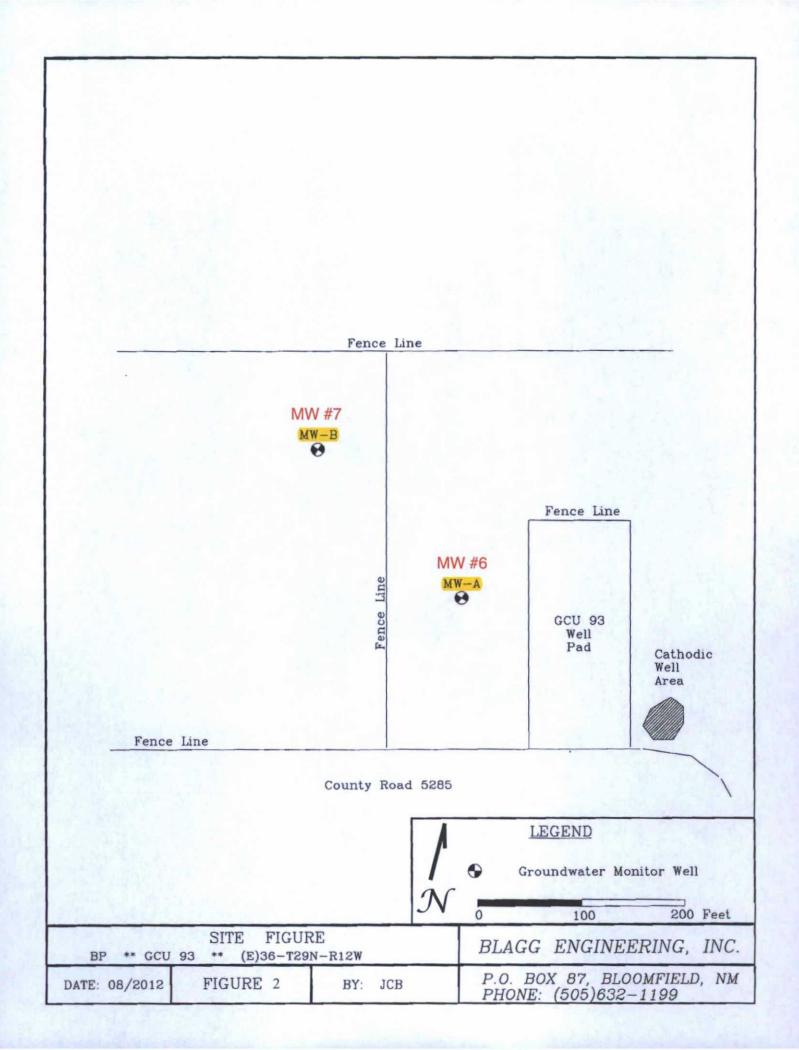
GENERAL WATER QUALITY BP AMERICA PRODUCTION COMPANY

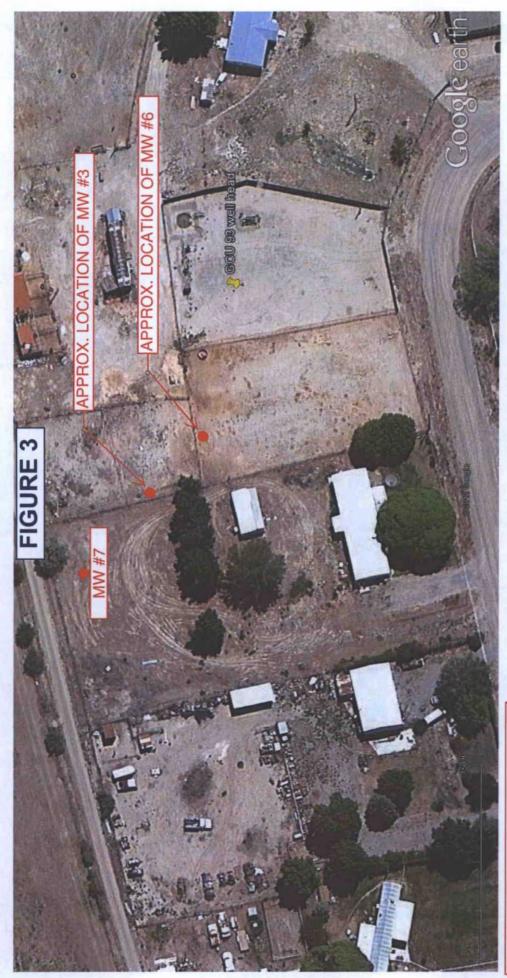
GCU # 93

SAMPLE DATES: 06/11/1996, 06/24/1997, 11/08/2012, 01/09/2013

PARAMETERS	WP # 1	MW # 2	MW#3	MW # 4	9# MW	9 # MW	WW # 7	ONITS
	06/11/96	06/11/96	06/11/96	06/27/97	06/27/97	11/08/12	01/09/13	
LAB pH	6.40	7.40	7.50	7.07	7.10	7.33	7.41	s. u.
LAB CONDUCTIVITY @ 25 C	2,240	1,010	3,680	4,765	3,410	3,100	2,200	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	1,750	099	2,490	2,380	1,700	NA NA	NA	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	1,580	629	2,490	2,362	1,697	2,550	1,670	mg/L
SODIUM ABSORPTION RATIO	NA	NA	NA	4.0	9.0	NA	NA	ratio
TOTAL ALKALINITY AS CaCO3	263	310	545	548	348	200	370	mg/L
TOTAL HARDNESS AS CACO3	1,080	244	726	1,152	1,204	AN	N A	mg/L
BICARBONATE as HCO3	263	310	545	548	348	NA	AN	mg/L
CARBONATE AS CO3	NA	NA	NA	< 1 ×	۲ ×	QN	ND	mg/L
HYDROXIDE AS OH	NA	NA	NA	- 1	^	NA	NA	mg/L
NITRATE NITROGEN	NA	NA	NA	1.0	× 1	1.6	2.2	mg/L
NITRITE NITROGEN	NA	NA	NA	< 0.001	< 0.001	ND	ND	mg/L
CHLORIDE	0.06	15.0	25.0	0.96	45.0	43	22	mg/L
FLUORIDE	NA	NA	NA	2.20	1.82	0.40	0.47	mg/L
PHOSPHATE	NA	NA	NA	1.6	1.3	ND	N	mg/L
SULFATE	898	198	1,370	1,190	930	1,400	910	mg/L
IRON	NA	NA	NA	NA	AN	NA	NA	mg/L
CALCIUM	243	89.7	259	368	413	380	350	mg/L
MAGNESIUM	116	4.84	19.3	9.99	45.0	44	31	mg/L
POTASSIUM	7.00	00.9	10.0	3.6	5.2	2.2	1.8	mg/L
SODIUM	100	130	490	310	50.2	370	190	mg/L
CATION / ANION DIFFERENCE	0.65	0.29	4.77	0.14	90.0	NA	AN	%

FIGURE 1 MW #7 MW#4R METER MW #6 GATE SEPARATOR RUN ORIGINAL BLOW PIT MW #5 € EXCAVATION 0 WELL HEAD ORIGINAL SEP. PIT EXCAVATION FENCE GATE WP#1 MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE. 100 FT. 50 0 BP AMERICA PRODUCTION COMPANY SITE PROJECT: MWINSTALLATION B LAGG ENGINEERING, I NC. CONSULTING PETROLEUM / RECLAMATION SERVICES DRAWN BY: NJV MAP P.O. BOX 87 FILENAME: GCU 93-SM1.SKF **BLOOMFIELD, NEW MEXICO 87413** REVISED: 11/14/15 NJV 02/12 PHONE: (505) 632-1199





BP - GCU # 93 Unit E, Sec. 36, T29N, R9W GPS Coord.: 36° 41' 7.90" / 108° 3' 27.50"

<Z

BLAGG ENGINEERING, INC.

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

UNIT E, SEC. 36, T29N, R12W

DRAWING: GCU 093 MW6 2000-04-28,SKF DATE: 11/14/15

MW#6

BORE / TEST HOLE REPORT

CLIENT:

LOCATION NAME: CONTRACTOR:

EQUIPMENT USED: BORING LOCATION: BP AMERICA PRODUCTION CO.

GCU # 93 API: 3004507699

BLAGG ENGINEERING, INC.
MOBILE DRILL RIG (EARTHPROBE)

172 FEET, N 77 W FROM WELL HEAD.

BORING #...... BH - 6

MW #..... 6

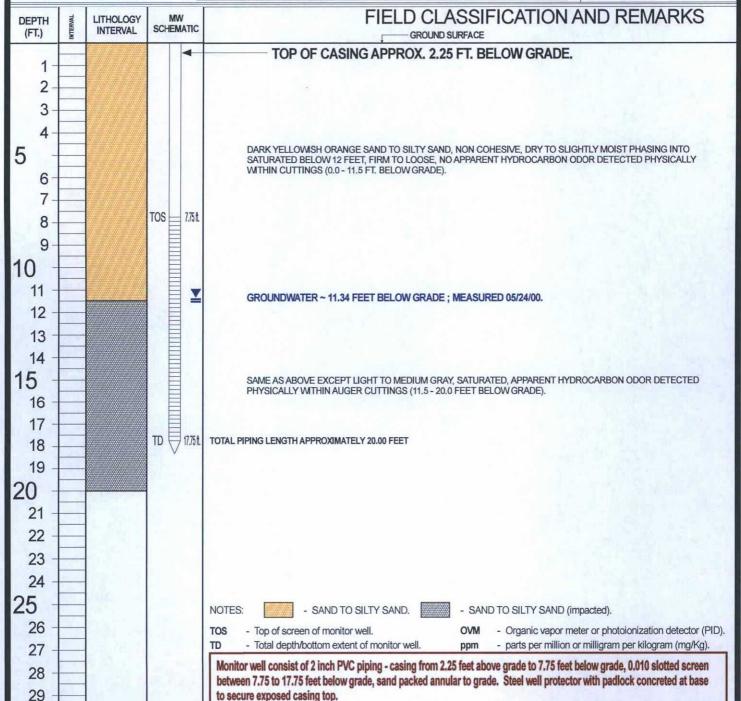
PAGE #..... 1

DATE STARTED 04/28/00

DATE FINISHED 04/28/00

OPERATOR..... JCB

LOGGED BY...... NJV



BLAGG ENGINEERING, INC.

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

MW # 7

BORE / TEST HOLE REPORT

CLIENT: LOCATION NAME: CONTRACTOR:

CONTRACTOR: EQUIPMENT USED: BORING LOCATION:

28

29

BP AMERICA PRODUCTION CO.

GCU # 93 API: 3004507699

UNIT E, SEC. 36, T29N, R12W

Monitor well consist of 2 inch PVC piping - casing from 2.70 feet above grade to 8.30 feet below grade, 0.010 slotted screen

between 8.30 to 23.30 feet below grade, sand packed annular to 7.00 feet below grade, bentonite grout between 5.00 to 7.00

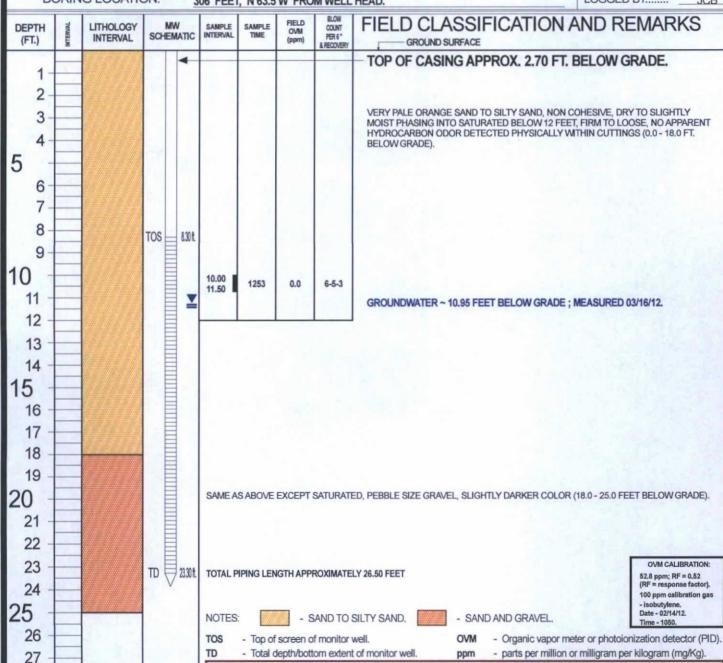
feet below grade, native clean soil surface. Steel well protector with padlock concreted at base to secure exposed casing top.

DRAWING: GCU 093 MW7 2012-02-14.SKF DATE: 11/14/15 DWN BY: NJV

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

MOBILE DRILL RIG (CME 95) - HOLLOW STEM AUGER

306 FEET, N 63.5 W FROM WELL HEAD.



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

CLIENT	BP AME	RICA PRO	D. CO.		CHAIN-OF-C	USTODY#:		N	/ A
GCU#93 UNIT E, S	EC. 36, T29N	N, R12W			LABORATOR	RY (S) USED):	HALL ENVI	RONMENTAL
Date : Filename :	March 27, 2	2012 nw log 2012-	03-27.xls				/SAMPLER: MANAGER:		1 A 1 A
Sample ID	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	рН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)
MW #7	T -	-	13.83	26.50	1145	7.16	2,700	15.5	6.25
NOTES:			INSTRU ed from well t. h = 1 ft.)	DAT			2,800 0900 X 7.48 gal./ft	3) X 3 (wellt	oores).
	or note we	II diameter	three (3) wel	rd 2".			diameter =		
waited 5 mir	nutes, then rein	nitiated pumpi	ng. Purged we	Il using 2 inc	ch submersible	electrical pur	mp , new / clea	r vinyl tubing	
and with bra	ss adjustable	flow valve atta	achment added	near sampli	ing end of tubin	g. Collected	sample for B	TEX per	
US EPA Me	thod 8021B fro	om MW#7 or	nly.					1000	
	A								
					7713			1,0194	
					pad'.	1,12,4		- 310	
Ton of carl	MA/# 7	70 feet eb							
1 op of casir	ig: MW # 7 ~ 2	./u feet above	e grade.						

on-site	10:45 AM	temp	43 F
off-site	12:00 PM	temp	42 F
sky cond.	1/4	Mostly cloud	dy
wind speed	0 - 10	direct.	sw

Analytical Report

Lab Order 1203B33

Date Reported: 4/5/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW #7

Project: GCU # 93

Collection Date: 3/27/2012 4:30:00 PM

Lab ID: 1203B33-001

Matrix: AQUEOUS Received Date: 3/29/2012 9:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	2.0	μg/L	2	4/3/2012 4:54:46 AM
Toluene	ND	2.0	μg/L	2	4/3/2012 4:54:46 AM
Ethylbenzene	ND	2.0	μg/L	2	4/3/2012 4:54:46 AM
Xylenes, Total	ND	4.0	μg/L	2	4/3/2012 4:54:46 AM
Surr: 4-Bromofluorobenzene	80.3	55-140	%REC	2	4/3/2012 4:54:46 AM

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Analytical Report Lab Order 1211399

Date Reported: 11/28/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

1211399-001

Client Sample ID: MW-A (#6)

Project: GCU 93

Lab ID:

Collection Date: 11/8/2012 12:04:00 PM Received Date: 11/9/2012 10:00:00 AM

RL Qual Units Analyses Result DF Date Analyzed **EPA METHOD 300.0: ANIONS** Analyst: JRR Fluoride 0.40 0.10 mg/L 1 11/9/2012 3:08:51 PM Chloride 43 10 mg/L 20 11/16/2012 12:39:15 AM Nitrogen, Nitrite (As N) ND 0.10 mg/L 1 11/9/2012 3:08:51 PM Bromide 0.44 0.10 mg/L 1 11/9/2012 3:08:51 PM Nitrogen, Nitrate (As N) 1.6 0.10 mg/L 1 11/9/2012 3:08:51 PM Phosphorus, Orthophosphate (As P) ND 0.50 mg/L 1 11/9/2012 3:08:51 PM Sulfate 1400 25 50 11/16/2012 12:51:40 AM mg/L **EPA METHOD 200.7: DISSOLVED METALS** Analyst: ELS Calcium 380 10 mg/L 10 11/9/2012 7:55:53 PM Magnesium 44 1.0 mg/L 1 11/9/2012 7:50:22 PM Potassium 2.2 1.0 mg/L 1 11/9/2012 7:50:22 PM Sodium 370 10 10 11/16/2012 5:11:20 PM mg/L **EPA 120.1: SPECIFIC CONDUCTANCE** Analyst: JML Conductivity umhos/cm 11/9/2012 4:39:56 PM 3100 0.010 1 SM4500-H+B: PH Analyst: JML pH 11/13/2012 1:17:34 PM 7.33 1.68 H pH units SM2320B: ALKALINITY Analyst: JML Bicarbonate (As CaCO3) 500 20 mg/L CaCO3 1 11/9/2012 4:39:56 PM Carbonate (As CaCO3) ND 2.0 mg/L CaCO3 11/9/2012 4:39:56 PM 1 Total Alkalinity (as CaCO3) 500 20 mg/L CaCO3 11/9/2012 4:39:56 PM 1 SM2540C MOD: TOTAL DISSOLVED SOLIDS Analyst: JML **Total Dissolved Solids** 2550 40.0 mg/L 11/15/2012 12:29:00 PM

Matrix: AQUEOUS

Qualifiers:

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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits 1 of 13

Analytical Report Lab Order 1301335

Date Reported: 1/18/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: MW-B (#7)

Project: GCU 93

Collection Date: 1/9/2013 1:40:00 PM

Lab ID: 1301335-003

Matrix: AQUEOUS Received Date: 1/

Received Date: 1/10/2013 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: JRR
Fluoride	0.47	0.10		mg/L	1	1/10/2013 8:33:25 PM
Chloride	22	10		mg/L	20	1/10/2013 8:45:49 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	1/10/2013 8:33:25 PM
Bromide	0.13	0.10		mg/L	1	1/10/2013 8:33:25 PM
Nitrogen, Nitrate (As N)	2.2	0.10		mg/L	1	1/10/2013 8:33:25 PM
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	1/10/2013 8:45:49 PM
Sulfate	910	10		mg/L	20	1/10/2013 8:45:49 PM
EPA METHOD 6010B: DISSOLVED M	IETALS					Analyst: ELS
Calcium	350	5.0		mg/L	5	1/14/2013 10:49:57 AM
Magnesium	31	1.0		mg/L	1	1/14/2013 10:47:19 AM
Potassium	1.8	1.0		mg/L	1	1/14/2013 10:47:19 AM
Sodium	190	5.0		mg/L	5	1/14/2013 10:49:57 AM
EPA 120.1: SPECIFIC CONDUCTANO	E					Analyst: JML
Conductivity	2200	0.010		µmhos/cm	1	1/11/2013 11:57:18 AM
SM4500-H+B: PH						Analyst: JML
рН	7.41	1.68	Н	pH units	1	1/11/2013 11:57:18 AM
SM2320B: ALKALINITY						Analyst: JML
Bicarbonate (As CaCO3)	370	20		mg/L CaCO3	1	1/11/2013 11:57:18 AM
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	1/11/2013 11:57:18 AM
Total Alkalinity (as CaCO3)	370	20		mg/L CaCO3	1	1/11/2013 11:57:18 AM
SM2540C MOD: TOTAL DISSOLVED	SOLIDS					Analyst: KS
Total Dissolved Solids	1670	40.0		mg/L	1	1/17/2013 8:55:00 AM

Qualifiers:

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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits 3 of 11

Mr An VI saldding viA **ANALYSIS LABORATORY** HALL ENVIRONMENTAL Paykey: ZPEACJDENV 4901 Hawkins NE - Albuquerque, NM 87109 Jeff Peace, 200 Energy Court, Farmington, NM 87401 Chloride (300.0) Tel. 505-345-3975 Fax 505-345-4107 www.hallenvironmental.com (AOV-im92) OYS8 Analysis Request (AOV) 803S8 8081 Pesticides / 8082 PCB's Anions (F, Cl, NO3, NO2, PO4, SO4) RCRA 8 Metals N1520106 (HA9 10 AN9) OLES BILL DIRECTLY TO BP: EDB (Method 504.1) (PH (Method 418.1) Work Order: (FPH Method 8015B (Gas/Diesel) Remarks: BTEX + MTBE + TPH (Gas only) BTEX + MTBE TMB's (8021B) > 3/28/12 1000 203833 8 HEAL No. Time 8 ON [] **NELSON VELEZ NELSON VELEZ** GCU # 93 Preservative Rush HCI & Cool Type Sample Temperature: X Yes Heceived by: I urn-Around 1 me. Project Manager Standard Project Name: 40 ml VOA - 2 Type and # Container Received by: Project #: Sampler: On Ice: Sample Request ID Level 4 (Full Validation) Chain-of-Custody Record 00 **MW #7 BLOOMFIELD, NM 87413** BLAGG ENGR. / BP AMERICA Mul Mister (505) 632-1199 Relinquished by: Relinquished by: P.O. BOX 87 □ Other Matrix WATER 10:00 Time 1630 1624 Mailing Address: QA/QC Package: Time: □ EDD (Type) email or Fax#: Accreditation: ✓ Standard O NELAP 3/38/12 Phone #: 3/27/12 Date Client: 100

	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request	(less (Vin	no ssb) eeid\se	15B (G 18.1) 14.1) 14.10 1.8082 1.8082 1.00.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	180 d 41 d 4	BTEX + MTI BTEX + MTI TPH Method TPH (Method B310 (PNA of RORA 8 Method RORA 9 Method	×		<	HWO CONTAINED FIELD FICTERED O.45 UM			Date Time Remarks: 1972 1322 Bild 13CAGs Date Time D
Turn-Around Time:	X Standard Rush		GCU 93	Project #:		Project Manager:	J. Buch	Sampler: J. B.46c	Sample Temple after 17 1. C	_#	2 x PVC COUL/4ND, -001	Cool Lago	HWD;				Matta Matter
Chain-of-Custody Record	Client: BLAGG ENGINERRING INC.	BP AMERICA	Mailing Address: P.O. Box 87	BLOOMFIELD, NM 87413		email or Fax#:	QA/QC Package: A Standard D Level 4 (Full Validation)	Other	□ EDD (Type)	Date Time Matrix Sample Request ID	4/12 1204 WATER MW-A (#6)	11 1030 11	2/20/11 Case			7	Date: Time: Relinquished by: [1322] H S-4 Date: Time: Relinquished by: [18e] Time: Relinquish

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<u>u</u>	2		109		F		/	MOZM	11	WOITAS	;		*	X	-	+	+		1				Time SONSE CONTACT: JEH FEACE Ves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
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HAI	5	www.hallenvironmental.com	4901 Hawkins NE	Tel. 505-345-3975			31.00			EDB (Metho AN9) 0168		H	+			+	+					BLAKE	Hed da
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Turn-Around Time:	pur	me:	90			Project Manager:	18	7	10	L#	į	H	t				+	+		14.		3	ar accredite
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000	A			1478			□ Level 4 (Full Validation)			Sample Request ID	intetta	6	1778	(44)			1						Dental n
Re	26		18	00	1199	5	(Full			e R		9		8			1		154			24.99) O O
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Chain-of-Custody Record	A	1	lress.	RUMFIED	S	:#x	rage:	nc	(bd.	Time	1	COO	Dic.	1340								5	Time: Reclived by: Reclived by: 1724 Church And Otto Louis frecessery, Rapples submitted to Hall Environmental may be subcontracted to die
Che	B	BP	g Ado	18	#	or Fa	Pack	ditatic	J.	F	_	_	it	13		-	-		*	1		July 1440	
	Client BLAGE ENGINEERUGE INC.		Mailing Address: P.O. Box		Phone #:	email or Fax#:	QA/QC Package:	Accreditation	□ EDD (Type)	Date	10/	12013	43	=	7							Pate:	Date:

Hall Environmental Analysis Laboratory, Inc.

WO#: 1203B33

05-Apr-12

Client:

Blagg Engineering

Project:

GCU#93

Sample ID: 5ML RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volati	les		
Client ID: PBW	Batcl	ID: R1	870	F	RunNo: 1	870				
Prep Date:	Analysis E	ate: 4/	2/2012	5	SeqNo: 5	2341	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0						- 4	and the state of	
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	16		20.00		80.5	55	140			

Sample ID: 100NG BTEX LCS	Samp	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSW	Batcl	n ID: R1	870	F	RunNo: 1	870				
Prep Date:	Analysis [)ate: 4/	2/2012	\$	SeqNo: 5	2352	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120			6
Toluene	21	1.0	20.00	0	107	80	120			
Ethylbenzene	22	1.0	20.00	0	109	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		103	55	140			

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 2 of 2



Hall Environmental Analysis Laboratory 4901 Hawkins NI: Albuquerque, NM 87105

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

Sample Log-In Check List

Clie	nt Name:	BLAGG		W	ork Ord	der l	Numb	er: 1	1203B33			
Rec	eived by/date	e: AA	03/29/12	2								
	ged By:	Michelle Garcia	3/29/2012 9:00	:00 AM				mi	tall Garrie			
	pleted By:	Michelle Garcia	3/29/2012 5:52	:25 PM				mi	hell Garrie			
Rev	iewed By: 🗆	03/3dia										
Cha	in of Cust	tody										
	Were seals				Yes		No		Not Preser	nt v		
		Custody complete?			Yes	~	No		Not Preser	nt		
		e sample delivered?			FedE	x						
Log	In						,					
		present? (see 19, for cooler s	specific information	1)	Yes	~	No		N	A		
5.	Was an atte	empt made to cool the sample	s?		Yes	~	No		N	A		
6.	Were all san	mples received at a temperatu	re of >0° C to 6.0)°C	Yes	~	No		N	A		
7.	Sample(s) in	n proper container(s)?			Yes	~	No					
8.	Sufficient sa	ample volume for indicated tes	st(s)?		Yes	V	No					
9.	Are samples	s (except VOA and ONG) prop	perly preserved?		Yes	~	No					
10.	Was preserv	vative added to bottles?			Yes		No	~	NA	١		
11.	VOA vials ha	ave zero headspace?			Yes		No		No VOA Via	s 🗸		
		ample containers received bro	ken?		Yes		No	V.				
13.		work match bottle labels? epancies on chain of custody)			Yes	~	No		the state of	reserved s checked :		
14.	Are matrices	s correctly identified on Chain	of Custody?		Yes	~	No				<2 or >12 unle	ss noted)
15.	Is it clear wh	nat analyses were requested?			Yes	~	No			Adjusted?	?	
		ding times able to be met? customer for authorization.)			Yes	~	No			Checked b	oy:	
Spe	cial Hand	ling (if applicable)										
17.	Was client n	notified of all discrepancies with	th this order?		Yes		No		N	IA 🗸		
	Person	Notified:		Date:	Innes Panille	era (Razelo	MARKAL COMMAND	Lia (ERICA)	THE PERSON NAMED IN COLUMN 1			
	By Wh	om:	"Westername Account A"	Via:	eMa	ii	Ph	none	Fax	In Person		
	Regard	ding:									No said	
	Client I	Instructions:		Control Management								
18.	Additional re	emarks:										
10	Cooler Info	rmation										
10.	Cooler No	Temp °C Condition	Seal Intact Seal	No S	eal Da	te		Signe	ed By			
	11	1.0 Good N	ot Present	V 50					4 4			

Lab Order 1211399

Date Reported: 11/28/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Sedillo Well

Project: GCU 93 Collection Date: 11/8/2012 12:30:00 PM

Lab ID: 1211399-002 Matrix: AQUEOUS Received Date: 11/9/2012 10:00:00 AM

Analyses Result DF RL Qual Units **Date Analyzed EPA METHOD 300.0: ANIONS** Analyst: JRR Fluoride 0.45 11/9/2012 3:58:30 PM 0.10 mg/L 1 Chloride 48 10 mg/L 20 11/9/2012 4:10:55 PM Nitrogen, Nitrite (As N) ND 0.10 mg/L 1 11/9/2012 3:58:30 PM Bromide 0.54 0.10 mg/L 1 11/9/2012 3:58:30 PM Nitrogen, Nitrate (As N) 4.4 0.10 mg/L 1 11/9/2012 3:58:30 PM Phosphorus, Orthophosphate (As P) ND 0.50 1 11/9/2012 3:58:30 PM mg/L 1200 25 50 11/13/2012 11:10:08 AM mg/L **EPA METHOD 200.7: DISSOLVED METALS** Analyst: ELS Calcium 360 10 mg/L 10 11/9/2012 8:14:27 PM Magnesium 34 1.0 mg/L 1 11/9/2012 7:59:38 PM Potassium 1.8 1.0 mg/L 1 11/9/2012 7:59:38 PM Sodium 200 10 10 11/9/2012 8:14:27 PM mg/L **EPA 120.1: SPECIFIC CONDUCTANCE** Analyst: JML Conductivity 2400 0.010 µmhos/cm 1 11/9/2012 5:00:13 PM SM4500-H+B: PH Analyst: JML pH 7.56 1.68 pH units 11/13/2012 1:22:03 PM H 1 SM2320B: ALKALINITY Analyst: JML Bicarbonate (As CaCO3) 180 20 mg/L CaCO3 1 11/9/2012 5:00:13 PM Carbonate (As CaCO3) ND 2.0 mg/L CaCO3 1 11/9/2012 5:00:13 PM Total Alkalinity (as CaCO3) 20 mg/L CaCO3 11/9/2012 5:00:13 PM 1 SM2540C MOD: TOTAL DISSOLVED SOLIDS Analyst: JML **Total Dissolved Solids** 1970 20.0 11/15/2012 12:29:00 PM mg/L

Qualifiers:

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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits 2 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:

Blagg Engineering

Sample ID	MB	Samp	Гуре: М	BLK	Tes	tCode: E	PA Method	200.7: Disso	lved Meta	Is	
Client ID:	PBW	Batc	h ID: Re	815	F	RunNo: 6	815				
Prep Date:		Analysis [Date: 1	1/9/2012		SeqNo: 1	97083	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		ND	1.0							A THURS	
Magnesium		ND	1.0								
Potassium		ND	1.0								
Sodium		ND	1.0							No. 10	d.h
Sample ID	LCS	Samp	Гуре: LC	s	Tes	tCode: E	PA Method	200.7: Disso	lved Meta	ls	
Client ID:	LCSW	Batc	h ID: Re	815	F	RunNo: 6	815				
Prep Date:		Analysis [Date: 1	1/9/2012	5	SeqNo: 1	97084	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		52	1.0	50.00	0	105	85	115	1.50		
Magnesium		53	1.0	50.00	0	106	85	115			
Potassium		51	1.0	50.00	0	101	85	115			
Sodium		52	1.0	50.00	0.07959	103	85	115		3254	
Sample ID	1211252-007DMS	Samp	уре: М	S	Tes	tCode: El	PA Method	200.7: Disso	ved Meta	ls	46 1
Client ID:	BatchQC	Batcl	n ID: Re	815	F	RunNo: 6	815				
Prep Date:		Analysis D	Date: 1	1/9/2012	5	SeqNo: 1	97109	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	717	53	1.0	50.00	0	106	70	130			MAL.
Magnesium		53	1.0	50.00	0	106	70	130			
Potassium		51	1.0	50.00	0	102	70	130			
Sample ID	1211252-007DMSI	Samp1	ype: M	SD	Tes	tCode: El	PA Method	200.7: Dissol	ved Meta	s	UT I
Client ID:	BatchQC	Batcl	n ID: Re	815	F	RunNo: 6	815				
Prep Date:		Analysis D	ate: 1	1/9/2012	8	SeqNo: 1	97110	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	JII KIND Y	55	1.0	50.00	0	111	70	130	4.56	20	Je N
Magnesium		56	1.0	50.00	0	112	70	130	5.66	20	
Potassium	All the same of the	54	1.0	50.00	0	109	70	130	6.51	20	
Sample ID	1211252-007DMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	200.7: Dissol	ved Meta	s	
Client ID:	BatchQC	Batch	ID: Re	815	F	RunNo: 6	815				
		Analysis D	ate: 1	1/9/2012		SeqNo: 1	97146	Units: mg/L			
Prep Date:		, and join a									
Prep Date: Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

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

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

Page 3 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:

Blagg Engineering

Project:	GCU 93										
Sample ID	1211252-007DMSE	SampT	ype: M	SD	Tes	stCode: E	PA Method	200.7: Disso	ved Meta	ls	
Client ID:	BatchQC	Batch	ID: Re	6815		RunNo: 6	815				
Prep Date:		Analysis D	ate: 1	1/9/2012		SeqNo: 1	97147	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		55	1.0	50.00	0.1442	110	70	130	4.91	20	
Sample ID	МВ	SampT	ype: MI	BLK	Tes	stCode: E	PA Method	200.7: Dissol	ved Meta	ls	TI, I
Client ID:	PBW	Batch	ID: Re	6815		RunNo: 6	815				
Prep Date:		Analysis D	ate: 1	1/9/2012		SeqNo: 1	97156	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		ND	1.0							THE RES	
Magnesium		ND	1.0								
Potassium		ND	1.0								
Sodium	All Inc.	ND	1.0		E VERLEY	V.	ملحمة		A Long		e s
Sample ID	LCS	SampT	ype: LC	cs	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls	1.14
Client ID:	LCSW	Batch	ID: RE	8815	1	RunNo: 6	815				
Prep Date:		Analysis D	ate: 1	1/9/2012		SeqNo: 1	97157	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	Mar Ar	51	1.0	50.00	0	103	85	115			
Magnesium		53	1.0	50.00	0	106	85	115			
Potassium		51	1.0	50.00	0	103	85	115			
Sodium	PART TO	53	1.0	50.00	0	105	85	115			
Sample ID	МВ	SampT	уре: МІ	BLK	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls	1
Client ID:	PBW	Batch	ID: RE	3967	F	RunNo: 6	967				
Prep Date:		Analysis D	ate: 1	1/16/2012		SeqNo: 2	01544	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium		ND	1.0								
Sample ID	LCS	SampT	ype: LC	s	Tes	tCode: E	PA Method	200.7: Dissol	ved Meta	ls	
Client ID:	LCSW	Batch	ID: RE	3967	F	RunNo: 6	967				
Prep Date:		Analysis D	ate: 1	1/16/2012		SeqNo: 2	01545	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%PEC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arialyte		Result	ru.	SPK value	SPK Rei Val	70REC	LOWLIMIL	riigiiLiiiit	MILD	KEDLIMI	Qual

Qualifiers:

Sodium

Value exceeds Maximum Contaminant Level.

50

1.0

50.00

- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH greater than 2

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Not Detected at the Reporting Limit

101

0

115

Page 4 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#:

1211399 28-Nov-12

Client: Project: Blagg Engineering

GCU 93

Sample ID MB	SampType: MBLK Batch ID: R6829			Tes						
Client ID: PBW				F	RunNo: 6					
Prep Date:	Analysis D	ate: 11	1/9/2012	5	SeqNo: 1	97608	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
luoride	ND	0.10				1000				
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50			4.49	5.8		1/2		
Sample ID LCS	SampT	ype: LC	s	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: LCSW	Batch	ID: R6	829	F	RunNo: 6	829				
Prep Date:	Analysis D	ate: 11	1/9/2012	5	SegNo: 1	97609	Units: mg/L			

- Controp	Jpc. me	_							
Batc	h ID: R6	829	F	RunNo: 6	829				
Analysis [Date: 11	1/9/2012	SeqNo: 197609			Units: mg/L			
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
0.48	0.10	0.5000	0	95.5	90	110		1 10	100
4.8	0.50	5.000	0	95.2	90	110			
0.96	0.10	1.000	0	95.8	90	110			
2.3	0.10	2.500	0	92.7	90	110			
2.5	0.10	2.500	0	98.5	90	110			
4.9	0.50	5.000	0	98.7	90	110			
	Result 0.48 4.8 0.96 2.3 2.5	Batch ID: R6 Analysis Date: 11 Result PQL 0.48 0.10 4.8 0.50 0.96 0.10 2.3 0.10 2.5 0.10	0.48 0.10 0.5000 4.8 0.50 5.000 0.96 0.10 1.000 2.3 0.10 2.500 2.5 0.10 2.500	Batch ID: R6829 Analysis Date: 11/9/2012 Result PQL SPK value SPK Ref Val 0.48 0.10 0.5000 0 4.8 0.50 5.000 0 0.96 0.10 1.000 0 2.3 0.10 2.500 0 2.5 0.10 2.500 0	Batch ID: R6829 RunNo: 6 Analysis Date: 11/9/2012 SeqNo: 1 Result PQL SPK value SPK Ref Val %REC 0.48 0.10 0.5000 0 95.5 4.8 0.50 5.000 0 95.2 0.96 0.10 1.000 0 95.8 2.3 0.10 2.500 0 92.7 2.5 0.10 2.500 0 98.5	Batch ID: Result Result PQL SPK value SPK Ref Val %REC LowLimit Result PQL SPK value SPK Ref Val %REC LowLimit 0.48 0.10 0.5000 0 95.5 90 4.8 0.50 5.000 0 95.2 90 0.96 0.10 1.000 0 95.8 90 2.3 0.10 2.500 0 92.7 90 2.5 0.10 2.500 0 98.5 90	Batch ID: R6829 RunNo: 6829 Analysis Date: 11/9/2012 SeqNo: 197609 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 0.48 0.10 0.5000 0 95.5 90 110 4.8 0.50 5.000 0 95.2 90 110 0.96 0.10 1.000 0 95.8 90 110 2.3 0.10 2.500 0 92.7 90 110 2.5 0.10 2.500 0 98.5 90 110	Batch ID: Result RunNo: 6829 Analysis Date: 11/9/2012 SeqNo: 197609 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD 0.48 0.10 0.5000 0 95.5 90 110 4.8 0.50 5.000 0 95.2 90 110 0.96 0.10 1.000 0 95.8 90 110 2.3 0.10 2.500 0 92.7 90 110 2.5 0.10 2.500 0 98.5 90 110	Batch ID: R6829 RunNo: 6829 Analysis Date: 11/9/2012 SeqNo: 197609 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 0.48 0.10 0.5000 0 95.5 90 110 4.8 0.50 5.000 0 95.2 90 110 0.96 0.10 1.000 0 95.8 90 110 2.3 0.10 2.500 0 92.7 90 110 2.5 0.10 2.500 0 98.5 90 110

Sample ID 1211349-001AMS	SampType: MS Batch ID: R6829			Tes	tCode: E	3				
Client ID: BatchQC				F	RunNo: 6	829				
Prep Date:	Analysis D	ate: 11	/9/2012	5	SeqNo: 1	97612	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.1	0.10	0.5000	0.6322	87.4	76.6	110	7-1-1		
Nitrogen, Nitrite (As N)	1.1	0.10	1.000	0	107	72.5	111			
Bromide	2.7	0.10	2.500	0	106	83.3	107			
Nitrogen, Nitrate (As N)	4.4	0.10	2.500	1.616	113	90.4	113			
Phosphorus, Orthophosphate (As P	8.0	0.50	5.000	2.570	108	74.5	115			

Sample ID 1211349-001AMS	ample ID 1211349-001AMSD SampType: MSD					TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R6829			F	RunNo: 6	829							
Prep Date:	Analysis Da	ate: 11	1/9/2012		SeqNo: 1	97613	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Fluoride	1.2	0.10	0.5000	0.6322	112	76.6	110	10.9	20	S			
Nitrogen, Nitrite (As N)	1.1	0.10	1.000	0	108	72.5	111	0.903	20				
Bromide	2.7	0.10	2.500	0	110	83.3	107	3.40	20	S			
Nitrogen, Nitrate (As N)	4.5	0.10	2.500	1.616	114	90.4	113	0.702	20	S			
Phosphorus, Orthophosphate (As P	8.0	0.50	5.000	2.570	109	74.5	115	0.616	20				

Qualifiers:

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

В Analyte detected in the associated Method Blank

RPD outside accepted recovery limits

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

Page 5 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:

Blagg Engineering

Project:

GCU 93

Sample ID MB	SampType: MBLK				tCode: E	3				
Client ID: PBW	Batc	h ID: R6	829	F	RunNo: 6	829				
Prep Date:	Analysis [Date: 11	/9/2012	5	SeqNo: 1	97692	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10		77 7 7 7						
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50		AND BY		101		Vi Ju	E LOUIS	
Sample ID LCS	Samp	ype: LC	s	Tes	tCode: E	PA Method	300.0: Anions		S PAIR WAY	
Client ID: LCSW	Batc	h ID: R6	829	F	RunNo: 6	829				

Samp	ype: LC	S	Tes	(Code: E	PA Method	300.0: Anion:	S		
Batc	h ID: R6	829	F	RunNo: 6					
Analysis [Date: 11	1/9/2012	5	SeqNo: 1	97693	Units: mg/L			
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
0.51	0.10	0.5000	0	102	90	110	0-1-0		
4.8	0.50	5.000	0	95.9	90	110			
0.96	0.10	1.000	0	96.3	90	110			
2.4	0.10	2.500	0	94.9	90	110			
2.4	0.10	2.500	0	97.9	90	110			
5.2	0.50	5.000	0	104	90	110			
	Analysis I Result 0.51 4.8 0.96 2.4 2.4	Batch ID: R6 Analysis Date: 11 Result PQL 0.51 0.10 4.8 0.50 0.96 0.10 2.4 0.10 2.4 0.10	0.51 0.10 0.5000 4.8 0.50 5.000 0.96 0.10 1.000 2.4 0.10 2.500 2.4 0.10 2.500	Batch ID: R6829 F Analysis Date: 11/9/2012 S Result PQL SPK value SPK Ref Val 0.51 0.10 0.5000 0 4.8 0.50 5.000 0 0.96 0.10 1.000 0 2.4 0.10 2.500 0 2.4 0.10 2.500 0	Batch ID: R6829 RunNo: 6 Analysis Date: 11/9/2012 SeqNo: 1 Result PQL SPK value SPK Ref Val %REC 0.51 0.10 0.5000 0 102 4.8 0.50 5.000 0 95.9 0.96 0.10 1.000 0 96.3 2.4 0.10 2.500 0 94.9 2.4 0.10 2.500 0 97.9	Batch ID: R6829 RunNo: 6829 Analysis Date: 11/9/2012 SeqNo: 197693 Result PQL SPK value SPK Ref Val %REC LowLimit 0.51 0.10 0.5000 0 102 90 4.8 0.50 5.000 0 95.9 90 0.96 0.10 1.000 0 96.3 90 2.4 0.10 2.500 0 94.9 90 2.4 0.10 2.500 0 97.9 90	Batch ID: R6829 RunNo: 6829 Analysis Date: 11/9/2012 SeqNo: 197693 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 0.51 0.10 0.5000 0 102 90 110 4.8 0.50 5.000 0 95.9 90 110 0.96 0.10 1.000 0 96.3 90 110 2.4 0.10 2.500 0 94.9 90 110 2.4 0.10 2.500 0 97.9 90 110	Batch ID: R6829 RunNo: 6829 Analysis Date: 11/9/2012 SeqNo: 197693 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD 0.51 0.10 0.5000 0 102 90 110 4.8 0.50 5.000 0 95.9 90 110 0.96 0.10 1.000 0 96.3 90 110 2.4 0.10 2.500 0 94.9 90 110 2.4 0.10 2.500 0 97.9 90 110	Batch ID: R6829 RunNo: 6829 Analysis Date: 11/9/2012 SeqNo: 197693 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 0.51 0.10 0.5000 0 102 90 110 4.8 0.50 5.000 0 95.9 90 110 0.96 0.10 1.000 0 96.3 90 110 2.4 0.10 2.500 0 94.9 90 110 2.4 0.10 2.500 0 97.9 90 110

Sample ID 1211400-004EMS	SampType: MS			Tes	S					
Client ID: BatchQC	Batch	ID: R6	829	F	RunNo: 6	829				
Prep Date:	Analysis Date: 11/9/2012			8	SeqNo: 1	97695	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.1	0.10	0.5000	0.6205	97.8	76.6	110			14171
Nitrogen, Nitrite (As N)	1.9	0.10	1.000	0.8390	109	72.5	111			
Bromide	4.9	0.10	2.500	2.532	93.4	83.3	107			
Nitrogen, Nitrate (As N)	5.2	0.10	2.500	2.603	105	90.4	113			

Sample ID 1211400-004EM	TestCode: EPA Method 300.0: Anions									
Client ID: BatchQC	Batch	ID: R6	829	F	RunNo: 6	829				
Prep Date:	Analysis Date: 11/9/2012			SeqNo: 197696			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.1	0.10	0.5000	0.6205	99.6	76.6	110	0.817	20	
Nitrogen, Nitrite (As N)	1.9	0.10	1.000	0.8390	111	72.5	111	1.09	20	
Bromide	4.9	0.10	2.500	2.532	92.8	83.3	107	0.309	20	
Nitrogen, Nitrate (As N)	5.3	0.10	2.500	2.603	107	90.4	113	0.661	20	

Qualifiers:

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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

- ND Not Detected at the Reporting Limit
- Page 6 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:	Blagg Engineering
Projects	GCI103

Sample ID 1211406-001AMS	SampT	ype: MS	5	Tes	tCode: E	PA Method	300.0: Anions	S		
Client ID: BatchQC	Batch	n ID: R6	829	F	RunNo: 6	829				
Prep Date:	Analysis D	Date: 11	1/9/2012	5	SeqNo: 1	97699	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0.07520	94.9	76.6	110		THE WAY	
Chloride	6.6	0.50	5.000	1.783	95.5	87.8	111			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.5	72.5	111			
Bromide	2.3	0.10	2.500	0	93.1	83.3	107			
Nitrogen, Nitrate (As N)	4.9	0.10	2.500	2.235	105	90.4	113			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	74.5	115			ibid
Sample ID 1211406-001AMSI	SampT	ype: MS	SD	Tes	tCode: E	PA Method	300.0: Anions	5	MET 1	
Client ID: BatchQC	Batch	n ID: R6	829	F	RunNo: 6	829				
Prep Date:	Analysis D	ate: 11	1/9/2012		SeqNo: 1	97700	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
luoride	0.55	0.10	0.5000	0.07520	94.5	76.6	110	0.292	20	

Prep Date:	Analysis I	Date: 11	1/9/2012		SeqNo: 1	97700	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0.07520	94.5	76.6	110	0.292	20	
Chloride	6.6	0.50	5.000	1.783	95.4	87.8	111	0.0732	20	
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.3	72.5	111	2.36	20	
Bromide	2.3	0.10	2.500	0	91.4	83.3	107	1.81	20	
Nitrogen, Nitrate (As N)	4.9	0.10	2.500	2.235	105	90.4	113	0.0824	20	
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	74.5	115	0.0179	20	

Sample ID MB	SampT	ype: MI	BLK	Tes	tCode: E	PA Method	300.0: Anion	s		
Client ID: PBW	Batch	ID: Re	8888	F	RunNo: 6	8888				
Prep Date:	Analysis D	ate: 1	1/13/2012	5	SeqNo: 1	99330	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50				714	1			1470

Sulfate		10	0.50	10.00	0	103	90	110	70101 12	TH DEITH	Quui
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Prep Date:		Analysis D	ate: 11	/13/2012	8	SeqNo: 1	99331	Units: mg/L			
Client ID:	LCSW	Batch	ID: R6	888	F	RunNo: 6	8888				
Sample ID	LCS	SampT	ype: LC	S	Tes	tCode: E	PA Method	300.0: Anion	s		

Sample ID MB	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	300.0: Anion	s		
Client ID: PBW	Batch	ID: R6	929	F	RunNo: 6	6929				
Prep Date:	Analysis D	ate: 11	1/15/2012	S	SeqNo: 2	200593	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50							1.5	
Sulfate	ND	0.50								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits

Page 7 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:

Blagg Engineering

Project:

GCU 93

Sample ID LCS	SampT	SampType: LCS			TestCode: EPA Method 300.0: Anions						
Client ID: LCSW	Batch	Batch ID: R6929			RunNo: 6	929					
Prep Date:	Analysis D	ate: 11	1/15/2012	8	SeqNo: 2	00594	Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	4.7	0.50	5.000	0	94.7	90	110				
Sulfate	9.5	0.50	10.00	0	95.0	90	110				

Qualifiers:

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

B Analyte detected in the associated Method Blank

RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 8 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:

Blagg Engineering

Project:

GCU 93

Sample ID 1211376-001d dup

SampType: DUP

TestCode: EPA 120.1: Specific Conductance

Client ID: **BatchQC**

Batch ID: R6832

RunNo: 6832

Prep Date:

Analysis Date: 11/9/2012

SeqNo: 197899

Units: µmhos/cm

Analyte

Result PQL

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit** Qual 0.477

Conductivity

0.010 440

20

Sample ID 1211406-002a dup

SampType: DUP

TestCode: EPA 120.1: Specific Conductance

Client ID: BatchQC Batch ID: R6832

RunNo: 6832

Units: µmhos/cm

Prep Date:

Analysis Date: 11/9/2012

SeqNo: 197913

Qual

Analyte

PQL

SPK value SPK Ref Val %REC LowLimit

%RPD HighLimit

RPDLimit

Conductivity

0.010 180

0.0560

20

Qualifiers:

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

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

Page 9 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:

Blagg Engineering

Project:

GCU 93

Sample ID 1211376-001d dup

SampType: DUP

TestCode: SM4500-H+B: pH

Client ID: BatchQC Batch ID: R6832

RunNo: 6832

Prep Date:

Analysis Date: 11/9/2012

SeqNo: 197922

Units: pH units

HighLimit

Analyte pH

Result PQL

7.58 1.68

SPK value SPK Ref Val %REC LowLimit

RPDLimit %RPD

Qual H

Sample ID 1211406-002a dup

SampType: DUP

TestCode: SM4500-H+B: pH

Client ID: BatchQC Batch ID: R6832

RunNo: 6832

Prep Date:

Analysis Date: 11/9/2012

SeqNo: 197951

Units: pH units

Analyte

SPK value SPK Ref Val %REC LowLimit

%RPD

RPDLimit Qual

рН

7.99 1.68

HighLimit

Н

Sample ID 1211501-001c dup

SampType: DUP

TestCode: SM4500-H+B: pH

Client ID: BatchQC

Batch ID: R6865 Analysis Date: 11/13/2012 RunNo: 6865 SegNo: 198754

Units: pH units

%RPD

Analyte

рН

Prep Date:

8.42

1.68

SPK value SPK Ref Val %REC LowLimit

HighLimit

RPDLimit

Qual

Qualifiers:

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

Analyte detected in the associated Method Blank

RPD outside accepted recovery limits

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

Page 10 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:

Blagg Engineering

Project:

GCU 93

Sample ID
Client ID:

SampType: MBLK

TestCode: SM2320B: Alkalinity

mb-1 PBW

Batch ID: R6832

RunNo: 6832

HighLimit

%RPD

Prep Date:

Analysis Date: 11/9/2012 PQL

SeqNo: 197868

Units: mg/L CaCO3

RPDLimit Qual

Analyte Total Alkalinity (as CaCO3)

ND 20

Result

SampType: LCS TestCode: SM2320B: Alkalinity

SPK value SPK Ref Val %REC LowLimit

Sample ID Ics-1 Client ID: LCSW

Batch ID: R6832

RunNo: 6832

Prep Date:

Analysis Date: 11/9/2012

SeqNo: 197869

Units: mg/L CaCO3

RPDLimit

Analyte Total Alkalinity (as CaCO3)

PQL 81 20 SPK value SPK Ref Val %REC 80.00 101

LowLimit HighLimit 88.1

%RPD

Qual

Sample ID 1211383-001b ms

SampType: MS

TestCode: SM2320B: Alkalinity

104

Client ID: BatchQC

Batch ID: R6832

RunNo: 6832

Units: mg/L CaCO3

Prep Date:

Analysis Date: 11/9/2012

200

SeaNo: 197872

HighLimit

Analyte Total Alkalinity (as CaCO3)

Client ID: BatchQC

Result PQL

20

SPK value SPK Ref Val %REC 127.9

LowLimit 62.6 %RPD

RPDLimit Qual

Sample ID 1211383-001b msd

SampType: MSD Batch ID: R6832 TestCode: SM2320B: Alkalinity

RunNo: 6832

Prep Date:

Analysis Date: 11/9/2012

80.00

SegNo: 197873

Units: mg/L CaCO3

RPDLimit

Qual

Analyte Total Alkalinity (as CaCO3)

Sample ID mb-2

Result PQL 200 20 80.00

SPK value SPK Ref Val %REC LowLimit 127.9 91.0

59.9

HighLimit %RPD 111 0.120

10

SampType: MBLK

TestCode: SM2320B: Alkalinity

RunNo: 6832

Client ID: PBW Prep Date:

Batch ID: R6832

SeqNo: 197889

Units: mg/L CaCO3

Analyte

Analysis Date: 11/9/2012

Result PQL SPK value SPK Ref Val %REC LowLimit

Qual

ND

%RPD

20

HighLimit

RPDLimit

Total Alkalinity (as CaCO3)

SampType: LCS

TestCode: SM2320B: Alkalinity

RPDLimit

Client ID: LCSW Prep Date:

Sample ID Ics-2

Batch ID: R6832

PQL

20

Analysis Date: 11/9/2012

80.00

80.00

SPK value SPK Ref Val %REC

RunNo: 6832 SeqNo: 197890

Units: mg/L CaCO3

%RPD

%RPD

Qual

Analyte

Total Alkalinity (as CaCO3)

Sample ID 1211400-001e ms

SampType: MS

Result

Result

390

81

101

HighLimit

HighLimit

TestCode: SM2320B: Alkalinity

Client ID: BatchQC Prep Date:

Batch ID: R6832

Analysis Date: 11/9/2012

PQL

20

RunNo: 6832

SPK value SPK Ref Val %REC LowLimit

325.0

SeqNo: 197892

62.6

LowLimit

88.1

Units: mg/L CaCO3

110

104

RPDLimit Qual

Analyte Total Alkalinity (as CaCO3)

Qualifiers: Value exceeds Maximum Contaminant Level.

Value above quantitation range

Sample pH greater than 2

Analyte detected in the associated Method Blank B

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

86.3

Page 11 of 13

Analyte detected below quantitation limits

RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

Qual

28-Nov-12

Client:

Blagg Engineering

Project:

GCU 93

Sample ID 1211400-001e msd Client ID:

SampType: MSD

TestCode: SM2320B: Alkalinity

BatchQC

Batch ID: R6832

RunNo: 6832

59.9

Prep Date:

Analysis Date: 11/9/2012

SeqNo: 197893

Units: mg/L CaCO3

Analyte Total Alkalinity (as CaCO3) Result 390 PQL SPK value SPK Ref Val %REC LowLimit 20 80.00

325.0

87.2

HighLimit

111

0.183

RPDLimit %RPD

10

Value exceeds Maximum Contaminant Level.

Value above quantitation range

Analyte detected below quantitation limits

Sample pH greater than 2

Analyte detected in the associated Method Blank B

Holding times for preparation or analysis exceeded H

RPD outside accepted recovery limits

Not Detected at the Reporting Limit

Page 12 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1211399

28-Nov-12

Client:

Blagg Engineering

Project:

GCU 93

Sample ID MB-4820

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: **PBW**

Prep Date: 11/14/2012

Batch ID: 4820

PQL

RunNo: 6916

Analysis Date: 11/15/2012

SeqNo: 200217

Units: mg/L HighLimit

RPDLimit

Qual

Total Dissolved Solids

ND 20.0

SampType: LCS

%RPD

Sample ID LCS-4820

Prep Date:

Analyte

RunNo: 6916

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

LCSW

Batch ID: 4820

Units: mg/L

120

Result

Analysis Date: 11/15/2012

20.0

SeqNo: 200218

HighLimit

Analyte

PQL Result

SPK value SPK Ref Val %REC

SPK value SPK Ref Val %REC LowLimit

LowLimit

%RPD **RPDLimit**

Qual

Total Dissolved Solids

1010

1000

101 0

80

Sample ID 1211448-003AMS

11/14/2012

SampType: MS

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

BatchQC

Batch ID: 4820

RunNo: 6916

Units: mg/L

Analyte

Prep Date: 11/14/2012

Analysis Date: 11/15/2012

SPK value SPK Ref Val %REC

SeqNo: 200238 LowLimit

HighLimit

%RPD

Total Dissolved Solids

PQL 20.0

Analysis Date: 11/15/2012

PQL

20.0

372.0 1000

100

120

RPDLimit Qual

Sample ID 1211448-003AMSD

SampType: MSD

1000

TestCode: SM2540C MOD: Total Dissolved Solids RunNo: 6916

80

Units: mg/L

Qual

Client ID: Prep Date: 11/14/2012

Analyte

Total Dissolved Solids

BatchQC

Batch ID: 4820

Result

1390

Result

1380

372.0

SegNo: 200239

102

SPK value SPK Ref Val %REC LowLimit

HighLimit 120

%RPD 0.868

RPDLimit 20

Qualifiers:

- Value exceeds Maximum Contaminant Level,
- Value above quantitation range E
- Analyte detected below quantitation limits
- Sample pH greater than 2

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded H Not Detected at the Reporting Limit
 - Page 13 of 13
- RPD outside accepted recovery limits



riau Environmeniai Analysis Laboratory 4901 Hawkins NE

Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-410;

Sample Log-In Check List

Website: www.hallenvironmental.com

Client Name: BLAGC	Work Order Number: 1211399
Received by/date: 1/09/12	
Logged By: Ashley Gallegos 11/9/2012 10:00:00 A	AM AG
Completed By: Ashley Gallegos 11/9/2012 11:30:46 A	AM A
Reviewed By: 10 11 09 12	
Chain of Custody	
1. Were seals intact?	Yes ☐ No ☐ Not Present 🗹
2. Is Chain of Custody complete?	Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered?	Client
Log In	
4. Coolers are present? (see 19. for cooler specific information)	Yes ☑ No □ NA □
5. Was an attempt made to cool the samples?	Yes ☑ No □ NA □
6. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑ No □ NA □
7. Sample(s) in proper container(s)?	Yes ₩ No □
8. Sufficient sample volume for indicated test(s)?	Yes V No
Are samples (except VOA and ONG) properly preserved?	Yes ☑ No □
10. Was preservative added to bottles?	Yes □ No ☑ NA □
11. VOA vials have zero headspace?	Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken?	Yes No 🗹
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ✓ No ☐ # of preserved bottles checked for pH:
14. Are matrices correctly identified on Chain of Custody?	Yes ✓ No ☐ (②or >12 unless noted)
15, Is it clear what analyses were requested?	Yes ✓ No ☐ Adjusted?
16. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ✓ No ☐ Checked by: ☐
Special Handling (if applicable)	
17. Was client notified of all discrepancies with this order?	Yes □ No □ NA 🗹
Person Notified: Date: By Whom: Via:	□ eMail □ Phone □ Fax □ In Person
Regarding: Client Instructions:	
18. Additional remarks:	
40.0-1-15	
19. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No	Seal Date Signed By
1 1.0 Good Yes	

Hall Environmental Analysis Laboratory, Inc.

8.4

0.92

2.4

3.5

5.2

0.50

0.10

0.10

0.10

0.50

5.000

1.000

2.500

5.000

WO#: 1301335

18-Jan-13

Client:

Blagg Engineering

Project:

GCU 93

Sample ID MB	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	300.0: Anion:	S		
Client ID: PBW	Batc	h ID: R7	989	F	RunNo: 7	989				
Prep Date:	Analysis [Date: 1/	10/2013	5	SeqNo: 2	31137	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10							7-2-	
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								State !
Sample ID LCS	Samp	ype: LC	S	Tes	tCode: El	PA Method	300.0: Anions	s	THE PERSON	Hy Sh
Client ID: LCSW	Batcl	h ID: R7	989	F	RunNo: 7	989				
Prep Date:	Analysis E	Date: 1/	10/2013	8	SeqNo: 2	31138	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.4	90	110		271	
Chloride	4.8	0.50	5.000	0	95.0	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	92.3	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.8	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	101	90	110			
Sulfate	9.5	0.50	10.00	0	95.0	90	110			
Sample ID 1301331-001CMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	300.0: Anions	s		STATE
Client ID: BatchQC	Batch	n ID: R7	989	F	RunNo: 7	989				
Prep Date:	Analysis D)ate: 1/	10/2013	S	SeqNo: 2	31150	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.79	0.10	0.5000	0.3027	96.7	76.6	110			Tule v

Sulfate	22	0.50	10.00	11.31	103	84.6	122			
Sample ID 1301331-001CMSI	Samp	ype: MS	SD	Tes	tCode: E	PA Method	300.0: Anion	s	6.171	
Client ID: BatchQC	Batc	n ID: R7	989	F	RunNo: 7	989				
Prep Date:	Analysis [)ate: 1/	10/2013	5	SeqNo: 2	31151	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.78	0.10	0.5000	0.3027	96.1	76.6	110	0.395	20	
Chloride	8.3	0.50	5.000	3.410	98.5	87.8	111	0.479	20	
Nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	91.3	72.5	111	0.415	20	

3.410

0.9124

0.1975

0

99.3

91.7

98.0

103

101

87.8

72.5

83.3

90.4

74.5

111

111

107

113

115

Qualifiers:

Chloride

Bromide

Nitrogen, Nitrite (As N)

Nitrogen, Nitrate (As N)

Phosphorus, Orthophosphate (As P

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

Page 4 of 11

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301335

18-Jan-13

Client:

Blagg Engineering

Project:

GCU 93

Sample ID 1301331-0	01CMSD Samp	Type: M:	SD	Tes	tCode: E	PA Method	300.0: Anion	s		
Client ID: BatchQC	Bato	h ID: R7	7989	F	RunNo: 7	989				
Prep Date:	Analysis I	Date: 1	/10/2013		SeqNo: 2	31151	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0	97.4	83.3	107	0.528	20	
Nitrogen, Nitrate (As N)	3.5	0.10	2.500	0.9124	102	90.4	113	0.636	20	
Phosphorus, Orthophosphate	(As P 5.2	0.50	5.000	0.1975	100	74.5	115	0.606	20	
Sulfate	21	0.50	10.00	11.31	101	84.6	122	0.830	20	i kili
Sample ID 1301335-0	01AMS Samp	Туре: М	S	Tes	tCode: E	PA Method	300.0: Anion	s	77 7 44	(1)
Client ID: Sedillo We	ell #1 Batc	h ID: R7	7989	F	RunNo: 7	989				
Prep Date:	Analysis I	Date: 1	/10/2013		SeqNo: 2	31154	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.71	0.10	0.5000	0.2787	85.5	76.6	110			
Nitrogen, Nitrite (As N)	0.88	0.10	1.000	0	88.3	72.5	111			
Bromide	2.6	0.10	2.500	0.2979	93.0	83.3	107			
Nitrogen, Nitrate (As N)	6.4	0.10	2.500	3.665	108	90.4	113		12.60%	
Sample ID 1301335-0	01AMSD Samp	Type: MS	SD	Tes	tCode: E	PA Method	300.0: Anion	s	-110 19	
Client ID: Sedillo We	ell #1 Batc	h ID: R7	7989	F	RunNo: 7	989				
Prep Date:	Analysis I	Date: 1	/10/2013	5	SeqNo: 2	31156	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.74	0.10	0.5000	0.2787	92.1	76.6	110	4.55	20	
Nitrogen, Nitrite (As N)	0.89	0.10	1.000	0	89.5	72.5	111	1.36	20	
Bromide	2.6	0.10	2.500	0.2979	93.8	83.3	107	0.748	20	
Nitrogen, Nitrate (As N)	6.4	0.10	2.500	3.665	109	90.4	113	0.243	20	
Sample ID MB	Samp	Туре: М	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: PBW	Bato	h ID: R7	7989	F	RunNo: 7	989				
Prep Date:	Analysis I	Date: 1	/11/2013		SeqNo: 2	31196	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								

Qualifiers:

Nitrogen, Nitrite (As N)

Nitrogen, Nitrate (As N)

Phosphorus, Orthophosphate (As P

Bromide

Sulfate

Value exceeds Maximum Contaminant Level.

ND

ND

ND

ND

ND

0.10

0.10

0.10

0.50

0.50

- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH greater than 2

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

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301335

18-Jan-13

Client:

Blagg Engineering

Project:

GCU 93

Sample ID LCS Client ID: LCSW	0.2500000000000000000000000000000000000	SampType: LCS Batch ID: R7989			TestCode: EPA Method 300.0: Anions RunNo: 7989							
Prep Date:	Analysis Date: 1/11/2013		8	SeqNo: 2	31197	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Fluoride	0.53	0.10	0.5000	0	105	90	110		mith half			
Chloride	4.6	0.50	5.000	0	92.1	90	110					
Nitrogen, Nitrite (As N)	0.90	0.10	1.000	0	90.4	90	110					
Bromide	2.3	0.10	2.500	0	93.9	90	110					
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.9	90	110					
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.7	90	110					
Sulfate	9.2	0.50	10.00	0	92.4	90	110					

Sample ID 1301316-001BMS	SampType: MS Batch ID: R7989			Tes	tCode: El	s						
Client ID: BatchQC				F	RunNo: 7	989						
Prep Date:	Analysis Date: 1/11/2013 SeqNo: 231206 Units: r						Units: mg/L	Inits: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Fluoride	0.88	0.10	0.5000	0.4093	94.0	76.6	110			The		
Nitrogen, Nitrite (As N)	1.3	0.10	1.000	0.4091	87.7	72.5	111					
Bromide	2.4	0.10	2.500	0	94.4	83.3	107					

Sample ID 1301316-001BMS Client ID: BatchQC		Sampl	ype: MS	SD	Tes						
		Batch ID: R7989			F	RunNo: 7	989				
Prep Date:		Analysis D	ate: 1/	11/2013	8	SeqNo: 2	31207	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.88	0.10	0.5000	0.4093	94.5	76.6	110	0.318	20	111
Nitrogen, Nitrite	e (As N)	1.3	0.10	1.000	0.4091	87.8	72.5	111	0.0777	20	
Bromide		2.4	0.10	2.500	0	94.5	83.3	107	0.0720	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Page 6 of 11

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301335

18-Jan-13

Client:

Blagg Engineering

Project:

GCU 93

Sample ID 1301358-003c dup

SampType: DUP

TestCode: EPA 120.1: Specific Conductance

Client ID: BatchQC Batch ID: R8022

RunNo: 8022

Prep Date:

SeqNo: 232168

Units: µmhos/cm

Analysis Date: 1/11/2013

Analyte

PQL Result

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit** Qual

Conductivity

5100 0.010

1.22

20

Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

Sample pH greater than 2

Analyte detected in the associated Method Blank В

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits

Page 7 of 11

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301335

18-Jan-13

Client:

Blagg Engineering

Project:

GCU 93

Client ID: PBW Prep Date:	Batcl Analysis D	n ID: R8			RunNo: SeqNo:		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0							100	North
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID LCS	SampT	ype: LC	s	Tes	tCode: El	PA Method	6010B: Diss	olved Met	als	THE PART					
Client ID: LCSW	Batch ID: R8039 RunNo: 8039														
Prep Date:	Analysis D	ate: 1/	14/2013	5	SeqNo: 2	32516	Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Calcium	58	1.0	50.00	0	117	80	120			1					
Magnesium	58	1.0	50.00	0	117	80	120								
Potassium	56	1.0	50.00	0	113	80	120								
Sodium	58	1.0	50.00	0	116	80	120								

Qualifiers:

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

B Analyte detected in the associated Method Blank

RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 8 of 11

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301335

18-Jan-13

Client:

Blagg Engineering

Project:

GCU 93

Sample ID 1301358-003c dup Client ID:

SampType: DUP

TestCode: SM4500-H+B: pH

BatchQC

Batch ID: R8022

RunNo: 8022

SPK value SPK Ref Val %REC LowLimit

HighLimit

Prep Date:

Analysis Date: 1/11/2013

SeqNo: 232240

Units: pH units

Qual

Analyte рН

Result PQL 8.41 1.68

RPDLimit %RPD

H

Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range

Analyte detected below quantitation limits

Sample pH greater than 2

В Analyte detected in the associated Method Blank

RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

Page 9 of 11

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301335

18-Jan-13

Client:

Blagg Engineering

Project:

GCU 93

Sample ID mb-1

SampType: MBLK

TestCode: SM2320B: Alkalinity

Client ID: PBW Batch ID: R8022

RunNo: 8022

Prep Date:

Analysis Date: 1/11/2013

SeqNo: 232128

Units: mg/L CaCO3

Analyte

PQL

SPK value SPK Ref Val %REC LowLimit

%RPD

Qual

Total Alkalinity (as CaCO3)

ND 20

Result

Result

Result

Result

190

84

TestCode: SM2320B: Alkalinity

RPDLimit

SampType: LCS

HighLimit

Sample ID Ics-1

RunNo: 8022

Client ID: LCSW

Batch ID: R8022

Units: mg/L CaCO3

Analyte

Prep Date:

Analysis Date: 1/11/2013 PQL

20

SPK value SPK Ref Val

SeqNo: 232129 %REC

HighLimit

105

RPDLimit

Qual

Qual

Total Alkalinity (as CaCO3)

80.00

105

95

%RPD

Sample ID 1301347-001b ms

Sample ID 1301347-001b msd

BatchQC

SampType: MS

TestCode: SM2320B: Alkalinity

65.3

Client ID: BatchQC

Batch ID: R8022 Analysis Date: 1/11/2013

RunNo: 8022

SeaNo: 232135

Units: mg/L CaCO3

%RPD

Analyte

Prep Date:

PQL

SPK value SPK Ref Val %REC 111.0 80.00

LowLimit

HighLimit

RPDLimit

Qual

Total Alkalinity (as CaCO3)

SampType: MSD

20

TestCode: SM2320B: Alkalinity

RunNo: 8022

Units: mg/L CaCO3

Analyte

Client ID:

Prep Date:

Batch ID: R8022

Analysis Date: 1/11/2013

SeqNo: 232136 %REC

LowLimit

HighLimit

%RPD

RPDLimit

Total Alkalinity (as CaCO3)

PQL

SPK value SPK Ref Val 80.00

111.0

93.4

65.3

113

1.18

10

Qualifiers: Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

H

Analyte detected in the associated Method Blank Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit Page 10 of 11

P Sample pH greater than 2

Hall Environmental Analysis Laboratory, Inc.

WO#: 1301335

18-Jan-13

Client:

Blagg Engineering

Project:

GCU 93

Cample	ID	MB-5675
Sample	10	G / OC-CIVI

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: **PBW**

Batch ID: 5675

RunNo: 8099

Prep Date: 1/15/2013

Analysis Date: 1/17/2013

SeqNo: 234230

Units: mg/L

Analyte

HighLimit

RPDLimit Qual

Total Dissolved Solids

Result PQL ND 20.0

Sample ID LCS-5675

SampType: LCS

TestCode: SM2540C MOD: Total Dissolved Solids

%RPD

LCSW Client ID:

Batch ID: 5675

Result

1020

RunNo: 8099

Prep Date: 1/15/2013

Analysis Date: 1/17/2013

SeqNo: 234231

Units: mg/L

120

Analyte

SPK value SPK Ref Val

SPK value SPK Ref Val %REC LowLimit

LowLimit 103

HighLimit

RPDLimit

Total Dissolved Solids

PQL 20.0

1000

%REC

%RPD

Qual

Sample ID 1301380-003AMS

SampType: MS

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: **BatchQC** Batch ID: 5675

Result

Result

5320

5310

RunNo: 8099 SeqNo: 234250

Units: mg/L

Prep Date: Analyte

1/15/2013

Analysis Date: 1/17/2013 PQL

20.0

SPK value SPK Ref Val %REC

4266

4266

LowLimit

HighLimit

120

%RPD

RPDLimit Qual

Qual

Total Dissolved Solids

Client ID:

SampType: MSD

1000

TestCode: SM2540C MOD: Total Dissolved Solids RunNo: 8099

105

105

80

Units: mg/L

Analyte **Total Dissolved Solids**

Prep Date: 1/15/2013

Sample ID 1301380-003AMSD

BatchQC

Batch ID: 5675 Analysis Date: 1/17/2013

PQL

20.0

1000

SeqNo: 234251 SPK value SPK Ref Val

%REC LowLimit

80

HighLimit 120 %RPD 0.150

RPDLimit

5

Qualifiers:

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

- Analyte detected in the associated Method Blank B
- H Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit

Page 11 of 11



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

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

Sample Log-In Check List

Clie	nt Name:	BLAGG	1 1	Wo	ork Ord	er N	umb	er. 1	1301335	
Rec	eived by/dat		DUIDII.	3						
Log	ged By:	Ashley Galleges	1/10/2013 9:50	0:00 AM				A	7	
Cor	npleted By:	Ashley Gallegos	1/10/2013 1:28	8:47 PM				A	F	
Rev	riewed By:	SK	11/1-							
Cha	in of Cus	stody	1015							
1.	Were seals	intact?	1,0		Yes		No	< 1.	Not Present	
		Custody complete?			Yes	v	No		Not Present	
3.	How was th	ne sample delivered?			Couri	er				
Log	<u>In</u>									
4.	Coolers are	present? (see 19. for	cooler specific informatio	n)	Yes	V.	No		NA i	
5.	Was an atte	empt made to cool the	samples?		Yes	V	No		NA - :	
6.	Were all sa	imples received at a ter	mperature of >0° C to 6.	0°C	Yes	~	No	. ;	NA i	
7.	Sample(s)	in proper container(s)?			Yes	~	No			
8.	8. Sufficient sample volume for indicated test(s)?						No	1		
9.	Are sample	es (except VOA and ON	IG) properly preserved?		Yes	V.	No	1 -		
10.	Was preser	rvative added to bottles	?		Yes		No	V :	NA i	
11.	VOA vials h	have zero headspace?			Yes	1	No	:	No VOA Vials	
12.	Were any s	sample containers rece	ived broken?		Yes	1	No	~		
13.		rwork match bottle labe			Yes	~	No	1	# of preserved bottles checked for pH:	6
14.	Are matrice	es correctly identified or	Chain of Custody?		Yes	V	No	1	11	or >12 unless noted)
15.	Is it clear w	hat analyses were requ	uested?		Yes	V.	No		Adjusted?	
16.		olding times able to be it y customer for authorization			Yes	~	No	. 1	Checked by:	20
Spe	cial Hand	dling (if applicable	<u>e)</u>							
17.	Was client	notified of all discrepan	cies with this order?		Yes	1 1	No	1 '	NA 🗸	
	Perso	n Notified:	NOW A DIVINI TANDESSEE THE COLUMN AND ADDRESSEE AND ADDRES	Date:		CO-CO-CO-CO-CO-CO-CO-CO-CO-CO-CO-CO-CO-C	-	-	desirant and	
	By Wi	hom:		Via:	eMai	1	Ph	one	Fax I In Person	
	Regar	rding:			- Arabaicios	M. S. Market	- Charles			
	Client	Instructions:	al almini anna atti milini anna anna anggang						THE RESERVE OF THE PERSON NAMED IN COLUMN 2 IN COLUMN	
18.	Additional r	remarks:								
19.	Cooler Info		ition Seal Intact Sea	I No Se	eal Dat	е	1 :	Sign	ed By	