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

Form C-141 Revised August 8, 2011 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

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

			Rele	ease Notific	catior	n and Co	rrective A	ction				
				·		. (OPERATO	₹ .	Ir	itial Repor	t 🛛 Final R	tepo
Name of Co						Contact: Ste						
		Court, Farm		M 87401			No.: 505-326-94					
acility Nai	ne: Galleg	os Canyon I	Jnit 170			Facility Typ	e: Natural gas	well				
urface Ow	ner: Fee			Mineral (Owner:	Fee			API No	30-045-07	7658	
				LOCA	ATIO	N OF REI	LEASE				ict 3	
nit Letter	Section 35	Township 29N	Range 12W	Feet from the 1,750	North/ South	South Line	Feet from the 1,777	East/W West	est Lingol	is: div d	H-Julan W	
		Latitı	ıde36.			_ Longitude	-108.07149°		W	RO 2 21	017	
					TURE	OF RELI						
		ed water and					Release: 253 bb			ecovered: 7		
urce of Re	iease: Faile	d well casing	and Histor	ical impacts			four of Occurrence 16; 2:15 PM		Date and 2016; 8:30		covery: July 22,	
as Immedi	ate Notice (If YES, To	Whom?					
		\boxtimes	Yes	No 🔲 Not R	equired	Landowne	Contacted Brand	don Powe	ılı - NMO	CD		
		obos – Private	Landown	er			lour: 7/22/16; Ph			il – 5:30 PM	[
as a Water	course Read		Yes ⊠	No		If YES, Vo	lume Impacting t	the Water	course.			
a Watercou	irse was Im	pacted, Descr	ibe Fully.									
escribe Are ackfill impo	a Affected rted from a e excavatio	and Cleanup A n offsite locat n. Closure so	Action Tak ion design il samples	en.* Approximat ated by the lando were collected fr ineation will be p	ely 16,00 wner. W	00 cubic yard Vhere applical excavation un	s of soil was exca	avated an	d removed s applied t	from the lo	cation with clea Iwater interface	n at
egulations a ublic health nould their or the environ	I operators or the envir operations h nment. In a	are required to ronment. The ave failed to a	o report ar acceptance adequately OCD accep	is true and comp d/or file certain r e of a C-141 repo investigate and r tance of a C-141	elease no ort by the emediate	otifications ar NMOCD ma contamination	nd perform correct arked as "Final R on that pose a three the operator of	etive action eport" do eat to gro responsib	ons for rele es not reli- ound water oility for co	ases which in eve the opera surface was surface was	may endanger ator of liability er, human healt ith any other	th
gnature: 🎉	Marie SV	Mu					OIL CON		1	<u>DIVISIO</u> محر) <	_
inted Name	: Steve Mo	skal				Approved by	Environmental S	pecialist:		1		_
tle: Field E	nvironment	al Coordinato	r			Approval Dat	e: 3/3/1-	(E	xpiration I	Date:		
mail Addre	ss: steven.r	noskal@bp.co	om	- 		Conditions of	Approval:	dition	val	Attached		
ate: March				05-326-9497		Scound	weder D	eline	dion			
tach Addi	ional Shee	ets If Necess	ary Hucs	1621656	998	Must	be bon	ح سُ	Hi. N	ad od	y's (5-	1-
			17 P		Si	Amole f	or 8260	Full	List			
			3R-	381	Ĉ.	Ation /	Avion		-			

Smith, Cory, EMNRD

From:

Smith, Cory, EMNRD

Sent:

Friday, March 3, 2017 2:29 PM

To:

Moskal, Steven

Cc:

Fields, Vanessa, EMNRD; Bayliss, Randolph, EMNRD

Subject:

GCU 170 3RP-381

Steve,

The OCD has received the Final C-141 for the soil aspects at the Gallegos Canyon Unit 170 2016 release. The C-141 has been approved with the following conditions of Approval.

- BP must return to the site within 60 days (5-1-17) and delineate any possible water contamination from the 2016 release and replace as needed monitor wells from the previous ground water contamination that were destroyed during excavation.
- BP will be sample the ground water by EPA Method 8260 (or equivalent division approved method), and General Water Chemistry (Cations and Anion)
- BP will notify the District III Office at least 24 hours but no more than 1 week prior to the start of delineation and before collection conformation water samples.

Since the 2016 release possibly comingled with the previous historic 1995 release BP will not be issued a new 3RP# and will use the historic 3RP-381.

If you have any additional questions please give me a call.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

Release Remediation

GCU 170 (K) Sec 35 – T29N – R12W API: 30-045-07658 San Juan County, New Mexico

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

Prepared by:
Blagg Engineering, Inc.
P.O. Box 87
Bloomfield, New Mexico 87413
(505)632-1199

February 28, 2017

RELEASE REMEDIATION GCU 170

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Remediation Closure
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Appendix C: Laboratory Analytical Data Reports
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Appendix E: Cathodic Well Closure Report

RELEASE REMEDIATION GCU 170

INTRODUCTION

Blagg Engineering Inc. (BEI) has been retained by BP America Production Co. (BP) to provide consulting for the remediation of a release that occurred at the GCU 170 natural gas well, located in rural San Juan County, New Mexico at (K) Sec. 35 - T29N - R12. A sudden catastrophic release of approximately 253 barrels of produced water and condensate was discovered to begin on July 21, 2016. The cause of the release was subsequently found to be an integrity issue with the natural gas well which resulted in a sudden inflow of water that overflowed both the on-site 300 barrel production storage tank and 95 barrel low profile tank. The release was contained within the tank perimeter containments and on July 22, 2016 approximately 71 barrels was recovered via vacuum truck.

Removal of surface equipment began on July 27, 2017 and soil impacts were remediated via excavation beginning on July 28, 2016. This work was suspended between August 12 – September 18, 2016 to allow a workover rig access to permanently plug and abandon the natural gas well. Remedial activities resumed on September 19, 2016.

During the period that remedial activities were suspended, BP obtained approval from the New Mexico Oil Conservation Division and the private surface landowner to treat the hydrocarbon impacted soils on-site via a soil shredding process. This process includes proprietary treatment of the soils with hydrogen peroxide, followed by sampling to insure that the soils meet closure standards (total petroleum hydrocarbons at < 100 ppm, benzene at <10 ppm, combined benzene, toluene, ethyl-benzene and total xylenes at <50 ppm). This process was conducted beginning on September 19, 2016.

Removal of impacted soils included excavation to below the top of the water table, found at approximately 8 feet below surface grade. To facilitate groundwater remediation, certain areas of the remedial excavation base were treated with hydrogen peroxide. Additionally, a lateral piping system to inject hydrogen peroxide was installed in the area of the remedial excavation, protected with a geo-textile fabric and then covered with cobbles. It was anticipated to place successfully shredded soils on top of the cobble layer. However, the private landowner rejected the use of the lateral piping, geo-textile fabric and cobble layer. As a result, BP elected to terminate the shredding process on October 17, 2016 and had the remediation contractor remove all piping, fabric and cobbles.

A prior historical release at the site had been remediated via excavation in 1995. This prior remediation did not result in removal of all impacts due to conflicts with piping, surface equipment and the request of the previous landowner to not excavate in his cultivated fields surrounding the well pad. Since the gas well had been permanently abandon, BP elected to remediate the residual historical impacts by excavation. This remedial effort began on October 26, 2016 and was completed on December 13, 2016.

A cathodic protection well was on the GCU 170 well pad, and as a result of the remedial efforts it was necessary to abandon this well. This work was completed by Correro of Farmington, New Mexico on November 7, 2016.

Closure sidewall sampling discovered elevated chlorides along the western boundary of the remedial excavation. Elevated chlorides were not evident at any other area of the remediation. A prior abandon gas well operated by Benson, Montin and Greer, the GCU 2, was immediately adjacent to this area. BP conducted additional chloride sampling of the ground surface in the cultivated pasture north of the GCU 2 abandonment marker, but found no elevated chlorides in the surface soils. There was no visual evidence that the pasture grasses were stressed.

CLOSURE SAMPLING PROCEDURES

The remedial excavation in all areas was extended to depths deeper than the known static water table (approximately 8 feet below grade) and as a result only excavation sidewall samples were necessary to demonstrate remediation closure. This sampling was conducted with witnessing by the NMOCD and included composite sampling of each portion of the excavation. Composite samples were placed into a gallon sized Ziploc® baggie for field headspace analysis of organic vapors with a calibrated IonScience Tiger model photo-ionization detector (PID) containing a 11.2 eV lamp. Split samples were placed into a 4-ounce laboratory supplied jar with Teflon® lid, labeled and placed on ice in an ice chest for further laboratory testing. The jarred samples were hand delivered to a representative of Hall Environmental Analytical Laboratories for analysis via U.S. EPA Method 8021B (volatile organics limited to benzene, toluene, ethyl benzene and total xylenes) and U.S. EPA Method 8015 (gasoline range (GRO), diesel range (DRO) and motor oil range (MRO) organics). A chain-of-custody followed the samples.

REMEDIATION CLOSURE

The summary laboratory analytical results of the closure sampling, maps showing composite sampling areas, and laboratory data reports are attached. All sampling indicates that site closure of soil impacts has been achieved at all perimeter areas of the remediation, including the historical 1995 release area.

It is Blagg Engineering, Inc's professional opinion that the sampling and analytical testing conducted for the release closure was sufficient to determine that no significant soil impacts exceeding site closure standards remain. Future site groundwater monitoring is indicated pursuant to standard regulatory protocol.

Blagg Engineering, Inc.

Jeffrey C. Blagg, P.E.

President

APPENDIX A BP America GCU 170

(K) Sec 35 – T29N – R12W San Juan County, New Mexico API: 30-045-07658

Summary Record of Impact Remediation

July 21, 2016 A release of approximately 253 barrels of produced water and condensate from overflow at a 300 barrel stock tank occurred due to significant and unexpected water inflow from the GCU 170 natural gas well. The release was contained on-site within the tank perimeter containment. Approximately 71 barrels was recovered via vac-truck.

The site closure standard was determined at 100 ppm TPH based on:

Known depth to groundwater less than 10' from ground surface.

July 25, 2016 Three pre-existing site groundwater monitor wells (installed to monitor natural attenuation of a prior 1995 site remediation) were inspected. Monitor wells MW-3R and MW-5, both located at down-gradient areas from the release, were found to be free of visual hydrocarbon impacts. Monitor well MW-4, located adjacent to and down-gradient from the tank containment ring, was found to have 7.9 feet of free product floating on the water table.

<u>July 26, 2016</u> A pump was placed into monitor well MW-4 to recover product. A total of approximately 1,300 gallons of water and 13 gallons of condensate was removed from the well and discharged into the 95 barrel on-site low profile tank.

July 27, 2016 Site remediation via excavation was authorized by BP and approved by the New Mexico Oil Conservation Division (NMOCD). Initial operational plans were developed and removal of site surface equipment was initiated.

<u>July 28 – July 29, 2016</u> Site remediation via excavation commenced. The initial source area impacted soils in the area of the 300 barrel stock tank and 95 barrel low profile tank were removed to a depth of 11 feet below grade, below the estimated static top of the water table. Apply 250 gallons of 17.5% hydrogen peroxide to the open excavation base (35' x 30' x 11' deep) to augment remediation.

<u>August 1 – August 12, 2016</u> Continued site remediation via excavation.

August 3 and August 5, 2016 Conduct NMOCD witnessed excavation closure sampling.

August 8 - 9, 2016 Conduct off site hand augering/sampling in the private pasture south of the location to delineate potential off-site impacts.

<u>August 12, 2016</u> Remediation via excavation suspended to allow workover rig access to permanently plug and abandon the natural gas well.

August 17 – September 13, 2017 Gas well plugged and abandoned.

<u>September 19 – October 14, 2016</u> Resume site remediation via soil shredding (on-site soil remediation via chemical oxidation of excavated hydrocarbon impacts). Shredding was pre-approved by both NMOCD and the private surface owner. Begin removal of impacts in private pasture south of well pad.

<u>September 20, 2016</u> Conduct NMOCD witnessed excavation closure sampling of remediated areas in private pasture south of well pad. Begin treating excavated impacted soil with the shredding process.

<u>September 21, 2016</u> Apply 1,375 gallons of 35% hydrogen peroxide to the west half of the south pasture open excavation base to augment remediation.

<u>September 22, 2016</u> Apply 2,200 gallons of 35% hydrogen peroxide to the east half of the south pasture open excavation base to augment remediation.

<u>September 26, 2016</u> Install horizontal slotted PVC treatment piping in remediated areas of the off-site pasture. Install geo-textile fabric and rock covering to protect piping.

<u>September 28, 2016</u> Conduct NMOCD witnessed closure sampling of shredded soils. Discover historic landowner buried trash at northwest corner of remedial excavation.

October 14, 2016 Conduct NMOCD witnessed excavation closure sampling.

October 17, 2016 Private landowner rejects PVC treatment piping, geo-textile fabric and rock covering processes. Remediation contractor instructed by BP to remove all these materials and transport shredded soils to a commercial landfarm.

October 18, 2016 Conduct investigation of surface soils in the private pasture west of the location to identify a potential presence of chlorides from the plugged and abandoned Benson, Montin Greer operated GCU #2 well.

October 26, 2016 Remediation contractor continues with site remediation via excavation. Excavation extends into remediation area of 1995 excavation. BP instructs excavation crew to remove all residual impacts from 1995 excavation.

October 31, 2016 Conduct NMOCD witnessed excavation closure sampling (in 1995 remedial area).

November 7, 2016 Corrpro of Farmington, New Mexico completes abandonment of the cathodic protection well on the well pad.

November 8, 2016 Conduct NMOCD witnessed excavation closure sampling (in 1995 remedial area).

November 13, 2016 1995 remedial area found to extend into private pasture north of well pad.

November 14, 2016 Conduct NMOCD witnessed excavation closure sampling (in 1995 remedial area).

November 15, 2016 Conduct NMOCD witnessed excavation closure sampling (in 1995 remedial area).

November 17, 2016 Conduct non-witnessed excavation closure sampling (in 1995 remedial area).

November 23, 2016 Conduct NMOCD witnessed excavation closure sampling (in 1995 remedial area).

<u>December 5, 2016</u> Conduct hand augering in the pasture east of the well pad. Determine that 1995 impacts extend into the east pasture.

<u>December 13, 2016</u> Conduct final NMOCD witnessed excavation closure sampling (in 1995 remedial area). Complete remediation via excavation. Commence with final backfilling and surface restoration.

January 10, 2017 Complete final site restoration.

Sidewall Closure Sampling Summary Test Results

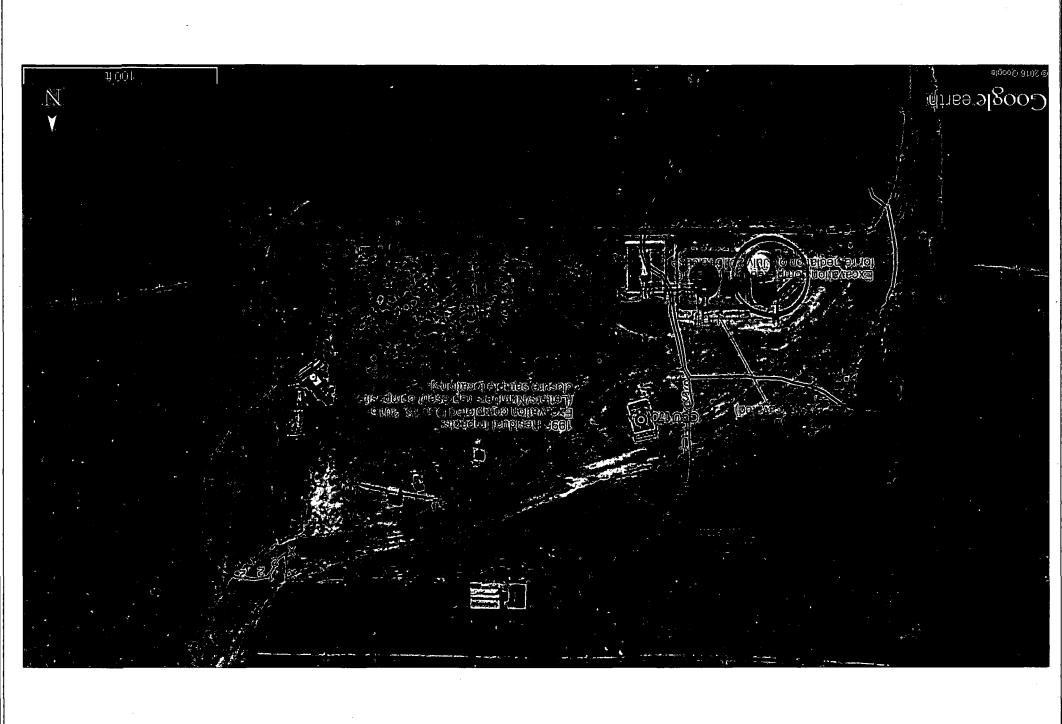
Sample	Мар	Date	Field OVM	BTEX	TPH GRO	TPH DRO	TPH MRO	TPH Total	Chloride
ID	ID	Sampled	(ppm)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
North Wall-West End 5- pt (3'-9')	A	8/3/2016	0.0	ND	ND	. ND	ND	ND	81
North Wall-East End 5-pt (3'-9')	В	8/5/2016	0.9	ND	ND	ND	ND	ND	ND
East Wall-North End 5-pt (3'-9')	С	8/5/2016	0.4	ND	ND	ND	ND	ND	52
East Wall-South End 5-pt (3'-9')	D	8/5/2016	0.0	ND	ND	ND	ND	ND	170
Off-Pad SE Sidewall 5-pt	E.	9/20/2016	3.0	ND	ND	ND	ND	ND	44
Off-Pad South Wall – East Half 5-pt	F	9/20/2016	2.7	ND	ND	ND	ND	ND .	ND
Off-Pad South Wall – West Half 5-pt	G	9/20/2016	0.7	ND	ND	ND	ND	ND	ND
Off-Pad SW Sidewall 5-pt	Н	9/20/2016	23.4	ND	ND	ND	ND	ND	ND
NW Extension – N Wall 5-pt (4'-8')	I	10/14/2016		ND	ND	ND	ND	ND	85
NW Extension – W Wall North Half 5-pt(4'-8')	J	10/14/2016		ND	ND	ND	ND	ND	402
NW Extension – W Wall South Half 5-pt(4'-8')	K	10/14/2016		ND	ND	ND	ND	ND	326
	1995	Historical	Area	Remedial	Sampling	Results	Follow		- "
1995 Impacts SW Corner 4-pt (4'-10')	Ĺ	10/31/2016	1.2	ND	ND	ND	ND	ND	ND
1995 Impacts South Wall Center 5-pt	М	11/8/2016	0.0	ND	ND	ND	ND	ND	ND
1995 Impacts South Wall East Side 5-pt	N	11/8/2016	0.0	ND	ND	ND	ND	ND	ND
1995 Impacts South Wall SE Corner 3-pt	0	11/8/2016	0.0	ND	ND	ND	ND	ND	ND
1995 Impacts East Wall South 4-pt	P	11/14/2016	1.2	ND	ND	ND	ND	ND	ND
1995 Impacts East Wall South 4-pt	Q	11/14/2016	. 1.0	ND	ND	ND	ND	ND	ND
•									

Sample	Мар	Date	Field OVM	BTEX	TPH GRO	TPH DRO	TPH MRO	TPH Total	Chloride
ID	ID	Sampled	(ppm)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
1995 Impacts W Corner 5-pt	Corner R		1.2	ND	ND	ND	ND	ND	ND
1995 Impacts NW Wall South End 5-pt	S	11/15/2016	0.7	ND	ND	ND	ND	ND	ND
1995 Impacts NW Wall North End 5-pt	Т	11/15/2016	0.7	ND	ND	ND	ND	ND	31
1995 Impacts North Wall @ Shed 6-pt	U	11/17/2016	254	ND	38	ND	ND	38	47
1995 Impacts North Wall Center 6-pt	V '	11/17/2016	3.5	ND	ND	ND	ND	ND	49
1995 Impacts North Wall West End 6-pt	W	11/17/2016	1.2	ND	ND	ND	ND	ND	ND
1995 Impacts North Wall East Corner 6-pt	Х	11/23/2016	6.3	ND	ND	ND	ND	ND	ND
1995 Impacts North Wall East of Sheds 6-pt	Y	11/23/2016	1.4	ND	ND	ND	ND	ND	93
1995 Impacts North Wall @ Sheds 6-pt	Z	11/23/2016	3.8	ND	ND	ND	ND	ND	63
1995 Impacts East Pasture #1 Grab at 2'	1	12/13/2016	2.5	ND	ND	ND	ND	ND	ND
1995 Impacts East Pasture #2 6-pt (4'-8')	2	12/13/2016	0.9	ND	ND	ND	ND	ND	33
1995 Impacts East Pasture #3 6-pt (4'-8')	3	12/13/2016	0.8	ND	ND	ND	ND	ND	ND
1995 Impacts East Pasture #4 6-pt (4'-8')	.4	12/13/2016	1.1	ND	ND	ND	ND	ND	ND
1995 Impacts East Pasture #5 6-pt (4'-8')	5	12/13/2016	1.0	ND	ND	ND	ND	ND	ND
			·						

APPENDIX B

GCU 170
Excavation Diagrams
&
Closure Sampling Locations

AAAABBBB Contained Surface Area of Spill within tenk ring and berm Google earth 90 ft



APPENDIX C

Laboratory Analytical Data Reports



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

August 05, 2016

Jeff Blagg
Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL:
FAX

RE: GCU 170 OrderNo.: 1608196

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/4/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1608196

Date Reported: 8/5/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Wall-West End 5-pt (3'-9')

Project: GCU 170

Collection Date: 8/3/2016 2:30:00 PM

Lab ID: 1608196-001

Matrix: MEOH (SOIL) Received Date: 8/4/2016 6:30:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: LGT
Chloride	· 81	30	mg/Kg	20	8/4/2016 2:22:14 PM	26787
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANIC	s			Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	8/4/2016 11:26:04 AM	26779
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/4/2016 11:26:04 AM	26779
Surr: DNOP	107	70-130	%Rec	1	8/4/2016 11:26:04 AM	26779
EPA METHOD 8015D: GASOLINE RAN	GE			•	Analyst	:: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	8/4/2016 1:20:29 PM	26763
Surr: BFB	97.2	49.4-163	%Rec	1	8/4/2016 1:20:29 PM	26763
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.016	mg/Kg	1	8/4/2016 1:20:29 PM	26763
Toluene	ND	0.033	mg/Kg	1	8/4/2016 1:20:29 PM	26763
Ethylbenzene	ND	0.033	mg/Kg	1	8/4/2016 1:20:29 PM	26763
Xylenes, Total	ND	0.065	mg/Kg	1	8/4/2016 1:20:29 PM	26763
Surr: 4-Bromofluorobenzene	89.5	80-120	%Rec	1	8/4/2016 1:20:29 PM	26763

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 5
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1608196

05-Aug-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID	MB-26787
Client ID:	nne

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Batch ID: 26787

PQL

1.5

RunNo: 36231

Prep Date: 8/4/2016 Analysis Date: 8/4/2016

SeqNo: 1122323

Units: mg/Kg

RPDLimit Qual

Analyte Chloride

Result ND SPK value SPK Ref Val

SPK value SPK Ref Val

%REC LowLimit

HighLimit

%RPD

SampType: LCS

TestCode: EPA Method 300.0: Anions

Sample ID LCS-26787

Client ID:

Prep Date:

LCSS

Batch ID: 26787 Analysis Date: 8/4/2016

RunNo: 36231 SeqNo: 1122324

Units: mg/Kg

LowLimit 90

HighLimit

Qual

Analyte Chloride

PBS

8/4/2016

8/4/2016

TestCode: EPA Method 300.0: Anions

110

%RPD

RPDLimit

Sample ID MB-26787

SampType: MBLK

14

Result

Batch ID: 26787

Analysis Date: 8/4/2016

PQL

1.5

RunNo: 36257

%REC

91.5

Units: mg/Kg

Analyte

Client ID:

Prep Date:

Result

PQL

SPK value SPK Ref Val %REC LowLimit

15.00

SeqNo: 1123236

HighLimit

%RPD **RPDLimit** Qual

Chloride

ND

SampType: LCS

1.5

TestCode: EPA Method 300.0: Anions

Sample ID LCS-26787 Client ID: LCSS Prep Date: 8/4/2016

Batch ID: 26787 Analysis Date: 8/4/2016

PQL

1.5

RunNo: 36257

SegNo: 1123237

Units: mg/Kg

Page 2 of 5

RPDLimit Qual

Analyte Chloride

SPK value 15.00

SPK Ref Val

%REC

LowLimit

110

HighLimit %RPD

Oualifiers:

D

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

Hall Environmental Analysis Laboratory, Inc.

48

5.2

10

50.00

5.000

WO#:

1608196

05-Aug-16

Client:

Blagg Engineering

Project:

Diesel Range Organics (DRO)

Surr: DNOP

GCU 170

	·	
Sample ID MB-26779	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 26779	RunNo: 36220
Prep Date: 8/3/2016	Analysis Date: 8/4/2016	SeqNo: 1122005 Units: mg/Kg
Analyte	Result PQL SPK value	e SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10	
Motor Oil Range Organics (MRO)	ND 50	
Surr: DNOP	9.9 10.00	98.8 70 130
Sample ID LCS-26779	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 26779	RunNo: 36220
Prep Date: 8/3/2016	Analysis Date: 8/4/2016	SeqNo: 1122006 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

0

97.0

104

62.6

70

124

130

Qualifiers:

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

Page 3 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#

1608196

05-Aug-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-26763

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 26763

RunNo: 36215

Prep Date:

Analyte

8/3/2016

8/3/2016

Analysis Date: 8/4/2016

PQL

5.0

SeqNo: 1122450

Units: mg/Kg

RPDLimit Qual

Gasoline Range Organics (GRO)

Surr: BFB

Result ND 970

1000

SPK value SPK Ref Val

SPK value SPK Ref Val

%REC 97.0

163

HighLimit

Sample ID LCS-26763

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

%RPD

Client ID: LCSS

Batch ID: 26763

PQL

Analysis Date: 8/4/2016

RunNo: 36215

SeqNo: 1122452

49.4

LowLimit

Units: mg/Kg

%RPD HighLimit

Analyte Gasoline Range Organics (GRO) Result 26

25.00 1000 102 105

80 49.4

LowLimit

RPDLimit Qual

Page 4 of 5

Surr: BFB

Prep Date:

1000

%REC

120 163

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1608196

05-Aug-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-26763	Samp1	Гуре: МІ	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	Batch ID: 26763			RunNo: 3					
Prep Date: 8/3/2016	Analysis E	Date: 8/	8/4/2016 SeqNo: 1122473 U		Units: mg/k	ίg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.5	80	120			
Sample ID LCS-26763	Samp	ype: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: 1 CSS Batch ID: 2676			763	PunNo: 36215						

Sample ID LCS-26763	Samp1	ype: LC	s	TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batcl	n ID: 26	763	F	RunNo: 3	6215							
Prep Date: 8/3/2016	Analysis D	Date: 8/	4/2016	S	SeqNo: 1								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	0.94	0.025	1.000	0 -	94.4	75.3	123						
Toluene	0.92	0.050	1.000	0	91.9	80	124						
Ethylbenzene	0.96	0.050	1.000	0	95.8	82.8	121						
Xylenes, Total	2.9	0.10	3.000	0	96.4	4 83.9 122							
Surr: 4-Bromofluorobenzene	0.95		1.000	0 95.0 80 120									

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 5 of 5

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



Hall Environmental Analysis Laboratory 4901 Hawkins NL Albuquerque, NM 87109

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

Sample Log-In Check List

Client Name: BLAGG	Work Order Number:	16081	96	SACAT MANAGEM PARTY		Rcptl	No: 1
Received by/date: Logged By: Ashley Galleges	08/04/14 8/4/2016 6:30:00 AM)		s A			
Completed By: Ashley Gallegos	8/4/2016 7:05:37 AM			A			
Reviewed By: aJ	0814116				,		
Chain of Custody							
1. Custody seals intact on sample bottles?		Yes	1	No	1 !	Not Present	• .
2. Is Chain of Custody complete?		Yes	•	No	•	Not Present i	1
3. How was the sample delivered?		<u>Couri</u>	<u>er</u>				
<u>Log In</u>							
Was an attempt made to cool the sample	es?	Yes		No	1.1	NA	() ()
5. Were all samples received at a temperal	ture of >0° C to 6.0°C	Yes	æ i	No	11.	NA !	:
6. Sample(s) in proper container(s)?		Yes	A	No	į i		
7. Sufficient sample volume for indicated te	est(s)?	Yes	•	No	1		
8. Are samples (except VOA and ONG) pro	•	Yes		No	:::		
9. Was preservative added to bottles?		Yes	[.]	No		NA :	1
10.VOA vials have zero headspace?		Yes	<u> </u>	No	<u>;</u> :	No VOA Vials	∌ i
11. Were any sample containers received b	roken?	Yes		No	•		
7						# of preserved bottles checked	I
12. Does paperwork match bottle labels?		Yes		No	, 1	for pH:	<2 or >12 unless noted)
(Note discrepancies on chain of custody		Yes		No	<u>:</u> .	Adjusted	
13. Are matrices correctly identified on Chai14. Is it clear what analyses were requested		Yes			 		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	r &:		[!	Checked I	oy:
Special Handling (if applicable)							
16. Was client notified of all discrepancies w	vith this order?	Yes	ſ	No	ï1	NA	(4)
Person Notified:	Date i	er ersentan.		au au promotiv	٠.		
By Whom:	and the state of t	eMa	il ¦ ,	Phone	Fax	In Person	
Regarding:	indigetal diambigaci man kerimen dambi dengan ing pada sasa sebesah sebesah dambi	ini.				. 81	A.,
Client Instructions:	الأرافة فالمداعدة المدارية والداريسي المناطقة بالمسابق منها والمناطقة ومواطقة والمعارفة والمناطقة والمسابقة وا ا	المراض المراضية	e-a-milat _{ij} a 11,811	en e e e e e e e e e e e e e e e e e e		El ango y mora as heterorias.	••
17. Additional remarks:							
18. Cooler Information							
Cooler No Temp °C Condition	Seal Intact Seal No	Seal Da	ite	Signed	Ву	!	
1 2.5 Good	Yes						

			istody Record	Turn-Around	Time:	ASAP SAMEDA	~				F	łA	LL	ΕI	NV	'IR	10	NI	1E	NT	AL	
lient:	BP F	+menic	<u> </u>	□ Standard	Rush	SAME DA	 -	_													R	
	BLAG	G ENG	NEERING INC	Project Name); . .	_					,	wwv	v.hal	lenv	ironr	nent	al.co	m				
ailing	Address			1 GC1	U 170	3			490	01 H	awki	ins N	۱E -	Alb	ugue	erqu	e. Ni	M 87	109			
-		············		Project #:							5-34					-		4107				
hone :	#: 50	5-7	320-1183													_	uest					
	r Fax#:			Project Mana	ger:				only)	(Ĉ					٦٩)					\Box		
A/QC I	Package:			JB	: A/.I			(8021)	IS OF	/MRO)		1	S)		4,80	B's						
Stan	dard	· · · · ·	☐ Level 4 (Full Validation)	9.0			<u> </u>	lωl	(Gas	DRO			SIMS)		PO.	2 PC						
ccredi				Sampler: J	- BLAGG			HMB	TPH	~	=	€	8270		NO2	808						2
I NEL		□ Othe	er	On Ice:	Yes	□ No			+	(GRO	418.1)	504	r 82	<u>s</u>	03	/ 86		OA)				ō
EDD	(Type) I		<u> </u>	Sample Temp	perature: 'Z	.5		#	MTBE	9	pou	ğ	100	etal	CI,N	cide	<u>₹</u>)- <u>i-</u>	4			<u>></u>
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL N		BTEX + MIBE	BTEX + M	TPH 8015B	TPH (Method	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLOCIDE			Air Bubbles (Y or N)
1/2016	1430	Soil	WORTH Wall-West Ends 5-pt (3-9')	402x1	coul	700		큣		X		ш		-	/	ω.	3	ω,	X	1	\dashv	
12010	1 100	2016	5-pt (3-9')	10521	1000		<i>)</i>			-									$\stackrel{\frown}{\vdash}$	+	+	+
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ate: 3/Zoile ate: 3/I/P	Time: 1819 Time: 1904	Relinquish	1 Blagg	Received by:	what	Pate T	18 19 ime	Ren	nark	s: 12	ראש	MC	レー ア: ; V	STI M	EVE OS	. M	lus QF	iAL EC			L	
	<u> </u>	semples sub	omitted to Hall Environmental may be subd	entracted to other a	coredited laboratori	+			bility.	Any st	ub-con	tracte	d data	will be	e clear	ty note	ated or	n the a	nalytica	al repor	rt.	



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

August 10, 2016

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: FAX

RE: GCU 170 OrderNo.: 1608401

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/6/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1608401

Date Reported: 8/10/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Wall-East End 5-pt (3'-9')

Project: GCU 170

Collection Date: 8/5/2016 11:29:00 AM

Lab ID: 1608401-001

Matrix: MEOH (SOIL) Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	30	mg/Kg	20	8/8/2016 12:23:29 PM	26851
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s			Analyst	: JME
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1	8/8/2016 10:22:21 AM	26824
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	8/8/2016 10:22:21 AM	26824
Surr: DNOP	84.9	70-130	%Rec	1	8/8/2016 10:22:21 AM	26824
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	8/8/2016 5:49:13 PM	26818
Surr: BFB	108	49.4-163	%Rec	1	8/8/2016 5:49:13 PM	26818
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.017	mg/Kg	1	8/8/2016 5:49:13 PM	26818
Toluene	· ND	0.034	mg/Kg	1	8/8/2016 5:49:13 PM	26818
Ethylbenzene	ND	0.034	mg/Kg	1	8/8/2016 5:49:13 PM	26818
Xylenes, Total	ND	0.068	mg/Kg	· 1	8/8/2016 5:49:13 PM	26818
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	8/8/2016 5:49:13 PM	26818

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1608401

Date Reported: 8/10/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Wall-North End 5-pt (3'-9')

Project: GCU 170

Collection Date: 8/5/2016 11:34:00 AM

Lab ID: 1608401-002

Matrix: MEOH (SOIL)

Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: MRA
Chloride	52	30	mg/Kg	20	8/8/2016 12:35:53 PM	26851
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analys	t: JME
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	8/8/2016 10:44:05 AM	26824
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/8/2016 10:44:05 AM	26824
Surr: DNOP	85.2	70-130	%Rec	1	8/8/2016 10:44:05 AM	26824
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	8/8/2016 6:12:34 PM	26818
Surr: BFB	108	49.4-163	%Rec	1	8/8/2016 6:12:34 PM	26818
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.016	mg/Kg	1	8/8/2016 6:12:34 PM	26818
Toluene	ND	0.033	mg/Kg	1	8/8/2016 6:12:34 PM	26818
Ethylbenzene	ND	0.033	mg/Kg	1	8/8/2016 6:12:34 PM	26818
Xylenes, Total	ND	0.065	mg/Kg	1	8/8/2016 6:12:34 PM	26818
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	8/8/2016 6:12:34 PM	26818

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1608401

Date Reported: 8/10/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Wall-South End 5-pt (3'-9')

Project: GCU 170

Collection Date: 8/5/2016 11:39:00 AM

Lab ID: 1608401-003

Matrix: MEOH (SOIL) Received Date: 8/6/2016 7:45:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	170	30	mg/Kg	20	8/8/2016 12:48:18 PM	26851
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	:: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	8/8/2016 11:05:57 AM	26824
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/8/2016 11:05:57 AM	26824
Surr: DNOP	87.0	70-130	%Rec	1	8/8/2016 11:05:57 AM	26824
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.2	mg/Kg	1	8/8/2016 6:36:01 PM	26818
Surr: BFB	108	49.4-163	%Rec	1	8/8/2016 6:36:01 PM	26818
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.016	mg/Kg	1	8/8/2016 6:36:01 PM	26818
Toluene	ND	0.032	mg/Kg	1	8/8/2016 6:36:01 PM	26818
Ethylbenzene	ND	0.032	mg/Kg	1	8/8/2016 6:36:01 PM	26818
Xylenes, Total	ND	0.064	mg/Kg	1	8/8/2016 6:36:01 PM	26818
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	8/8/2016 6:36:01 PM	26818

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1608401

10-Aug-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-26851

SampType: mblk

TestCode: EPA Method 300.0: Anions

LowLimit

LowLimit

Client ID:

PBS

Batch ID: 26851

RunNo: 36324

8/8/2016

Units: mg/Kg

Analyte

Prep Date:

Analysis Date: 8/8/2016

SPK value SPK Ref Val %REC

SeqNo: 1125060

HighLimit

%RPD

RPDLimit Qual

Chloride

Result **PQL** ND 1.5

Sample ID LCS-26851

SampType: ics

TestCode: EPA Method 300.0: Anions

%REC

Client ID: LCSS Batch ID: 26851

RunNo: 36324

Prep Date: 8/8/2016

Analysis Date: 8/8/2016

SeqNo: 1125061

Units: mg/Kg

HighLimit %RPD **RPDLimit** Qual

Analyte

Result **PQL**

15.00

SPK value SPK Ref Val

90

110

14 92.9 1.5 Chloride

Oualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

RPD outside accepted recovery limits R

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

Ε Value above quantitation range

Analyte detected below quantitation limits J

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Page 4 of 7

Hall Environmental Analysis Laboratory, Inc.

PQL

10

Result

40

4.1

WO#:

1608401

10-Aug-16

Client:

Blagg Engineering

Project:

Analyte

Sum: DNOP

Diesel Range Organics (DRO)

GCU 170

Sample ID MB-26824	SampT	ype: Mi	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batcl	n ID: 26	824	F	lunNo: 3	6290				
Prep Date: 8/8/2016	Analysis E)ate: 8/	8/2016	8	SeqNo: 1	124202	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10	<u></u>			<u> </u>				
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		86.6	70	130	<u>.</u> .		
Sample ID LCS-26824	Samp	ype: LC	s	Tes	Code: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batcl	1 ID: 26	824	F	tunNo: 3	6290				
Prep Date: 8/8/2016	Analysis D	ate: 8/	8/2016	S	eaNo: 1	124203	Units: mg/K	(a		

%REC

80.6

81.9

LowLimit

62.6

70

HighLimit

124

130

%RPD

RPDLimit

Qual

SPK value SPK Ref Val

50.00

5.000

Qual	ifiers:
------	---------

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 5 of 7

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1608401

10-Aug-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-26818

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 26818

PQL

Batch ID: 26818

Analysis Date: 8/8/2016

5.0

RunNo: 36301

Prep Date: 8/5/2016

Analysis Date: 8/8/2016

SeqNo: 1124720

Units: mg/Kg

Analyte

Result ND

%REC LowLimit

HighLimit

%RPD **RPDLimit**

Qual

Gasoline Range Organics (GRO)

Surr: BFB

1100

1000

SPK value SPK Ref Val

SPK value SPK Ref Val

105

49.4

TestCode: EPA Method 8015D: Gasoline Range

163

Sample ID LCS-26818

Prep Date: 8/5/2016

LCSS

SampType: LCS

RunNo: 36301

LowLimit

SeqNo: 1124721 %REC

Units: mg/Kg

HighLimit

RPDLimit Qual

Page 6 of 7

%RPD

Result

5.0 25.00 108

80

120

Gasoline Range Organics (GRO) Surr: BFB

Client ID:

1200

PQL

1000

119

49.4

163

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1608401

10-Aug-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-26818	Samp1	Type: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batcl	h ID: 26	818	F	RunNo: 3	6301				
Prep Date: 8/5/2016	Analysis D	Date: 8/	8/2016	5	SeqNo: 1	124736	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025			,					
Toluene	ND	0.050					-			
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.5	80	120			
Sample ID LCS-26818	SampT	ype: LC	s	Tes	tCode: El	A Method	8021B: Volat	iles		
Client ID: LCSS	Batch	n ID: 26	B18	F	RunNo: 3	6301				

· ·	•										
Client ID: LCSS	Batc	h ID: 26	818	F	RunNo: 3	6301					
Prep Date: 8/5/2016	Analysis [Date: 8/	8/2016	8	SeqNo: 1	124737	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.96	0.025	1.000	0	96.2	75.3	123				
Toluene	1.0	0.050	1.000	0	102	80	124				
Ethylbenzene	1.1	0.050	1.000	0	109	82.8	121				
Xylenes, Total	3.2	0.10	3.000	0	106	83.9	122				
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120				

Qualifiers:

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

Page 7 of 7



Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque. NM 87109

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

Sample Log-In Check List

Client Name: BLAGG	Work Order Number:	1608401	and the state of t	RcptNo:	1
Received by/date: Logged By: Lindsay Mangin	8/6/2016 7:45:00 AM		spreadust Heriopo		:
Completed By: Lindsay Mangin	8/6/2016 12:22:24 PM		Streety Happy		: !
Reviewed By: A 08/08/			000		
Chain of Custody	IQ		•		
···		Yes 🗆	No 🗌	Not Present	
 Custody seals intact on sample bottles? Is Chain of Custody complete? 		Yes 🐼	No 🗆	Not Present	
3. How was the sample delivered?		Courier			
<u>Log In</u>					
4. Was an attempt made to cool the sampl	es?	Yes 🕏	No 🗌	NA 🗆	
5. Were all samples received at a temperat	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	st(s)?	Yes 🐼	No 🗌		
8. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🐼	No 🗌		
9. Was preservative added to bottles?	•	Yes \square	No 🗷	NA \square	
10.VOA vials have zero headspace?		Yes 🗌	No 🗌	No VOA Vials	
11. Were any sample containers received be	roken?	Yes 🗆	No 🐼	# of preserved	
		🔊	N- (1)	bottles checked	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody))	Yes 🥏	No ⊔	for pH: (<2 o	or >12 unless noted)
13 Are matrices correctly identified on Chair		Yes 🕏	No □	Adjusted?	
14. Is it clear what analyses were requested	?	Yes 🍻	No 🗀 🗎		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🐱	No 🗌	Checked by:	·
Special Handling (if applicable)					
16. Was client notified of all discrepancies w	rith this order?	Yes 🗌	No 🗌	NA 🐼	
Person Notified:	Date:	SHOWS MINISTERNATION	THE RESERVED AND THE PERSON OF		
By Whom:	Via:	eMail	Phone 🔲 Fax	In Person	
Regarding:		TO THE OWNER OF THE OWNER.	MANAGE MA	The state of the s	
Client Instructions:					
17. Additional remarks:					
 18. <u>Cooler Information</u>					
Cooler No Temp °C Condition	Seal Intact Seal No Yes	Seal Date	Signed By		
1 2.0 Good	108				
Page 1 of 1					

			stody Record	Turn-Around	Time:	ASAP SAME DAY	,		,		Н	ΙΔΙ	ı 1	=N	i V 1	ΓR	OF	u M	iFi	NT	ΔL	
ent:	BP A	MERIC	A	☐ Standard	Rush	21/145 21-4				\exists										TO		
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iling	Address	:		GC	U 170				490)1 Ha	wkir	ns NI	Ξ - /	Mbu	quer	rque	, NM	1 871	109			
				Project #:						J. 505					-	-	45-4					
one i	#: 5°C	5- 32	.0-1183										An	alys	is R	lequ	est					
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/QC F	Package: dard		☐ Level 4 (Full Validation)	J. BL				\$ (802	(Gas o	30 / M			SIMS)		J. J	PCB's						
	tation			Sampler: J	BLAGO			計	핊	<u></u>	=	=	2	9	္ခ်ီ	/ 8082		- 1				2
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EDD	(Type)_	г		Sample Temp	perature:		1		門	9	8	8	<u>≗</u> :	etal	Z	<u>ë</u>	<u></u>	<u>```</u>				\ <u>\</u>
ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO	··· + · (\$4999)	BTEX + 拉打路医主工MES (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	KCKA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	CHLORID			Air Bubbles (Y or N)
مهاورد	1129	SOIL	NORTH WALL - EAST END 5-PE (3-9')	4 02 ×1	Cool	-001		X	$\neg \neg$	X								$\overline{}$	×			
	1134	ч	EAST WALL - NORTH END S-PE (3'-9') EAST WALL - SOUTH END	ц.	ц	-002		X		X]							×			
	1139	ч	EASTWALL - SOUTH END 5- PE (3-9')	u	ις	-003		×		×				I					×		$oxed{oxed}$	
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

September 23, 2016

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: FAX

RE: GCU 170 OrderNo.: 1609B49

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/21/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report Lab Order 1609B49

Date Reported: 9/23/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Off-Pad SE Sidewall 5-pt

Project: GCU 170

Collection Date: 9/20/2016 2:53:00 PM

Lab ID: 1609B49-001

Matrix: MEOH (SOIL) Received Date: 9/21/2016 7:45:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: LGT
Chloride	44	30	mg/Kg	20	9/21/2016 12:08:16 PM	1 27630
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	9/21/2016 9:57:38 AM	27624
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/21/2016 9:57:38 AM	27624
Surr: DNOP	98.2	70-130	%Rec	1	9/21/2016 9:57:38 AM	27624
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	3.7	mg/Kg	1	9/21/2016 9:38:14 AM	27604
Surr: BFB	81.6	68.3-144	%Rec	1	9/21/2016 9:38:14 AM	27604
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.019	mg/Kg	1	9/21/2016 9:38:14 AM	27604
Toluene	ND	0.037	mg/Kg	1	9/21/2016 9:38:14 AM	27604
Ethylbenzene	ND	0.037	mg/Kg	1	9/21/2016 9:38:14 AM	27604
Xylenes, Total	ND	0.075	mg/Kg	1	9/21/2016 9:38:14 AM	27604
Surr: 4-Bromofluorobenzene	96.0	80-120	%Rec	1	9/21/2016 9:38:14 AM	27604

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1609B49

Date Reported: 9/23/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Off-Pad South Wall-East Half 5-

GCU 170 **Project:**

Collection Date: 9/20/2016 2:58:00 PM

Lab ID: 1609B49-002

Matrix: MEOH (SOIL) Received Date: 9/21/2016 7:45:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: LGT
Chloride	ND	30	mg/Kg	20	9/21/2016 11:31:02 A	M 27630
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analys	st: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/21/2016 10:19:17 A	M 27624
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	9/21/2016 10:19:17 A	M 27624
Surr: DNOP	103	70-130	%Rec	1	9/21/2016 10:19:17 A	M 27624
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	9/21/2016 10:01:39 A	M 27604
Surr: BFB	81.2	68.3-144	%Rec	1	9/21/2016 10:01:39 Al	M 27604
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.017	mg/Kg	1	9/21/2016 10:01:39 Al	VI 27604
Toluene	ND	0.035	mg/Kg	1	9/21/2016 10:01:39 AI	VI 27604
Ethylbenzene	ND	0.035	mg/Kg	1	9/21/2016 10:01:39 AI	M 27604
Xylenes, Total	ND	0.069	mg/Kg	1	9/21/2016 10:01:39 AI	VI 27604
Surr: 4-Bromofluorobenzene	95.7	80-120	%Rec	1	9/21/2016 10:01:39 AI	vi 27604

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 12 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1609B49

Date Reported: 9/23/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: Off-Pad South Wall-West Half 5-

Project: GCU 170 **Collection Date:** 9/20/2016 3:00:00 PM

Lab ID: 1609B49-003 Matrix: MEOH (SOIL) Received Date: 9/21/2016 7:45:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	·	· · · · · · · · · · · · · · · · · · ·			Analyst	LGT
Chloride	ND	30	mg/Kg	20	9/21/2016 11:43:27 AM	27630
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	AG
Gasoline Range Organics (GRO)	ND	3.2	mg/Kg	1	9/21/2016 10:58:06 AM	M37365
Surr: BFB	99.8	70-130	%Rec	1	9/21/2016 10:58:06 AM	M37365
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	;	*		Analyst	TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	9/21/2016 10:40:56 AM	27624
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/21/2016 10:40:56 AM	27624
Surr: DNOP	100	70-130	%Rec	1	9/21/2016 10:40:56 AM	27624
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	AG
Benzene	ND	0.016	mg/Kg	1	9/21/2016 10:58:06 AM	S37365
Toluene	ND	0.032	mg/Kg	1	9/21/2016 10:58:06 AM	S37365
Ethylbenzene	ND	0.032	mg/Kg	1	9/21/2016 10:58:06 AM	S37365
Xylenes, Total	ND	0.064	mg/Kg	1	9/21/2016 10:58:06 AM	S37365
Surr: 1,2-Dichloroethane-d4	101	70-130	%Rec	1	9/21/2016 10:58:06 AM	S37365
Surr: 4-Bromofluorobenzene	91.2	70-130	%Rec	1	9/21/2016 10:58:06 AM	S37365
Surr: Dibromofluoromethane	108	70-130	%Rec	1	9/21/2016 10:58:06 AM	S37365
Surr: Toluene-d8	95.8	70-130	%Rec	1	9/21/2016 10:58:06 AM	S37365

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 12
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1609B49

Date Reported: 9/23/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Off-Pad SW SideWall Half 5-pt

GCU 170 Project:

Collection Date: 9/20/2016 3:08:00 PM

Lab ID: 1609B49-004

Matrix: MEOH (SOIL)

Received Date: 9/21/2016 7:45:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	:: LGT
Chloride	ND	30	mg/Kg	20	9/21/2016 11:55:51 AM	27630
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analysi	: AG
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	9/21/2016 11:27:04 AM	M37365
Surr: BFB	101	70-130	%Rec	1	9/21/2016 11:27:04 AM	M37365
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	3			Analyst	:: TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	9/21/2016 11:02:47 AM	27624
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/21/2016 11:02:47 AM	27624
Surr: DNOP	99.8	70-130	%Rec	1	9/21/2016 11:02:47 AM	27624
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG
Benzene	ND	0.017	mg/Kg	1	9/21/2016 11:27:04 AM	S37365
Toluene	ND	0.035	mg/Kg	1	9/21/2016 11:27:04 AM	S37365
Xylenes, Total	ND	0.069	mg/Kg	1	9/21/2016 11:27:04 AM	S37365
Surr: 1,2-Dichloroethane-d4	96.0	70-130	%Rec	1	9/21/2016 11:27:04 AM	S37365
Surr: 4-Bromofluorobenzene	92.2	70-130	%Rec	1	9/21/2016 11:27:04 AM	S37365
Surr: Dibromofluoromethane	113	70-130	%Rec	1	9/21/2016 11:27:04 AM	S37365
Surr: Toluene-d8	94.3	70-130	%Rec	1	9/21/2016 11:27:04 AM	S37365

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 12 J
- Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609B49

23-Sep-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-27630

SampType: MBLK

TestCode: EPA Method 300.0: Anions

TestCode: EPA Method 300.0: Anions

LowLimit

Client ID:

PBS

Batch ID: 27630

RunNo: 37376

Prep Date: 9/21/2016

Analysis Date: 9/21/2016

SeqNo: 1161518

Units: mg/Kg

HighLimit

%RPD **RPDLimit**

Quai

Analyte Chloride

Result

PQL

ND 1.5

Sample ID LCS-27630

SampType: LCS

RunNo: 37376

Batch ID: 27630

Prep Date: 9/21/2016

Client ID: LCSS

Analysis Date: 9/21/2016

SeqNo: 1161520

Units: mg/Kg

%RPD **RPDLimit** Qual

Chloride

90

%REC PQL 14 15.00 95.1 1.5

HighLimit

Analyte

SPK value SPK Ref Val

SPK value SPK Ref Val %REC LowLimit

110

Qualifiers:

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

Value above quantitation range

Page 5 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#:

Page 6 of 12

1609B49

23-Sep-16

Client:

Blagg Engineering

Project:	GCU 170) 							
Sample ID	LCS-27624	SampType:	LCS	Tes	tCode: EPA Method	1 8015M/D: Die	sel Rang	e Organics	
Client ID:	LCSS	Batch ID:	27624	F	RunNo: 37357	·			
Prep Date:	9/21/2016	Analysis Date:	9/21/2016	S	SeqNo: 1160681	Units: mg/K	9		
Analyte		Result PC	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	Organics (DRO)	47	10 50.00	0	94.0 62.6	124			
Surr: DNOP		4.7	5.000		93.9 70	130		· · · · · · · · · · · · · · · · · · ·	
Sample ID	MB-27624	SampType:	MBLK	Tes	tCode: EPA Method	l 8015M/D: Die	sel Rang	e Organics	
Client ID:	PBS	Batch iD:	27624	R	RunNo: 37357				
Prep Date:	9/21/2016	Analysis Date:	9/21/2016	S	SeqNo: 1160682	Units: mg/Kg	9		
Analyte		Result PC	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	Organics (DRO)	ND	10					<u></u>	
Motor Oil Rang Surr: DNOP	e Organics (MRO)	ND 9.8	10.00		98.0 70	130			
Suil. DNOF			10.00		90.0 70	100			
Sample ID	1609B49-001AMS	SampType:	MS	Test	Code: EPA Method	1 8015M/D: Die:	sel Range	e Organics	
Client ID:	Off-Pad SE Sidew	vall Batch ID:	27624	R	RunNo: 37357				
Prep Date:	9/21/2016	Analysis Date:	9/21/2016	S	SeqNo: 1160891	Units: mg/Kg)		
Analyte		Result PC		SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
•	Organics (DRO)		9.8 49.12	0	94.2 33.9	141			
Surr: DNOP		4.7	4.912		95.7 70	130			
Sample ID	1609B49-001AMS	D SampType:	MSD	Test	Code: EPA Method	8015M/D: Die	sel Range	organics	
Client ID:	Off-Pad SE Sidew	vali Batch ID:	27624	R	tunNo: 37357				
Prep Date:	9/21/2016	Analysis Date:	9/21/2016	S	eqNo: 1160892	Units: mg/Kg	3		
Analyte		Result PC	L SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)		9.6 47.85	0	94.6 33.9	141	2.17	20	
Surr: DNOP		4.6	4.785		95.2 70	130	0	0	
Sample ID	LCS-27605	SampType:	LCS	Test	Code: EPA Method	8015M/D: Die:	sel Range	e Organics	
Client ID:	LCSS	Batch ID:	27605	R	unNo: 37357				
Prep Date:	9/20/2016	Analysis Date:	9/21/2016	S	eqNo: 1161362	Units: %Rec			
Analyte		Result PC	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		4.3	5.000		86.9 70	130			
Sample ID	MB-27605	SampType:	MBLK	Test	Code: EPA Method	8015M/D: Die:	sel Range	Organics	
Client ID:	PBS	Batch ID:	27605	R	unNo: 37357			-	
Prep Date:	9/20/2016	Analysis Date:	9/21/2016	s	eqNo: 1161363	Units: %Rec			
Analyte		Result PC	QL SPK value	SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609B49

23-Sep-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-27605

SampType: MBLK

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID:

PBS

Batch ID: 27605

RunNo: 37357

Prep Date:

9/20/2016

Analysis Date: 9/21/2016

SeqNo: 1161363

Units: %Rec

%RPD

RPDLimit Qual

Result

94.9

HighLimit 130

PQL SPK value SPK Ref Val %REC Analyte 10.00 Surr: DNOP 9.5

LowLimit 70

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В

Е Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

Reporting Detection Limit RL

Sample container temperature is out of limit as specified

Analyte detected in the associated Method Blank

Page 7 of 12

Hall Environmental Analysis Laboratory, Inc.

Result

24

900

PQL

5.0

WO#:

%RPD

RPDLimit

Qual

1609B49

23-Sep-16

Client:

Blagg Engineering

Project:

Analyte

Surr: BFB

Gasoline Range Organics (GRO)

GCU 170

Sample ID MB-27604	SampT	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	Batch ID: 27604		RunNo: 37362						
Prep Date: 9/20/2016	Analysis D)ate: 9	/21/2016	8	eqNo: 1	161649	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0				•		<u> </u>		
Surr: BFB	820		1000		82.3	68.3	144			
Sample ID LCS-27604	SampT	ype: LC	 :s	Tes	Code: E	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch	1D: 27	604	F	unNo: 3	7362				
Prep Date: 9/20/2016	Analysis D)ate: 9/	21/2016	S	eaNo: 1	161650	Units: ma/K	(a		

%REC

95.0

90.2

LowLimit

74.6

68.3

HighLimit

123

144

SPK value SPK Ref Val

25.00

1000

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 8 of 12

P Sample pH Not In Range RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1

1609B49 23-Sep-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-27604	Samp	Гуре: М	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 27	604	F	RunNo: 3	7362	•			
Prep Date: 9/20/2016	Analysis [Date: 9/	21/2016	8	SeqNo: 1	161660	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025					•			_
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		98.4	80	120			
Sample ID LCS-27604	Samp	ſype: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles	-	
Client ID: LCSS	Batcl	h ID: 27	604	F	RunNo: 3	7362				
Prep Date: 9/20/2016	Analysis D	Date: 9/	21/2016	8	SeqNo: 1	161661	Units: mg/K	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	75.3	123			
Toluene	0.98	0.050	1.000	. 0	98.3	80	124			
Ethylbenzene	0.98	0.050	1.000	0	98.2	82.8	121			
	2.9	0.10	3.000	0	97.6	83.9	122			
Kylenes, Total	2.3	0.10	3.000	U	00	00.0	,			

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 9 of 12

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

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609B49

23-Sep-16

Client:

Blagg Engineering

Project: GCU 1	70					<u> </u>				
Sample ID 100ng Ics	Samp ¹	Гуре: LC	s	Tes	tCode: E	PA Method	8260B: Vola	tiles Shor	t List	
Client ID: LCSS	Batc	h ID: S3	7365	F	RunNo: 3	7365				
Prep Date:	Analysis D	Date: 9/	21/2016		SeqNo: 1	160917	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	70	130			
Toluene	0.93	0.050	1.000	0	92.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		96.7	70	130			
Surr: Toluene-d8	0.49	_	0.5000		98.0	70	130			
Sample ID rb	Samp?	ype: ME	BLK	Tes	tCode: E	PA Method	8260B: Vola	tiles Short	List	
Client ID: PBS	Batch	h ID: S3	7365	F	RunNo: 3	7365				
Prep Date:	Analysis D)ate: 9/	21/2016	8	SeqNo: 1	160918	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025	-				•			
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								•
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.1	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		99.6	70	130			
Surr: Toluene-d8	0.49	<u>.</u>	0.5000		97.5	70	130			
Sample ID 1609b49-003am	s SampT	ype: M \$	3	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: Off-Pad South V	Vall- Batch	n ID: S3	7365	F	lunNo: 3	7365				٠
Prep Date:	Analysis D	Date: 9/	21/2016	S	eqNo: 1	161832	Units: mg/k	(g		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.65	0.016	0.6402	0	101	49.2	155			
Toluene	0.58	0.032	0.6402	0	90.4	52	154			
Surr: 1,2-Dichloroethane-d4	0.32		0.3201		101	70	130			
Surr: 4-Bromofluorobenzene	0.29		0.3201		89.1	70	130			
Surr: Dibromofluoromethane	0.36		0.3201		113	70	130			
Surr: Toluene-d8	0.30		0.3201		92.5	70 	130			
Sample ID 1609b49-003ams	sd SampT	ype: MS	SD	Tes	Code: El	PA Method	8260B: Vola	iles Short	List	
Client ID: Off-Pad South V		n ID: S3			tunNo: 3					
Prep Date:	Analysis D	ate: 9/	21/2016	S	eqNo: 1	161833	Units: mg/K	(g		
Analyte	Result	PQL		SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene - ·	0.63	0.016	0.6402	0	98.5	49.2	155	2.47	20	
Toluene	0.57	0.032	0.6402	0	89.4	52	154	1.05	20	

Qualifiers:

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

Page 10 of 12

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1609B49

23-Sep-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID 1609b49-003am	sd SampT	uno: BAS	20	Toe	tCode: El	DA Mothod	8260B: Vola	tiles Short	Liet	
	•	•					OZOUD. VUIA	uies Silori	List	
Client ID: Off-Pad South \	Wall - Batch	ID: \$3	7365	F	RunNo: 3	7365				
Prep Date:	Analysis D	ate: 9/	21/2016	5	SeqNo: 1	161833	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.34		0.3201		107	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.28		0.3201		86.5	70	130	0	0	
Surr: Dibromofluoromethane	0.36		0.3201		112	70	130	0	0	
Surr: Toluene-d8	0.31		0.3201		95.5	70	130	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- В
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Analyte detected in the associated Method Blank

Page 11 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609B49

23-Sep-16

Client:

Blagg Engineering

Project:	GCU 170)									
Sample ID	2.5ug gro lcs	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	LCSS	Batch	ID: M3	37365	F	RunNo: 3	7365				
Prep Date:		Analysis D	ate: 9/	21/2016	\$	SeqNo: 1	160923	Units: mg/l	K g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	24	5.0	25.00	0	95.2	62.9	123			
Surr: BFB		500		500.0		100	70	130			
Sample ID	rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	PBS	Batch	ID: M3	37365	F	RunNo: 3	7365	·			
Prep Date:		Analysis D	ate: 9/	21/2016	S	SeqNo: 1	160924	Units: mg/l	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
=	e Organics (GRO)	ND	5.0								
Surr: BFB		490		500.0		97.3	70	130			
Sample ID	1609B49-003AMS	SampT	/pe: M \$	3	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	Off-Pad South Wa	all- Batch	ID: M3	7365	R	tunNo: 3	7365				
Prep Date:		Analysis Da	ate: 9/	21/2016	S	SeqNo: 1	161680	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quai
Gasoline Rang	e Organics (GRO)	14	3.2	16.00	0.6018	85.8	52.3	132			
Surr: BFB		330		320.1		102	70	130			
Sample ID	1609B49-003AMS	D SampTy	/pe: MS	SD	Test	Code: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	Off-Pad South Wa	all- Batch	ID: M3	7365	R	tunNo: 3	7365				
Prep Date:		Analysis Da	ate: 9/	21/2016	S	SeqNo: 1	161681	Units: mg/h	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	14	3.2	16.00	0.6018	82.9	52.3	132	3.27	20	
Surr: BFB		340		320.1		105	70	130	0	0	

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

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

E Value above quantitation range

J Analyte detected below quantitation limits

Page 12 of 12

P Sample pH Not In Range

RLReporting Detection Limit

Sample container temperature is out of limit as specified



11411 Environmental Analysis Laboratory

4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

BLAGG Client Name: Work Order Number: 1609B49 RcptNo: 1 Received by/date: Logged By: 9/21/2016 7:45:00 AM Completed By: **Lindsay Mangin** 9/21/2016 8:20:16 AM Reviewed By: Chain of Custody 1. Custody seals intact on sample bottles? Yes 🗌 Not Present No 🗌 Yes 🔽 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log in NA 🗆 No 🗀 4. Was an attempt made to cool the samples? Yes 🔽 5. Were all samples received at a temperature of >0° C to 6.0°C No 🗍 NA 🗌 Yes V 6. Sample(s) in proper container(s)? Yes V No 🗀 7. Sufficient sample volume for indicated test(s)? Yes 🗹 No 🗌 No 🗆 8. Are samples (except VOA and ONG) properly preserved? No 🗹 Yes 🗌 NA 🗆 9. Was preservative added to bottles? 10. VOA vials have zero headspace? Yes No 🗆 No VOA Vials Yes 🗆 11. Were any sample containers received broken? No 🗹 # of preserved bottles checked No 🗌 for pH: 12. Does paperwork match bottle labels? Yes 🗹 (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? 13. Are matrices correctly identified on Chain of Custody? Yes 🔽 No 🔲 Yes 🗸 No 🗌 14. Is it clear what analyses were requested? Checked by: 15. Were all holding times able to be met? Yes 🔽 No 🗌 (If no, notify customer for authorization.) Special Handling (if applicable) Yes 16. Was client notified of all discrepancies with this order? No 🗆 NA 🗹 Person Notified: Date By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person Regarding: **Client Instructions:** 17. Additional remarks: 18. Cooler Information Cooler No Temp °C | Condition Seal Intact | Seal No Seal Date Signed By 1.8 Good

			stody Record	Turn-Around	Time:	ASAP SAME DAK				_	4 6			MV	/T E	20	MP	u e	NT	-A I		
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			- Campio Hoquotiis	Type and #	Type	MACRIG	ВТЕХ	втех	TPH 8015B	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	3			ľ	Air Bubbles (Y or N)
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

October 18, 2016

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: FAX

RE: GCU 170 OrderNo.: 1610735

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/15/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

Andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1610735

Date Reported: 10/18/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Extension N Wall 5-pt (4'-8'

Project: GCU 170

Collection Date: 10/14/2016 2:45:00 PM

Lab ID: 1610735-001

Matrix: MEOH (SOIL) Recei

Received Date: 10/15/2016 1:15:00 PM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: LGT
Chloride	86	30	mg/Kg 🗅	20	10/17/2016 11:56:25	5 AM 28108
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS	3			Anal	yst: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/17/2016 12:43:24	PM 28084
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	10/17/2016 12:43:24	PM 28084
Surr: DNOP	87.7	70-130	%Rec	1	10/17/2016 12:43:24	PM 28084
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	10/17/2016 10:07:13	3 AM G37989
Surr: BFB	96.4	68.3-144	%Rec	1	10/17/2016 10:07:13	3 AM G37989
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.017	mg/Kg	1	10/17/2016 10:07:13	3 AM B37989
Toluene	ND	0.033	mg/Kg	1	10/17/2016 10:07:13	3 AM B37989
Ethylbenzene	ND	0.033	mg/Kg	1	10/17/2016 10:07:13	3 AM B37989
Xylenes, Total	ND	0.067	mg/Kg	1	10/17/2016 10:07:13	3 AM B37989
Surr: 4-Bromofluorobenzene	109	80-120	%Rec	1	10/17/2016 10:07:13	3 AM B37989

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1610735

Date Reported: 10/18/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Extension N Half W Wall 5-

Project: GCU 170

Collection Date: 10/14/2016 2:49:00 PM

Lab ID: 1610735-002

Matrix: MEOH (SOIL)

Received Date: 10/15/2016 1:15:00 PM

Analyses	Result	PQL Qu	al Units	DF Date Ana	lyzed Batch
EPA METHOD 300.0: ANIONS					Analyst: LGT
Chloride	400	30	mg/Kg	20 10/17/201	6 12:08:50 PM 28108
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	s			Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1 10/17/201	6 1:06:21 PM 28084
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1 10/17/201	6 1:06:21 PM 28084
Surr: DNOP	93.7	70-130	%Rec	1 10/17/201	6 1:06:21 PM 28084
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.1	mg/Kg	1 10/17/201	6 10:31:39 AM G37989
Surr: BFB	92.7	68.3-144	%Rec	1 10/17/201	6 10:31:39 AM G37989
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.016	mg/Kg	1 10/17/201	6 10:31:39 AM B37989
Toluene	ND	0.031	mg/Kg	1 10/17/201	6 10:31:39 AM B37989
Ethylbenzene	ND	0.031	mg/Kg	1 10/17/201	6 10:31:39 AM B37989
Xylenes, Total	ND	0.062	mg/Kg	1 10/17/201	6 10:31:39 AM B37989
Surr: 4-Bromofluorobenzene	108	80-120	%Rec	1 10/17/201	6 10:31:39 AM B37989

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- $R \quad \ RPD \ outside \ accepted \ recovery \ limits$
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1610735

Date Reported: 10/18/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Extension S Half 5-pt (4'-8')

GCU 170 Project:

Collection Date: 10/14/2016 2:55:00 PM

Lab ID: 1610735-003

Matrix: MEOH (SOIL)

Received Date: 10/15/2016 1:15:00 PM

Analyses	Result	PQL Qu	al Units	DF Date Analyze	d Batch
EPA METHOD 300.0: ANIONS					Analyst: LGT
Chloride	330	30	mg/Kg	20 10/17/2016 12	21:15 PM 28108
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	S			Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1 10/17/2016 1:2	9:20 PM 28084
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1 10/17/2016 1:2	9:20 PM 28084
Surr: DNOP	93.8	70-130	%Rec	1 10/17/2016 1:2	9:20 PM 28084
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1 10/17/2016 10:	56:01 AM G37989
Surr: BFB	92.6	68.3-144	%Rec	1 10/17/2016 10:	56:01 AM G37989
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.018	mg/Kg	1 10/17/2016 10:	56:01 AM B37989
Toluene	ND	0.036	mg/Kg	1 10/17/2016 10:	56:01 AM B37989
Ethylbenzene	ND	0.036	mg/Kg	1 10/17/2016 10:	56:01 AM B37989
Xylenes, Total	ND	0.072	mg/Kg	1 10/17/2016 10:	56:01 AM B37989
Surr: 4-Bromofluorobenzene	104	80-120	%Rec	1 10/17/2016 10:	56:01 AM B37989

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 7

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1610735

18-Oct-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28108

SampType: MBLK

TestCode: EPA Method 300.0: Anions

LowLimit

LowLimit

Client ID:

PBS

Batch ID: 28108

RunNo: 38011

%REC

Prep Date:

10/17/2016

Analysis Date: 10/17/2016

PQL

1.5

SeqNo: 1184848

Units: mg/Kg

Analyte Chloride

HighLimit %RPD

RPDLimit Qual

Sample ID LCS-28108

SampType: LCS

RunNo: 38011

TestCode: EPA Method 300.0: Anions

Client ID: **LCSS**

10/17/2016

Batch ID: 28108

SeqNo: 1184849

Units: mg/Kg

HighLimit %RPD **RPDLimit** Qual

Analyte Chloride

Prep Date:

Analysis Date: 10/17/2016

PQL SPK value SPK Ref Val

%REC

110

Result 14

Result

ND

1.5

15.00

SPK value SPK Ref Val

93.2

90

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix Н

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 4 of 7

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1610735

18-Oct-16

Client:

Blagg Engineering

Project:

GCU 170

Project: GCU 17	, o	
Sample ID LCS-28084	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 28084	RunNo: 37981
Prep Date: 10/17/2016	Analysis Date: 10/17/2016	SeqNo: 1183848 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	50 10 50.00	0 100 62.6 124
Surr: DNOP	4.6 5.000	91.8 70 130
Sample ID MB-28084	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 28084	RunNo: 37981
Prep Date: 10/17/2016	Analysis Date: 10/17/2016	SeqNo: 1183849 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10	
Motor Oil Range Organics (MRO)	ND 50	
Surr: DNOP	9.9 10.00	98.8 70 130
Sample ID MB-28076	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 28076	RunNo: 37981
Prep Date: 10/14/2016	Analysis Date: 10/17/2016	SeqNo: 1184449 Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	8.6 10.00	85.7 70 130

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 5 of 7

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1610735 18-Oct-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID RB

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID: **PBS** Batch ID: G37989

5.0

RunNo: 37989

Prep Date:

Analysis Date: 10/17/2016

SeqNo: 1184431

Result PQL

Units: mg/Kg

Analyte

ND 910

Result

1000

%REC LowLimit HighLimit

%RPD

%RPD

RPDLimit Qual

Gasoline Range Organics (GRO)

Surr: BFB

SampType: LCS

SPK value SPK Ref Val

TestCode: EPA Method 8015D: Gasoline Range

144

Sample ID 2.5UG GRO LCS Client ID: LCSS

Batch ID: G37989

PQL

5.0

91.4

RunNo: 37989

SeqNo: 1184432

Units: mg/Kg

Prep Date: Analyte

Analysis Date: 10/17/2016

SPK value SPK Ref Val %REC LowLimit

HighLimit

RPDLimit Qual

Gasoline Range Organics (GRO) Surr: BFB

27 950 25.00 1000

107 95.4

0

74.6 68.3

68.3

123 144

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits J
- Page 6 of 7

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

Hall Environmental Analysis Laboratory, Inc.

WO#: 1610735

18-Oct-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID RB	SampT	ype: ME	BLK	Tes	tCode: Ei	PA Method	8021B: Vola	tiles	-	
Client ID: PBS	Batch	ID: B3	7989	F	RunNo: 3	7989				
Prep Date:	Analysis D	ate: 10	0/17/2016	5	SeqNo: 1	184496	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								,
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID 100NG BTEX LO	CS Samp7	Гуре: LC	s	Tes	tCode: Ei	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batcl	h ID: B3	7989	F	RunNo: 3	7989				
Prep Date:	Analysis [Date: 10)/17/2016	5	SeqNo: 1	184497	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.6	75.2	115			
Toluene	0.99	0.050	1.000	0	99.2	80.7	112			
Ethylbenzene	0.97	0.050	1.000	0	96.7	78.9	117			
Xylenes, Total	3.0	0.10	3.000	0	101	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID 1610735-001AM	IS Samp	Гуре: М\$	6	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: NW Extension I	N Wa Batc	h ID: B3	7989	F	RunNo: 3	7989				
Prep Date:	Analysis [Date: 10)/17/2016	8	SeqNo: 1	184498	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.62	0.017	0.6684	0	93.1	71.5	122	<u>-</u>		
Toluene	0.60	0.033	0.6684	0.005615	89.2	71.2	123			
Ethylbenzene	0.60	0.033	0.6684	0.006951	89.2	75.2	130			
Xylenes, Total	1.9	0.067	2.005	0.04204	94.5	72.4	131			
Surr: 4-Bromofluorobenzene	0.67		0.6684		101	80	120			

Sample ID 1610735-001AM	ISD Samp	Гуре: М\$	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: NW Extension I	N Wa Batci	h ID: B3	7989	F	RunNo: 3	7989				
Prep Date:	Analysis D	Date: 10)/17/2016	S	SeqNo: 1	184499	Units: mg/M	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.65	0.017	0.6684	0	97.0	71.5	122	4.12	20	
Toluene	0.63	0.033	0.6684	0.005615	93.0	71.2	123	4.16	20	
Ethylbenzene	0.61	0.033	0.6684	0.006951	90.4	75.2	130	1.39	20	
Xylenes, Total	2.0	0.067	2.005	0.04204	95.4	72.4	131	0.955	20	
Surr: 4-Bromofluorobenzene	0.68		0.6684		102	80	120	0	0	

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 7 of 7

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

Client Name: BLAGG	Work Order Number: 16	10735		RcptNo:	1
Received by/date:	15/16			•••	
Logged By: Lindsay Mangin 10	0/15/2016 1:15:00 PM		James Hough		
	0/15/2016 2:06:14 PM		Juney Hay		ļ
Reviewed By: AT 1011116					İ
Chain of Custody		***			•
1. Custody seals intact on sample bottles?	Y	es 🗌	No 🗆	Not Present	•
2. Is Chain of Custody complete?	Y	es 🗷	No 🗆	Not Present	
3. How was the sample delivered?	<u>C</u>	<u>ourier</u>			
<u>Log In</u>					
4. Was an attempt made to cool the samples?	Y	es 🗗	No 🗆	na 🗆	
5. Were all samples received at a temperature of	f >0° C to 6.0°C Ye	s 🗹	No 🗆	na 🗆	
6. Sample(s) in proper container(s)?	Y	es 🕏	No 🗆		
7. Sufficient sample volume for indicated test(s)?	Y	es 📝	No 🗆		
8. Are samples (except VOA and ONG) properly	preserved? Ye	es 🖻	No 🗌		
9. Was preservative added to bottles?	Y	es 🗌	No 🗹	NA 🗆	
10.VOA vials have zero headspace?	Y	es 🗆	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken	? Y	es 🗆	No 🗭		
		_		# of preserved bottles checked	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Y	es 🗹	No 📙	for pH: (<2 o	or >12 unless noted)
13. Are matrices correctly identified on Chain of Ci	ustody? Ye	es 🐼	No 🗌	Adjusted?	
14. Is it clear what analyses were requested?	Y	es 🗹	No 🗆		
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Ye	es 🗃	No 🗆	Checked by:	
Special Handling (If applicable)					
16. Was client notified of all discrepancies with this	s order? Ye	es 🗆	No 🗆	NA 🗹	
Person Notified:	Date:			•	
By Whom:	Via: e	Mail [Phone Fax	In Person	
Regarding:					
Client Instructions:					
17. Additional remarks:					
18. Cooler Information Cooler No Temp °C Condition Seal 1 4.4 Good Yes	I Intact Seal No Seal	Date	Signed By	-	

C	hain-	-of-Cu	istouy Necoru	Turn-Around	Time:	ASAP	ļ	- , ;		L	AI	. ■ 1	EN	IV.	тю		NI N	ЛE	NT	·A1	
Client:	BP A	MERI	cA	☐ Standard		SAME DAI			H										\T(
_	BIA	c E 11	GIVEERING INC	Project Name):				:			.halle									
Mailing	Address	:	grobenno sire	GC	U 170			490	01 H	awkir								109			
		-		Project #:				Τe	el. 50	5-34	5-39	75	Fa	х 5	605-3	345-	4107	7			
Phone :	#: 5 0	25 - 3	20-1183										alys	is F	₹eqı	.iest					;
email o	r Fax#:			Project Mana	ger:		_	<u>ج</u>	2 0)				1	3		Ţ					
QA/QC	ackage:			テ	BLAGE		202	lo si	MF.		l	<u>@</u>	- 13	χ, Σ	B's				1		
Stan	dard		☐ Level 4 (Full Validation)				8)	(39	ည္က		ŀ	SIMS)		조	낊						
Accredi		□ Othe	er	Sampler: J	T. BLAGE	S No	H	- TPH	IG / 01	8.1)		8270		3,NO ₂	/ 808		2	,,			Ŝ
□ EDD	(Type)_			Sample Tem	perature: 4	O No		3Ë +	(GR	d 41	92	ö	울 함	일	des		Š	3			ا ح
Date	Time	Matrix	Sample Request ID ACTOLISTIC Wall Hart NW Extension - N. Call	Container Type and #	Decement	2020 100 100 100	BTEX + MIBE = IMBS (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CALWENDE			Air Bubbles (Y or N)
9/14/2016	1445	SOIL	C - Dt / U - 9 1	400×1	COUL	-001	X		X									X		十	
ic	1449	lτ	NW Extension - NHARE 5-PE (4-8-) WWALL NW Extension - 5. HALF	10	u	-007	X		X	\vdash	_		_	+				X		十	
ic	1455	I(NW Extension - 5. HALF	10	ч	-003	یز ا		×	\dashv	\dashv		+	\dashv	\dashv			シ	\dashv	十	+
·	1723		5-pt (4'-8')			43			^		\dashv	\dashv	+	_		-			\vdash	十,	
											\dashv	\dashv	\dashv	\dashv	\dashv	\dashv			\dashv	\dashv	
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Date: Date:	Time:	Relinquish Relinquish	Blogg	Received by:	tu Daet	Date Time VH V 1715 Date Time	Rei	mark	s:	300	7~0	BA Act D:							· .		
·alalic	12614	Y YUU	mitted to Hall Environmental may be subc	ontrooted to others	10	16/16/13/5	<u></u>	:L:::4	A				All hard	-1							
ľ	i ilecessary,	Zimples sub		ondacted to other a	Vieurieu laboratorii	es. This serves as notice of thi	s poss	iunity.	ANY S	up-cont	racted	data w	nii de c	aearly	y nota	red on	n the a	nalytic	ai repo	rt.	



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

Website: www.hallenvironmental.com

November 03, 2016

Jeff Blagg
Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL:
FAX

RE: GCU 170

OrderNo.: 1611002

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/1/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1611002

Date Reported: 11/3/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 1995 Impacts SW Corner 4-pt (4'

Project: GCU 170

Collection Date: 10/31/2016 3:15:00 PM

Lab ID: 1611002-001

Matrix: MEOH (SOIL) Received Date: 11/1/2016 8:15:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	•				Analy	st: LGT
Chloride	ND ·	30	mg/Kg	20	11/1/2016 3:05:02 PM	1 28393
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analys	st: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	11/1/2016 10:36:18 A	M 28391
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/1/2016 10:36:18 A	M 28391
Surr: DNOP	89.9	70-130	%Rec	1	11/1/2016 10:36:18 A	M 28391
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	3.2	mg/Kg	1	11/1/2016 9:34:43 AM	28377
Surr: BFB	91.1	68.3-144	%Rec	1	11/1/2016 9:34:43 AM	28377
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.016	mg/Kg	1	11/1/2016 9:34:43 AM	28377
Toluene	. ND	0.032	mg/Kg	1	11/1/2016 9:34:43 AM	28377
Ethylbenzene	ND	0.032	mg/Kg	1	11/1/2016 9:34:43 AM	28377
Xylenes, Total	ND	0.064	mg/Kg	1	11/1/2016 9:34:43 AM	28377
Surr: 4-Bromofluorobenzene	105	80-120	%Rec	1	11/1/2016 9:34:43 AM	28377

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- \$ % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 5
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611002

03-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28393

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 28393

RunNo: 38370

Prep Date: 11/1/2016

SeqNo: 1198745

Units: mg/Kg

Analyte

Analysis Date: 11/1/2016

SPK value SPK Ref Val %REC LowLimit

HighLimit

RPDLimit

Quai

Chloride

PQL Result ND 1.5

Sample ID LCS-28393

SampType: Ics

RunNo: 38370

TestCode: EPA Method 300.0: Anions

Client ID:

LCSS

Batch ID: 28393

SeqNo: 1198746

Units: mg/Kg

Analyte

Prep Date: 11/1/2016

Analysis Date: 11/1/2016

SPK value SPK Ref Val

%REC

%RPD

Qual

%RPD

Chloride

95.0

14

PQL 1.5

15.00

LowLimit 90

HighLimit 110

RPDLimit

Page 2 of 5

Qualifiers:

Η

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R % Recovery outside of range due to dilution or matrix

Holding times for preparation or analysis exceeded

J

Analyte detected in the associated Method Blank E Value above quantitation range

Analyte detected below quantitation limits

Reporting Detection Limit

Sample pH Not In Range

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

50

10.00

ND

8.7

WO#:

1611002

03-Nov-16

Client:

Blagg Engineering

Project:

Surr: DNOP

Motor Oil Range Organics (MRO)

GCU 170

Sample ID LCS-28391	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	ID: 28	391	F	RunNo: 3	8355				
Prep Date: 11/1/2016	Analysis D	ate: 1	1/1/2016	S	SeqNo: 1	197442	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.0	62.6	124		-	
Surr: DNOP	4.1		5.000		82.4	70	130			
Sample ID MB-28391	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batch	ID: 28	391	F	RunNo: 3	8355				
Prep Date: 11/1/2016	Analysis D	ate: 11	I/1/2016	S	SeqNo: 1	197443	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10							<u> </u>	

87.3

70

130

Qualifiers:

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

Page 3 of 5

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611002

03-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28377

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 28377

RunNo: 38364

Prep Date: 10/31/2016

Analysis Date: 11/1/2016

SeqNo: 1198102

Units: mg/Kg

PQL Analyte Result

5.0

LowLimit SPK value SPK Ref Val %REC

144

HighLimit

RPDLimit Qual

Gasoline Range Organics (GRO) Surr: BFB

ND 910

1000

90.5

Sample ID LCS-28377

Batch ID: 28377

PQL

5.0

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

RunNo: 38364

HighLimit

Prep Date: 10/31/2016

LCSS

Analysis Date: 11/1/2016

SeqNo: 1198103 %REC

Units: mg/Kg

Analyte Gasoline Range Organics (GRO)

26

Result

25.00

SPK value SPK Ref Val

105

74.6

123

%RPD

%RPD

RPDLimit Qual

Surr: BFB

Client ID:

980

1000

98.2

68.3

LowLimit

68.3

144

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix S

В Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

Reporting Detection Limit RL

Sample container temperature is out of limit as specified

Page 4 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611002

03-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

				-						
Sample ID MB-28377	Samp	Гуре: М	BLK	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batc	h ID: 28	377	F	RunNo: 3	8364				
Prep Date: 10/31/2016	Analysis [Date: 11	1/1/2016	S	SeqNo: 1	198129	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025						<u>-</u> -		
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			
Sample ID LCS-28377	Samp	ype: LC	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batc	h ID: 28	377	F	RunNo: 3	B364				
Prep Date: 10/31/2016	Analysis E	Date: 11	/1/2016	S	SeqNo: 1	198130	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<u> </u>	Result 0.91	PQL 0.025	SPK value 1.000	SPK Ref Val	%REC 91.1	LowLimit 75.2	HighLimit 115	%RPD	RPDLimit	Qual
Benzene								%RPD	RPDLimit	Qual
Benzene Toluene	0.91	0.025	1.000	0	91.1	75.2	115	%RPD	RPDLimit	Qual
Analyte Benzene Toluene Ethylbenzene Xylenes, Total	0.91 0.93	0.025 0.050	1.000 1.000	0 0	91.1 93.1	75.2 80.7	115 112	%RPD	RPDLimit	Qual

Qualifiers:

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

Page 5 of 5



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

Sample Log-In Check List

Client Name: BLAGG	Work Order Number:	1611002		RcptNo:	1
Received by/date:	11/01/16				
Logged By: Lindsay Mangin	11/1/2016 8:15:00 AM		July Allego		
Completed By: Lindsay Mangin	11/1/2016 8:38:08 AM		of 4/1/100		
Reviewed By: UJ	11/01/16				
Chain of Custody			<u> </u>		
1 Custody seals intact on sample bottles?		Yes 🗌	No 🗆	Not Present 🗹	
2. Is Chain of Custody complete?		Yes 🗹	No 🗆	Not Present \square	•
3. How was the sample delivered?		<u>Courier</u>			
<u>Log In</u>					
4. Was an attempt made to cool the sample	9?	Yes 🗹	No 🗌	NA 🗆	
5. Were all samples received at a temperatu	re of >0° C to 6.0°C	Yes 🗹	No 🗌	· NA 🗆	
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗆		
7. Sufficient sample volume for indicated test	t(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) prop	erly preserved?	Yes 🗹	No 🗆		
9. Was preservative added to bottles?		Yes 🗌	No 🗹	na	
10.VOA vials have zero headspace?		Yes 🗌	No 🗆	No VOA Vials	
11. Were any sample containers received bro	ken?	Yes	No 🗹	# of preserved	
40.5		🗖	🗖	bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗔	for pH: (<2 o	r >12 unless noted)
13. Are matrices correctly identified on Chain	of Custody?	Yes 🗹	No 🗆	Adjusted?	· · · · · · · · · · · · · · · · · · ·
14. Is it clear what analyses were requested?		Yes 🗹	No 🗆		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗔 🏻	Checked by:	
(ii iio, notity destorier for addionzacon.)	:				
Special Handling (if applicable)		•	•		
16. Was client notified of all discrepancies with	this order?	Yes 🗆	No 🗆	NA 🗹	
Person Notified:	Date				
By Whom:	Via:	eMail 🔲	Phone 🗍 Fax	In Person	
Regarding:					
Client Instructions:					
17. Additional remarks:					
	Seal Intact Seal No Se	eal Date	Signed By		

	1-of-Cu	istody Record	Turn-Around	ı me:	ASAP				Н	IAI	1 1	FR	uv	TE	n	NR	4F	NT	AL	
lient: BP	AMERICA		☐ Standard	Rush	ASAP SAME DAY	-)R)	
2	1 E.160	u eer in 6	Project Name	. .		1					.hall									-
lailing Addres	<u>96 250 (0.) 2</u> SS:	DEEN NO	- G	CU 170	7		40	04 LI									7100			
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hono# /	-nc 3	20-1103	- -				16	91. DU)5-34	5-39				ous- Req		410	, 			
hone #: 4	05- 5	20-1103	Project Mana	ager			γ)	Ô				-		χcq	a.c.3					
A/QC Package	<u> </u>		7	-		21	TPH (Gas only)	DRO / MRO)				ŀ	SO	3,8	İ					
Standard		□ Level 4 (Full Validation)	9.	BLAGG J. BLA		8)	Gas	10			SIMS)	ŀ	Š.	PC						
ccreditation			Sampler:	J. BLA	dala			DR			S 0.	l	0	382	ı			- 1	1	
1 NELAP	□ Othe	er	On Ice:	X Yes	DINO PROC		 	30/	418.1)	4.	8270		Z,	7 8		8				Z
1 EDD (Type)				V management	出	띪	(GRO	bd 4	d 5	ö	tals	Ž	ides	(8	الما			اخ
			Containor	Decement		+ WIBE + IMB'S (8021)	BTEX + MTBE	TPH 8015B	TPH (Method	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHOUDE		į	Air Bubbles (Y or N)
Date Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALTNO;	*	*	1 80	₹	<u>S</u>) s,	\$	Suc	4	0B (S) 0	400			릚
					61602	втех	BIE	TP	TP		₹ A	쭚	Anic	808	826	827	2			Ą.
31/16 1515	SOIL	1995 Impacts SW Corner 4-pt (4-10'	1×507 (cece	-007	X		X									X	\Box		77
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1/16/165/		H Dogl	Must.	Lhelo	10/31/16 1651	VI	P:	VBE	EBS	OP	LG									
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	y, samples sub	mitted to Hall Environmental may be sub	contracted to other a	ccredited laboratori												the a	nalytic	a) repoi	rt.	
	. ,		17																	



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

November 11, 2016

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199 FAX (505) 632-3903

RE: GCU 170

OrderNo.: 1611441

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/9/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1611441

Date Reported: 11/11/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

1611441-001

Client Sample ID: South Wall (Center) 5-pt

Project: GCU 170

Lab ID:

Matrix: SOIL

Collection Date: 11/8/2016 2:24:00 PM **Received Date:** 11/9/2016 8:00:00 AM

Analyses	Result	PQL Qual	Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analyst:	LGT
Chloride	ND	30	mg/Kg	20 11/9/2016 10:51:10 AM	28575
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S		Analyst:	TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1 11/9/2016 10:19:51 AM	28566
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1 11/9/2016 10:19:51 AM	28566
Surr: DNOP	100	70-130	%Rec	1 11/9/2016 10:19:51 AM	28566
EPA METHOD 8015D: GASOLINE RA	NGE			Analyst:	NSB
Gasoline Range Organics (GRO)	ND	3.0	mg/Kg	1 11/9/2016 9:53:52 AM	G38567
Surr: BFB	84.3	68.3-144	%Rec	1 11/9/2016 9:53:52 AM	G38567
EPA METHOD 8021B: VOLATILES				Analyst:	NSB
Benzene	ND	0.030	mg/Kg	1 11/9/2016 9:53:52 AM	B38567
Toluene	ND	0.030	mg/Kg	1 11/9/2016 9:53:52 AM	B38567
Ethylbenzene	ND	0.030	mg/Kg	1 11/9/2016 9:53:52 AM	B38567
Xylenes, Total	ND	0.060	mg/Kg	1 11/9/2016 9:53:52 AM	B38567
Surr: 4-Bromofluorobenzene	99.6	80-120	%Rec	1 11/9/2016 9:53:52 AM	B38567

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1611441

Date Reported: 11/11/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: South Wall (East Side) 5-pt

Project: GCU 170

Collection Date: 11/8/2016 2:34:00 PM

Lab ID: 1611441-002

Matrix: SOIL

Received Date: 11/9/2016 8:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: LGT
Chloride	ND	30	mg/Kg	20	11/9/2016 11:03:34 AM	28575
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	}			Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	11/9/2016 10:42:28 AM	28566
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	11/9/2016 10:42:28 AM	28566
Surr: DNOP	99.1	70-130	%Rec	1	11/9/2016 10:42:28 AM	28566
EPA METHOD 8015D: GASOLINE RAN	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	11/9/2016 10:17:22 AM	G38567
Surr: BFB	82.9	68.3-144	%Rec	1	11/9/2016 10:17:22 AM	G38567
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.018	mg/Kg	1	11/9/2016 10:17:22 AM	B38567
Toluene	ND	0.035	mg/Kg	1	11/9/2016 10:17:22 AM	B38567
Ethylbenzene	ND	0.035	mg/Kg	1	11/9/2016 10:17:22 AM	B38567
Xylenes, Total	ND	0.071	mg/Kg	1	11/9/2016 10:17:22 AM	B38567
Surr: 4-Bromofluorobenzene	96.9	80-120	%Rec	1	11/9/2016 10:17:22 AM	B38567

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1611441

Date Reported: 11/11/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Wall (SE Corner) 3-pt

Project: GCU 170

Collection Date: 11/8/2016 2:39:00 PM

Lab ID: 1611441-003

Matrix: SOIL

Received Date: 11/9/2016 8:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	LGT
Chloride	ND	30	mg/Kg	20	11/9/2016 11:15:58 AM	28575
EPA METHOD 8015M/D: DIESEL RAN		Analyst	: TOM			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/9/2016 11:05:15 AM	28566
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/9/2016 11:05:15 AM	28566
Surr: DNOP	101	70-130	%Rec	1	11/9/2016 11:05:15 AM	28566
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	11/9/2016 10:40:59 AM	G38567
Surr: BFB	83.9	68.3-144	%Rec	1	11/9/2016 10:40:59 AM	G38567
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.017	mg/Kg	1	11/9/2016 10:40:59 AM	B38567
Toluene	ND	0.034	mg/Kg	1	11/9/2016 10:40:59 AM	B38567
Ethylbenzene	ND	0.034	mg/Kg	1	11/9/2016 10:40:59 AM	B38567
Xylenes, Total	ND	0.068	mg/Kg	1	11/9/2016 10:40:59 AM	B38567
Surr: 4-Bromofluorobenzene	97.6	80-120	%Rec	1	11/9/2016 10:40:59 AM	B38567

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 7
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611441 11-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28575

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 28575

1.5

PQL

RunNo: 38595

Prep Date:

SeqNo: 1205514

Units: mg/Kg

Analyte

11/9/2016

Analysis Date: 11/9/2016

HighLimit

%RPD

%RPD

RPDLimit Qual

Chloride

Result **PQL** ND

Sample ID LCS-28575 LCSS

SampType: LCS

Batch ID: 28575

RunNo: 38595

Units: mg/Kg

Prep Date: 11/9/2016

Analysis Date: 11/9/2016

SeqNo: 1205516

SPK value SPK Ref Val %REC LowLimit

Analyte

Client ID:

SPK value SPK Ref Val %REC

HighLimit LowLimit

RPDLimit

Chloride

1.5 15.00

93.4

90

TestCode: EPA Method 300.0: Anions

Qual

14

110

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

Page 4 of 7

P Sample pH Not In Range

RLReporting Detection Limit Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611441

11-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Project: GCU 17	/ 0									
Sample ID LCS-28566	SampType: LCS Batch ID: 28566 Analysis Date: 11/9/2016			TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS				RunNo: 38561						
Prep Date: 11/9/2016				SeqNo: 1204626			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.1	62.6	124			
Surr: DNOP	4.6		5.000		92.7	70	130			
Sample ID MB-28566	SampT	SampType: MBLK TestCode: EPA Method				8015M/D: Di	esel Rang	e Organics		
Client ID: PBS	Batch ID: 28566			F	RunNo: 38561					
Prep Date: 11/9/2016	Analysis Date: 11/9/2016			5	SeqNo: 1204627			Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.0	70	130			

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 5 of 7

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611441

11-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID RB

SampType: MBLK

PQL

5.0

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

Batch ID: G38567

RunNo: 38567

Prep Date:

Analysis Date: 11/9/2016

SeqNo: 1205218

Units: mg/Kg

144

Analyte

Result ND

SPK value SPK Ref Val

HighLimit

%RPD

RPDLimit

Qual

Gasoline Range Organics (GRO)

PBS

Surr: BFB

840

1000

84.1

%REC

68.3

LowLimit

%RPD

Sample ID 2.5UG GRO LCS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS

Batch ID: G38567

RunNo: 38567

Units: mg/Kg

Prep Date:

Analysis Date: 11/9/2016

SeqNo: 1205219

Analyte

Result PQL

SPK value SPK Ref Val 25.00

%REC 94.6 90.8

74.6

LowLimit

RPDLimit Qual

Gasoline Range Organics (GRO) Surr: BFB

24 910 5.0 1000

68.3

123 144

HighLimit

Qualifiers:

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

Page 6 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611441

11-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID RB	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: B3	8567	F	RunNo: 3	8567				
Prep Date:	Analysis [Date: 11	1/9/2016	8	SeqNo: 1	205233	Units: mg/#	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID 100NG BTEX LC	Samp	Type: LC	S	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Bato	h ID: B3	8567	F	RunNo: 3	8567				
Prep Date:	Analysis	Date: 1	1/9/2016	5	SeqNo: 1	205234	Units: mg/F	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	118	75.2	115			S
Toluene	1.1	0.050	1.000	0	108	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	102	78.9	117			
Xylenes, Total	3.1	0.10	3.000	0	102	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Qualifiers:

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

Page 7 of 7

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



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

Client Name: BLAGG	Work Order Number:	1611	141		RcptNo:	1
Received by/date: LC ////9//	6				·	
Logged By: Anne Thorne	11/9/2016 8:00:00 AM			anne Sham		-
Completed By: Anne Thorne	11/9/2016			anne II.	_	
Reviewed By:	11/09/16				_	
Chain of Custody						
1. Custody seals intact on sample bottles?		Yes	<u> </u>	No 🗆	Not Present 🗹	
2. Is Chain of Custody complete?		Yes	V	No 🗌	Not Present	
3. How was the sample delivered?		Cour	<u>ler</u>			
Log In						
4. Was an attempt made to cool the samples?		Yes	V	No 🗆	na 🗆	
5. Were all samples received at a temperature	of >0° C to 6.0°C	Yes	V	No 🗆	NA 🗆	
6. Sample(s) in proper container(s)?		Yes	7	No 🗆		
7. Sufficient sample volume for indicated test(s)?	Yes	V	No 🗌		
8. Are samples (except VOA and ONG) properl	ly preserved?	Yes	\checkmark	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 broke	en?	Yes		No 🗹	#_of-preserved	
40				🗂	bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	•	Yes	V	No L	for pH: (<2 o	r >12 unless noted)
13. Are matrices correctly identified on Chain of	Custody?	Yes	V	No 🗌	Adjusted?	
14. Is it clear what analyses were requested?		Yes	\checkmark	No 🗆		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	\checkmark	No 🗆	Checked by:	
,						
Special Handling (if applicable)					•	
16. Was client notified of all discrepancies with the	his order?	Yes		No 🗌	NA 🗹	÷
Person Notified:	Date					
By Whorn:	Via: [eMa	il 🗌	Phone Fax	☐ In Person	· ·
Regarding:						
Client Instructions:						
17. Additional remarks:						_
18. Cooler Information						
		Seal Da	te	Signed By		
1 1.6 Good Yes				ير د يون پرورونون درو خارسته بخال با دوانت خالب]	

C	hain-	of-Cu	ustody Record	Turn-Around	Time) :	ASAP SAME	Dale					ı A		FI	NV	TE	20	NB	ИF	NT	ΓΑΙ	1
ıt:	BP	AMERI		□ Standard		≰Rush	SAME 	DAY		****	E,											OR	
	7	· · · ·		Project Name	E									v.hal							•••		•
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hone i	#: <i>50</i>	05 -3	320-1193	1445	<u></u>	EMEDIA	From Exc	country						Α	naly	/sis	Req	uest					
mail o	r Fax#:			Project Mana		_11			=	<u>اج</u>	RO)					ð					,		
A/QC I	Package: dard_		☐ Level 4 (Full Validation)	Sampler: J	- 7	Budlo	6		TIMES (8021)	TPH (Gas only)	DRO / MRO)			SIMS)		PO4,S	PCB's						
ccredi		□ Othe	er	Sampler: J		BLA (66			F TPH	_	18.1)	04.1)	8270		3,NO ₂	/ 808		€				S N
EDD	(Type)			Sample Temp	erat	ure: 4	Carrie -			끪	(GRO	4 b	Q Q	o C	tals	Ŋ,	ides	2	Ş	2			اخ
Date	Time	Matrix	Sample Request ID	21	Pres	ervative Type	HEAL MEAL MEAL	New	×	BTEX + MTBE	TPH 8015B	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	2400M2			Air Bubbles (Y or N)
ZOIL	1424	SOIL	South wall (center)	4021		av L		700	V		X							,		X			
Łij	1434	И	Som well (EAST Side) 5-P	4		u		762	Ý		X									x			
1/	1439	ч	Som well (EAST side) 5-PS EAST Wall (SE COME) 3-P	= 1/		4		703	×		X									X			
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ate:	Time:	Rell/iquist	ned by:	Received by:	u	Con		Time Ulk Ob	סט	Ar	Ē:			00			,]
		samples sut	omitted to Hall Environmental may be subc	ontracted to other a	gredit	ed laborator	ies. This serves	as notice of thi	s poss				_							malytic	al rep	ort.	



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

November 18, 2016

Jeff Blagg
Blagg Engineering
P. O. Box 87

Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: GCU 170 OrderNo.: 1611716

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/15/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report Lab Order 1611716

Date Reported: 11/18/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Wall - South 4 pt

Project: GCU 170

Collection Date: 11/14/2016 2:02:00 PM

Lab ID: 1611716-001

Matrix: MEOH (SOIL)

Received Date: 11/15/2016 7:50:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Ana	lyst: LGT
Chloride	ND	30	mg/Kg	20	11/15/2016 11:10:13	3 AM 28678
EPA METHOD 8015M/D: DIESEL RAM	NGE ORGANIC	S		•	Anal	lyst: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	11/15/2016 10:21:50	O AM 28664
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	11/15/2016 10:21:50	O AM 28664
Surr: DNOP	85.0	70-130	%Rec	1	11/15/2016 10:21:50	O AM 28664
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	lyst: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	11/15/2016 10:57:45	5 AM G38713
Surr: BFB	83.5	68.3-144	%Rec	, 1	11/15/2016 10:57:45	5 AM G38713
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.017	mg/Kg	1	11/15/2016 10:57:45	5 AM B38713
Toluene	ND	0.033	mg/Kg	1	11/15/2016 10:57:45	5 AM B38713
Ethylbenzene	ND	0.033	mg/Kg	1	11/15/2016 10:57:45	5 AM B38713
Xylenes, Total	ND	0.066	mg/Kg	1	11/15/2016 10:57:45	5 AM B38713
Surr: 4-Bromofluorobenzene	98.7	80-120	%Rec	1	11/15/2016 10:57:45	5 AM B38713

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1611716

Date Reported: 11/18/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East wall - Center 4 pt

Project: GCU 170 Collection Date: 11/14/2016 2:12:00 PM

Lab ID: 1611716-002

Matrix: MEOH (SOIL) Received Date: 11/15/2016 7:50:00 AM

Analyses	Result	PQL Qu	al Units	DF D	ate Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	/st: LGT
Chloride	ND	30	mg/Kg	20 1	1/15/2016 11:22:38	AM 28678
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	s			Analy	/st: JME
Diesel Range Organics (DRO)	· ND	9.5	mg/Kg	1 1	1/15/2016 10:48:52	AM 28664
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1 1	1/15/2016 10:48:52	AM 28664
Surr: DNOP	82.8	70-130	%Rec	1 1	1/15/2016 10:48:52	AM 28664
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	/st: NSB
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1 1	1/15/2016 11:21:20	AM G38713
Surr: BFB	82.5	68.3-144	%Rec	1 1	1/15/2016 11:21:20	AM G38713
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB
Benzene	ND	0.017	mg/Kg	1 1	1/15/2016 11:21:20	AM B38713
Toluene	ND	0.034	mg/Kg	1 1	1/15/2016 11:21:20	AM B38713
Ethylbenzene	ND	0.034	mg/Kg	1 1	1/15/2016 11:21:20	AM B38713
Xylenes, Total	ND	0.067	mg/Kg	1 1	1/15/2016 11:21:20	AM B38713
Surr: 4-Bromofluorobenzene	96.0	80-120	%Rec	1 1	1/15/2016 11:21:20	AM B38713

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 6 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611716

18-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28678

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 28678

RunNo: 38732

Units: mg/Kg

Analyte

Client ID:

Prep Date: 11/15/2016

Analysis Date: 11/15/2016

SeqNo: 1210162

HighLimit

%RPD

RPDLimit

Result

PQL SPK value SPK Ref Val %REC LowLimit

Qual

Chloride

ND 1.5

Sample ID LCS-28678

SampType: LCS Batch ID: 28678 TestCode: EPA Method 300.0: Anions RunNo: 38732

Prep Date: 11/15/2016

LCSS

Analysis Date: 11/15/2016 **PQL**

SeqNo: 1210163

Units: mg/Kg

HighLimit LowLimit

%RPD

RPDLimit

Result

SPK value SPK Ref Val

Analyte

1.5

14

110

Qual

Chloride

15.00

%REC 94.8

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits В Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

Page 3 of 6

P Sample pH Not In Range

RLReporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Result

47

4.5

PQL

10

WO#:

%RPD

RPDLimit

Qual

1611716

18-Nov-16

Client:

Blagg Engineering

Project:

Analyte

Surr: DNOP

Diesel Range Organics (DRO)

GCU 170

Sample ID MB-28664 Client ID: PBS	•	ype: MI n ID: 28			tCode: E RunNo: 3		8015M/D: Di	esel Rang	e Organics	
Prep Date: 11/15/2016	Analysis D	ate: 1	1/15/2016	5	SeqNo: 1	209099	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10				•				
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		82.2	70	130			
Sample ID LCS-28664	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	1D: 28	664	F	RunNo: 3	8705				
Prep Date: 11/15/2016	Analysis D	ate 11	1/15/2016	5	SeaNo: 1	209100	Units: ma/k	(a		

%REC

94.6

89.9

LowLimit

62.6

70

HighLimit

124

130

SPK value SPK Ref Val

50.00

5.000

Qualifiers:

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

Page 4 of 6

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611716

18-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID RB

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

PBS Client ID:

Batch ID: G38713

PQL

5.0

RunNo: 38713

TestCode: EPA Method 8015D: Gasoline Range

Prep Date:

SeqNo: 1209486

Units: mg/Kg

Analysis Date: 11/15/2016

Analyte

ND

SPK value SPK Ref Val

%REC LowLimit HighLimit

RPDLimit Qual

Gasoline Range Organics (GRO)

Result

87.7

Surr: BFB

880

1000

68.3

144

Sample ID 2.5UG GRO LCS

SampType: LCS

RunNo: 38713

Client ID: LCSS Batch ID: G38713

Prep Date:

SeqNo: 1209487

Units: mg/Kg

Analyte

Analysis Date: 11/15/2016

SPK value SPK Ref Val %REC HighLimit

RPDLimit

Result

PQL 5.0 25.00

82.7 90.9 74.6 68.3

LowLimit

%RPD

%RPD

Qual

Gasoline Range Organics (GRO) Surr: BFB

21 910

1000

123 144

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Η Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- Page 5 of 6

- Р Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611716

18-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID RB	Samp	уре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batcl	h ID: B3	8713	F	RunNo: 3	8713				
Prep Date:	Analysis D)ate: 1	1/15/2016	S	SeqNo: 1	209497	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID 100NG BTEX LO	Samp	Type: LC	:S	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: B3	8713	F	RunNo: 3	8713				
Prep Date:	Analysis I	Date: 11	1/15/2016	8	SeqNo: 1	209499	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	117	75.2	115			S
Toluene	1.0	0.050	1.000	0	103	80.7	112			
Ethylbenzene	0.97	0.050	1.000	0	97.4	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	97.9	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 6 of 6

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



Hall Environmental Analysis Laboratory
4901 Hawkins NE

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 Ord	der Numb	er: 16117	16		RcptNo	: 1
Received by/da	te: A	- 11/15/14						
Logged By:	Anne Thor	ne 11/15/2016	7:50:00	AM		anne Ha	_	
Completed By:	Aftne Thor	ne 11/15/2016	8:38:55	AM		anne Man		
Reviewed By:	1	11/15/16				Cina J, Ci	_	
Chain of Cus		Ar (Calabi Cara and	•			•		
1. Custody sea		ample bottles?		Yes		No 🗆	Not Present 🗹	
2. Is Chain of	Custody comp	lete?		Yes	\checkmark	No 🗀	Not Present	
3. How was th	e sample deliv	ered?		Couri	<u>ər</u>			
Log In								
4. Was an atte	empt made to	cool the samples?		Yes	✓:	No 🗆	NA 🗆	
5. Were all sa	mples received	d at a temperature of >0° C to	6.0°C	Yes [✓	No 🗌	na 🗆	
6. Sample(s) i	in proper conta	niner(s)?		Yes	V	No 🗔		
7. Sufficient sa	imple volume i	for indicated test(s)?		Yes	✓	No 🗆		
8. Are samples	s (except VOA	and ONG) properly preserved?	?	Yes	✓ :	No 🗌		
9. Was presen	vative added to	bottles?		Yes		No 🗹	na 🗆	
10.VOA vials h	ave zero head:	space?		Yes		No []	No VOA Vials ⊻	
11, Were any s	ample contain	ers received broken?		Yes		No 🗹	# of preserved	
		×			_		bottles checked	
12. Does papen (Note discre		ttle labels? ain of custody)		Yes	⊻ i	No 🗀	for pH:	or >12 unless noted)
•		itified on Chain of Custody?		Yes	V	No 🗆	Adjusted?	,,
14. Is it clear wh	•	•		Yes		No 🗆		
15. Were all hol		e to be met?		Yes [✓	No 🗆	Checked by:	
(II Not Hour)		idinonia di di di						
Special Hand	iling (if app	licable)						
16. Was client n	otified of all di	screpancies with this order?		Yes [No 🗀	NA 🗹	
Person	n Notified:		Date					-
By Wh	nom:		Via:	eMail		Phone Tax	☐ In Person	
Regar	ding:		·····	******				
Client	Instructions:							
17. Additional re	emarks:							
18. Cooler Info	rmation					-		
Cooler N	<u> </u>	Condition Seal Intact S	eal No	Seal Date	е	Signed By		
1	1.0	Good Yes						
Page 1 o	. <u> </u>	. 22		:			Live and including the line	. marka karangan dari

			istody Record	Turn-Aroung	ime:	SAME DAY				H	IA	LL	E	NV	/IF	10	11	ME	NT	'Al	_
	<u>BP An</u>	NERVCA		□ Standard] [A	N	AL	YS	SIS	5 L	.AE	30	RA	\T()R	Y.
i	BLAG.	· FNG	INEERING INC.	Project Name						,	www	/.hal	lenv	ironi	men!	tal.co	om				
ailing	Address	:	7-03000	G	LU 170)		490)1 H								м 87	'109			
	-			Project #:				Te	1. 50	5-34	5-39	975	F	- ax	505-	345	410	7			
none #	#: 5 0	5-32	20-1183	1995 R	EMEDIATION	EXCAVATON)										uest					
nail or	Fax#:			Project Mana	ger:)	(YI	<u>Q</u>)4)							
VQC F	Package: dard		☐ Level 4 (Full Validation)		BLAG6		§ (8021)	TPH (Gas only)	DRO / MRO)			SIMS)		,PO4,S(PCB's						
credi	tation			Sampler: 2	- BLAGG		198	표		\rightleftharpoons	₽	02		Ş	087					}	→
NEL	AP	□ Othe	er	On Ice:	Yes	□ No	1 11	+	잁	8	9	. 82		J.50	8/8		€			1	10
EDD	(Type)_			Sample Tem	perature20	CF-1.0= 1.0]	MTBE	<u>ō</u>	м 4	8	o o	stals	ž	ide	₽	۱۶۱	14			\ <u>E</u>
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MIBE	BTEX + MT	TPH 8015B (GRO /	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
EDIL	1402	SOIL	EAST Wall-South 4 pe	402×1	COOL	-001	x		X									X		寸	
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

November 17, 2016

Jeff Blagg
Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL:
FAX

RE: GCU 170 OrderNo.: 1611788

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/16/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1611788

Date Reported: 11/17/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Corner 5-pt

Project: GCU 170

Collection Date: 11/15/2016 4:18:00 PM

Lab ID: 1611788-001

Matrix: MEOH (SOIL)

Received Date: 11/16/2016 8:00:00 AM

Analyses	Result	PQL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analys	MRA
Chloride	ND	30	mg/Kg	20 11/16/2016 10:39:09 A	M 28702
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S		Analys	:: JME
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1 11/16/2016 10:28:54 A	M 28697
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1 11/16/2016 10:28:54 A	M 28697
Surr: DNOP	87.0	70-130	%Rec	1 11/16/2016 10:28:54 A	M 28697
EPA METHOD 8015D: GASOLINE RA	NGE			Analysi	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1 11/16/2016 10:20:26 A	M 28653
Surr: BFB	84.6	68.3-144	%Rec	1 11/16/2016 10:20:26 A	M 28653
EPA METHOD 8021B: VOLATILES				Analyst	: NSB
Benzene	ND	0.050	mg/Kg	1 11/16/2016 10:20:26 A	M 28653
Toluene	ND	0.050	mg/Kg	1 11/16/2016 10:20:26 Al	M 28653
Ethylbenzene	ND	0.050	mg/Kg	1 11/16/2016 10:20:26 Al	M 28653
Xylenes, Total	ND	0.10	mg/Kg	1 11/16/2016 10:20:26 Al	M 28653
Surr: 4-Bromofluorobenzene	98.6	80-120	%Rec	1 11/16/2016 10:20:26 Al	M 28653

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1611788

Date Reported: 11/17/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Wall South End 5-pt

Project: GCU 170

Collection Date: 11/15/2016 4:27:00 PM

Lab ID: 1611788-002

Matrix: MEOH (SOIL) Received Date: 11/16/2016 8:00:00 AM

Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					. Anal	yst: MRA
Chloride	ND	30	mg/Kg	20	11/16/2016 10:51:34	AM 28702
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S			Anal	yst: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	11/16/2016 10:50:34	AM 28697
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/16/2016 10:50:34	AM 28697
Surr: DNOP	83.3	70-130	%Rec	1	11/16/2016 10:50:34	AM 28697
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/16/2016 10:43:56	AM 28653
Surr: BFB	83.0	68.3-144	%Rec	1	11/16/2016 10:43:56	AM 28653
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.050	mg/Kg	1	11/16/2016 10:43:56	AM 28653
Toluene	ND	0.050	mg/Kg	1	11/16/2016 10:43:56	AM 28653
Ethylbenzene	ND .	0.050	mg/Kg	1	11/16/2016 10:43:56	AM 28653
Xylenes, Total	ND	0.10	mg/Kg	1	11/16/2016 10:43:56	AM 28653
Surr: 4-Bromofluorobenzene	95.8	80-120	%Rec	1	11/16/2016 10:43:56	AM 28653

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1611788

Date Reported: 11/17/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Wall-North End 5-pt

Project: GCU 170

Collection Date: 11/15/2016 4:33:00 PM

Lab ID: 1611788-003

Matrix: MEOH (SOIL) Received Date: 11/16/2016 8:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	yst: MRA
Chloride	31	30	mg/Kg	20	11/16/2016 11:03:58	AM 28702
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S			Analy	yst: JME
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	11/16/2016 11:12:10	AM 28697
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/16/2016 11:12:10	AM 28697
Surr: DNOP	84.5	70-130	%Rec	1	11/16/2016 11:12:10	AM 28697
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	yst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/16/2016 11:07:36	AM 28653
Surr: BFB	84.9	68.3-144	%Rec	1	11/16/2016 11:07:36	AM 28653
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB
Benzene	ND	0.050	mg/Kg	1	11/16/2016 11:07:36	AM 28653
Toluene	ND	0.050	mg/Kg	1	11/16/2016 11:07:36	AM 28653
Ethylbenzene	ND	0.050	mg/Kg	1	11/16/2016 11:07:36	AM 28653
Xylenes, Total	ND	0.10	mg/Kg	1	11/16/2016 11:07:36	AM 28653
Surr: 4-Bromofluorobenzene	98.7	80-120	%Rec	1	11/16/2016 11:07:36	AM 28653

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611788

17-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28702

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 28702

RunNo: 38771

Prep Date: 11/16/2016

Analysis Date: 11/16/2016

SeqNo: 1211314

Units: mg/Kg

Analyte

PQL

SPK value SPK Ref Val

%REC LowLimit

HighLimit

RPDLimit %RPD

Qual

Chloride

Result ND

1.5

Sample ID LCS-28702

Client ID: LCSS

SampType: Ics Batch ID: 28702

PQL

TestCode: EPA Method 300.0: Anions

RunNo: 38771

LowLimit

Units: mg/Kg

Analyte

Prep Date: 11/16/2016

Analysis Date: 11/16/2016

SeqNo: 1211315

%RPD

Result

%REC 94.0

14

1.5

15.00

RPDLimit

Chloride

SPK value SPK Ref Val

HighLimit 110

Qual

Qualifiers:

D

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix Η Holding times for preparation or analysis exceeded

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

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit RL

Sample container temperature is out of limit as specified

Page 4 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611788

17-Nov-16

Blagg Engineering

Project:

GCU 170

Sample ID	MB-28682
-----------	----------

SampType: MBLK

TestCode: EPA Method 8015M/D: Diesel Range Organics

70

LowLimit

Client ID:

PRS

Batch ID: 28682

RunNo: 38735

POL

Prep Date:

11/15/2016

Analysis Date: 11/16/2016

SeaNo: 1210301

Analyte

Units: %Rec

130

Result 8.0

Result

Result

ND

ND

8.3

4.2

SPK value SPK Ref Val 10.00

SPK value SPK Ref Val

%REC LowLimit 80.2

HighLimit

Qual

Surr: DNOP

SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

%RPD

%RPD

Client ID: LCSS

Sample ID LCS-28682

Batch ID: 28682

PQL

RunNo: 38735

Prep Date:

11/15/2016

SeqNo: 1210302

83.4

Units: %Rec

RPDLimit

RPDLimit

Surr: DNOP

Analysis Date: 11/16/2016

%REC

HighLimit

Qual

Sample ID MB-28697

SampType: MBLK

130 TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS

Batch ID: 28697

RunNo: 38734

Prep Date: 11/16/2016

Analysis Date: 11/16/2016

SeqNo: 1210312

Units: mg/Kg

Analyte Diesel Range Organics (DRO)

PQL 10

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit**

Qual

Motor Oil Range Organics (MRO)

50

10.00

5.000

83.2

130

Sample ID LCS-28697

SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID:

Surr: DNOP

LCSS

Batch ID: 28697

RunNo: 38734

86.0

Analyte Diesel Range Organics (DRO)

Prep Date: 11/16/2016

Result 43 10 50.00 5.000

Analysis Date: 11/16/2016

SPK value SPK Ref Val %REC

0

SeqNo: 1210313 LowLimit Units: mg/Kg HighLimit

%RPD **RPDLimit** Qual

Surr: DNOP

4.3

85.2

62 6 70 124 130

%RPD

%RPD

Sample ID MB-28686

PRS

SampType: MBLK

Batch ID: 28686

RunNo: 38735

TestCode: EPA Method 8015M/D: Diesel Range Organics

%REC LowLimit

HighLimit

130

Qual

Analyte Surr: DNOP

Client ID:

Prep Date:

11/15/2016

Result

Analysis Date: 11/16/2016

SeqNo: 1210466

Units: %Rec

RPDLimit Qual

Sample ID LCS-28686

Prep Date: 11/15/2016

7.8

SampType: LCS Batch ID: 28686

Analysis Date: 11/16/2016

PQL

TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 38735

SeqNo: 1210467

77.9

RPDLimit

Page 5 of 7

Analyte

Surr: DNOP

Client ID: LCSS

Result 4.1

SPK value SPK Ref Val 5.000

10.00

SPK value SPK Ref Val

%REC 81.4 LowLimit 70

70

Units: %Rec HighLimit 130

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

ND Not Detected at the Reporting Limit R Analyte detected in the associated Method Blank

Р Sample pH Not In Range

Sample container temperature is out of limit as specified

E Value above quantitation range Analyte detected below quantitation limits

RL Reporting Detection Limit

Qualifiers:

Н Holding times for preparation or analysis exceeded

R

RPD outside accepted recovery limits % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611788

17-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28653

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 28653

RunNo: 38746

Prep Date: 11/14/2016

Analysis Date: 11/16/2016

SeqNo: 1210935

Units: mg/Kg

HighLimit

Analyte

PQL 5.0

%REC SPK value SPK Ref Val

LowLimit

68.3

%RPD

RPDLimit

Qual

Gasoline Range Organics (GRO)

Surr: BFB

Client ID: LCSS

ND 830

Result

1000

SPK value SPK Ref Val

83.2

144

Sample ID LCS-28653

Prep Date: 11/14/2016

SampType: LCS

Batch ID: 28653

Analysis Date: 11/16/2016

PQL

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

RunNo: 38746 SeqNo: 1210936

Units: mg/Kg

Qual

Analyte Gasoline Range Organics (GRO)

Surr: BFB

22 880

Result

25.00 1000

88.0 88.2

%REC

74.6 68.3 123 144

HighLimit

%RPD **RPDLimit**

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

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

Ε Value above quantitation range

Analyte detected below quantitation limits

Page 6 of 7

P Sample pH Not In Range RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611788

17-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28653	Samp [*]	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batc	h ID: 28	653	F	RunNo: 3					
Prep Date: 11/14/2016	Analysis [Date: 11	1/16/2016	5	SeqNo: 1	210951	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.7	80	120			
Sample ID LCS-28653	Samp	mpType: LCS TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batcl	h ID: 28	653	F	RunNo: 3	8746				

Cumpic ID LCC-20000	Camp	Type. Lo		103	loud. L	A INGUIOU	UUZID. VUIA	uies		
Client ID: LCSS	Batc	h ID: 28	653	F	RunNo: 3	8746				
Prep Date: 11/14/2016	Analysis [Date: 11	1/16/2016	5	SeqNo: 1	210952	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	75.2	115			
Toluene	0.97	0.050	1.000	0	96.6	80.7	112			
Ethylbenzene	0.93	0.050	1.000	0	93.5	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	93.3	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Qualifiers:

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

Page 7 of 7



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

Website: www.hallenvironmental.com

Sample Log-In Check List

BLAGG Work Order Number: 1611788 RcptNo: 1 Client Name: Received by/date: Ashley Gallegos 11/16/2016 8:00:00 AM Logged By: Ashley Gallegos Completed By: 11/16/2016 8:20:26 AM Reviewed By: Chain of Custody No 🗌 Not Present 🔽 Yes [] 1. Custody seals intact on sample bottles? No [] Not Present Yes 💽 2. Is Chain of Custody complete? Courier 3. How was the sample delivered? Log In NA [] No 🗔 Yes 🗹 4. Was an attempt made to cool the samples? NA 🗌 No 🗌 Yes 🗸 5. Were all samples received at a temperature of >0° C to 6.0°C No [] Yes 🗹 6. Sample(s) in proper container(s)? No 🗀 7. Sufficient sample volume for indicated test(s)? Yes 🗹 No 🗌 Yes 🗹 8. Are samples (except VOA and ONG) properly preserved? NA 🗀 No 🔽 Yes [9. Was preservative added to bottles? Yes 🗀 No 🗆 No VOA Vials 🗹 10. VOA vials have zero headspace? Yes No 🗹 11. Were any sample containers received broken? # of preserved bottles checked for pH: No 🗆 12. Does paperwork match bottle labels? Yes 🗹 (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗔 Yes 🗸 13. Are matrices correctly identified on Chain of Custody? No 🗔 Yes 🗹 14. Is it clear what analyses were requested? Checked by: No 🗌 Yes 🔽 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes [] No 🗀 NA 🗹 16. Was client notified of all discrepancies with this order? Person Notified: Date By Whom: | eMail | Phone Fax | In Person Regarding: **Client Instructions:** 17. Additional remarks: 18. Cooler Information Cooler No | Temp °C | Condition | Seal Intact | Seal No |

С	hain	-of-Cu	ustody Record	Turn-Around	Time:	ASAP		=						NI V	TE	· ^	MB	a E	NT	TAL	
Client:	BP A	MERICA	<u> </u>	□ Standard) ≰Rush	ASAP SAME DAY			_										\T(
7.	3 N/6	E.Kul	Ethnic Inc	Project Name);				7	_		v.hal									-
Mailing	Address):	SECTION TIME	GCU	170	·		490)1 H									7109			
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email o	r Fax#:			Project Mana	ger:		_	(YIL	<u>©</u>)4)							
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□ NEL	AP	□ Othe	er	On Ice:	v ∕Yes*	□ No] #	 	잁	18.	04.	82		7.60	8 / g		(A)				
□ EDD	(Type)			Sample Tem	perature:	1.6°C		띪	<u>ত</u>	4 bc	od 5	0 or	stals	ž	ğ	ਜ	ا ج		il		2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE TIMES (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHARADE			Air Bubbles (Y or N)
15/2016	1618	SOIL	NW Corner 5-pt	4 oz x l	Cass	-001	X		X	·			_	_	Ť			X		\top	\uparrow
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1/5/16	1802	1 1 1	1 Blogg	Must	Mulael	الم المراز مل Date Time										J	,		- 12	,	
Date:	Time:	Relinquish	ned by:																		
<u>"115/10</u>	1827		lothe Walle	and/	/ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	116/16 0800				<u>:)</u>				_							
' 1	f necessary	, samples sub	bmitted to Hall Environmental may be sub	contracted to other a	ccredited laboratori	es. This serves as notice of thi	s possi	ibility.	Any s	ub-con	tracte	d data	will b	e clear	rty not	ated o	n the a	inalytic	;al repo	rt.	



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

November 21, 2016

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: FAX

RE: GCU 170 OrderNo.: 1611984

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/18/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report Lab Order 1611984

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering GCU 170

Client Sample ID: North Wall @ Shed 6-Point

Collection Date: 11/17/2016 1:22:00 PM

Lab ID: 1611984-001

Project:

Matrix: MEOH (SOIL) Received Date: 11/18/2016 7:55:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: LGT
Chloride	47	30	mg/Kg	20	11/18/2016 11:02:13	3 AM 28764
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S			Anal	yst: JME
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	11/18/2016 10:06:30	AM 28746
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/18/2016 10:06:30	AM 28746
Surr: DNOP	86.8	70-130	%Rec	1	11/18/2016 10:06:30	AM 28746
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	38	18	mg/Kg	5	11/18/2016 10:44:21	AM 28740
Surr: BFB	136	68.3-144	%Rec	5	11/18/2016 10:44:21	AM 28740
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.18	mg/Kg	5	11/18/2016 10:44:21	AM 28740
Toluene	ND	0.18	mg/Kg	5	11/18/2016 10:44:21	AM 28740
Ethylbenzene	ND	0.18	mg/Kg	5	11/18/2016 10:44:21	AM 28740
Xylenes, Total	ND	0.36	mg/Kg	5	11/18/2016 10:44:21	AM 28740
Surr: 4-Bromofluorobenzene	109	80-120	%Rec	5	11/18/2016 10:44:21	AM 28740

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 8
- P Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

Lab Order 1611984

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Wall-Center 6-Point

GCU 170 Project:

Collection Date: 11/17/2016 1:28:00 PM

1611984-002 Lab ID:

Matrix: MEOH (SOIL) Received Date: 11/18/2016 7:55:00 AM

Analyses	Result	PQL Qu	al Units	DF Date Analyzed Ba
EPA METHOD 300.0: ANIONS				Analyst: LG
Chloride	49	30	mg/Kg	20 11/18/2016 11:14:38 AM 28
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	s		Analyst: JM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1 11/18/2016 10:33:13 AM 287
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1 11/18/2016 10:33:13 AM 287
Surr: DNOP	86.7	70-130	%Rec	1 11/18/2016 10:33:13 AM 287
EPA METHOD 8015D: GASOLINE RAN	IGE			Analyst: NS
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1 11/18/2016 11:07:49 AM 287
Surr: BFB	85.0	68.3-144	%Rec	1 11/18/2016 11:07:49 AM 287
EPA METHOD 8021B: VOLATILES				Analyst: NS
Benzene	ND	0.021	mg/Kg	1 11/18/2016 11:07:49 AM 287
Toluene	ND	0.042	mg/Kg	1 11/18/2016 11:07:49 AM 287
Ethylbenzene	ND	0.042	mg/Kg	1 11/18/2016 11:07:49 AM 287
Xylenes, Total	ND	0.084	mg/Kg	1 11/18/2016 11:07:49 AM 287
Surr: 4-Bromofluorobenzene	99.9	80-120	%Rec	1 11/18/2016 11:07:49 AM 287

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

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 8 J
- P Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1611984

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Wall-West End 6-Point

Project: GCU 170

Collection Date: 11/17/2016 1:34:00 PM

Lab ID: 1611984-003

Matrix: MEOH (SOIL) Received Date: 11/18/2016 7:55:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: LGT
Chloride	ND	30	mg/Kg	20	11/18/2016 11:27:02	2 AM 28764
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Anal	yst: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	11/18/2016 10:59:53	3 AM 28746
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/18/2016 10:59:53	3 AM 28746
Surr: DNOP	85.7	70-130	%Rec	1	11/18/2016 10:59:53	3 AM 28746
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	11/18/2016 11:31:15	AM 28740
Surr: BFB	84.6	68.3-144	%Rec	1	11/18/2016 11:31:15	AM 28740
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.016	mg/Kg	1	11/18/2016 11:31:15	AM 28740
Toluene	ND	0.033	mg/Kg	1	11/18/2016 11:31:15	AM 28740
Ethylbenzene	ND	0.033	mg/Kg	1	11/18/2016 11:31:15	AM 28740
Xylenes, Total	ND	0.065	mg/Kg	1	11/18/2016 11:31:15	AM 28740
Surr: 4-Bromofluorobenzene	99.5	80-120	%Rec	1	11/18/2016 11:31:15	AM 28740

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611984 21-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28764

SampType: mblk

TestCode: EPA Method 300.0: Anions

LowLimit

90

Client ID:

PBS

Batch ID: 28764

RunNo: 38831

Prep Date: 11/18/2016

SeqNo: 1213308

HighLimit

Analysis Date: 11/18/2016

%REC LowLimit

Units: mg/Kg

Qual

Analyte Chloride

Result **PQL** ND 1.5

Sample ID LCS-28764

SampType: Ics Batch ID: 28764

Result

Result

ND

14

TestCode: EPA Method 300.0: Anions

Client ID: LCSS Prep Date: 11/18/2016

SPK value SPK Ref Val

SPK value SPK Ref Val

15.00

RunNo: 38831

%RPD HighLimit

%RPD

%RPD

Analyte

Analysis Date: 11/18/2016 **PQL**

SeqNo: 1213309

Units: ma/Ka

RPDLimit Qual

RPDLimit

Chloride

Sample ID MB-28764

SampType: MBLK

TestCode: EPA Method 300.0: Anions

%REC

96.5

110

Client ID: PBS Batch ID: 28764

RunNo: 38856

Prep Date: 11/18/2016

Analysis Date: 11/18/2016

1.5

SeqNo: 1214304

Units: mg/Kg

HighLimit

RPDLimit

Analyte Chloride

PQL 1.5

SampType: LCS

TestCode: EPA Method 300.0: Anions

Client ID:

Sample ID LCS-28764

Prep Date: 11/18/2016

Batch ID: 28764

RunNo: 38856

SeqNo: 1214305

Units: mg/Kg

Analyte

14

Result

Analysis Date: 11/18/2016

SPK value SPK Ref Val %REC

HighLimit LowLimit

%RPD **RPDLimit**

Qual

Qual

Chloride

PQL 1.5

15.00

SPK value SPK Ref Val %REC LowLimit

95.5

110

Qualifiers:

R

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

Analyte detected below quantitation limits

Page 4 of 8

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611984

21-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

SampType: MBLK

TestCode: EPA Method 8015M/D: Diesel Range Organics

PBS

Batch ID: 28696

RunNo: 38803

Client ID:

POL

Prep Date: 11/16/2016 Analyte

Analysis Date: 11/18/2016

SeqNo: 1212490

Units: %Rec

Qual

Result

SPK value SPK Ref Val

%REC LowLimit HighLimit %RPD

Surr: DNOP

8.4

10.00

83 7

70 130 **RPDLimit**

Sample ID LCS-28696

SampType: LCS

RunNo: 38803

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID:

LCSS

Batch ID: 28696

%RPD

Prep Date: 11/16/2016

Analysis Date: 11/18/2016

SeqNo: 1212491

Units: %Rec

Analyte

SPK value SPK Ref Val

%REC LowLimit HighLimit

RPDLimit

Surr: DNOP

4.3

ND

ND

8.8

Result

5.000

86.1

130

Qual

Sample ID MB-28746

SampType: MBLK

POL

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS

Prep Date: 11/18/2016

Batch ID: 28746

RunNo: 38802

Analyte

Analysis Date: 11/18/2016 SPK value SPK Ref Val %REC LowLimit Result **PQL**

SeaNo: 1212493

Units: mg/Kg HighLimit

Qual

Diesel Range Organics (DRO)

10

SeqNo: 1212494

TestCode: EPA Method 8015M/D: Diesel Range Organics

RPDLimit %RPD

Motor Oil Range Organics (MRO)

50

10.00

87.9

Surr: DNOP

Sample ID LCS-28746

Prep Date: 11/18/2016

SampType: LCS

Client ID: LCSS

Batch ID: 28746

Analysis Date: 11/18/2016

POL

RunNo: 38802

70

130

130

Analyte

Result

SPK value SPK Ref Val

%REC

LowLimit

Units: mg/Kg

Diesel Range Organics (DRO)

41 4.2

10 50.00 5.000

n 81.5 84.8

62.6 70

HighLimit %RPD **RPDLimit** Qual 124

Surr: DNOP

Sample ID 1611984-001AMS

SampType: MS

TestCode: EPA Method 8015M/D: Diesel Range Organics

%RPD

%RPD

Client ID: Prep Date: 11/18/2016

North Wall @ Shed

Batch ID: 28746

RunNo: 38803

LowLimit

Analyte Diesel Range Organics (DRO)

Result 45 SPK value SPK Ref Val 47.53 4.753

SeqNo: 1213606 %REC

Units: mg/Kg

130

130

HighLimit

TestCode: EPA Method 8015M/D: Diesel Range Organics

HighLimit

130

RPDLimit Qual

Surr: DNOP

3.6

Analysis Date: 11/18/2016

PQL

9.5

76.7

51.6 70

Sample ID 1611984-001AMSD

Client ID: North Wall @ Shed

SampType: MS

Result

43

Batch ID: 28746 Analysis Date: 11/18/2016

PQL

9.3

46.30

SPK value SPK Ref Val

Е

P

RunNo: 38803

1.920

1.920

SeqNo: 1213607

%REC

88.1

90.4

51.6

LowLimit

Units: mg/Kg

RPDLimit Qual

Page 5 of 8

Prep Date: 11/18/2016 Analyte Diesel Range Organics (DRO)

Oualifiers:

D

Н Holding times for preparation or analysis exceeded ND

B Analyte detected in the associated Method Blank

I Analyte detected below quantitation limits

Value above quantitation range

RL

Sample container temperature is out of limit as specified

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

Not Detected at the Reporting Limit R RPD outside accepted recovery limits Sample pH Not In Range Reporting Detection Limit

S % Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

WO#:

RPDLimit

1611984

21-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID 1611984-001AMSD

SampType: MS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: North Wall @ Shed

Batch ID: 28746

RunNo: 38803

Prep Date: 11/18/2016

Analysis Date: 11/18/2016

SeqNo: 1213607

Units: mg/Kg

Analyte

Result

PQL SPK value SPK Ref Val %REC

LowLimit HighLimit %RPD

Qual

Surr: DNOP

3.6

4.630

78.0

70

130

Qualifiers:

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

Page 6 of 8

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611984

21-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28740

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

Batch ID: 28740

RunNo: 38819

PBS

Units: mg/Kg

Prep Date: 11/17/2016 Analyte

Analysis Date: 11/18/2016 **PQL**

5.0

SeqNo: 1213564 %REC

HighLimit

%RPD

%RPD

Qual

Gasoline Range Organics (GRO)

Surr: BFB

ND 800

Result

1000

SPK value SPK Ref Val

SPK value SPK Ref Val

79.8

68.3

LowLimit

RPDLimit

Sample ID LCS-28740

SampType: LCS

144 TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS

Batch ID: 28740

RunNo: 38819

%REC LowLimit

Prep Date: 11/17/2016

Result

Analysis Date: 11/18/2016 **PQL**

SeqNo: 1213565

Units: mg/Kg

RPDLimit Qual

Analyte

85.8

74.6 68.3

123 144

HighLimit

Gasoline Range Organics (GRO) 23 5.0 25.00 91.3 Surr: BFB 860 1000

Qualifiers:

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

Ρ

RL. Reporting Detection Limit Sample container temperature is out of limit as specified Page 7 of 8

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611984

21-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28740	Samp	Гуре: МЕ	BLK	Tes	PA Method	8021B: Vola	tiles			
Client ID: PBS	Batc	h ID: 28	740	RunNo: 38819						
Prep Date: 11/17/2016	Analysis E	Date: 1	1/18/2016	SeqNo: 1213581			Units: mg/F	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025							<u> </u>	
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.4	80	120			

Sample ID LCS-28740	Samp ⁻	Гуре: LC	s	Tes	tCode: E	ode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batc	h ID: 28	740	F	RunNo: 3	8819						
Prep Date: 11/17/2016	Analysis Date: 11/18/2016 SeqNo: 1213582				213582	Units: mg/k						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	1.1	0.025	1.000	0	106	75.2	115					
Toluene	0.95	0.050	1.000	0	94.9	80.7	112					
Ethylbenzene	0.91	0.050	1.000	0	91.4	78.9	117	•				
Xylenes, Total	2.7	0.10	3.000	0	89.6	79.2	115					
Surr: 4-Bromofluorobenzene	0.97		1.000		97.4	80	120					

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 8 of 8

P Sample pH Not In Range

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



Hall Environmental Analysis Laboratory 1901 Hawkins NE

Albaquerque: NA187169 - TEL - 505-345-3975 FAX: 505-345-4107 Websue: www.hallenvironmental.com

Sample Log-In Check List

Client Name: BLAGG Work Order N	umber: 1611984		RcptNo	M
Received by/date: U18 W.			- Warner Transition - The Control of the Control of	
Logged By: Lindsay Mangin 11/18/2016 7:55	00 AM	J-1/1160		
Completed By: Lindsey Mangin /11/18/2018 8:02	10 AM	J-4/11/00		
Reviewed By: AG 11	8/10	0.0.0.		
Chain of Custody	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>		
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?	Courler			
<u>Log In</u>		e		
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 🗀	٠	
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	iato 🗔	boltles checked	
(Note discrepancies on chain of custody)	Yes - W	No ഥ.	for pH (<2 o	≥12 unless noted):
13 Are matrices correctly identified on Chain of Custody?	Yes 🔽	No 🔲	Adjusted?	·
14 is it clear what analyses were requested?	Yes 📝	No 🔲	Water and the second	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No L	Checked by:	
Special Handling (if applicable)				
16 Was client notified of all discrepancies with this order?	Yes: 🗌	No □,	2 NA ≦ ⊘ (9 cu as 7	
Ţ,	ate			
By Whom:	a: eMail []	Phone 🔲 Fax	☐ In Person	
Regarding Client Instructions:				
17 Additional remarks:			· ······························· ··	
18. Cooler Information				
Cooler No. Temp C. Condition Scal Intact Seel N	o Seal Date	Signed By		
1 14 Good Yes	· · · · · · · · · · · · · · · · · · ·			

			ustody Record	Turn-Around	Time:	ASAP SAME DAY				н	ΔI		:NI	/TI	30	NI	ИF	NT	TAL	
lient:	BP A	MERIC	A	☐ Standard	X Rush		-												DR'	
			icering Inc	Project Name	9:]						viror							_
lailing	Address	<u> </u>	NCERNIS INC.	- GCU	170			490	01 H	• awkir							7109			
-				Project #:			1			5-34			•	•		-410				
hone a	#: (50	5) 320	-1183	1995	REMEDIATI	ION EXCAVATION			00				lysis	_						
	r Fax#:			Project Mana		· ·	<u> </u>	(yl	Ô)4)							
A/QC I	Package: dard	_	☐ Level 4 (Full Validation)	J.B	LAGG		s (8021	TPH (Gas only)	DRO / MRO)			CIMIC	PO ₄ ,SC	PCB's						
.ccredi	tation			Sampler: J	- BLAGG			표	70	=			Ş	/ 8082						
) NEL		□ Othe	er	On Ice:	☑ Yes	IJI No	֓֞֟֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	+	8	18	504.1)	8 8	ي ا	s / 8		Æ				۱۵
1 EDD	(Type)_		·	Sample Tem	perature: 1	4	_ #	띮	9	90 4		2 S	Ž	ğe	18	\frac{7}{2}	到			کا
Date	Time	Matrix		Container Type and #	Preservative Type	HEAL NO. 1	BTEX + WHBE + IMB'S (8021)	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method	RCRA & Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
7/2016	13:22	Soil		402×1	COOL	-001	×		X								×			
u	13:28	ч	NORTH WALL - CENTER	н	14	-002	X		X								X	\Box		
1į	13:34	u	NORTH WALL- WEST END	1(Li	-003	X		X								×			
						-,-														
															\top					
																			\top	
								Ť										П		
																			T	
																		\Box	\neg	
ate:	Time:	Relinguish	ned by:	Received by:	. \	Date Time	Rer	nark	s: i	Bill	BP			באקב	TACT	: S	TEV	<u> </u>	105 KA	42_
201b	العال	14	1 Blogg	1 Mil	Tulian	Ju "17/11. 1619				ViD		BEE:							-	
ate:	Time:	Relinduish	ned by:	Received by:	,,	Date Time				AFE						₹ E S	-			
1116		semples sub	omitted to Hall Environmental may be sub	contracted to other a	ccredited laboratori	ies. This serves as notice of the	is possi	bility.	Any st	ıb-contr	acted d	ata will	be clea	arly no	tated o	n the a	nalytic	al repo	nt.	



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

November 29, 2016

Jeff Blagg Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: FAX

RE: GCU 170

OrderNo.: 1611C74

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/26/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1611C74

Date Reported: 11/29/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Wall-East Corner 6-pt

Project: GCU 170

Collection Date: 11/23/2016 11:06:00 AM

Lab ID: 1611C74-001

Matrix: MEOH (SOIL) Received Date: 11/26/2016 12:20:00 PM

Analyses	Result	PQL Qu	al Units	DF D	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	/st: MRA
Chloride	ND	30	mg/Kg	20	11/28/2016 10:39:57	AM 28861
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	S			Analy	yst: TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1 .	11/28/2016 11:05:33	AM 28856
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1 1	11/28/2016 11:05:33	AM 28856
Surr: DNOP	93.4	70-130	%Rec	1 '	11/28/2016 11:05:33	AM 28856
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	/st: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1 '	11/28/2016 9:59:40	AM 28848
Surr: BFB	93.6	68.3-144	%Rec	1 '	11/28/2016 9:59:40 /	AM 28848
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB
Benzene	ND	0.025	mg/Kg	1 .	11/28/2016 9:59:40 /	AM 28848
Toluene	ND	0.049	mg/Kg	1 1	11/28/2016 9:59:40 /	AM 28848
Ethylbenzene	· ND	0.049	mg/Kg	1 1	11/28/2016 9:59:40 /	AM 28848
Xylenes, Total	ND	0.098	mg/Kg	1 1	11/28/2016 9:59:40 /	AM 28848
Surr: 4-Bromofluorobenzene	99.5	80-120	%Rec	1 1	11/28/2016 9:59:40 /	AM 28848

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1611C74

Date Reported: 11/29/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Wall-East of Sheds-6pt

Project: GCU 170

Collection Date: 11/23/2016 11:14:00 AM

Lab ID: 1611C74-002

Matrix: MEOH (SOIL) Receiv

Received Date: 11/26/2016 12:20:00 PM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: MRA
Chloride	93	30	mg/Kg	20	11/28/2016 10:52:22	AM 28861
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	s			Analy	st: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/28/2016 11:28:40	AM 28856
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/28/2016 11:28:40	AM 28856
Surr: DNOP	89.2	70-130	%Rec	1	11/28/2016 11:28:40	AM 28856
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	11/28/2016 10:23:42	AM 28848
Surr: BFB	96.8	68.3-144	%Rec	1	11/28/2016 10:23:42	AM 28848
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.022	mg/Kg	1	11/28/2016 10:23:42	AM 28848
Toluene	ND	0.044	mg/Kg	1	11/28/2016 10:23:42	AM 28848
Ethylbenzene	ND	0.044	mg/Kg	1	11/28/2016 10:23:42	AM 28848
Xylenes, Total	ND	0.088	mg/Kg	1	11/28/2016 10:23:42	AM 28848
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	11/28/2016 10:23:42	AM 28848

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1611C74

Date Reported: 11/29/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: North Wall @ Sheds 6-pt

Project: GCU 170

Collection Date: 11/23/2016 11:21:00 AM

Lab ID: 1611C74-003

Matrix: MEOH (SOIL)

Received Date: 11/26/2016 12:20:00 PM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: MRA
Chloride	63	30	mg/Kg	20	11/28/2016 11:04:46	AM 28861
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANIC	S			Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/28/2016 11:51:49	AM 28856
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/28/2016 11:51:49	AM 28856
Surr: DNOP	94.1	70-130	%Rec	1	11/28/2016 11:51:49	AM 28856
EPA METHOD 8015D: GASOLINE RAN	IGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	11/28/2016 10:47:46	AM 28848
Surr: BFB	113	68.3-144	%Rec	1	11/28/2016 10:47:46	AM 28848
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.020	mg/Kg	1	11/28/2016 10:47:46	AM 28848
Toluene	ND	0.041	mg/Kg	1	11/28/2016 10:47:46	AM 28848
Ethylbenzene	ND	0.041	mg/Kg	1	11/28/2016 10:47:46	AM 28848
Xylenes, Total	ND	0.082	mg/Kg	1	11/28/2016 10:47:46	AM 28848
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	11/28/2016 10:47:46	AM 28848

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611C74

29-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28861

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 28861

PQL

RunNo: 39009

Prep Date: 11/28/2016

Analysis Date: 11/28/2016

SeqNo: 1220072

Units: mg/Kg

Analyte

Result

SPK value SPK Ref Val %REC LowLimit

TestCode: EPA Method 300.0: Anions

HighLimit

RPDLimit

Qual

Chloride

ND 1.5

Sample ID LCS-28861

SampType: Ics

RunNo: 39009

Client ID: LCSS

Prep Date: 11/28/2016

Batch ID: 28861

SeqNo: 1220073

Units: mg/Kg

Analyte

Analysis Date: 11/28/2016

%REC

%RPD

110

Result 14

Page 4 of 7

1.5

90

HighLimit

%RPD

RPDLimit

Qual

Chloride

SPK value SPK Ref Val **PQL**

15.00

91.8

LowLimit

Qualifiers:

ND

S

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η

% Recovery outside of range due to dilution or matrix

- Not Detected at the Reporting Limit RPD outside accepted recovery limits R
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits P Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C74

29-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID LCS-28856	SampT	ype: LC	s	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch	1D: 28	856	F	RunNo: 3	8975					
Prep Date: 11/28/2016	Analysis D	ate: 11	1/28/2016	S	SeqNo: 1	218822	Units: mg/h	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	47	10	50.00	0	94.8	62.6	124		*		
Surr: DNOP	4.5		5.000		89.4	70	130				
Sample ID MB-28856	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics		

Client ID: PBS	Batch	iD: 28	856	F	RunNo: 3	8975		J	J	
Prep Date: 11/28/2016	Analysis D	ate: 11	/28/2016	S	SeqNo: 1	218823	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.3		10.00		92.5	70	130			

Sample ID	1611C74-001AM	S Samp1	ype: M	S	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	North Wall-East	Cor Batcl	h ID: 28	856	F	RunNo: 3	8975				
Prep Date:	11/28/2016	Analysis D	ate: 1	1/28/2016	5	SeqNo: 1	219057	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range O	rganics (DRO)	43	9.4	46.95	2.213	87.4	51.6	130	•		
Surr: DNOP		4.1		4.695		87.5	70	130			

Sample ID 1611C7	74-001AMSD	SampType	: MS	SD .	Tes	Code: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: North \	Wall-East Cor	Batch ID	: 288	356	R	tunNo: 3	8975				
Prep Date: 11/28/	/2016 A	nalysis Date	: 11	/28/2016	S	eqNo: 1	219058	Units: mg/K	(g		
Analyte		Result P	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.30	2.213	91.4	51.6	130	10.8	20	
Surr: DNOP		4.7		5.030		92.7	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 5 of 7

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C74

29-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28848 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: **PBS** Batch ID: 28848 RunNo: 38984 Analysis Date: 11/28/2016 SeqNo: 1219303 Prep Date: 11/23/2016 Units: mg/Kg %REC **RPDLimit** Result **PQL** SPK value SPK Ref Val LowLimit HighLimit %RPD Qual Analyte Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 910 1000 91.5 68.3 144

Sample ID LCS-28848 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 28848 RunNo: 38984 Prep Date: 11/23/2016 SeqNo: 1219304 Analysis Date: 11/28/2016 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Result PQL 74.6 123 Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.8 Surr: BFB 990 1000 99.0 68.3 144

Qualifiers:

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

Page 6 of 7

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611C74

29-Nov-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28848	Samp [*]	Type: Mi	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h iD: 28	848	F	RunNo: 3	8984				
Prep Date: 11/23/2016	Analysis [Date: 1	1/28/2016	\$	SeqNo: 1	219341	Units: mg/l	K g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025							· ·	
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.0	80	120			
Sample ID LCS-28848	Samp	Гуре: LC	 s	Tes	tCode: E	PA Method	8021B: Vola	tiles		. =
Client ID: LCSS	Batc	h ID: 28	848	F	RunNo: 3	8984				
Prep Date: 11/23/2016	Analysis [Date: 11	1/28/2016	9	SeqNo: 1	219342	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.9	75.2	115			
Toluene	0.94	0.050	1.000	0	94.3	80.7	112			
Ethylbenzene	0.88	0.050	1.000	0	87.9	78.9	117			
(ylenes, Total	2.6	0.10	3.000	0	88.3	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			
Sample ID 1611C74-001AN	ed Correct	Type: MS	•	T		NA 98 -461	8021B: Vola	411		

Sample iD 1611C74-001AN	IS Samp?	ype: MS	3	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID: North Wall-Eas	t Cor Batch	n ID: 28	848	F	RunNo: 3	8984				
Prep Date:	Analysis D	oate: 11	1/28/2016	8	SeqNo: 1	219344	Units: mg/k	ζg	·	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	0.9843	0	106	71.5	122			
Toluene	1.1	0.049	0.9843	0	109	71.2	123			
Ethylbenzene	1.0	0.049	0.9843	0	103	75.2	130			
Xylenes, Total	3.0	0.098	2.953	0	100	72.4	131			
Surr: 4-Bromofluorobenzene	1.2		0.9843		119	-83.4	338			

Sample ID 1611C74-001AN	ISD Samp	Гуре: М\$	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles					
Client ID: North Wall-Eas	t Cor Batc	h ID: 28	848	F	RunNo: 38984								
Prep Date:	Analysis [Date: 11	1/28/2016	8	SeqNo: 1	ζg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	0.96	0.025	0.9843	0	97.6	71.5	122	8.04	20				
Toluene	0.87	0.049	0.9843	0	88.7	71.2	123	20.3	20	R			
Ethylbenzene	0.84	0.049	0.9843	0	85.3	75.2	130	19.0	20				
Xylenes, Total	2.6	0.098	2.953	0	86.7	72.4	131	14.4	20				
Surr: 4-Bromofluorobenzene	0.98		0.9843		99.6	-83.4	338	0	0				

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 7 of 7

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



Half Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL 505-345-3975 FAX: 505-345-4107 Website: www.hallenviranmental.com

Sample Log-In Check List

Client Name:	BLAGG	Work Order Numb	en::1611C74		ReptNo:	ï
Received by/dat	e W	112614				
Logged By:	Lindsey Mangin	11/26/2016 12:20:00	PM	of the		į
Completed By:	Lindsay Mangin	11/28/2016 7:27:00	AM	HAMA		
Reviewed By:	1 1/29/110			000		·
Chain of Cus		·		and a section of the		
	ils intact on sample bo	ttles?	Yes 📋	No 🖸	Not Present 🗹	
2. Is Chain of C	Custody complete?	945 22 cm	Yes 🗹	No 🗔	Not Present 🗌	
3. How was the	sample delivered?		Courier			
Log In						
4. Was an atte	ampt made to cool the	samples?	Yes 🗹	No 🗆	NA 🗆	
5. Were all ser	mples received at a ter	mperature of >0° C to 6.0°C	Yes 🔽	No 🖽	, NA: 🍱	
6. Sample(s) ii	n proper container(s)?		Yes 🗸	No. 🗆		
7, Sufficient sa	mple volume for indica	ated test(s)?	Yes 🗹	No 🗆		
8. Are samples	(except VOA and ON	G) properly preserved?	Yes 🗹	No 🗆		
9. Was preserv	vative added to bottles	?	Yes 🛄	No 🗸	NA\ 🔲 i	
10.VOA vials h	ave zero headspace?		Yes 🗆	No 🗆	No VOA Vials 🗹	
11. Were any s	emple containers rece	ived broken?	Yes	No 🐼 📑	# of preserved	
12. Does paper	work match bottle labe	iś?∜	Yos 🗹	No: 🗔	bottles checked for pH:	
	pancies on chain of cu	[HA	e e e e e e e e e e e e e e e e e e e		4.1 A.2 Starbard (1997)	>12 unless noted)
TOTAL THE RESERVE OF STREET	s correctly identified on	Selection of the page and details are selected.	Yes 🗹	No 🗆	Adjusted?	
A 40 TO 10 T	rat analyses were requ ding times able to be r	4 DY 40 TA 44	Yes 🗸 Yes 🗸	No □	Checked by:	
and the second second second	customer for authoriza	* • 100 m .	Yes 🔽		<u> </u>	
Special Hand	tling (if applicabl	(j)				
•	iotified of all discrepan		Yès 🗓	No. 🗆	Ñ.	_
Perso	n Notified:	Date	Arra China a	Salata da Para da Para da Para da Salata da Para da	L. 1820 M.	
By Wi		Via:	eMail1	Phone 🗌 Fax	In Person	
Regar	ding:	· · · · · · · · · · · · · · · · · · ·	·			
17. Additional r	1. 4. 20 m (Alabert Print), 4					
The half to the house	MATERIAL STATE					
18. Cooler Info	rana Minazara va sikara a Minazara a s	iltion Seal Intact Seal No	Seal Date	Signed By		
1	2.3 Good	Yes	, - y - y - y - y - y - y - y - y - y -			
			·			<u> </u>

			ıstody	Record	Turn-Around	Time:	ASAP			-		_	IAI			MV	/TE	20	ni R	ИE	NT	-A I	l
ient: -	3P AM	ERICA			□ Standard	Rush	SAME DAY		-												\T(
7	i Δ/-/	FNA	JEERWS	INC.	Project Name]					.hali							,		
ailing	Address		<u>, , , , , , , , , , , , , , , , , , , </u>		60	CU 170)			490	01 H			E -						'109			
					Project #:	_			1			5-34				-	-	345-					
none #	#: (505	3)320	0-1183		1995	REMODIATION	i Excavation	U						Α	naly	rsis	Req	uesi					
	Fax#:				Project Mana	ıger:			1)	only)	8		Ī			O4)	(0						
A/QC F	Package: dard		□ Level 4	(Full Validation)	J.	BLAGG			3 (8021)	(Gas	DRO / MRO)			SIMS)		PO4,S	PCB's						
ccredi	tation		-		Sampler: J	F. BLAGE			HATES:	ТРН	~	=	€	023		NO2	308						9
NEL		□ Othe	er		On Ice:	Yes	□ No		H	+	잃	418	504	r 82	<u>s</u>	103,	/ Se		OA)				o
EDD	(Type) _	W	T		Sample Tem	perature: <u>C</u>	\3		1911	MTBE	9	Pg	<u>100</u>	5	heta	, D,	licid	OA)	N-in	4	.		رح (ح
Date	Time	Matrix	Sample	e Request ID	Container Type and #	Preservative Type	HEAL No.		BTEX +4	BTEX + N	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHURUDE			Air Bubbles (Y or N)
Zwil	1106	Sou	North Wa	IL- EAST COTHE	4 02 × 1	COOL	-001	_1_	×	ш	X		Ш	<u>a</u>	L.	٩	8	8	8	×			1
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ate:	Time:	Relinquish	ned by:		Received by:	1)	Date Time	e ¹	Rer	nark	s:	BIL	LB	P		C	D.VY	ACT:	St	EVE	M)SK/	4 L
3/16	1455	م استر		9	Received by:	Weet	75/16 Time	<u> </u>	4					VE									
ate:	Time:	Réfinquist	+ Uca	<u></u>	received by		1/26/10 12	20			<i>.</i>	FE	: X	۲7-	-00)6R	≥w·	-E	:RE	EST	-		-



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

OrderNo.: 1612739

December 15, 2016

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199 FAX (505) 632-3903

RE: GCU 170

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/14/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612739

Date Reported: 12/15/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Pasture #1 Grab @ 2'

Project: GCU 170

Collection Date: 12/13/2016 2:19:00 PM

Lab ID: 1612739-001

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: LGT
Chloride	ND	30	mg/Kg	20	12/14/2016 10:59:09	AM 29183
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	s			Anal	yst: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/14/2016 11:06:50	AM 29175
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/14/2016 11:06:50	AM 29175
Surr: DNOP	82.4	70-130	%Rec	1	12/14/2016 11:06:50	AM 29175
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/14/2016 11:12:31	AM G39381
Surr: BFB	86.3	68.3-144	%Rec	1	12/14/2016 11:12:31	AM G39381
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.024	mg/Kg	1	12/14/2016 11:12:31	AM B39381
Toluene	ND	0.049	mg/Kg	1	12/14/2016 11:12:31	AM B39381
Ethylbenzene	ND	0.049	mg/Kg	1	12/14/2016 11:12:31	AM B39381
Xylenes, Total	ND	0.098	mg/Kg	1	12/14/2016 11:12:31	AM B39381
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	12/14/2016 11:12:31	AM B39381

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612739

Date Reported: 12/15/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Pasture #2 6-pt (4'-8')

Project: GCU 170

Collection Date: 12/13/2016 2:28:00 PM

Lab ID: 1612739-002

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: LGT
Chloride	33	30	mg/Kg	20	12/14/2016 11:11:33	AM 29183
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S			Anal	yst: TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	12/14/2016 10:45:15	AM 29175
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/14/2016 10:45:15	AM 29175
Surr: DNOP	78.7	70-130	%Rec	1	12/14/2016 10:45:15	AM 29175
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	12/14/2016 11:37:08	AM G39381
Surr: BFB	88.2	68.3-144	%Rec	1	12/14/2016 11:37:08	AM G39381
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.018	mg/Kg	1	12/14/2016 11:37:08	AM B39381
Toluene	ND	0.036	mg/Kg	1	12/14/2016 11:37:08	AM B39381
Ethylbenzene	ND	0.036	mg/Kg	1	12/14/2016 11:37:08	AM B39381
Xylenes, Total	ND	0.072	mg/Kg	1	12/14/2016 11:37:08	AM B39381
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	12/14/2016 11:37:08	AM B39381

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612739

Date Reported: 12/15/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Pasture #3 6pt (4'-8')

GCU 170 Project:

Collection Date: 12/13/2016 2:35:00 PM

Lab ID: 1612739-003

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL Qu	al Units	DF Date Analyzed Batch
EPA METHOD 300.0: ANIONS				Analyst: LGT
Chloride	ND	30	mg/Kg	20 12/14/2016 11:23:57 AM 29183
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s		Analyst: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1 12/14/2016 10:23:47 AM 29175
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1 12/14/2016 10:23:47 AM 29175
Surr: DNOP	80.6	70-130	%Rec	1 12/14/2016 10:23:47 AM 29175
EPA METHOD 8015D: GASOLINE RAM	NGE			Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1 12/14/2016 12:01:51 PM G39381
Surr: BFB	88.5	68.3-144	%Rec	1 12/14/2016 12:01:51 PM G39381
EPA METHOD 8021B: VOLATILES				Analyst: NSB
Benzene	ND	0.021	mg/Kg	1 12/14/2016 12:01:51 PM B39381
Toluene	ND	0.042	mg/Kg	1 12/14/2016 12:01:51 PM B39381
Ethylbenzene	ND	0.042	mg/Kg	1 12/14/2016 12:01:51 PM B39381
Xylenes, Total	ND	0.084	mg/Kg	1 12/14/2016 12:01:51 PM B39381
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1 12/14/2016 12:01:51 PM B39381

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 9 J
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612739

Date Reported: 12/15/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Pasture #4 6-pt (4'-8')

....

Project: GCU 170

Collection Date: 12/13/2016 2:41:00 PM

Lab ID: 1612739-004

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: LGT
Chloride	ND	30	mg/Kg	20	12/14/2016 11:36:22	2 AM 29183
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	s			Anal	yst: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/14/2016 10:02:18	3 AM 29175
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/14/2016 10:02:18	3 AM 29175
Surr: DNOP	80.4	70-130	%Rec	1	12/14/2016 10:02:18	3 AM 29175
EPA METHOD 8015D: GASOLINE RA	NGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	12/14/2016 12:26:22	2 PM G39381
Surr: BFB	85.2	68.3-144	%Rec	1	12/14/2016 12:26:22	2 PM G39381
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.021	mg/Kg	1	12/14/2016 12:26:22	PM B39381
Toluene	ND	0.042	mg/Kg	1	12/14/2016 12:26:22	2 PM B39381
Ethylbenzene	ND	0.042	mg/Kg	1	12/14/2016 12:26:22	PM B39381
Xylenes, Total	ND	0.085	mg/Kg	1	12/14/2016 12:26:22	2 PM B39381
Surr: 4-Bromofluorobenzene	95.4	80-120	%Rec	1	12/14/2016 12:26:22	PM B39381

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612739

Date Reported: 12/15/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: East Pasture #5 6-pt (4'-8')

Project: GCU 170

Collection Date: 12/13/2016 2:48:00 PM

Lab ID: 1612739-005

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	:: LGT
Chloride	ND	30	mg/Kg	20	12/14/2016 11:48:47 Al	M 29183
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	s			Analyst	: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/14/2016 9:40:56 AM	29175
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/14/2016 9:40:56 AM	29175
Surr: DNOP	81.0	70-130	%Rec	1	12/14/2016 9:40:56 AM	29175
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	12/14/2016 12:50:38 PI	M G39381
Surr: BFB	88.6	68.3-144	%Rec	1	12/14/2016 12:50:38 PI	M G39381
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.018	mg/Kg	1	12/14/2016 12:50:38 PM	И ВЗ9381
Toluene	ND	0.035	mg/Kg	1	12/14/2016 12:50:38 Pt	и вз9381
Ethylbenzene	ND	0.035	mg/Kg	1	12/14/2016 12:50:38 PM	M B39381
Xylenes, Total	ND	0.071	mg/Kg	1	12/14/2016 12:50:38 PM	M B39381
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	12/14/2016 12:50:38 PM	M B39381

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612739

15-Dec-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-29183

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

RunNo: 39400

Batch ID: 29183

RPDLimit

Prep Date: 12/14/2016

Analysis Date: 12/14/2016

SeqNo: 1233612

Units: mg/Kg

Analyte

Result

PQL

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD

%RPD

Qual

Chloride

ND 1.5

SampType: LCS

TestCode: EPA Method 300.0: Anions RunNo: 39400

Client ID: Prep Date: 12/14/2016

LCSS

Sample ID LCS-29183

Batch ID: 29183

PQL

SeqNo: 1233613

Units: mg/Kg

Analysis Date: 12/14/2016

SPK value SPK Ref Val

%REC 96.3

HighLimit

RPDLimit Qual

Analyte Chloride

1.5

14

15.00

90

110

LowLimit

Qualifiers:

R

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н ND Not Detected at the Reporting Limit RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- Page 6 of 9

- Sample pH Not In Range RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612739

15-Dec-16

Client:

Blagg Engineering

Project:

GCU 170

ĺ	Sample ID	LCS-29175	
	Client ID:	LCSS	
	Prep Date:	12/14/2016	,

SampType: LCS

Batch ID: 29175

TestCode: EPA Method 8015M/D: Diesel Range Organics

5 RunNo: **39372**

12/14/2016 Analysis Date: 12/14/2016 SeqNo: 1232663 Units: mg/Kg

Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Diesel Range Organics (DRO) 45 10 89.4 63.8 116 50.00 Surr: DNOP 4.2 83.2 70 5.000 130

Sample ID MB-29175	SampT	ype: ME	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 29175 RunNo: 39372			RunNo: 39372						
Prep Date: 12/14/2016	Analysis D	ate: 12	2/14/2016	8	SeqNo: 1	232664	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.3		10.00		83.1	70	130			

Qualifiers:

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

Page 7 of 9

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

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612739

15-Dec-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID RB

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: G39381

RunNo: 39381

Prep Date:

Analysis Date: 12/14/2016

SeqNo: 1233413

Units: mg/Kg

Analyte

Result

%REC SPK value SPK Ref Val

LowLimit

68.3

HighLimit %RPD

Qual

Gasoline Range Organics (GRO) Surr: BFB

ND 860

1000

85.7

144

RPDLimit

Sample ID 2.5UG GRO LCS

SampType: LCS

PQL

5.0

RunNo: 39381

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS

Batch ID: G39381

Prep Date:

Analysis Date: 12/14/2016

SeqNo: 1233414

%REC

Units: mg/Kg

Analyte Gasoline Range Organics (GRO) Result 27

SPK value SPK Ref Val 25.00 1000

108 93.7

74.6 68.3 %RPD **RPDLimit** Qual

Surr: BFB

940

LowLimit

123 144

HighLimit

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- Page 8 of 9

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612739

15-Dec-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID RB	Samp1	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	Batch ID: B39381 RunNo: 39381								
Prep Date:	Analysis [Date: 12	2/14/2016	8	SeqNo: 1	233459	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		94.8	80	120			

Sample ID 100NG BTEX LC	CS Samp	Гуре: LC	s	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batc	h ID: B3	9381	F	RunNo: 3	9381		•		
Prep Date:	Analysis [Date: 12	2/14/2016	5	SeqNo: 1	233460	Units: mg/F	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	75.2	115			
Toluene	0.92	0.050	1.000	0	92.0	80.7	112			
Ethylbenzene	0.92	0.050	1.000	0	92.0	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	91.7	79.2	115			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.5	80	120			

Qualifiers:

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

Page 9 of 9

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



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

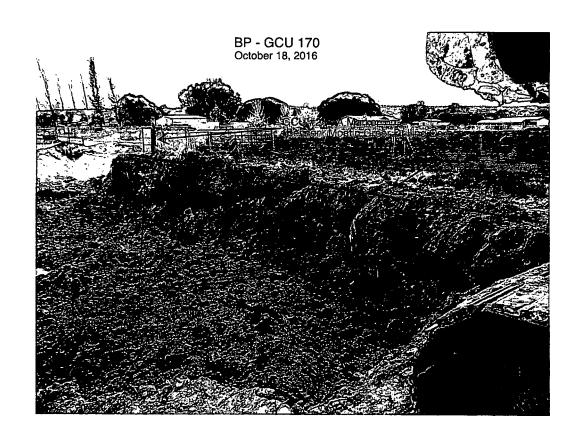
Client Name:	BLAGG	Work Order Numb	per: 1612	739		RcptNo:	1
Received by/dat	te: AT /2	114/16					
Logged By:	Anne Thorne	12/14/2016 8:05:00	АМ		ane Il-	_	
Completed By:	Anne Thorne	12/14/2016 8 :26:12	AM		am Il-	_	
Reviewed By:	Ma	12/14/16			4 ,4,4,4		
Chain of Cus	tody						
1. Custody sea	als intact on sample l	bottles?	Yes		No 🗌	Not Present	
2. Is Chain of (Custody complete?		Yes	✓	No 🗆	Not Present	
3. How was the	e sample delivered?		Cour	<u>ler</u>	-		
<u>Log In</u>							
4. Was an atte	empt made to cool th	e samples?	Yes	V	No 🗆	NA 🗆	
5. Were all sar	mples received at a t	emperature of >0° C to 6.0°C	Yes	✓	No 🗆	na 🗆	
6. Sample(s) ii	n proper container(s)	?	Yes	V	No 🗆		
7. Sufficient sa	mple volume for indi	cated test(s)?	Yes	V	No 🗆		
8. Are samples	(except VOA and O	NG) properly preserved?	Yes	V	No 🗆		
9. Was presen	vative added to bottle	es?	Yes		No 🗹	NA 🗆	
10.VOA vials he	ave zero headspace	?	Yes		No 🗆	No VOA Vials 🗹	
11. Were any sa	ample containers rec	elved broken?	Yes		No 🗹	# of preserved	
12 Dags			Yes		No 🗆	bottles checked for pH:	
	work match bottle lat pancles on chain of		res	X J	NO L	·	r >12 unless noted)
13. Are matrices	s correctly identified	on Chain of Custody?	Yes	✓	No 🗆	Adjusted?	
14. Is it clear wh	nat analyses were red	quested?	Yes	V	No 🗀		
	ding times able to be customer for authori		Yes	V	No L.I	Checked by:	
Special Hand	iling (if applicab	ile)					
		uncles with this order?	Yes		No 🗆	NA 🗹	
Person	n Notified:	Date				,]
By Wh	nom:	Via:	' ∐ eMa	il 🗌	Phone Fax	in Person	
Regard	ding:						
Client	Instructions:		· • • • • • • • • • • • • • • • • • • •				
17. Additional re	emarks:		•			•	ı
18. <u>Cooler Info</u>	ormation						
Cooler N		dition Seal Intact Seal No	Seal Da	ate	Signed By		
 1	1.0 Good	Yes					

			istody Record	Tum-Around	Time:	ASAP SAME DAY		 		j.	IAL			uv	/TE	20	N R	4F	NT	'ΑΙ	
ient:	BP A	<i>Merica</i>	· ·	□ Standard	⊠ Rush		<u> </u>												\TC		
7	Di Alda	Fellow 1	SERVE INC.	Project Name):						www										-
ailing	Address	:	MAN THE	GCI	170 ر			490	01 H		ns N							109			
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)ate	Time	Matrix	Sample Request ID	Container Type and # Mest Krts	Preservative Type		BTEX + M⊞	BTEX + MTBE	трн 8015в (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
Zolle	1419	SOIL	EAST PASTURE #1 GRAG @2'	402×1	COOL	-001	X		X									×	寸	\top	
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APPENDIX D

Surface Soil Sampling Benson, Montin Greer GCU #2 (PxA)







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

OrderNo.: 1610918

October 26, 2016

Jeff Blagg Blagg Engineering P. O. Box 87

Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: GCU 170

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/19/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1610918

Date Reported: 10/26/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: West Pasture 3-pt @ 1'

GCU 170 Project:

Collection Date: 10/18/2016 11:12:00 AM

Lab ID: 1610918-001

Matrix: SOIL

Received Date: 10/19/2016 8:00:00 AM

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: LGT
Fluoride	2.3	0.30	mg/Kg	1	10/22/2016 4:13:20 AM	28220
Chloride	160	30	mg/Kg	20	10/22/2016 4:25:45 AM	28220
Nitrogen, Nitrite (As N)	ND	0.30	mg/Kg	1	10/22/2016 4:13:20 AM	28220
Bromide	ND	0.30	mg/Kg	1	10/22/2016 4:13:20 AM	28220
Nitrogen, Nitrate (As N)	0.31	0.30	mg/Kg	1	10/22/2016 4:13:20 AM	28220
Phosphorus, Orthophosphate (As P)	ND	1.5	mg/Kg	1	10/22/2016 4:13:20 AM	28220
Sulfate	500	30	mg/Kg	20	10/22/2016 4:25:45 AM	28220
RESISTIVITY AND EC SOIL					Analyst	LGT
Conductivity	2050	1.00	µmhos/cm	1	10/24/2016 2:40:00 PM	28245
EPA METHOD 6010B: SOIL METALS					Analyst	MED
Calcium	7400	50	mg/Kg	2	10/25/2016 9:12:06 AM	28249
Magnesium	3200	50	mg/Kg	2	10/25/2016 9:12:06 AM	28249
Potassium	2000	100	mg/Kg	2	10/25/2016 9:12:06 AM	28249
Sodium	620	50	mg/Kg	2	10/25/2016 9:12:06 AM	28249
SM4500-H+B: PH					Analyst	JRR
рН	8.02	1.68	pH Units	1	10/24/2016 12:56:00 PM	M R38159

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 5 J

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

Analytical Report Lab Order 1610918

Date Reported: 10/26/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Extension West Wall N Half

Project: GCU 170

Collection Date: 10/18/2016 11:42:00 AM

Lab ID: 1610918-002

Matrix: SOIL

Received Date: 10/19/2016 8:00:00 AM

Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: LGT
Fluoride	3.2	0.30	mg/Kg	1	10/22/2016 4:38:10 AM	28220
Chloride	720	30	mg/Kg	20	10/22/2016 4:50:34 AM	28220
Nitrogen, Nitrite (As N)	ND	0.30	mg/Kg	1	10/22/2016 4:38:10 AM	28220
Bromide	0.93	0.30	mg/Kg	1	10/22/2016 4:38:10 AM	28220
Nitrogen, Nitrate (As N)	1.5	0.30	mg/Kg	1	10/22/2016 4:38:10 AM	28220
Phosphorus, Orthophosphate (As P)	ND	1.5	mg/Kg	1	10/22/2016 4:38:10 AM	28220
Sulfate	1000	30	mg/Kg	20	10/22/2016 4:50:34 AM	28220
RESISTIVITY AND EC SOIL					Analyst	LGT
Conductivity	3530	1.00	µmhos/cm	1	10/24/2016 2:40:00 PM	28245
EPA METHOD 6010B: SOIL METALS					Analyst	MED
Calcium	6400	49	mg/Kg	2	10/25/2016 9:13:31 AM	28249
Magnesium	3100	49	mg/Kg	2	10/25/2016 9:13:31 AM	28249
Potassium	1500	98	mg/Kg	2	10/25/2016 9:13:31 AM	28249
Sodium	1800	49	mg/Kg	2	10/25/2016 9:13:31 AM	28249
SM4500-H+B: PH					Analyst	JRR
рН	7.63	1.68	pH Units	1	10/24/2016 12:56:00 Pi	/I R38159

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 5 J
- Р Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified



Trust our People. Trust our Data. www.energylab.com

Billings, MT 800.735.4489 • Casper, WY 868.235.0515 College Staffon, TX 888.690.2218 • Gillette, WY 866.686.7175 • Helana, MT 877.472.0711

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client:

Hall Environmental

Project:

Not Indicated

Report Date: 10/24/16

Lab ID:

B16101544-001

Collection Date: 10/18/16 11:12

Client Sample ID: 1610918-001B West Pasture 3-pt @ 1 Foot

DateReceived: 10/20/16

Matrix: Soil

Analyses

Result Units

Qualifiers RL

Qualifiers

MCL QCL Method

Analysis Date / By

WATER EXTRACTABLE CONSTITUENTS

Alkalinity, 1:2

100 mg/kg

10/24/16 14:07 / c]m

Lab ID:

B16101544-002

MCL

QCL

Collection Date: 10/18/16 11:42

Client Sample ID: 1610918-002B NW Ext W Wall N Half 5-pt (4-8 Feet)

DateReceived: 10/20/16 Matrix: Soil

Method

ASA10-3

Analyses

WATER EXTRACTABLE CONSTITUENTS Alkalinity, 1:2

94 mg/kg

Result Units

RL

ASA10-3.

10/24/16 14:34 / cim

Analysis Date / By

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hall Environmental Project: Not Indicated

Report Date: 10/24/16
Work Order: B16101544

Analyte	Result Units	RL %REC Low Limit High Limit	RPD RPDLimit Qual
Method: ASA10-3			Batch: 103842
Lab ID: LCS-103842	Laboratory Control Sample	Run: AR50_161024A	10/24/16 14:06
Alkalinity, 1:2	47.4 mg/kg	4.0 84 70 130	
Lab ID: B16101544-002A DUP	Sample Duplicate	Run: AR50_161024A 4.0	10/24/16 14:35
Alkalinity, 1:2	95.3 mg/kg		1.5 20

Hall Environmental Analysis Laboratory, Inc.

WO#:

1610918

26-Oct-16

Client:

Blagg Engineering

Project: GCU 17	0								<u>. i</u>			
Sample ID MB-28220	Samp	Гуре: МІ	BLK	Tes	tCode: E	··						
Client ID: PBS	Batc	h ID: 28	220	F	RunNo: 3							
Prep Date: 10/21/2016	Analysis Date: 10/22/2016		5	SeqNo: 1	190647	Units: mg/F	(g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Fluoride	ND	0.30										
Chloride	ND	1.5										
Nitrogen, Nitrite (As N)	ND	0.30										
Bromide	ND	0.30										
Nitrogen, Nitrate (As N)	ND	0.30										
Phosphorus, Orthophosphate (As P	ND	1.5										
Sulfate	ND	1.5						·- <u></u>		_		
Sample ID LCS-28220	Samp	Type: LC	s	Tes	TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batcl	h ID: 28	220	F	RunNo: 3	8151						
Prep Date: 10/21/2016	Analysis D	Date: 10	0/22/2016	5	SeqNo: 1	190648	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
luoride	1.6	0.30	1.500	0	106	90	110					
Chloride	14	1.5	15.00	0	93.6	90	110					
litrogen, Nitrite (As N)	2.8	0.30	3.000	0	93.8	90	110					
Bromide	7.3	0.30	7.500	0	97.5	90	110					
litrogen, Nitrate (As N)	7.4	0.30	7.500	0	98.5	90	110					
Phosphorus, Orthophosphate (As P	14	1.5	15.00	0	95.6	90	110					
Sulfate	29	1.5	30.00	0	95.9	90	110					
Sample ID MB-28220	SampT	ype: mt	olk	Tes								
Client ID: PBS	Batcl	h ID: 28	220	F								
Prep Date: 10/21/2016	Analysis E	Date: 10	0/24/2016	SeqNo: 1191011			Units: mg/K	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
luoride	ND	0.30							*			
Chloride	ND	1.5										
litrogen, Nitrite (As N)	ND	0.30										
Bromide	ND	0.30										
Nitrogen, Nitrate (As N)	ND	0.30										
Sulfate 	ND	1.5						<u> </u>				
Sample ID LCS-28220	SampT	ype: Ics	•	Tes	Code: El	PA Method	300.0: Anion	s				
Client ID: LCSS	Batch	n ID: 28:	220	-F	tunNo: 3							
Prep Date: 10/21/2016	Analysis D	ate: 10	0/24/2016	S	SeqNo: 1	191012	Units: mg/K	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
	1.5	0.30	1.500	0	99.7	90	110					
Fluoride	1.5	0.00	1.500	Ū	00.7	00						

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded Н

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Page 3 of 5

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1610918

26-Oct-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID LCS-28220 SampType: Ics				Tes						
Client ID: LCSS	220	F								
Prep Date: 10/21/2016	Analysis D)ate: 10)/24/2016	S	SeqNo: 1	191012	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	2.8	0.30	3.000	0	93.0	90	110			
Bromide	7.1	0.30	7.500	0	94.9	90	110			
Nitrogen, Nitrate (As N)	7.4	0.30	7.500	0	98.1	90	110			
Sulfate	28	1.5	30.00	0	94.9	90	110			

Qualifiers:

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

Page 4 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#:

1610918

26-Oct-16

Client:

Blagg Engineering

Project:

GCU 170

Sample ID MB-28249	TestCode: EPA Method 6010B: Soil Metals									
Client ID: PB\$	Batch	n ID: 28	249	F	RunNo: 3	8178				
Prep Date: 10/24/2016	Analysis Date: 10/25/2016			S	SeqNo: 1	191555	Units: mg/K	(g		
Analyte -	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	25								
Magnesium	ND	25								
Potassium	ND	50								
Sodium	ND	25								

Sample ID LCS-28249	TestCode: EPA Method 6010B: Soil Metals										
Client ID: LCSS	F	RunNo: 3									
Prep Date: 10/24/2016	Analysis D	ate: 10	0/25/2016	8	SeqNo: 1	191556	Units: mg/k	g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium	2600	25	2500	0	104	80	120				
Magnesium	2600	25	2500	0	103	80	120				
Potassium	2500	50	2500	0	99.8	80	120				
Sodium	2500	25	2500	0	100	80	120				

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 5 of 5

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuguerque, NM 87109

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

Sample Log-In Check List

Client Name: **BLAGG** Work Order Number: 1610918 RcptNo: 1 Received by/date: Lindsay Mangin 10/19/2016 8:00:00 AM Logged By: Completed By: Lindsay Mangin 10/19/2016 9:29:48 AM 10/16 Reviewed By: Chain of Custody 1. Custody seals intact on sample bottles? Yes Not Present No 🗆 Yes 🗹 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier <u>Log in</u> NA 🗆 No 🗌 4. Was an attempt made to cool the samples? Yes 🔽 NA 🗆 No 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C Yes 🗸 6. Sample(s) in proper container(s)? Yes 🗸 No 🗌 No 🗌 7. Sufficient sample volume for indicated test(s)? Yes 🔽 No 🗌 Yes 🗸 8. Are samples (except VOA and ONG) properly preserved? No 🗹 NA 🗆 9. Was preservative added to bottles? Yes 🗍 No 🗆 No VOA Vials 10. VOA vials have zero headspace? Yes \square Yes No 🔽 11. Were any sample containers received broken? # of preserved bottles checked No 🗆 for pH: 12. Does paperwork match bottle labels? Yes 🔽 (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🔲 13. Are matrices correctly identified on Chain of Custody? Yes 🔽 Yes 🗸 No 🔲 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? Yes 🔽 No 🗆 Checked by: (If no, notify customer for authorization.) Special Handling (if applicable) NA 🗹 16. Was client notified of all discrepancies with this order? Yes 🗌 No 🗌 Person Notified: Date By Whom: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C | Condition Seal Intact | Seal No Seal Date 1.6

Chain-of-Custody Record			Turn-Around Time: ASAP 3-DAF					HALL ENVIRONMENTAL													
			☐ Standard	ANALYSIS LABORATORY																	
	BLAGE	FAIG	WEERING INC.	Project Name													•				
ailing	Address	:	meading the	GCU 170				www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109													
				Project #:	Tel. 505-345-3975 Fax 505-345-4107																
hone :	#: 50	05 - 37	20-1183	1					Analysis Request												
	nail or Fax#:			Project Mana	ger:		21) Only) (SO ₄) SO ₄)														
A/QC Package:			7	R		(8021)	S OF	R		1	6	S,4	PCB's				*				
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ccreditation NELAP Other			Sampler: S		+ TPH (Gas only)	30 / D	18.1)	04.1)	0770	NO ₂	/ 808		ৰি	ANIONS	COND,		r N)				
EDD (Type)			Sample Tem	MTBE	MTBE	9	д 4	2d 5	tals	X	ides	a	Ş	\ !			2				
) Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1610918)	BTEX + MT	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH S (6310 or 6270 RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	CATIONS	PLUS ALK		Air Bubbles (Y or N)	
9/2016	1112	SOL	WEST PASTURE 3-PERI	802×(COOL	-001				Ħ	_	+-	1		<u> </u>		$\overline{}$	x	\top	\uparrow	
11	1142	1(NW Extension - West wall N. Half 5-pt (4'-0')	ц	ι(-002										\Box	- +	$\frac{1}{x}$	\top	\dagger	
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	f necessary,	samples sub	mitted to Half Environmental may be subc		ocredited laboratori	 ;	his poss	ibility.	Апу ви	b-contr	acted d	ata will t	e clea	rly nota	ated or	the a	nalytic	i report	t.		

APPENDIX E

Cathodic Well Closure Report



An Aegion Company 3900 Monroe Road Farmington, NM 87401 Tel: 505-325-1946 * Fax 505-327-9215

To: Ritchie Hart

BP America Production Company 2906 County Road 307 Durango, CO 81303

Re: GCU 170 - Plug and Abandon of Cathodic Protection Deep Well Groundbed

<u>Job Description</u>: Corrpro was contracted to plug and abandon the GCU 170 cathodic protection deep well groundbed due to water seepage from the groundbed and P & a of the gas well itself. This job was completed November 7, 2016.

Work Completed:

An area around the well casing and vent pipe was excavated to expose the top of the casing and vent pipe. The depth of this excavation was approximately 14' deep. The casing was previously filled with conducrete by an unknown contractor when the well was drilled. There were 3 1"vent pipes, 2 inside the casing and 1 outside. The casing outside was used to pump concrete down the backside of the casing. The 2 inside the casing were producing water. The vent pipe and casing were both cut off 14' below grade and the 2 vent pipes were terminated into one. A 1" stainless steel valve was installed to stop the leak successfully.

A 10" to 8" pvc Reducer was installed on the 8" casing and a 3' Piece of 10" casing was installed. The 10" casing was then filled with 2 bags of Portland cement and capped.

Materials used:

- 2 -94# bags Portland Cement
- 10" to 8" reducer pvc
- 1" Stainless Steel valve
- 10" pvc Casing

Doug Davis | NACE Certified Cathodic Protection Technician | Corrpro Companies

3900 Monroe Road | Farmington, NM 87401

Office: 505-325-1946 | Mobile: 505-215-9353 | www.Aegion.com

ddavis@aegion.com