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

4.1

- 'o

State of New Mexico **Energy Minerals and Natural Resources**

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

Release Notification and Corrective Action

Revised August 8, 2011

Form C-141

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

						OPERATOR Initial Report I Final				Final Repor	rt		
Name of Co	mpany: B	Р			(Contact: Jeff Peace]	
Address: 20	0 Energy	Court, Farmi	ington, N	M 87401	1	[elephone]	No.: 505-326-94	79					
Facility Nan	ne: GCU (Com B 143E	·		F	Facility Type: Natural gas well							
Surface Own	ner: Privat	e		Mineral O	wner: F	r: Federal API No. 3004524284]	
				LOCA	TION	OF REI	LEASE						
Unit Letter M	Section 25	Township 29	Range	Feet from the	North/South Line Feet from the East/West Line County: San Juan South 1150 West]		
	20			.,			1,100						
		Lat	itude3	6.69341		Longitud	e_108.05567_						-
	NATURE OF RELEASE												
Type of Relea	ase: conden	sate/oil				Volume of	Release: unknow	n	Volume R	ecovered: n	one		
Source of Rel	ease: under	rground pipe t	o below g	rade tank		Date and H	lour of Occurrenc	e:	Date and	Hour of Disc	covery:	September	
Was Immedia	ta Nictica (Siven?	,,,,,,,,,			UNKNOWN	W/h a me?		9, 2013; 9	:35 AM	·,,		4
was inniedia			Yes 🗌	No 🛛 Not Re	quired	II 165, 10	whom?						
By Whom?						Date and H	lour:					·····	1
Was a Watero	ourse Read	ched?				If YES, Vo	lume Impacting t	he Wate	ercourse.				7
			Yes 🗵	No						m.m.m. 1.27	n o a	54 A	
If a Watercou	rse was Im	pacted, Descr	ibe Fully.*			L				OIL COL	<u>15.</u> 01		
Describe Area yards of impa	the cellar. Borehole of Affected a Affected a cted soil we	and Cleanup / as taken to the backfilled w	Action Tak e IEI landf vith clean s	en.* Excavation v arm for treatment.	was done Excava	e to remove a tion continu	op soil and to rem ed until remaining rea was compacte	nove im g soil sa	pacted soil. mples resul	Approximat ted in less th monitor well	tank int tely 100 nan 100 I was in	cubic ppm TPH. stalled to	
assess ground	water imp	acts. Analysis	s results sh	owed BTEX belo	w standa	ards.							
I hereby certific regulations all public health should their o or the environ federal, state,	fy that the i l operators or the envir perations h ment. In a or local lay	nformation gi are required to conment. The ave failed to a ddition, NMC ws and/or regu	ven above o report an acceptanc adequately OCD accep alations.	is true and compl d/or file certain re e of a C-141 report investigate and re tance of a C-141 r	ete to the lease no t by the mediate eport do	e best of my otifications au NMOCD m contaminations not reliev	knowledge and un nd perform correct arked as "Final Reconstruction that pose a three the operator of r	nderstat tive act eport" d eat to gr responsi	nd that pursi- ions for rele oes not relia ound water bility for co	uant to NMC ases which i eve the opera surface wat ompliance w	DCD rul may enc ator of l ter, hum ith any	es and langer iability an health other	
^	10 /	า					<u>OIL CONS</u>	SERV	ATION	<u>divisi</u> ¢	N		
Signature:	off l	que							Con	v/	1 -	C_{7}	Ł
Printed Name	: Jeff Peace	2			A	Approved by	Environmental Sp			XI	<u>````</u>	~ '	
Title: Field E	nvironment	al Advisor				Approval Dat	e: 4-15-14	-	Expiration I	Date:			-
E-mail Addre	ss: peace.je	effrey@bp.cor	n		(Conditions of Approval:							
Date: March	Date: March 18, 2014 Phone: 505-326-9479												

* Attach Additional Sheets If Necessary

,

Incident # NCS 1410650913

34

BP AMERICA PRODUCTION COMPANY

RELEASE INVESTIGATION & REMEDIATION OF SUBSURFACE PIPING GCU Com B #143E API #: 3004524284 Legal Description: (Unit Letter M, Sec. 25, T29N, R12W, NMPM)

Legal Description. (Onit Letter W, Sec. 25, 12914, K12W, MWPW)

CHRONOLOGICAL EVENT SUMMATION

- September 9, 2013 (Monday): During confirmation sampling to close a 95 barrel below-grade tank (bgt), discolored soil was observed in the northeast corner within the wooden cellar. There was no evidence of a loss of integrity from the bgt. The release mostly likely originated from subsurface piping leading into the bgt (see Field Report page 1 of 2). A test hole was advanced at the discoloration area using a backhoe to approximately 11 feet below grade. Field screening and lab analyses from the 5½ and 11 foot depths (lab reports attached) confirmed the impact to soils. Existing on-site groundwater monitor wells from a previous investigation recorded depth to water to be approximately 12 feet below grade.
- February 6, 2014 (Thursday): Blagg Engineering, Inc. (BEI) was contacted to provide technical support and conduct sampling from the excavation sidewalls (see Field Report page 2 of 2). The lab results recorded all constituents to be non detect or well below the New Mexico Oil Conservation Division's closure standards according to its spill and release guidelines. Approximately 100 cubic yards of soil was excavated and transported to BP's Crouch Mesa Facility.
- 3. February 13, 2014 (Thursday): BEI was contacted to provide technical support for the installation of a groundwater monitor well (<u>MW #4</u>) at the point of release. Boring log and well completion data is attached.
- 4. February 17, 2014 (Monday): BEI conducted development/purging of MW #4 to eliminate sediment accumulation during the installation process. Approximately 20 gallons was purged and disposed into the on-site low profile above-grade tank.
- 5. February 18, 2014 (Tuesday): BEI conducted environmental sampling of MW #4 (Field Sampling Data Sheet attached).
- 6. February 27, 2014 (Thursday): BEI & BP received final lab reports for samples collected on 02/18/2014. The lab results recorded all constituents to be non detect or well below the New Mexico Water Quality Control Commission's groundwater closure standards.

CLIENT:	BP	BLA P.O. BOX	AGG ENG (87, BLC (505)	GINEERIN DOMFIEL 632-119	NG, IN .D, NI 9	NC. VI 8741:	3	API #: 30 	04524 A	284
FIELD RE	PORT:	(circle one): BGT CON	irmation / Re	LEASE INVESTIG	ATION /	OTHER:		PAGE #: _	1 c	f 2
SITE INFO	DRMATION	J: <u>SITE NAME</u>	GCU CON	B #143E	01		NIR <i>A</i>	DATE STARTED:	09/0	09/13
QUAD/UNIT: IVI	SEC: 20 TWP:	ZYIN RNG: 14	ZVV PM:		<u>: 5J</u>	ST:		DATE FINISHED:		
1/4 -1/4/FOOTAGE	: 1,105 5 / 1,15				KHOR	N TEEVIND	<u>NAN</u>	ENVIRONMENTAL	L ·	W
				RACIOR: M	<u> 3F - B.</u>	SCHUMA	<u>N</u>			
		U WELL HEAD	(W.H.) GPS CO 36 6	ORD.: 93/1 X 108	<u>36.693</u> 05567	<u>36 X 108.</u>	05600	GL E	LEV.: _	5,462' N79⊑
1) 55_DG		GPS COORD.:		<u>JJ41 A 100</u>	00001		STANCE/BEA	ARING FROM W.H.:	104,	
2),		GPS COORD.				DR	STANCE/BEA			
3)		GPS COORD				، ال	STANCE/BEA			
			CORD(S) # OR 14							OVM
SAIVIFLIN	S DATA.		00100/13		0020		440.4/0			(ppm)
1) SAMPLE ID:	TH 1 @ 5 5'		09/09/13	SAMPLE TIME:	0930	LAB ANALYSIS:	410.1/0 001/	U13B/8U21B/		<u>NA</u>
2) SAMPLE ID:		SAMPLE DATE:	00/00/13	SAMPLE TIME:	0935		001;		<u>(</u>)	400
 SAMPLE ID: SAMPLE ID: 		SAMPLE DATE:	 	\$AMPLE TIME	0953		801			355
						LAD ANALTOIS.	00_1			
			AND / SILTY SA	<u>ND</u> ∫SILT/SILT	Y CLAY /	CLAY / GRA	VEL / OTH	-IER		
SAMPLE TYPE: [GRAB / COMPOSITE] # OF PTS										
		TED WITH SIMILAR OV	M. READING				KER SHA		RAY), CLE	
ANY AREAS DISPLAYING APPARENT EVIDEN ADDITIONAL COMM RATHER FROM P	GWETNESS: YES / <u>NC</u> CE OF A RELEASE C IENTS: <u>IMPACTS DI</u> IPING FROM SEPAR	TED WITH SIMILAR OV DESERVED AND/OR OC SCOVERED DO NOT A RATOR TO BGT.	M. READING. CURRED : YES PPEAR TO RE]/ NO EXPLAI SULT FROM BO	NATION : GT LOSS	DISCOLOR	ED SOIL	IN NE CORNER	RAY), CLE OF WOOD RETAINI	ARED_U
ANY AREAS DISPLAYIN APPARENT EVIDEN ADDITIONAL COMM RATHER FROM P SOIL IMPACT DIMEN DEPTH TO GROUNDW	G WETNESS: YES / <u>NC</u> CE OF A RELEASE (IENTS: IMPACTS D IPING FROM SEPAF VSION ESTIMATION ATER:	TED WITH SIMILAR OV DESERVED AND/OR OC ISCOVERED DO NOT A RATOR TO BGT. 	M. READING. CURRED : YES PPEAR TO RE ft.]/ NO EXPLAI SULT FROM BO X NEAREST SURFAC	NATION : GT LOSS ft. CE WATER	DISCOLOR INTEGRITY EXCAVAT	ED SOIL , BUT	IN NE CORNER	OF WOOD RETAINI Yards) : TD: 100	EN NG WAL
ANY AREAS DISPLAYING APPARENT EVIDEN ADDITIONAL COMM RATHER FROM P SOIL IMPACT DIMEN DEPTH TO GROUNDW SITE SKET	G WETNESS: YES / <u>IN</u> CE OF A RELEASE C IENTS: IMPACTS DI IPING FROM SEPAF VSION ESTIMATION ATER: CH	TED WITH SIMILAR OV	M. READING. CURRED : YES PPEAR TO RE)/ NO EXPLAI SULT FROM BO X NEAREST SURFAC	The second secon	DISCOLOR INTEGRITY EXCAVAT >1,000 cle: attache	ED SOIL BUT	IMATION (Cubic N D TPH CLOSURE S CALIB. READ. =	OF WOOD RETAINII Yards) : TD: 100 33.2 pp 00 pp	ERED_U EN NG WAL
ANY AREAS DISPLAYIN APPARENT EVIDEN ADDITIONAL COMM RATHER FROM P SOIL IMPACT DIMEN DEPTH TO GROUNDW	G WETNESS: YES / <u>N</u> CCE OF A RELEASE (IENTS: IMPACTS DI IPING FROM SEPAF NSION ESTIMATION (ATER:	TED WITH SIMILAR OV DESERVED AND/OR OC ISCOVERED DO NOT A RATOR TO BGT. 	M. READING. CURRED : YES PPEAR TO RE ft. >1,000'	/ NO EXPLAI SULT FROM BO X VEAREST SURFAC PLOT PL	NATION : GT LOSS ft. CE WATER AN cir SEPARA	DISCOLOR INTEGRITY EXCAVAT >1,000 cle: attach	ED SOIL BUT		OF WOOD RETAINI Yards) : TD: 100 33.2 pp 00 pp DATE: 05	EN NG WAL ppm m m N/09/13
ANY AREAS DISPLAYIN APPARENT EVIDEN ADDITIONAL COMM RATHER FROM P SOIL IMPACT DIMEN DEPTH TO GROUNDW	G WETNESS: YES / <u>IN</u> CE OF A RELEASE (IENTS: IMPACTS DI IPING FROM SEPAF NSION ESTIMATION ATER:	TED WITH SIMILAR OV DESERVED AND/OR OC ISCOVERED DO NOT A RATOR TO BGT. 	M. READING. CURRED : YES PPEAR TO RE 1. 	PLOT PL	NATION : GT LOSS ft. CE WATER AN cir SEPARAT	DISCOLOR INTEGRITY EXCAVAT >1,000 cle: attach		IMATION (Cubic N IMATION (Cubic N D TPH CLOSURE S CALIB. READ, = CALIB. GAS =1 10:11(m)pm MISCELI O: N1521 D#: C: ZEVHC J#: Z2-006	OF WOOD RETAININ Yards) : TD: 100 33.2 pp 00 pp DATE: 09 0983 0983 01BGT2 00	EN NG WAL mm RF = 0.5 0/09/13 TES
ANY AREAS DISPLAYIN APPARENT EVIDEN ADDITIONAL COMM RATHER FROM P SOIL IMPACT DIMEN DEPTH TO GROUNDW SITE SKET	GWETNESS: YES / <u>N</u> C CE OF A RELEASE (IENTS: IMPACTS D IPING FROM SEPAF NSION ESTIMATION (ATER:	TED WITH SIMILAR OV DESERVED AND/OR OC ISCOVERED DO NOT A RATOR TO BGT. 	M. READING. CURRED : YES PPEAR TO RE 1. 21,000' M TH 1 X X X X X X Y PF	PLOT PL PBGTL T.B. ~ 5.5' B.G.	NATION GT LOSS ft. CE WATER AN cir SEPARAT	DISCOLOR INTEGRITY EXCAVAT >1,000 cle: attache		IN NE CORNER IMATION (Cubic N D TPH CLOSURE S CALIB. READ = CALIB. GAS = TO:I1 MISCELI O: N1521 O#: C C D#: C C D#: CC C C CC C C C	OF WOOD RETAINII Yards): TD: 100 33.2 pp 00 pp DATE: 09 DATE: 09 00 09 DATE: 00 09833 01 D1BGT2 00 Q0 06/14 per million 15 Disible: (Y)	ERED_L EN NG WAL ppm m m RF = 0.5 0/09/13 TES 0/09/13 TES
ANY AREAS DISPLAYIN APPARENT EVIDEN ADDITIONAL COMM RATHER FROM P SOIL IMPACT DIMEN DEPTH TO GROUNDW SITE SKET	TO W.H.	TED WITH SIMILAR OV DESERVED AND/OR OC ISCOVERED DO NOT A RATOR TO BGT. 	M. READING. CURRED : YES PPEAR TO RE ft. >1,000' M TH 1 X X X X X X Y YCRADE: D - DEL CM	PLOT PL PLOT PL PBGTL T.B. ~ 5.5' B.G.	NATION : GT LOSS ft. CE WATER AN cirr SEPARAT SEPARAT	DISCOLOR INTEGRITY EXCAVAT >1,000 cle: attach ror N S.P.D.		IN NE CORNER IMATION (Cubic N D TPH CLOSURE S CALIB. READ. = CALIB. GAS = MISCELI O: N1521 O#: C N1521 O#: C ZEVHO J#: Z2-006 Immit date(s): CD Appr. date(s) CD Appr. date(s) CD Appr. date(s) CD Appr. date(s) BGT Sidewalls V BGT Sidewalls V	OF WOOD RETAINII Yards) : TD: 100 33.2 pp 00 pp DATE: 09 DATE: 09 00 pp DATE: 09 00 pp 01BGT2 09 00 09/14 00 06/14 per million rsible: (Y) fisible: Y /	ARED_L EN NG WAL ppm m RF = 0.5 0/09/13 TES //10 //13 ter N N N
ANY AREAS DISPLAYIN APPARENT EVIDEN ADDITIONAL COMM RATHER FROM P SOIL IMPACT DIMEN DEPTH TO GROUNDW SITE SKET SITE SKET	G WETNESS: YES / INFAG G WETNESS: YES / INF CEOFA RELEASE (IENTS: IMPACTS DI IPING FROM SEPAI NSION ESTIMATION ATER:	TED WITH SIMILAR OV DESERVED AND/OR OC ISCOVERED DO NOT A RATOR TO BGT. 	M. READING. CURRED : YES PPEAR TO RE ft. >1,000' M TH 1 X X X X VGRADE; B = BELOW PD = SAMPLE POINT B - SINGLE BOTTOM;	PLOT PL PLOT PL PLOT PL PLOT PL PLOT PL PLOT PL PLOT PL PLOT PL PLOT PL PLOT PL	TRATION TLOSS ft. CE WATER AN cirr SEPARAT SEPARAT SEPARAT SEPARAT SEPARAT	DISCOLOR INTEGRITY EXCAVAT >1,000 cle: attache ror S.P.D.		IN NE CORNER IMATION (Cubic ` D TPH CLOSURE S CALIB. READ. = CALIB. GAS = MISCELI O: N1521 O: N1521 O: X1521 O: X1521 O	Context (Context), CLE Context), CLE Context), CLE Context, CLE Cont	EARED U EN NG WAL ppm M RF = 0. 0/09/13 TES V/10 V/13 ter N N N N

CLIENT: _	BP	BLAGO P.O. BOX 87	3 ENGINE 7, BLOOM (505) 632-	ERING, IN FIELD, NN 1199	C. 187413	API #: 30045 TANK ID (if applicble):	24284 NA
FIELD F	REPORT:	(circle one): BGT CONFIRMA	TION / RELEASE IN	Vestigation / 0 - Cleanup	THER:	PAGE #: 2	of _2
SITE INF			LCOMB#	13E			2/06/11
	SEC: 25 TAR	29N PNG: 12W			ST. NM		2/00/14
	CE 1 10E'S / 1 15					DATE FINISHED:	
<u></u>	<u>55. 1,105 57 1,10</u>		CONTRACTO	CROSSFI	RE	- ENVIRONMENTAL	N.IV
		-	CONTRACTO				
REFERE	INCE POINT	WELL HEAD (W.H) GPS COORD.:	36.693	345 X 108.056	007 GL ELEV.:	<u>5,462'</u>
1) EXCA	VATION CENTER	GPS COORD.:	30.093407 X	108.055640	DISTANCE/B	EARING FROM W.H.:110'	, N78E
2)		GPS COORD.:			DISTANCE/B	EARING FROM W.H.:	
3)		GPS COORD.:			DISTANCE/B	EARING FROM W.H.:	
4)		GPS COORD.:		······	DISTANCE/B	EARING FROM W.H.:	I OVM
SAMPLI	NG DATA:)(S) # OR LAB USED:	HALL			READIN (ppm)
1) SAMPLE ID:	4PC - SW @	7'-8' SAMPLE DATE:)2/06/14 SAMP	etime: 1150	LAB ANALYSIS:8	015B/8021B/300.0(Cl)	<u>NA</u>
2) SAMPLE ID:	·	SAMPLE DATE:	SAMPI	e TIME:	LAB ANALYSIS:		
3) SAMPLE ID:	<u></u>	SAMPLE DATE:	SAMPI	e TIME:	LAB ANALYSIS:		
4) SAMPLE ID:		SAMPLE DATE:	SAMPI	ETIME:	LAB ANALYSIS:		
SOIL DE	SCRIPTION	SOIL TYPE: SAND / SILTY S	AND/ SILT / SILTY C	LAY / CLAY GRAVE	L OTHER		
SOIL COLOR: _	DARK Y	ELLOWISH ORANGE	PLASTICITY (CLAYS): NON PLASTIC	/ SLIGHTLY PLASTIC	COHESIVE / MEDIUM PLASTIC / H	IGHLY PLAST
COHESION (ALL OTHE	RS): NON COHESIVE SLIGHTLY	COHESIVE / COHESIVE / HIGHLY CO	IESIVE DENSITY (C	OHESIVE CLAYS &	SILTS): SOFT / FIRM	1/ STIFF / VERY STIFF / HARD	
CONSISTENCY (N MOISTURE: DRY /S	ON COHESIVE SOILS): [LC	D <u>ose / Firm</u> / Dense / Very Di et / Saturated / Super Satura		TECTED: <u>[YES]</u> / NO	EXPLANATION - <u>SL</u>	IGHTLY WITHIN SAND AN	D GRAVEL
SAMPLE TYPE:	GRAB COMPOSITE #	OF PTS. <u>4</u>	ANY AREAS	DISPLAYING WETNES	BS: YES / NO EXPL	ACE. ANATION - GROUNDWATE	
DISCOLORATION/ST	AINING OBSERVED: YES	O EXPLANATION - AT AND W	ITHIN GROUNDW	ATER - MEDIUM	TO DARK GRAY.		
SITE OF	SERVATION		PMENT: YES/NO E	PLANATION - N	<u>A</u>		-
APPARENT EVIDEN	E OF A RELEASE OBSERVE	DAND/OR OCCURRED : YES NO	Explanation: PR	EVIOUSLY IDENT	IFIED IN SEPT. 2	13 DURING BGT CLOSUF	<u>≀E.</u>
OTHER: RESIDU	L IMPACTS AT AND W	ITHIN GROUNDWATER OB	SERVED IN SE AN	D NE PORTIONS	OF EXCAVATION	. COLLECTED 4 POINT (OMPOSIT
SAMPLE FROM	SIDEWALLS, SAND	AND GRAVEL - 14 TO 16 FT	BELOW GRADE				
SOIL IMPACT DI	AENSION ESTIMATION:		<u>20 </u>	8 ft.	EXCAVATION E	STIMATION (Cubic Yards) :	<u> </u>
		EAREST WATER SOURCE:	I,UUUNEAREST	SURFACE WATER:		DCD TPH CLOSURE STD:	<u>р</u>
SHESK		BGT Located : off / or	1 site PL	OT PLAN circ	le: attached 0	/M.CALIB. READ. = NA	-ppm RF = 0.
STEEL						/M CALIB. GAS = <u>NA</u>	_ppm
CONTAINMENT		\frown			N ⊡	ME: NA am/pmDATE: _	
3131LW				- SEPARATOR	' [MISCELL. NO	DTES
		, // L		OLIFACTION		WO: N15378931	
						PO #: 4300253375	<u> </u>
ABOVE-GRAD	E TANK	X	7 1			PK:	
		~/ ~				PJ #:	
	EVO ALIATIONI OPHITEE		20 ft.			Permit date(s):	NA
	EAGAVATION CENTER~	X A	^		רז	OCD Appr. date(s): ank OVM = Organic Vapor	NA Meter
то W.H.				MW #2	-	ID ppm = parts per millio BGT Sidewalls Visible· Y	n '/N
4		<u> </u>		\oplus	-	BGT Sidewalls Visible: Y	/ N
	X - S.P.D.		> E·B = BEI ∩\\\/ T⊔ - T□			BGT Sidewalls Visible: Y	' / N
T.B. = TANK BC	TTOM; PBGTL = PREVIOUS BEL	OW-GRADE TANK LOCATION; SPD = S	AMPLE POINT DESIGNAT	ION; R.W. = RETAINING	WALL; NA - NOT	Magnetic declination	10 [°] F
	OR NOT AVAILABLE; SW - SINGLE	WALL; DW - DOUBLE WALL; SB - SING	JLE BOTTOM; DB - DOUF	LE BOTTOM.			
				AA14			

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Analytical Report						
Lab Order 1309461						
Date Reported: 9/18/2013						

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project: GCU COM B #143E

Client Sample ID: 5PC-TB @ 5.5' (95) Collection Date: 9/9/2013 9:30:00 AM Received Date: 9/11/2013 9:50:00 AM

Lab ID: 1309461-001	Matrix: SOIL			Received Date: 9/11/2013 9:50:00 AM			
Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				-	Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	. 1	mg/Kg	1	9/16/2013 7:08:56 PM	9308
Surr: DNOP	78.9	63-147		%REC	1	9/16/2013 7:08:56 PM	9308
EPA METHOD 8015D: GASOLINE RANG	BE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/13/2013 1:43:37 PM	9285
Surr: BFB	92.7	80-120		%REC	1	9/13/2013 1:43:37 PM	9285
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.048		mg/Kg	1	9/13/2013 1:43:37 PM	9285
Toluene	ND	0.048		mg/Kg	1	9/13/2013 1:43:37 PM	9285
Ethylbenzene	ND	0.048		mg/Kg	1	9/13/2013 1:43:37 PM	9285
Xylenes, Total	ND	0.096		mg/Kg	1	9/13/2013 1:43:37 PM	9285
Surr: 4-Bromofluorobenzene	97.3	80-120		%REC	1	9/13/2013 1:43:37 PM	9285
EPA METHOD 300.0: ANIONS						Analyst	JRR
Chloride	11	1.5		mg/Kg	1	9/16/2013 2:19:55 PM	9328
EPA METHOD 418.1: TPH						Analyst	JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	9/16/2013	9309

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	d Blank
	E	Value above quantitation range	Н	Holding times for preparation or analysis	exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and T	OC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1309461

Date Reported: 9/18/2013

9/13/2013 12:17:39 PM 9285

9/16/2013 2:44:45 PM 9328

Analyst: JRR

Hall Environmental Analysis Laboratory, Inc.

Benzene

Toluene

Chloride

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

EPA METHOD 300.0: ANIONS

CLIENT:	Blagg Engineering			C	lient Sampl	e ID: TH	11 @ 5.5'				
Project:	GCU COM B #143E	Collection Date: 9/9/2013 9:35:00 AM									
Lab ID:	1309461-002	Matrix: SOIL			Received Date: 9/11/2013 9:50:00 AM						
Analyses		Result	RL	Qual	Units	DF	Date Analyzed	Batch			
EPA MET	HOD 8015D: DIESEL RANG	E ORGANICS				-	Analyst:	BCN			
Diesel Ra	ange Organics (DRO)	1500	100		mg/Kg	10	9/17/2013 12:42:03 PM	9308			
Surr: E	NOP	0	63-147	s	%REC	10	9/17/2013 12:42:03 PM	9308			
EPA MET	HOD 8015D: GASOLINE RA	NGE					Analyst:	NSB			
Gasoline	Range Organics (GRO)	500	48		mg/Kg	10	9/13/2013 12:17:39 PM	9285			
Surr: E	BFB	284	80-120	s	%REC	10	9/13/2013 12:17:39 PM	9285			
EPA MET	HOD 8021B: VOLATILES						Analyst:	NSB			

0.24

0.48

0.48

0.96

7.5

80-120

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%REC

mg/Kg

10

10

10

10

10

5

ND

0.55

ND

17

118

17

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits		ND	Not Detected at the Reporting Limit Page 2 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

CLIENT: Blagg Engineering Project: GCU COM B #143E Lab ID: 1309461-003	Matrix: S	SOIL	C	Client Sampl Collection 1 Received	It Sample ID: TH1 @ 11' Ilection Date: 9/9/2013 9:53:00 AM						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch				
EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: BCN											
Diesel Range Organics (DRO)	1800	100		mg/Kg	10	9/17/2013 1:13:42 PM	9308				
Surr: DNOP	0	63-147	s	%REC	10	9/17/2013 1:13:42 PM	9308				
EPA METHOD 8015D: GASOLINE RA	ANGE					Analyst	: NSB				
Gasoline Range Organics (GRO)	2100	47		mg/Kg	10	9/13/2013 12:46:18 PM	9285				
Surr: BFB	742	80-120	S	%REC	10	9/13/2013 12:46:18 PM	9285				
EPA METHOD 8021B: VOLATILES						Analyst	: NSB				
Benzene	0.67	0.47		mg/Kg	10	9/13/2013 12:46:18 PM	9285				
Toluene	29	0.47		mg/Kg	10	9/13/2013 12:46:18 PM	9285				
Ethylbenzene	11	0.47		mg/Kg	10	9/13/2013 12:46:18 PM	9285				
Xylenes, Total	210	9.5		mg/Kg	100	9/16/2013 3:15:15 PM	9285				
Surr: 4-Bromofluorobenzene	155	80-120	s	%REC	10	9/13/2013 12:46:18 PM	9285				
EPA METHOD 300.0: ANIONS						Analyst	JRR				
Chloride	1200	30		mg/Kg	20	9/16/2013 3:21:58 PM	9328				

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	d Blank
	E	Value above quantitation range	н	Holding times for preparation or analysis	exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and 1	OC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

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Analytical Report Lab Order 1309461

Date Reported: 9/18/2013

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering

Project: GCU COM B #143E

Sample ID MB-9328	SampType: MBLK	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 9328	RunNo: 13415		
Prep Date: 9/16/2013	Analysis Date: 9/16/2013	SeqNo: 381618	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID LCS-9328	SampType: LCS	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 9328	RunNo: 13415		
Prep Date: 9/16/2013	Analysis Date: 9/16/2013	SeqNo: 381619	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 92.8 90	110	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- 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 4 of 8

WO#: 1309461

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:GCU COM B #143E

Sample ID MB-9309	SampType: MBLK	TestCode: EPA Method	418.1: TPH				
Client ID: PBS	Batch ID: 9309	RunNo: 13380					
Prep Date: 9/13/2013	Analysis Date: 9/16/2013	SeqNo: 380738	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Petroleum Hydrocarbons, TR	ND 20	•					
Sample ID LCS TestCode: EPA Method 418.1: TPH							
Client ID: LCSS	Batch ID: 9309	RunNo: 13380					
Prep Date: 9/13/2013	Analysis Date: 9/16/2013	SeqNo: 380739	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Petroleum Hydrocarbons, TR	84 20 100.0	0 83.5 80	120				
Sample ID LCSD-9309	SampType: LCSD	TestCode: EPA Method	418.1: TPH				
Client ID: LCSS02	Batch ID: 9309	RunNo: 13380					
Prep Date: 9/13/2013	Analysis Date: 9/16/2013	SeqNo: 380740	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Petroleum Hydrocarbons, TR	93 20 100.0	0 93.3 80	120 11.1	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
- 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

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18-Sep-13

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Blagg Engineering

Client:

Project: GCU	COM B #143E								
Sample ID LCS-9308	SampType: L	cs	Tes	tCode: EP	A Method	8015D: Dies	el Range (Drganics	
Client ID: LCSS	Batch ID: 9	308	F	unNo: 13	385				
Prep Date: 9/13/2013	Analysis Date:	9/16/2013	S	eqNo: 38	1454	Units: mg/M	ζg		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45 10	50.00	0	90.8	77.1	128	•	•	
Surr: DNOP	4.9	5.000		97.4	63	147			
Sample ID MB-9308	SampType: N	IBLK	Tes	Code: EP	A Method	8015D: Dies	el Range C	Organics	
Client ID: PBS	Batch ID: 9	308	F	unNo: 13	385				
Prep Date: 9/13/2013	Analysis Date:	9/16/2013	<u></u> .5	eqNo: 38	1455	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10)							
Surr: DNOP	7.6	10.00		75.6	63	147			

and a second second

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

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1309461

WO#:

Hall Environmental Analysis Laboratory, Inc.

Blagg Engineering **Client:** GCU COM B #143E **Project:**

Sample ID MB-9285	Samp	Туре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e	
Client ID: PBS	Batc	h ID: 92	85	F	RunNo: 1	3373				
Prep Date: 9/12/2013	Analysis (Date: 9/	13/2013	013 SeqNo: 380265 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		92.4	80	120			
Sample ID LCS-9285	Samp	Гуре: LC	s	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	···
Sample ID LCS-9285 Client ID: LCSS	Samp Batc	Type: LC h ID: 92	:S 85	Tes F	tCode: El RunNo: 1	PA Method 3373	8015D: Gase	oline Rang	e	
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013	Samp Batc Analysis [Fype: LC h ID: 92 Date: 9/	:S 85 13/2013	Tes F S	tCode: El RunNo: 1 SeqNo: 3	PA Method 3373 80266	8015D: Gase	bline Rang	e	
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013 Analyte	Samp Batc Analysis [Result	Fype: LC h ID: 92 Date: 9/ PQL	25 85 13/2013 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 1 SeqNo: 3 %REC	PA Method 3373 80266 LowLimit	8015D: Gase Units: mg/H HighLimit	oline Rang (g %RPD	e RPDLimit	Qual
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013 Analyte Gasoline Range Organics (GRO)	Samp Batc Analysis I Result 22	Type: LC h ID: 92 Date: 9/ PQL 5.0	2 S 85 13/2013 SPK value 25.00	Tes F S SPK Ref Val 0	tCode: El RunNo: 1 SeqNo: 3 %REC 87.1	PA Method 3373 80266 LowLimit 74.5	8015D: Gase Units: mg/l HighLimit 126	oline Rang (g %RPD	e RPDLimit	Qual

Qualifiers:

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

Page 7 of 8

WO#: 1309461

Sample ID MB-9285	SampType: MBLK TestCode: EPA Method 8021B: Volatiles										
Client ID: PBS	Batc	h ID: 92	85	F	RunNo: 1	3373					
Prep Date: 9/12/2013	Analysis [Date: 9 /	13/2013	S	eqNo: 3	80319	Units: mg/H	g/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.050									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120				
	SampType: LCS TestCode: EPA Method 8021B: Volatiles										
Sample ID LCS-9285	Samp	Гуре: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Sample ID LCS-9285 Client ID: LCSS	Samp ⁻ Batc	Гуре: LC h ID: 92	S 85	Tes F	tCode: El RunNo: 1	PA Method 3373	8021B: Vola	tiles			
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013	Samp Batc Analysis [Гуре: LC h ID: 92 Date: 9/	S 85 13/2013	Tes F S	tCode: El RunNo: 1 SeqNo: 3	PA Method 3373 80321	8021B: Vola Units: mg/k	tiles Kg			
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013 Analyte	Samp Batc Analysis I Result	Гуре: LC h ID: 92 Date: 9/ РQL	S 85 13/2013 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 1 SeqNo: 3 %REC	PA Method 3373 80321 LowLimit	8021B: Volar Units: mg/k HighLimit	tiles Sg %RPD	RPDLimit	Qual	
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013 Analyte Benzene	Samp Batc Analysis [Result 0.99	Fype: LC h ID: 92 Date: 9/ PQL 0.050	S 85 13/2013 SPK value 1.000	Tes F S SPK Ref Val 0	tCode: El RunNo: 1 SeqNo: 3 %REC 99.4	PA Method 3373 80321 LowLimit 80	8021B: Volar Units: mg/k HighLimit 120	tiles Sg %RPD	RPDLimit	Qual	
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013 Analyte Benzene Toluene	Samp Batc Analysis [Result 0.99 0.99	Fype: LC h ID: 92 Date: 9/ PQL 0.050 0.050	S 85 13/2013 SPK value 1.000 1.000	Tes F S SPK Ref Val 0 0	tCode: El RunNo: 1 SeqNo: 3 <u>%REC</u> 99.4 99.2	PA Method 3373 80321 LowLimit 80 80	8021B: Volar Units: mg/k HighLimit 120 120	riles Xg %RPD	RPDLimit	Qual	
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013 Analyte Benzene Toluene Ethylbenzene	Samp Batc Analysis I Result 0.99 0.99 0.98	Type: LC h ID: 92 Date: 9/ PQL 0.050 0.050 0.050	S 85 13/2013 SPK value 1.000 1.000 1.000	Tes F SPK Ref Val 0 0 0 0	tCode: El RunNo: 1 SeqNo: 3 %REC 99.4 99.2 98.1	PA Method 3373 80321 LowLimit 80 80 80	8021B: Volat Units: mg/k HighLimit 120 120 120	tiles (g %RPD	RPDLimit .	Qual	
Sample ID LCS-9285 Client ID: LCSS Prep Date: 9/12/2013 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Samp Batc Analysis I Result 0.99 0.99 0.98 3.0	Type: LC h ID: 92 Date: 9/ PQL 0.050 0.050 0.050 0.10	S 85 13/2013 SPK value 1.000 1.000 1.000 3.000	Tes F SPK Ref Val 0 0 0 0 0 0	tCode: El RunNo: 1 SeqNo: 3 %REC 99.4 99.2 98.1 100	PA Method 3373 80321 LowLimit 80 80 80 80 80	8021B: Volat Units: mg/K HighLimit 120 120 120 120	tiles (g %RPD	RPDLimit .	Qual	

Qualifiers:

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

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WO#: 1309461

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Client:	BLAG	G ENGR.	/ BP AMERICA	Standard	🗌 Rush _						١Ň			51	S L		BC	R/			RY
				Project Name				- 4 A A A A A A A A A A A A A A A A A A A	2		ww	w.h	aller	viro	nme	enta	l.con	n			
Mailing A	ddress:	P.O. BO	X 87	G	CU Com B #	143E		49	01 H	lawl	kins	NE ·	- All	ouqu	Jerq	ue, I	NM 8	3710	9		
		BLOOM	FIELD, NM 87413	Project #:				Τe	el. 50)5-3	45-3	8975		Fax	505	-345	5-410)7			
Phone #:		(505) 63	2-1199	1								8) and	Anal	ysis	Re	que	ŝţ.		- 34 - 44 	in di si	2345-83
email or F	ax#:			Project Manag	jer:				n	r				4				1)			
QA/QC Pa	ckage: ard		Level 4 (Full Validation)		NELSON VELEZ			021B) s only) ANO)	IS) _		204,SO	PCB's			er - 300	,		a			
Accreditat	tion:			Sampler: NELSON VELEZ				(Gas	RO /	ਜ	F	SIS		02,1	3082			/ wat			du
)			On Ice:	X Yes	🔟 No		TPH	a/c	418.	504	827(5	03,7	ss / s	·	3	0.00			e sa
	Гуре)			Sample Temp	erature: 13			.+ 	(GR(por	Do l	or	etal	Ž J	cide	ৰি		ii - 3		e	osit
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 130941/1	BTEX + NATE	BTEX + MTE	TPH 8015B	TPH (Meth	EDB (Meth	PAH (8310	RCRA 8 M	Anions (F,	8081 Pesti	8260B (VC	8270 (Serr	Chloride (sc		Grab samp	5 pt. comp
9/9/13	0930	SOIL	5PC-TB @ 5.5' (95)	4 oz 2	Cool	-(1)	V		٧	۷								V			V
																	İ		-		
9/9/13	0935	SOIL	TH1 @ 5.5'	4 oz 1	Cool	-002	V		۷									V		V	
9/9/13	0953	SOIL	TH1 @ 11'	4 oz 1	Cool	-703	٧		۷									۷		۷	
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

ENVIRONMENTAL ANALYSIS LABORATORY

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4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: BLAGG Work Order Numb	er: 1309461		RcptNo:	1
Received by/date: AG= 09111113	······································			
Logged By: Anne Thorne 9/11/2013 9:50:00 A	М	anne Hann	_	
Completed By: Anne Thorne 9/12/2013		Den M		
Reviewed By: Ag 17/3				
Chain of Custody				
1. Custody seals intact on sample bottles?	Ý Yes 📋	No 🗔	Not Present 🗹	
2. Is Chain of Custody complete?	Yes 🗹	No 🗖	Not Present	
3. How was the sample delivered?	Courier			
Log In				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗔	NA 🗌	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🔽	No 🗌	NA 🗀	
6. Sample(s) in proper container(s)?	Yes 🔽	No 🗌	· .	
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) properly 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 broken?	Yes	No 🗹	# of preserved	• • • • • • • • • • • • • • • • • • •
12. Does paperwork match bottle labels?	Yes 🗹	No 🗌	bottles checked for pH:	
(Note discrepancies on chain of custody)	Voc.	No 🗍	Adjusted?	>12 uniess noted)
14. Is it clear what analyses were requested?	Yes 🔽		·	
15. Were all holding times able to be met?	Yes 🗹	No 🗌	Checked by:	
(If no, notify customer for authorization.)			· · · · · · · · · · · · · · · · · · ·	
Special Handling (if app <u>licable)</u>				
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗔	NA 🔽	
Person Notified: Date		· · · · · · · · · · · · · · · · · · ·		
By Whom: Via:	eMaii 🔲 I	Phone 🗌 Fax	In Person	
Regarding:				
Client Instructions:				

17. Additional remarks:

18. Cooler Information

Cooler No	Temp ℃	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes		1	

CLIENT: Blagg Engineering		C	lient Sampl	e ID: 4P	C-SW @ 7'-8'				
Project: GCU Com B # 143E			Collection	Date: 2/6	/2014 11:50:00 AM				
Lab ID: 1402373-001	Matrix:	SOIL	Received	Date: 2/11/2014 10:04:00 AM					
Analyses	Result	RL Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN			
Diesel Range Organics (DRO)	32	10	mg/Kg	1	2/13/2014 11:20:52 AM	11680			
Surr: DNOP	97.6	66-131	%REC	1	2/13/2014 11:20:52 AM	11680			
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	2/12/2014 10:27:40 PM	11678			
Surr: BFB	82.1	74.5-129	%REC	1	2/12/2014 10:27:40 PM	11678			
EPA METHOD 8021B: VOLATILES					Analyst	: NSB			
Benzene	ND	0.049	mg/Kg	1	2/12/2014 10:27:40 PM	11678			
Toluene	ND	0.049	mg/Kg	1	2/12/2014 10:27:40 PM	11678			
Ethylbenzene	ND	0.049	mg/Kg	1	2/12/2014 10:27:40 PM	11678			
Xylenes, Total	ND	0.098	mg/Kg	1	2/12/2014 10:27:40 PM	11678			
Surr: 4-Bromofluorobenzene	89.4	80-120	%REC	1	2/12/2014 10:27:40 PM	11678			
EPA METHOD 300.0: ANIONS					Analyst	JRR			
Chloride	ND	30	mg/Kg	20	2/13/2014 1:26:17 PM	11710			

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 5
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	14601015
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 1402373

Date Reported: 2/18/2014

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering

Project: GCU Com B # 143E

Sample ID MB-11710	SampType: MBLK	TestCode: EPA Method	300.0: Anions		
Client ID: PBS	Batch ID: 11710	RunNo: 16753			
Prep Date: 2/13/2014	Analysis Date: 2/13/2014	SeqNo: 482183	Units: mg/Kg		
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimít %RPD	RPDLimit Q	ual
Chloride	ND 1.5				
Sample ID LCS-11710	SamoType: ICS	TostCode: EPA Method			
•••••••••	Camprype. LOO	resicoue. EFA Methou	1 300.0: Anions		
Client ID: LCSS	Batch ID: 11710	RunNo: 16753	1 300.0: Anions		
Client ID: LCSS Prep Date: 2/13/2014	Batch ID: 11710 Analysis Date: 2/13/2014	RunNo: 16753 SeqNo: 482184	Units: mg/Kg		
Client ID: LCSS Prep Date: 2/13/2014 Analyte	Batch ID: 11710 Analysis Date: 2/13/2014 Result PQL SPK value	RunNo: 16753 SeqNo: 482184 SPK Ref Val %REC LowLimit	Units: mg/Kg HighLimit %RPD	RPDLimit Q	ual

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

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1402373 18-Feb-14

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:GCU Com B # 143E

Sample ID LCS-11680	SampT	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics									
Client ID: LCSS	Batch	n ID: 11	680	F	RunNo: 16685						
Prep Date: 2/11/2014	Analysis D)ate: 2 /	12/2014	5	SeqNo: 4	80529	Units: mg/l	Jnits: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	48	10	50.00	0	96.1	60.8	145			•• •	
Surr: DNOP	4.1		5.000		81.6	66	131	_			
Sample ID MB-11680	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Dies	el Range (Drganics		
Client ID: PBS	Batch	n ID: 11	680	F	RunNo: 1	6685					
Prep Date: 2/11/2014	Analysis D)ate: 2 /	12/2014	S	SeqNo: 4	80530	Units: mg/l	۲g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Surr: DNOP	7.1		10.00		· 71.1	66	131				

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

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1402373 18-Feb-14

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Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering **Project:**

GCU Com B # 143E

Sample ID MB-11678	SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 11678	RunNo: 16720					
Prep Date: 2/11/2014	Analysis Date: 2/12/2014	SeqNo: 481146	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual				
Gasoline Range Organics (GRO)	ND 5.0	· · ·					
Surr: BFB	820 1000	82.2 74.5	129				
Sample ID LCS-11678	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range				
Client ID: LCSS	Batch ID: 11678	RunNo: 16720	· · · ·				
Prep Date: 2/11/2014	Analysis Date: 2/12/2014	SeqNo: 481147	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual				
Gasoline Range Organics (GRO)	26 5.0 25.00	0 106 71.7	134				
Surr: BFB	880 1000	88.4 74.5	129				
Sample ID MB-11696 MK	SampType: MBLK	TestCode: EPA Method	8015D: Gasoline Range				
Client ID: PBS	Batch ID: R16746	RunNo: 16746					
Prep Date: 2/12/2014	Analysis Date: 2/13/2014	SeqNo: 482053	Units: %REC				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual				
Surr: BFB	800 1000	79.8 74.5	129				
Sample ID LCS-11696 MK	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Range				
Client ID: LCSS	Batch ID: R16746	RunNo: 16746					
Prep Date: 2/12/2014	Analysis Date: 2/13/2014	SeqNo: 482054	Units: %REC				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual				
Surr: BFB	850 1000	85.5 74.5	129				

Qualifiers:

Value exceeds Maximum Contaminant Level. *

Value above quantitation range Е

Analyte detected below quantitation limits J

0 RSD is greater than RSDlimit

- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

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WO#: 1402373

18-Feb-14

Hall	Environmental	Anal	lysis	La	bora	tory, I	lnc.
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Client: Blagg Engineering GCU Com B # 143E **Project:**

Sample ID MB-11678	SampType: MBLK	TestCode: EPA Method	I 8021B: Volatiles	· · · · · · · · ·
Client ID: PBS	Batch ID: 11678	RunNo: 16720		
Prep Date: 2/11/2014	Analysis Date: 2/12/2014	SeqNo: 481173	Units: mg/Kg	
Analyte	Result PQL SPK val	e SPK Ref Val %REC LowLimit	HighLimit %RPD R	PDLimit Qual
Benzene	ND 0.050		· · ·	
Toluene	ND 0.050			
Ethylbenzene	ND 0.050			
Xylenes, Total	ND 0.10			
Surr: 4-Bromofluorobenzene	0.90 1.00	0 90.4 80	120	
Sample ID LCS-11678	SampType: LCS	TestCode: EPA Method	I 8021B: Volatiles	
Client ID: LCSS	Batch ID: 11678	RunNo: 16720		
Prep Date: 2/11/2014	Analysis Date: 2/12/2014	SeqNo: 481174	Units: mg/Kg	
Analyte	Result PQL SPK val	e SPK Ref Val %REC LowLimit	HighLimit %RPD R	PDLimit Qual
Benzene	1.2 0.050 1.00	0 0 119 80	120	
Toluene	1.2 0.050 1.0	0 0 120 80	120	
Ethylbenzene	1.2 0.050 1.00	0 0 119 80	120	
Xylenes, Total	3.5 0.10 3.00	0 0 118 80	120	
Surr: 4-Bromofluorobenzene	0.96 1.00	0 95.9 80	120	
Sample ID MB-11696 MK	SampType: MBLK	TestCode: EPA Method	8021B: Volatiles	
Client ID: PBS	Batch ID: R16746	RunNo: 16746		
Prep Date:	Analysis Date: 2/13/2014	SeqNo: 482085	Units: %REC	
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD R	PDLimit Qual
Surr: 4-Bromofluorobenzene	0.86 1.00	0 86.0 80	120	
Sample ID LCS-11696 MK	SampType: LCS	TestCode: EPA Method	8021B: Volatiles	
Client ID: LCSS	Batch ID: R16746	RunNo: 16746		i
Prep Date:	Analysis Date: 2/13/2014	SeqNo: 482086	Units: %REC	
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD R	PDLimit Qual
Surr: 4-Bromofluorobenzene	0.92 1.00	0 92.4 80	120	

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- E Value above quantitation range
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit 0
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

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18-Feb-14

1402373

Client:	BLAG	G ENGR.	/ BP AMERICA	Standard	🗌 Rush _						ł	1A \N	LL AL	. E .Y	N¥ 51:	/IF S L	05 IA.	NI BO	ME R/		ra Df	.L ZY	*
Mailing A	ddress:	P.O. BO	X 87	Project Name	CU Com B #	143E			<u> </u>	01 F	awk	ww	w.ha	allen . All	iviro huan	nme	ntal	.con IM 8	י די די	9			
		BLOOM	FIELD, NM 87413	Project #:				1	Te	el. 50)5-34	45-3	975		Fax	505	-345	-410)7				
Phone #:		(505) 63	2-1199					- - 	بود ۳۰	2.2	9			Anal	ysis	Red	jues	st 🔅		÷.1.,		s. Es	1 H H
email or F	ax#:			Project Manag	jer:				2	20 0					÷				1)				Γ
QA/QC Par ☑ Stand	ckage: ard		Level 4 (Full Validation)		NELSON V	ELEZ)21B)	(Vluo	-lovin			IS)		04,SO	PCB's			er - 300.			a	
Accreditat	tion:			Sampler:	NELSON V	ELEZ	and	100	(Gas	RO /	न	(T	NISC		03,1	3082			/ wat			d u	}
		Other		On lce:	X Yes	D No.			H	0/0	418.	504.	827(O S S	s / 8		R	0.00			e sa] :
	Гуре)			Sample Temp	erature:	. 9		L	+ 111	(GR(pol	pot	or	etal	Ň,	cide	Ŕ	i-VC	il - 3		8	osit	:
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALN	ور کار	BTEX + MITE	BTEX + MTB	TPH 8015B	TPH (Meth	EDB (Meth	PAH (8310	RCRA 8 M	Anions (F,	8081 Pesti	8260B (VO	8270 (Sem	Chloride (so		Grab samp	4 pt. comp	
2/6/14	1150	SOIL	4PC-SW @ 7'-8'	4 oz 1	Cool	-0	01	V	\square	V									V			V	Γ
						1																	Γ
				1															-		-		F
•						+															1	-	F
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)ate	Time	Relinquich	edaby:	Received by	I	Data Tir																	L
10/14			1/L			21.1.	15	nen c	narks	s: Mair													
	1430	1/1		(shrister	Walter	P MIOIT	30	56	enu if	NOIC	.e 10	Bla	agg E	ingin	eerii	ng, Ir	1C.						
	1730	This	atu ila Dal Ita u	Abt	Anter							P.C Bło	D. Bo	x 87 field,	, NM	874	13						

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If necessary earnples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical most

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmen X TEL: 505-345-35 Website: www	ntal Analysis Lab 4901 Haw Albuquerque, Ni 275 FAX: 505-3 Mallenvironme	boratory vkins NE M 87109 San 45-4107 ntal.com	nple Log-In C	heck List
Client Name: BLAGG	Work Order Numb	per: 1402373		RcptNo:	1
Received by/date: AG	02/11/14				
Logged By: Michelle Garcia	2/11/2014 10:04:00	AM	minul G	arun	1
Completed By: Michelle Garcia	2/11/2014 11:50:37	AM	Minul C	anua	
Reviewed By:	02/11/14				
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?		Courier			
Log In					
4. Was an attempt made to cool the samp	les?	Yes 🖌	No 🛄	NA	
5. Were all samples received at a tempera	ture 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 te	est(s)?	Yes 🗹	No 🗋		
8. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🗹	No 🗔		
9. Was preservative added to bottles?		Yes 门	No 🔽	NA	
10.VOA vials have zero headspace?		Yes	No L]	No VOA Vials 🗹	
11. Were any sample containers received b	roken?	Yes 🛄	No 🗹	# of preserved	
12. Does paperwork match bottle labels?		Yes 🗹	No 🗆	bottles checked for pH:	
(Note discrepancies on chain of custody)	, -,	_	(<2 0	r >12 unless noted)
13 Are matrices correctly identified on Chair	n of Custody?	Yes 🗹	No 🗌	Adjusted	
14. Is it clear what analyses were requested	?	Yes 🗹	No L		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes M	. NO [.1	Checked by:	
· · · · · · · · · · · · · · · · · · ·					1
<u>Special Handling (if applicable)</u>					
16. Was client notified of all discrepancies w	ith this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified:	Date:				
Regarding:	Y IQ.				1

17. Additional remarks:

Client Instructions:

18. Cooler Information

Cooler No	Temp [®] C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

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Analytical Report

Lab Order 1402755

Date Reported: 2/27/2014

Analyst: KS

2/25/2014 5:13:00 PM 11864

Hall Environmental Analysis Laboratory, Inc.

SM2540C MOD: TOTAL DISSOLVED SOLIDS

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Total Dissolved Solids

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CLIENT: Blagg Engineering Project: GCU Com B #143E Lab ID: 1402755-001	Matrix:	AQUEOUS	Client Samp Collection Received	le 1D: M' Date: 2/1 Date: 2/1	W #4 8/2014 2:00:00 PM 9/2014 10:00:00 AM	
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES					Analyst	JMP
Benzene	ND	1.0	µg/L	1	2/21/2014 11:30:09 AM	R16894
Toluene	2.6	1.0	µg/L	1	2/21/2014 11:30:09 AM	R16894
Ethylbenzene	2.6	1.0	μg/L	1	2/21/2014 11:30:09 AM	R16894
Xylenes, Total	37	2.0	µg/L	1	2/21/2014 11:30:09 AM	R16894
Surr: 4-Bromofluorobenzene	110	85-136	%REC	1	2/21/2014 11:30:09 AM	R16894
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Fluoride	0.87	0.10	mg/L	1	2/20/2014 1:54:42 PM	R16880
Chloride	7.1	0.50	mg/L	1	2/20/2014 1:54:42 PM	R16880
Nitrogen, Nitrate (As N)	1.0	0.10	mg/L	1	2/20/2014 1:54:42 PM	R16880
Sulfate	240	10	mg/L	20	2/20/2014 2:07:06 PM	R16880
EPA METHOD 200.7: DISSOLVED ME	TALS				Analyst	JLF
Iron	0.025	0.020	mg/L	1	2/21/2014 1:16:51 PM	R16879

40.0

*

mg/L

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 7
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	rage ror /
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

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Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:GCU Com B #143E

3

Sample ID MB Client ID: PBW	SampType: MBLK Batch ID: R16879	TestCode: EPA Method RunNo: 16879	200.7: Dissolved Metals
Prep Date: 2/5/2014	Analysis Date: 2/21/2014	SeqNo: 486096	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
Sample ID LCS Client ID: LCSW	SampType: LCS Batch ID: R16879	TestCode: EPA Method RunNo: 16879	200.7: Dissolved Metals
Sample ID LCS Client ID: LCSW Prep Date:	SampType: LCS Batch ID: R16879 Analysis Date: 2/21/2014	TestCode: EPA Method RunNo: 16879 SeqNo: 486097	200.7: Dissolved Metals Units: mg/L
Sample ID LCS Client ID: LCSW Prep Date: Analyte	SampType: LCS Batch ID: R16879 Analysis Date: 2/21/2014 Result PQL SPK value	TestCode: EPA Method RunNo: 16879 SeqNo: 486097 SPK Ref Val %REC LowLimit	200.7: Dissolved Metals Units: mg/L HighLimit %RPD RPDLimit Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

WO#: 1402755

27-Feb-14

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Hall	Environmental	Ana	lysis	La	bora	tory,	Inc.
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Client:Blagg EngineeringProject:GCU Com B #143E

3

Sample ID MB	SampType: MB	LK	Tes	tCode: EF	PA Method	300.0: Anions			
Client ID: PBW	Batch ID: R16	5880	F	RunNo: 10	6880				
Prep Date:	Analysis Date: 2/2	20/2014	S	SeqNo: 41	86110	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								
Nitrogen, Nitrate (As N)	ND 0.10								
Sulfate	ND 0.50		·						
Sample ID LCS	SampType: LC	s	Tes	tCode: EF	PA Method	300.0: Anions	;		
Client ID: LCSW	Batch ID: R16	6880	F	RunNo: 16	6880				
Prep Date:	Analysis Date: 2/2	20/2014	S	eqNo: 4	86111	Units: mg/L			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51 0.10	0.5000	0	102	90	110			
Chloride	5.0 0.50	5.000	· 0	99.6	90	110			
Nitrogen, Nitrate (As N)	2.6 0.10	2.500	0	103	90	110			
Sulfate	9.9 0.50	10.00	0	98.6	90	110			
Sample ID A4	SampType: CC	V_4	Tes	Code: EF	PA Method	300.0: Anions	;		
Client ID: BatchQC	Batch ID: R16	5880	F	RunNo: 10	6880				
Prep Date:	Analysis Date: 2/2	20/2014	S	eqNo: 4	86120	Units: mg/L			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.94 0.10	1.000	0	93.7	90	110			
Chloride	4.7 0.50	5.000	0	93.4	90	110			
Nitrogen, Nitrate (As N)	2.9 0.10	3.000	0	95.7	90	110			
Sulfate	12 0.50	12.50	0	93.0	90	110			
Sample ID A5	SampType: CC	V_5	Tes	tCode: EF	PA Method	300.0: Anions	;		
Client ID: BatchQC	Batch ID: R16	6880	R	lunNo: 16	6880				
Prep Date:	Analysis Date: 2/2	20/2014	S	eqNo: 48	86132	Units: mg/L			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5 0.10	1.600	0	96.4	90	110			
Chloride	7.7 0.50	8.000	0	96.4	90	110			
Nitrogen, Nitrate (As N)	4.8 0.10	4.800	0	99.9	90	110			
Sulfate	19 0.50	20.00	0	96.8	90	110		· · ·	
Sample ID A6	SampType: CC	V_6	Tes	tCode: EF	PA Method	300.0: Anions			
Client ID: BatchQC	Batch ID: R16	6880	R	lunNo: 16	6880				
Prep Date:	Analysis Date: 2/2	20/2014	S	eqNo: 48	86144	Units: mg/L			
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

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

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

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27-Feb-14

1402755

Hall Environmental Analysis Laboratory, Inc.

Blagg Engineering **Client:** GCU Com B #143E **Project:**

0	A.0				~						······
Sample ID	A6	Sampl	ype: CC	V_6	Tes	tCode: E	PA Method	300.0: Anion	S		
Client ID:	BatchQC	Batc	h ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D	Date: 2/	20/2014	S	SeqNo: 4	86144	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	•	2.4	0.10	2.400	0	98.2	90	110		•	
Chloride		12	0.50	12.00	0	101	90	110			
Nitrogen, Nitrat	te (As N)	7.6	0.10	7.200	0	106	90	110			
Sulfate		30	0.50	30.00	0	101	90	110			
Sample ID	A4	SampT	ype: CC	:∨_4	Tes	tCode: E	PA Method	300.0: Anion	s		
Client ID:	BatchQC	Batcl	h ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D	Date: 2 /	20/2014	S	SegNo: 4	86156	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.96	0.10	1.000	0	95.9	90	110			
Chloride		4.7	0.50	5.000	0	94.1	90	110 ·			
Nitrogen, Nitrat	e (As N)	2.9	0.10	3.000	0	96.1	90	110			
Sulfate		12	0.50	12.50	0	93.4	90	110			
Sample ID	A5	SampT	ype: CC	V_5	Tes	tCode: E	PA Method	300.0: Anion:	s	·····	
Client ID:	BatchQC	Batch	n ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D	Date: 2/	20/2014	S	SeqNo: 4	86168	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		1.5	0.10	1.600	0	96.6	90	110			
Chloride		7.8	0.50	8.000	0	96.9	90	110			
Nitrogen, Nitrat	e (As N)	4.8	0.10	4.800	0	100	90	110			
Sample ID	MB	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	300.0: Anion:	5		
Client ID:	PBW	Batch	n ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D)ate: 2/	20/2014	5	eqNo: 4	86170	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								
Nitrogen, Nitrat	e (As N)	ND	0.10								
Sample ID	A6	SampT	ype: CC	₩6	– Tes	tCode: El	PA Method	300.0: Anion:	s <u> </u>		
Client ID:	BatchQC	Batch	n ID: R1	6880	F	RunNo: 1	6880				-
Prep Date:		Analysis D)ate: 2/	20/2014	S	SeqNo: 4	86180	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		2.3	0.10	2.400	0	97.6	90	110			
Chloride		12	0.50	12.00	0	101	90	110			

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Value above quantitation range Е
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits S
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- Sample pH greater than 2. Р
- RL Reporting Detection Limit

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Blagg Engineering

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Client:

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Project:	GCU Con	n B #143E	;								
Sample ID A6	6	SampT	ype: CC	:V_6	Tes	tCode: E	PA Method	300.0: Anion	6		
Client ID: Ba	atchQC	Batch	ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D	ate: 2 /	20/2014	5	SeqNo: 4	86180	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (A	As N)	7.5	0.10	7.200	0	105	90	110			
Sample ID A	4	SampT	ype: CC	℃_4	Tes	tCode: E	PA Method	300.0: Anion:	5		
Client ID: Ba	atchQC	Batch	ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D	ate: 2/	21/2014	S	SeqNo: 4	86192	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.94	0.10	1.000	0	94.3	90	110			
Chloride		4.7	0.50	5.000	0	93.3	90	110			
Nitrogen, Nitrate (/	As N)	2.9	0.10	3.000	0	95.7	90	110			
Sample ID As	5	SampT	ype: CC	×_5	Tes	tCode: E	PA Method	300.0: Anions	6		
Client ID: Ba	atchQC	Batch	ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D	ate: 2/	21/2014	S	SeqNo: 4	86204	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		1.5	0.10	1.600	0	95.1	90	110			
Chloride		7.7	0.50	8.000	0	96.7	90	110			
Nitrogen, Nitrate (A	As N)	4.8	0.10	4.800	0	100	90	110			
Sample ID A6	6	SampT	ype: CC	×_6	Tes	tCode: El	PA Method	300.0: Anions	5		
Client ID: Ba	atchQC	Batch	ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D	ate: 2/	21/2014	S	SeqNo: 4	86214	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		2.3	0.10	2.400	0	96.4	90	110			
Chloride		12	0.50	12.00	0	101	90	110			
Nitrogen, Nitrate (A	As N)	7.5	0.10	7.200	0	104	90	110			
Sample ID A	4	SampT	ype: CC	CV_4	Tes	tCode: E	PA Method	300.0: Anions	\$		
Client ID: Ba	atchQC	Batch	ID: R1	6880	F	RunNo: 1	6880				
Prep Date:		Analysis D	ate: 2/	21/2014	5	SeqNo: 4	86220	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride		0.94	0.10	1.000	0	93.8	90	110			
Chloride		4.7	0.50	5.000	0	93.6	90	- 110			
Nitrogen, Nitrate (A	As N)	2.9	0.10	3.000	0	96.2	90	. 110			

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Value above quantitation range Е
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- Page 5 of 7

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

Blagg Engineering

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Client:

Project: GCU Com B #143E Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBW Batch ID: R16894 RunNo: 16894 Prep Date: Analysis Date: 2/21/2014 SeqNo: 486551 Units: µg/L Result PQL SPK value SPK Ref Val Analyte %REC LowLimit HighLimit %RPD RPDLimit Qual ND 1.0 Benzene ND 1.0 Toluene Ethylbenzene ND 1.0 ND 2.0 Xylenes, Total Surr: 4-Bromofluorobenzene 21 20.00 103 85 136 Sample ID 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSW Batch ID: R16894 RunNo: 16894 Prep Date: Analysis Date: 2/21/2014 SeqNo: 486552 Units: µg/L Analyte PQL SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Result LowI imit Qual Benzene 19 1.0 20.00 0 97.4 80 120 20 1.0 20.00 0 98.5 80 120 Toluene 0 98.2 Ethylbenzene 20 1.0 20.00 80 120 Xylenes, Total 60 2.0 60.00 0 100 80 120 Surr: 4-Bromofluorobenzene 22 20.00 111 85 136 Sample ID MB-11838 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Batch ID: R16894 Client ID: PBW RunNo: 16894 Analysis Date: 2/21/2014 Prep Date: SeqNo: 486561 Units: µg/L PQL SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Analyte Result LowLimit Qual ND 1.0 Benzene 1.0 Toluene ND ND 1.0 Ethylbenzene ND 2.0 Xylenes, Total Surr: 4-Bromofluorobenzene 22 20.00 109 85 136 Sample ID LCS-11838 SampType: LCS TestCode: EPA Method 8021B: Volatiles RunNo: 16894 Client ID: LCSW Batch ID: R16894 Prep Date Analysis Date: 2/21/2014 SeqNo: 486562 Units: µg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Analyte 1.0 20.00 0 97 1 80 120 Benzene 19 20 1.0 20.00 0 97.6 80 120 Toluene 20.00 0 80 120 Ethylbenzene 20 1.0 98.8 60.00 0 100 80 120 Xylenes, Total 60 2.0

Qualifiers:

Value exceeds Maximum Contaminant Level.

22

E Value above quantitation range

Surr: 4-Bromofluorobenzene

- 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

85

136

ND Not Detected at the Reporting Limit

109

P Sample pH greater than 2.

20.00

RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:GCU Com B #143E

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Sample ID MB-11864	SampType: MBLK	TestCode: SM2540C M	OD: Total Dissolved Solids			
Client ID: PBW	Batch ID: 11864	, RunNo: 16946				
Prep Date: 2/24/2014	Analysis Date: 2/25/2014	SeqNo: 487787	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-11864 SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids						
Client ID: LCSW	Batch ID: 11864	RunNo: 16946				
Prep Date: 2/24/2014	Analysis Date: 2/25/2014	SeqNo: 487788	Units: mg/L			
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual			
Total Dissolved Solids	1030 20.0 1000	0 103 80	120			

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

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1402755

WO#:

27-Feb-14

		44	nouy noulu		/ · · · · ·					ы		F	ML	/T E	20		ME	MT	M -
Client:	BLAG	G ENGR.	/ BP AMERICA	Standard	🗌 Rush _					A			SI	5 L	.Al	BO	RA	TO	R
				Project Name:					يمية ² يريد	w	ww.h	aller	nviro	nme	entai	.con	n		
Mailing Ac	dress:	P.O. BO	X 87	G	CU Com B #	143E		49	01 H	awkin	s NE	- Al	bugu	iergi	ue, M	NM 8	37109		
		BLOOM	FIELD, NM 87413	Project #:			Tel. 505-345-3975 Fax 505-345-4107												
Phone #:		(505) 63	2-1199	1					a starter			Aņa	ysis	Rec	jues	St.			a far A far A far A
email or F	ax#:			Project Manag	jer.				Ī				3						
QA/QC Pac	ckage: ard		Level 4 (Full Validation)	NELSON VELEZ		(8021E	(ylno	(MRO)		(S)		Por SO			a	\mathbf{r}		a	
Accreditat	ion:			Sampler: NELSON VELEZ 9		1	(Gas	2 2 2	न्	SIN	m	{F	lids	red	*			lam	
)	Other		On Ice:	I⊈⁄Yes	D No.	Ŧ	HdT	3	418	827	5	15	d So	filte	H			te sa
	[ype)			Sample Temp	erature: d: I	\mathcal{O}		н Ж	(GR		a la	etal	U.S.	olve) snc	I		el	posit
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + M	BTEX + MT	TPH 80158	TPH (Met	PAH (8310	RCRA 8 M	Anions (F,	Total Diss	Iron, Ferre	Nitrate N		Grab sam	5 pt. com
2/18/14	1400	WATER	MW # 4	40 ml VOA - 2	HCI & Cool	001	V	-			1	T						V	1
2/18/14	1400	WATER	MW # 4	500 ml - 1	Cool	061					T		V	V				V	Γ
2/18/14	1400	WATER	MW # 4	125 ml - 1	HNO3 & Cool	001					T				۷			V	
2/18/14	1400	WATER	MW # 4	125 mi - 1	H ₂ SO ₄	001					-	-				۷		V	F
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<u> </u>							$\left\{ -\right\}$		-+										┣╌┥
Date:	Time:	Relinquish	ad by:	Received by:	1	Date Time	Rem	l	<u>l</u>		_L	L	L						
2/18/14	1522	91	half	mustul	Nortz	2/18/14 1522	Se	nd in	voice	e to : E	lagg	Engin	eerir	ng, In	NC.				
Uate: 2/19/14	LOU		stu Walt	Received by:	1 A O	Date Time	P.O. Box 87 Bloomfield, NM 87413												

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It necessary, samples submitted to Hall Environmental may be subcontracted to other active did laboratories/ This/serves as notice of this possibility. Any sub-contracted riata will be clearly of

ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Ar Albuqu TEL: 505-345-3975 F. Website: www.halle	nalysi 4901 uerqu AX: 5 nviro	s Laborato Hawkins N 2, NM 8710 05-345-410 nmental.co	VE 05 Sar 07	iple Log-In C	heck List
Client Name: BLAGG	Work Order Number: 1	4027	55		RcptNo:	1
Received by/date:	Plialin		<u>.</u>	<u> </u>		
Logged By: Michelle Garcia 2/	19/2014 10:00:00 AM		•	Minue Go	nue	
Completed By: Michelle Garcia 2/	20/2014 9:55:10 AM			Musile Co	nue	
Reviewed By:	2/20/14				. –	
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?	1	Couri	er			
Log In						
4. Was an attempt made to cool the samples?		Yes		No 📮		
5. Were all samples received at a temperature of	>0° C to 6.0°C	res	V	No 🗌		
6. Sample(s) in proper container(s)?		Yes		No 🗍	· · ·	
7. Sufficient sample volume for indicated test(s)?	,	Yes		No 🗔		
8. Are samples (except VOA and ONG) properly p	reserved?	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 broken?	•	Yes		No 🔽	# of presson and	
12. Does paperwork match bottle labels?	·	Yes		No 🗌	bottles checked for pH:	2
(Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Cu	stody?	100		No 🗍	Adjusted?	r > 12 uniess noted)
14. Is it clear what analyses were requested?	ology r	Yes I				h.
15. Were all holding times able to be met? (If no, notify customer for authorization.)	•	Yes		No 🗌	Checked by:	Ing
Special Handling (if applicable)						
16. Was client notified of all discrepancies with this	order?	/eis		No 🗆	NA 🗹	
Person Notified:	Date:]		
By Whom:	Via:	eMai	l 🗌 Pho	one 门 Fax	in Person	
Regarding:						
				·		
17. Additional remarks:	· ·					
18. <u>Cooler Information</u>	·					
1 10 Good Ves	Intacta isealinos se	aliDa	e se	igned By		
	<u></u>	<u> </u>	<u>-</u>	<u> </u>		

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

CLIENT : BP AMERICA PROD. CO.					CHAIN-OF-C	USTODY # :	N / A				
GCU Com B # 143E LABORATORY (S) USED : UNIT M, SEC. 25, T29N, R12W							:	HALL ENVIRONMENTAL			
Date :	February 18	<u>, 2014</u>			C		/ SAMPLER :	<u> </u>	JV		
Filename :	GCU Com B	143E mw log	02-18-14.XIS			PROJECT	MANAGER :	<u>N .</u>	1 V		
Sample ID	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pН	CONDUCT (umhos)	TEMP. (celcius)	VOLUME PURGED (gal.)		
MW #4	_	-	17.17	25.95	1400	7.20	800	15.3	4.25		
	<u>▶</u> ,,		INSTRI	JMENT CALI DAT	BRATIONS = E & TIME =	4.01/7.00/10.00 02/18/14	2,800 0600				
NOTES :	NOTES : Volume of water purged from well prior to sampling; V = pi X r2 X h X 7.48 gal./ft3) X 3 (wellbores). (i.e. 2" MW r = (1/12) ft. h = 1 ft.) (i.e. 4" MW r = (2/12) ft. h = 1 ft.) Ideally a minimum of three (3) wellbore volumes: 2.00 " well diameter = 0.49 gal. / ft. of water.										
Comments	<u>or note wel</u> 2/13/2014. De	<u>diameter</u>	i <u>f not standa</u> ed 20 gallons d	<u>rd_2".</u>	on 2/17/2014 (murky brown	in appearance	2)			
Purged well	using 2 inch su	ubmersible ele	ectric pump , n	ew / clear vin	yl tubing and v	with brass adj	ustable flow va	alve			
attachment a	added near sar	mpling end of	tubing . Collec	cted samples	for BTEX per	US EPA Meth	nod 8021B &				
general cher	nistry paramet	ers.									
<u></u>											
							·				
Top of casin	g: MW #4 ~ 2.4	45 ft. above g	rade.						<u> </u>		

on-site	1:15 PM	_temp.	61 F
off-site	2:15 PM	_temp.	61 F
sky cond.		Sunny	
wind speed	5 - 15	direct.	w

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