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 Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

# **Release Notification**

NMOCD

### **Responsible Party**

JAN	17	2019
0 T D	10.9	

Responsible Party: BP America Production Co.	OGRID: 778	Final-Report
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # (assigned by OCD)	
Contact mailing address: 1199 Main Ave. Suite 101, Durang	go CO, 81301	

### **Location of Release Source**

Latitude: 36.64325°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Gallegos Canyon Unit 198	Site Type: Natural Gas Production Well (Abandoned)
Date Release Discovered: June 22, 2018	API#: 30-045-07275

Unit Letter	Section	Township	Range	County	
N	20	T28N	R12W	San Juan	

Surface Owner: State Federal Tribal Private (Name: \_

### Nature and Volume of Release

Volume Released (bbls)	Volume Recovered (bbls)
Volume Released (bbls): unknown	Volume Recovered (bbls): 0
Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Volume Released (bbls):	Volume Recovered (bbls):
Volume Released (Mcf)	Volume Recovered (Mcf)
Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
	Volume Released (bbls): unknown         Is the concentration of dissolved chloride in the produced water >10,000 mg/l?         Volume Released (bbls):         Volume Released (Mcf)

Cause of Release:

BGT closure sampling indicated soil impacts. The BGT removed for closure and the impacted area remediated to NMAC 19.15.29 standards.

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
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Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?	
🗌 Yes 🛛 No		
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

### **Initial Response**

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

 $\square$  The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name:	Title:	
Signature:	Date:	
email:	Telephone:	
OCD Only		
Received by:	Date:	

State of New Mexico **Oil Conservation Division** 

Incident ID	
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Facility ID	
Application ID	

## Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>50-100</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🛛 Yes 🗌 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🛛 Yes 🗌 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🛛 No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.

- 🛛 Field data
- Data table of soil contaminant concentration data
   Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
   Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141	State of New M	Aexico	Incident ID	
Page 4	Oil Conservation	Division	District RP	
5			Facility ID	
			Application ID	
			1 1 . 1.1	
regulations all op public health or the failed to adequate	hat the information given above is true and co erators are required to report and/or file certa the environment. The acceptance of a C-141 f ely investigate and remediate contamination the ceptance of a C-141 report does not relieve the s.	in release notifications and perform coreport by the OCD does not relieve the hat pose a threat to groundwater, surfa	operator of liability sho ce water, human health	ases which may endanger ould their operations have or the environment. In
Printed Name:	Steve Moskal Title:	Environmental Coordinator		
Signature: email: <u>steven</u>	Mars Muy	Date: <u>January 16, 2019</u> Telephone: <u>(505) 33</u>	<u>0-9179</u>	
OCD Only				
Received by:		Date:		

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
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# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.							
<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>							
Deferred Dequests Only. Each of the following items must be confirmed as part of any new act for deferred of new ediction							
<u>Deferral Requests Only</u> : Each of the following items must be confirmed as part of any request for deferral of remediation.							
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.							
Extents of contamination must be fully delineated.							
Contamination does not cause an imminent risk to human health, the environment, or groundwater.							
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.							
Printed Name: Title:							
Signature: Date:							
email: Telephone:							
OCD Only							
Received by: Date:							
Approved Approved with Attached Conditions of Approval Denied Deferral Approved							
Signature: Date:							

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

# Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

<b>Closure Report Attachment Checklist:</b>	Each a	f the	following it	tems must	he includ	ed in the	e closure	report.
ciosure report rattachment checknist.	LIME IN U	1 1110	Juno many in	CITED TIMESE	or mermu		- CECIDEELC	report

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: <u>Steve Moskal</u> Title: <u>Environmental Coordinator</u>
Signature: Date: January 16, 2019
email: <u>steven.moskal@bpx,com</u> Telephone: <u>(505) 330-9179</u>
OCD Only Received by: Varesse Fields Date: 11772019
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations. Closure Approved by:
Printed Name: Varesse Fields Title: Equironmental Specialist

# BP America GCU 198 (N) Sec 20 – T28N – R12W San Juan County, New Mexico API: 30-045-07275

### Summary Record of Impact Remediation

June 22, 2018

1. Soils impacted with hydrocarbons were encountered during closure of a 95 barrel below grade tank. Analytical laboratory testing of impacted soils immediately below the BGT at the 5' depth reported total petroleum hydrocarbons (TPH) at 780 ppm, total BTEX at non-detect (ND) and chlorides at ND.

2. BGT failed on Release Rule 19.15.29 NMAC site closure standard, established as follows:

Horizontal Distance to Water Course < 300 feet Distance to Nearest Water Well > 1,000 feet Depth to Groundwater >50 feet

Site closure standard therefore determined at 100 ppm TPH and 50 ppm total BTEX (with 10 ppm benzene) and 600 ppm chlorides.

- 3. Gas well plugged and abandoned.
- 4. Federal mineral lease, NAPI surface.

August 22, 2018: Initiate remediation via excavation and haul to Envirotech Landfarm.

<u>August 24, 2018:</u> Excavation size approximately 27' x 24' x 16' deep. Closure sampling conducted on sidewalls and base with analytical results as follows:

		Au	ugust 24, 2018	3					
	(See Figure 1 map and photo's)								
Sample Date/Time		Field OVM (ppm)	TPH Method 8015B (mg/Kg)	BTEX Method 8021 (mg/Kg)	Benzene Method 8021 (mg/Kg)	Chloride Method 300 (mg/Kg)			
North Base 5-pt @ 16'	8/24/2018 @ 14:29	158	420	ND	ND	ND			
South Base 5-pt @ 8/24/2018 @ 16' 14:37		1,163	1,810	ND	ND	ND			
South Wall (Ramp) 5-pt @ (6'-14')			450	ND	ND	ND			
East Sidewall 5-pt @ (6'-14')	8/24/2018 @ 14:49	5.5	ND	ND	ND	ND			
Site	Closure	Standard:	100	50	10	600			

### Initial Closure Sampling Test Results August 24, 2018

August 25 – 29, 2018: Advance remedial excavation.

<u>August 29, 2018</u>: Excavation size approximately 56' x 36' x 19' deep. Closure sampling conducted on sidewalls and base with analytical results as follows:

### Closure Sampling Test Results August 29, 2018

(See Figure 2 map and photo's)							
Sample ID	- I Date/Lime		TPH Method 8015B (mg/Kg)	BTEX Method 8021 (mg/Kg)	Benzene Method 8021 (mg/Kg)	Chloride Method 300 (mg/Kg)	
West Base 5-pt @ 19'			68	ND	ND	44	
West Wall N. Half 5-pt @ 6'-17'	8/29/2018 @ 12:39	2.8	ND	ND	ND	ND	
West Wall S. Half 5-pt @ 6'-17'			ND	ND	ND	ND	
South Wall W. Half 5-pt @ 6'-17'	8/29/2018 @ 12:48	0.0	ND	ND	ND	ND	
Site	Closure	Standard:	100	50	10	600	

(See Figure 2 map and photo's)

<u>August 30 - 31, 2018</u>: Advance remedial excavation towards east and south.

August 31, 2018: Closure sampling conducted on sidewalls and base with analytical results as follows:

Crobare Sampring rest results									
August 31, 2018									
		(See Figu	ure 3 map and ph	noto's)					
Sample ID	Sample         Field         TPH         BTEX         Benzene         Chlor           Sample         Date/Time         OVM         Method 8015B         Method 8021         Method 8021         Method 8021								
East Base N Half 8/31/2018 @ 5-pt @ 19' 12:35		0.1	ND	ND	ND	ND			
East Base S Half         8/31/2018 @           5-pt @ 19'         12:41		34	ND	ND	ND	ND			
South Wall (Ramp) 5-pt @ 6'-17'	8/31/2018 @ 12:48	0.1	ND	ND	ND	ND			
Site Closure		Standard:	100	50	10	600			

# **Closure Sampling Test Results**

<u>September 1 – 11, 2018</u>: Backfill open excavation and advance the remedial dig to the North.

September 11, 2018: Closure sampling conducted on north sidewalls and base with analytical results as follows:

### **Closure Sampling Test Results** September 11, 2018 (See Figure 4 map and photo's)

Sample ID	Date/Time	Field OVM (ppm)	TPH Method 8015B (mg/Kg)	BTEX Method 8021 (mg/Kg)	Benzene Method 8021 (mg/Kg)	Chloride Method 300 (mg/Kg)
North Base 5-pt @ 20'	9/11/2018 @ 10:21	105	173	ND	ND	33
North-East Walls 6-pt @ 6'-18''			ND	ND	ND	ND
North-West Walls         9/11/2018 @           6-pt @ 6'-18''         10:44		0.4	ND	ND	ND	40
Site	Closure	Standard:	100	50	10	600

September 12-19, 2018: Engineer excavation to allow advancing past 20' depth. Extend north base to 23'.

September 19, 2018: Closure sampling conducted on north base with analytical results as follows:

Final Closure Sampling Test Results									
	September 19, 2018								
		(See Figu	ure 5 map and pl	noto's)					
Sample ID	Date/Time	Field OVM (ppm)	TPH Method 8015B (mg/Kg)	BTEX Method 8021 (mg/Kg)	Benzene Method 8021 (mg/Kg)	Chloride Method 300 (mg/Kg)			
North Base 5-pt @ 23'	9/19/2018 @ 12:56	0.0	ND	ND	ND	ND			
Site	Closure	Standard:	100	50	10	600			

September 21, 2018: Complete backfilling excavation.

### SITING AND HYDRO-GEOLOGICAL REPORT FOR GALLEGOS CANYON UNIT 198

### SITING CRITERIA 19.15.17.10 NMAC

Depth to groundwater at the site is estimated to be between 50 and 100 feet. This estimation is based on data from Stone and others (1983), and depth to groundwater data obtained from water wells permitted by the New Mexico State Engineer's Office (OSE, Figure 1). Local topography and proximity to adjacent water features is also considered. A topographic map of the site is provided as Figure 2 and demonstrates that the below grade tank (BGT) is not within 300 feet of any continuously flowing watercourse or within 200 feet of any other significant watercourse, lakebed, sinkhole or playa lake as measured from the ordinary high water mark. Figure 3 demonstrates that the BGT is not within 300 feet of a permanent residence, school, hospital, institution or church. Figure 4 demonstrates, based on a search of the OSE database and USGS topographic maps, that there are no freshwater wells or springs within 1000 feet of the BGT. Figure 5 demonstrates that the BGT is not within a municipal boundary or a defined municipal freshwater well field. Figure 6 demonstrates that the BGT is not within 500 feet of a wetland. Figure 7 demonstrates that the BGT is not in an area overlying a subsurface mine. The BGT is not located in an unstable area. Figure 8 demonstrates that the BGT is not within the mapped FEMA 100-year floodplain.

### Local Geology and Hydrology

This particular site is located on a slope west of Gallegos Canyon. Groundwater is estimated to be between 50 and 100 feet below ground surface (bgs) at this site. This is based on the elevation difference between the site and Gallegos Canyon of 69 feet. Gallegos Canyon is 2,983 feet southeast from the site. Broad shalely hills are interspersed with occasional sandstone outcrops, and systems of dry washes and their tributaries are common. The predominant geologic formation is the Nacimiento Formation of Tertiary age, which underlies surface soils and is often exposed. Deposits of Quaternary alluvial and eolian sands occur prominently near the surface of the area, especially near washes.

### **Regional Geology and Hydrology**

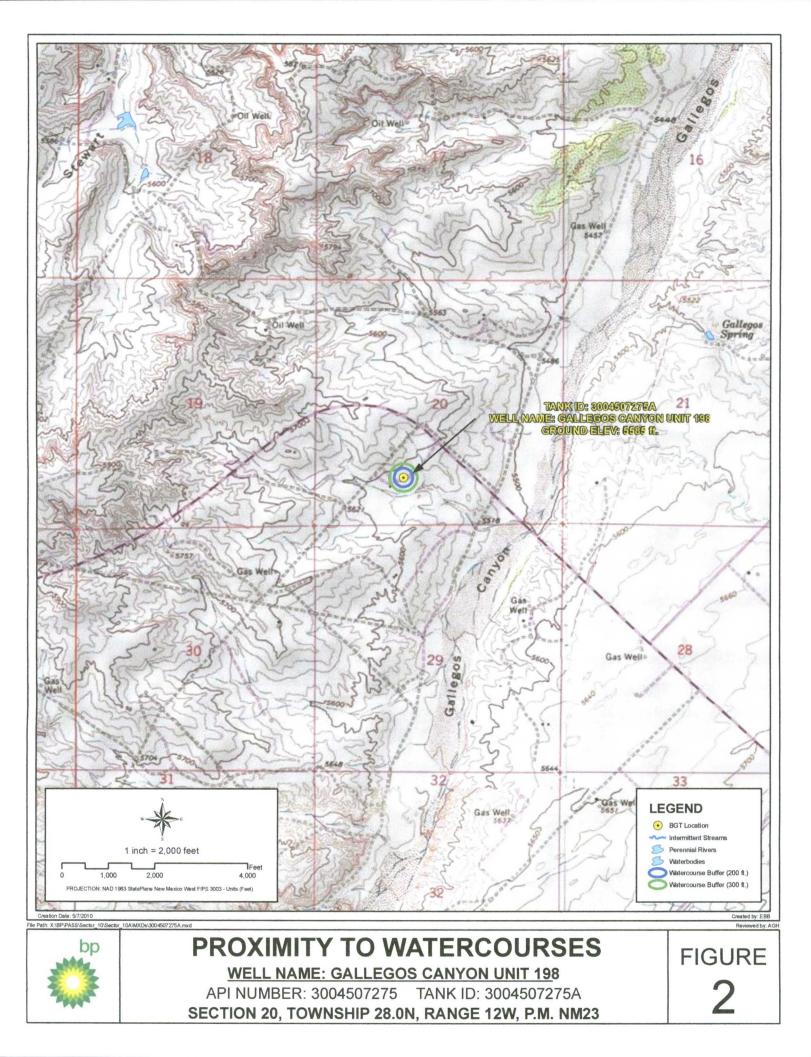
The San Juan Basin is situated in the Navajo section of the Colorado Plateau and is characterized by broad open valleys, mesas, buttes and hogbacks. Away from major valleys and canyons topographic relief is generally low. Native vegetation is sparse and shrubby. Drainage is mainly by the San Juan River, the only permanent stream in the Navajo Section of the Colorado Plateau. The San Juan River is a tributary of the Colorado River. Major tributaries include the Animas, Chaco and La Plata Rivers. Flow of the San Juan River across the basin is regulated by the Navajo Dam, located about 30 miles northeast of Farmington, New Mexico. The climate is arid to semiarid with an average annual precipitation of 8 to 10 inches. Soils within the basin consist of weathered parent rock derived from predominantly physical means mostly from eolian depositional system with fluvial having a lesser impact.

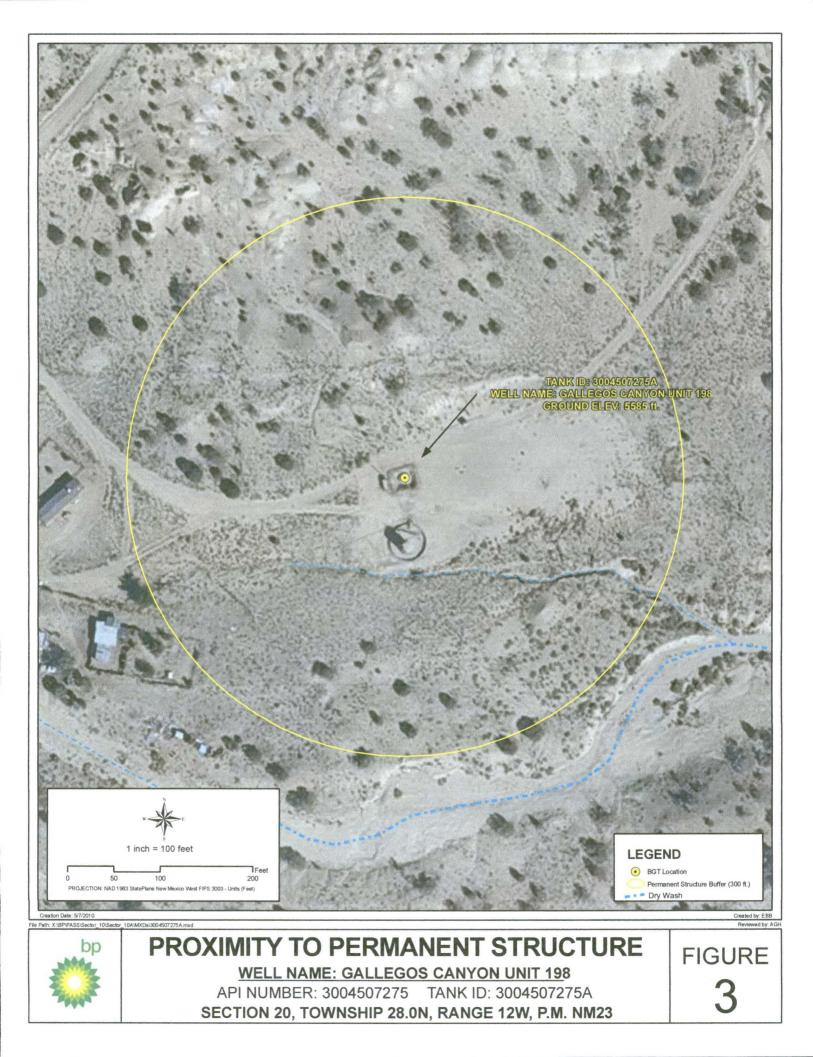
Cretaceous and Tertiary sandstones, as well as Quaternary Alluvial deposits, serve as the primary aquifers in the San Juan Basin (Stone et al., 1983). In most of the proposed area, the Nacimiento Formation lies at the surface and grades into the Animas Formation to the west. The lower part of the Nacimiento Formation is composed of interbedded black, carbonaceous mudstones and white coarse-grained sandstones. The upper part is comprised of mudstone and sandstone. It is generally slope-forming, even within the sandstone units. Thickness of the Nacimiento ranges from 418 to 2232 feet (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the Nacimiento Formation are between 0 and 1000 feet deep in this section of the basin. Wells within these bodies flow from 16 to 100 gallons per minute (gpm), and transmissivities are expected to be 100  $\text{ft}^2/\text{d}$  (Stone et al., 1983). Groundwater within these aquifers flows toward the San Juan River.

### References

Circular 154—Guidebook to coal geology of northwest New Mexico By E. C. Beaumont, J. W. Shomaker, W. J. Stone, and others, 1976

Stone, et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico, Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p





# GCU 198 Initial Release Discovery at 95 BGT

	STATE OF TAXABLE PARTY OF TAXABLE PARTY.	- Company of the owner of the second s	Section of the sectio	A CONTRACTOR OF A CONTRACTOR	THE R. L.

CLIENT: BP	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199				API #:		
FIELD REPORT:	(circle one): BGT CONFIRMATION				-	of _1	
SITE INFORMATION	I: SITE NAME: GCU	# 198			DATE STARTED: 00	6/22/18	
QUAD/UNIT: N SEC: 20 TWP:			SJ ST: N	IM	DATE FINISHED:		
			DIKE		ENVIRONMENTAL SPECIALIST(S):	NJV	
REFERENCE POIN				3707	GL ELEV.:	5 585'	
	GPS COORD.:		the second se		RING FROM W.H.: 149'	the second s	
2)					RING FROM W.H.:		
	GPS COORD.:				RING FROM W.H.:		
	GPS COORD.:	boğ Sarah Markan Baran Baran Baran (Haran Markan		NCE/BEAF	RING FROM W.H.:	OVM	
SAMPLING DATA:	CHAIN OF CUSTODY RECORD(S)		HALL			READING (ppm)	
	(95) SAMPLE DATE:06/			801	5B/8021B/300.0 (CI)	31.5	
2) SAMPLE ID:							
3) SAMPLE ID:      4) SAMPLE ID:							
5) SAMPLE ID:	SAMPLE DATE:						
SOIL DESCRIPTION				EDDOO	OK (CANDSTONE)		
SOIL COLOR: MOSTLY DAR					OHESIVE / MEDIUM PLASTIC / H		
COHESION (ALL OTHERS): NON COHESIVE / SLIGHTI					STIFF / VERY STIFF / HARD		
CONSISTENCY (NON COHESIVE SOILS): L					OR IN DISCOLORED SC		
MOISTURE: DRY SLIGHTLY MOIST MOIST V							
SAMPLE TYPE: GRAB COMPOSITE		ANY AREAS DISPLAYIN	NG WETNESS: YES NO	EXPLAN	IATION -		
DISCOLORATION/STAINING OBSERVED: YES			a, da jatoops Sama dataa Koba ama yaa aa	an a			
SITE OBSERVATION	<b>NS:</b> LOST INTEGRITY OF EQUIPME	NT: YES NO EXPLANATI	ON - MOST LIKELY A	T WES	T SIDEWALL & BOTTOM	/	
APPARENT EVIDENCE OF A RELEASE OBSERV	ED AND/OR OCCURRED : YES NO EX	(PLANATION: PHYSICAL	LY OBSERVED & MIN	IOR HY	DROCARBON ODOR		
EQUIPMENT SET OVER RECLAIMED AREA: OTHER: NMOCD OR BLM REPS. NOT P		IATION SAMPLING.	GAS WELL TO BE PLU	IGGED	& ABANDONED.		
EXCAVATION DIMENSION ESTIMATION		ft. X		ON EST	TMATION (Cubic Yards) :		
	NEAREST WATER SOURCE: >1,00	00' NEAREST SURFAC	E WATER: <1,000'	NMOC	D TPH CLOSURE STD:	100 ppm	
SITE SKETCH	BGT Located : off / on s	site PLOT PLA	AN circle: attached	OVM	CALIB. READ. = 99.4	ppm RF =1.00	
				A OVM	CALIB. GAS = 100	ppm	
BERM	~		N	TIME	: <b>11:28</b> (am)pm DATE:	06/22/18	
DERM	PBGTL				MISCELL. N	OTES	
FENCE	T.B. ~ 5'		то			JIES	
	B.G.		W.H.	-	/O:		
$\bigcap  $					EF #: P-984		
SEPARATOR ->				-	ID: VHIXONEV	B2	
		SURFACE		-	J#:	100/40	
		GRADIENT				/02/10	
		DIRECTION		O Tar		/07/17 r Meter	
	PROD.				ppm = parts per milli     BGT Sidewalls Visible: `	on	
	TANK				BGT Sidewalls Visible:		
	Ŧ		X - S.P.I		BGT Sidewalls Visible:		
NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVAT T.B. = TANK BOTTOM; PBGTL = PREVIOUS BE APPLICABLE OR NOT AVAILABLE; SW - SING	LOW-GRADE TANK LOCATION; SPD = SAMPL	E POINT DESIGNATION; R.W. =	= RETAINING WALL; NA - NOT			10°E	
NOTES: GOOGLE EARTH IMAG			06/22/18				
		UNSITE.					

<b>Analytical Report</b>
Lab Order 1806E44
Date Reported: 6/26/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: 5PC-TB @ 5' (95) Collection Date: 6/22/2018 11:10:00 AM

<b>Project:</b>	GCU 198			Collection Dat	e: 6/2	22/2018 11:10:00 AM	
Lab ID:	1806E44-001	Matrix: SOI	L	<b>Received Dat</b>	e: 6/2	23/2018 10:35:00 AM	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analys	t: MRA
Chloride		ND	30	mg/Kg	20	6/25/2018 1:03:58 PM	38870
EPA MET	HOD 8015M/D: DIESEL	RANGE ORGANICS				Analys	t: TOM
Diesel R	ange Organics (DRO)	300	9.3	mg/Kg	1	6/25/2018 11:48:10 AN	38859
Motor Oi	I Range Organics (MRO)	480	47	mg/Kg	1	6/25/2018 11:48:10 AN	38859
Surr: [	DNOP	102	70-130	%Rec	1	6/25/2018 11:48:10 AN	38859
EPA MET	HOD 8015D: GASOLIN	E RANGE				Analys	t: NSB
Gasoline	Range Organics (GRO)	ND	3.9	mg/Kg	1	6/25/2018 9:32:37 AM	38844
Surr: 8	BFB	91.8	15-316	%Rec	1	6/25/2018 9:32:37 AM	38844
EPA MET	HOD 8021B: VOLATILE	ES				Analys	t: NSB
Benzene		ND	0.020	mg/Kg	1	6/25/2018 9:32:37 AM	38844
Toluene		ND	0.039	mg/Kg	1	6/25/2018 9:32:37 AM	38844
Ethylben	zene	ND	0.039	mg/Kg	1	6/25/2018 9:32:37 AM	38844
Xylenes,	Total	ND	0.078	mg/Kg	1	6/25/2018 9:32:37 AM	38844
Surr: 4	4-Bromofluorobenzene	99.0	80-120	%Rec	1	6/25/2018 9:32:37 AM	38844

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 5
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

and the second distance of the stand for stand	hain-c	of-Cus	tody Record	Turn-Around	Time:	SAME				н			F	NV	/TS	20	NI	MF	INT			
Client:	BLAG	G ENGR.	/ BP AMERICA	Standard	🛛 Rush	DAY )													ATC			
				Project Name													.con					
Mailing Ac	dress:	P.O. BO	X 87		GCU # 19	98		49	01 H	awki	ins f	NE -	Alt	ouqu	erq	ue, N	MM 8	3710	9			
		BLOOM	FIELD, NM 87413	Project #:		ng digital daga daga di ang	1			)5-34				-			-410					
Phone #:		(505) 63	2-1199							ALC: N		A	Anal	ysis	Red	ques	st					
email or F	ax#:			Project Manag	jer:	7 Providence - Conception - Source and reaction of the filling								4)				1)		Τ	Τ	
QA/QC Pad			Level 4 (Full Validation)		ERIN GARI	FALOS	(8021B)	only)	MRO)			IS)		04,SO	PCB's			er - 300.1)			e	
Accreditat	ion:			Sampler:	NELSON V	ELEZ	<b>1</b> (8(	(Gas	RO /	1	1)	NISC		102,1	3082			/ water			Idu	
		Other_		On lce;	DicYes	🖻 No 👘 72 V		HdT	0/0	418.	504	827(	s	O3, N	se / se		(YC	0.00			te sa	L N)
	ype)	1			erature: 1,7	0C		3E +	(GR	por	por	or	etal	CI,N	icide	(Y)	i-V(	oil - 3		e	osit	No
Date	Time	Matrix	Sample Request ID	A obj251 Container Type and # McsHK.+	Preservative Type	HEAL NO.	BTEX + MH	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F,Cl,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 /		Grab sample	5 pt. composite sample	Air Bubbles (Y or N)
6/22/18	1110	SOIL	5PC - TB @ 5' (95)	4 oz 1	Cool	105	V		V									V		Τ	V	
																					1	
																					1	
	and a factor of the first																				1	
																				$\uparrow$	1	
																			-+	$\neg$	+	-
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			av and dark in a shart in						_	-									$\rightarrow$	+	+	-
											-									$\rightarrow$	+	$\neg$
										-+									-+	+	+	$\neg$
Date:	Time:	Relinquishe	ed by:	Received by:		Date Time	Rem	arks		BILL D	IRECT	TLY TO	OBPI	USING	THE	CONT	ACT	VITH	ORRES	SPON	DING	VID
6/22/18	1420 Time:	Relinguishe	the y	Austal Received by:	Naels	Unil 1420 Date Time	C		ACT:	& REF ERIN VHIX	GAI	RIFA	LOS				ON					
Date:	1715	M	stra Walt	Ande	L	6/23/18 1035	Ref	eren	ce #	Million	P - 9	984	-			undure dae			alvtical			

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

**Client: Blagg Engineering Project:** GCU 198

5											
Sample ID MB-	38870	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: PBS		Batch	ID: 38	870	F	RunNo: 5	2211				
Prep Date: 6/2	5/2018	Analysis D	ate: 6/	25/2018	S	SeqNo: 1	711195	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID LCS	-38870	SampT	ype: LC	s	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: LCS	S	Batch	ID: 38	870	F	RunNo: 5	2211				
Prep Date: 6/2	5/2018	Analysis D	ate: 6/	25/2018	S	SeqNo: 1	711196	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		15	1.5	15.00	0	96.8	90	110			

**Qualifiers:** 

- \* 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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е
- J
- Р
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Page 2 of 5

- Value above quantitation range
  - Analyte detected below quantitation limits
  - Sample pH Not In Range

WO#: 1806E44

26-Jun-18

WO#:	1806E44

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26-Jun-18

Client: Blagg E Project: GCU 19	ngineering 98									
Sample ID LCS-38859	SampType	e: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch ID	D: 38	859	F	RunNo: 5	2195				
Prep Date: 6/25/2018	Analysis Date	e: 6/	25/2018	S	SeqNo: 1	710097	Units: mg/#	٢g		
Analyte	Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.9	70	130			
Surr: DNOP	4.4		5.000		87.5	70	130			
Sample ID MB-38859	SampType	e: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batch ID	): <b>38</b>	859	F	RunNo: 5	2195				
Prep Date: 6/25/2018	Analysis Date	e: 6/	25/2018	S	eqNo: 1	710098	Units: mg/M	g		
Analyte	Result F	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	9.4		10.00		94.3	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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client: Blagg Engineering Project: GCU 198

						and the second se				
Sample ID MB-38844	SampTy	pe: ME	BLK	Tes	tCode: EF	PA Method	8015D: Gasc	line Rang	e	
Client ID: PBS	Batch	ID: 38	844	F	RunNo: 52	2200				
Prep Date: 6/22/2018	Analysis Da	ate: 6/	25/2018	S	SeqNo: 17	710874	Units: mg/M	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		85.9	15	316			
		and the second second			and the second	and the second property of the second		whether a survey of the second second	and the second second second second	and the second se
Sample ID LCS-38844	SampTy	me LC	S	Tes	tCode: EF	A Method	8015D: Gaso	line Rang	8	
Sample ID LCS-38844	SampTy						8015D: Gasc	line Rang	9	
Sample ID LCS-38844 Client ID: LCSS		rpe: LC			tCode: EF		8015D: Gaso	oline Rang	Đ	
		ID: 38		F		2200	8015D: Gaso Units: mg/K		e	
Client ID: LCSS	Batch	ID: 38	844 25/2018	F	RunNo: 52	2200			e RPDLimit	Qual
Client ID: LCSS Prep Date: 6/22/2018	Batch Analysis Da	ID: 38	844 25/2018	F	RunNo: 52 SeqNo: 17	2200 710875	Units: mg/K	íg		Qual

Qualifiers:

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

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1806E44 26-Jun-18

WO#:

Client: Blagg Engineering Project: GCU 198

			And the second se	No. of some state of the source of the sourc	and the second s	And and a second state of the second state of	Contraction of the second s	And when the second party of the second second	and the second se	
Sample ID MB-38844	SampT	ype: ME	BLK	Test	Code: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batch	ID: 38	844	R	anNo: 5	2200				
Prep Date: 6/22/2018	Analysis D	ate: 6/	25/2018	S	eqNo: 1	710901	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025				n an an Alian Interface an anna inferences an Alian				Manada anti-Angle (Bridgen in grind processor)
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.1	80	120			
Sample ID LCS-38844	CompT		9	Test	Code: El	PA Mothod	8021B: Volat	ilos		(provide de contra d
Cample ID LC3-30044	SampT	ype. LC	0	100		Amethon	0021D. V01a	1163		
Client ID: LCSS		ID: 38			unNo: 5		0021D. V01at	1103		
		ID: 38	844	R		2200	Units: mg/K			
Client ID: LCSS	Batch	ID: 38	344 25/2018	R	unNo: 5	2200			RPDLimit	Qual
Client ID: LCSS Prep Date: 6/22/2018 Analyte	Batch Analysis D	ID: 38 ate: 6/	344 25/2018	R	aunNo: 5 SeqNo: 1	2200 710902	Units: mg/K	g	RPDLimit	Qual
Client ID: LCSS Prep Date: 6/22/2018 Analyte	Batch Analysis D Result	ID: <b>38</b> ate: <b>6</b> /	844 25/2018 SPK value	R S SPK Ref Val	unNo: 5 eqNo: 1 %REC	2200 710902 LowLimit	Units: <b>mg/K</b> HighLimit	g	RPDLimit	Qual
Client ID: LCSS Prep Date: 6/22/2018 Analyte Benzene Toluene	Batch Analysis D Result 0.98	ID: <b>38</b> ate: <b>6</b> PQL 0.025	844 25/2018 SPK value 1.000	R S SPK Ref Val 0	eqNo: <b>5</b> %REC 97.7	2200 710902 LowLimit 77.3	Units: <b>mg/K</b> HighLimit 128	g	RPDLimit	Qual
Client ID: LCSS Prep Date: 6/22/2018 Analyte Benzene	Batch Analysis D Result 0.98 0.99	ID: 38 ate: 6/ PQL 0.025 0.050	844 25/2018 SPK value 1.000 1.000	R S SPK Ref Val 0 0	tunNo: 5 eqNo: 1 %REC 97.7 98.9	2200 710902 LowLimit 77.3 79.2	Units: mg/K HighLimit 128 125	g	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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 5 of 5

WO#: 1806E44

26-Jun-18

Client Name:	BLAGG	Work Order N	umber: 1806	6E44		RcptNo	o: 1
Received By:	Andy Freeman	6/23/2018 10:35	:00 AM		Balic	-	
Completed By:	Anne Thome	6/25/2018 7:27:0	MA 80		Andy Anne An		
Reviewed By:	ENM	6/25/18			ame som	~	
	by: tool2	510					
Chain of Cust	/ /						
1. Is Chain of Cu			Yes	$\checkmark$	No	Not Present	
2. How was the s	sample delivered?		Cour	ier			
Log In 3. Was an attem	pt made to cool the sam	nles?	Yes	<b>y</b>	No	NA 🗌	
e. was an atten		intes :	163				
4. Were all samp	les received at a temper	rature of >0° C to 6.0°C	Yes	$\checkmark$	No 🗌	NA 🗌	
F 0 1/11					No		
<ol> <li>Sample(s) in p</li> </ol>	roper container(s)?		Yes	V	NO		
6. Sufficient sam	ple volume for indicated	test(s)?	Yes	$\checkmark$	No 🗌		
7, Are samples (e	except VOA and ONG) p	roperly preserved?	Yes	$\checkmark$	No 🗌		
8. Was preservat	ive added to bottles?		Yes		No 🖌	NA 🗌	
9 VOA vials have	zero headspace?		Yes		No 🗌	No VOA Vials 🗹	
	ple containers received	broken?	Yes		No 🗹		
10.						# of preserved bottles checked	
	rk match bottle labels?		Yes	$\checkmark$	No 🗌	for pH:	
	ncies on chain of custod		Yes		No 🗌	(<2 c Adjusted?	or >12 unless no
	orrectly identified on Cha analyses were requeste		Yes			-	•
	g times able to be met?		Yes		No 🗌	Checked by:	
(If no, notify cu	stomer for authorization	.)					
Special Handli	ng (if applicable)						
15. Was client not	ified of all discrepancies	with this order?	Yes		No	NA 🗹	
Person	Notified:	Da	ate	*******	anan mananan kalamatan katar		
By Who	m:	Vi	p	uil 🗌 F	Phone 🗌 Fax	In Person	
Regardin	ng:						
Client In	structions:		ere contrat a contrat de			CONTRACTOR OF A	

# GCU 198

Site Remediation August 24, 2018

Figure 1 Photographs Lab Reports



GCU 198 Sample Locations 8/24/2018

East Wall

North Base

South Wall (Ramp)

X

X

South Base

X



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

August 28, 2018

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

RE: GCU 198

OrderNo.: 1808F82

Dear Sabre Beebe:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/25/2018 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 <u>www.hallenvironmental.com</u> 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 #NM0901

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

<b>Analytical Report</b>
Lab Order 1808F82
Date Reported: 8/28/2018

# Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Blagg Engineering	Client Sa	ample ID: North Base @ 16'
<b>Project:</b>	GCU 198		ion Date: 8/24/2018 2:29:00 PM
Lab ID:	1808F82-001	Matrix: MEOH (SOIL) Recei	ved Date: 8/25/2018 9:45:00 AM

Analyses	Result	PQL	Qual Un	ts DF	<b>Date Analyzed</b>	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg	Kg 20	8/27/2018 12:09:56 PM	40002
EPA METHOD 8015D MOD: GASOLINE RANGE					Analyst	AG
Gasoline Range Organics (GRO)	ND	19	mg	Kg 5	8/27/2018 11:10:56 AM	A53722
Surr: BFB	110	70-130	%R	ec 5	8/27/2018 11:10:56 AM	A53722
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	Irm
Diesel Range Organics (DRO)	290	9.8	mg	Kg 1	8/27/2018 10:29:26 AM	39995
Motor Oil Range Organics (MRO)	130	49	mg	Kg 1	8/27/2018 10:29:26 AM	39995
Surr: DNOP	116	50.6-138	%R	ec 1	8/27/2018 10:29:26 AM	39995
EPA METHOD 8260B: VOLATILES SHORT LIST					Analyst	AG
Benzene	ND	0.093	mg	Kg 5	8/27/2018 11:10:56 AM	B53722
Toluene	ND	0.19	mg	Kg 5	8/27/2018 11:10:56 AM	B53722
Ethylbenzene	ND	0.19	mg	Kg 5	8/27/2018 11:10:56 AM	B53722
Xylenes, Total	ND	0.37	mg	Kg 5	8/27/2018 11:10:56 AM	B53722
Surr: 4-Bromofluorobenzene	121	70-130	%R	ec 5	8/27/2018 11:10:56 AM	B53722
Surr: Toluene-d8	102	70-130	%R	ec 5	8/27/2018 11:10:56 AM	B53722

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 9
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

<b>Analytical Report</b>
Lab Order 1808F82
Date Reported: 8/28/2018

### Hall Environmental Analysis Laboratory, Inc.

Ne - Kattler, men o Kattler, and you want of Articles and Report of Articles and Report of Articles and Articles a		Due reported. 0/20/2010
CLIENT: Blagg Engineering	С	lient Sample ID: South Base @ 16'
Project: GCU 198		Collection Date: 8/24/2018 2:37:00 PM
Lab ID: 1808F82-002	Matrix: MEOH (SOIL)	Received Date: 8/25/2018 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	30		mg/Kg	20	8/27/2018 12:22:21 PM	40002
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	AG
Gasoline Range Organics (GRO)	140	18		mg/Kg	5	8/27/2018 11:34:01 AM	A53722
Surr: BFB	121	70-130		%Rec	5	8/27/2018 11:34:01 AM	A53722
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	1200	20		mg/Kg	2	8/27/2018 1:10:53 PM	39995
Motor Oil Range Organics (MRO)	470	100		mg/Kg	2	8/27/2018 1:10:53 PM	39995
Surr: DNOP	131	50.6-138		%Rec	2	8/27/2018 1:10:53 PM	39995
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	AG
Benzene	ND	0.092		mg/Kg	5	8/27/2018 11:34:01 AM	B53722
Toluene	ND	0.18		mg/Kg	5	8/27/2018 11:34:01 AM	B53722
Ethylbenzene	ND	0.18		mg/Kg	5	8/27/2018 11:34:01 AM	B53722
Xylenes, Total	ND	0.37		mg/Kg	5	8/27/2018 11:34:01 AM	B53722
Surr: 4-Bromofluorobenzene	137	70-130	S	%Rec	5	8/27/2018 11:34:01 AM	B53722
Surr: Toluene-d8	100	70-130		%Rec	5	8/27/2018 11:34:01 AM	B53722

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 9
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Er	vironmental Analys	is Labora	itory	y, Inc.				Lab Order Date Repor	1808F82 ted: 8/28/201	8
CLIENT: Project: Lab ID:	Blagg Engineering GCU 198 1808F82-003	Matrix:	Client Sample ID: South Wall (Ramp) (6'-14') Collection Date: 8/24/2018 2:41:00 PM Matrix: MEOH (SOIL) Received Date: 8/25/2018 9:45:00 AM							
Analyses		R	esult	PQL	Qual	Units	DF	Date Ana	lyzed	Batch
EPA MET Chloride	HOD 300.0: ANIONS		ND	30		mg/Kg	20	8/27/2018	Analyst: 12:34:46 PM	
	HOD 8015D MOD: GASOLINE Range Organics (GRO) BFB	RANGE	ND 122	3.9 70-130		mg/Kg %Rec	1 1		Analyst: 11:57:08 AM 11:57:08 AM	A53722
EPA MET	HOD 8015M/D: DIESEL RANG		s						Analyst:	Irm
	ange Organics (DRO) Range Organics (MRO) DNOP		280 170 124	10 50 50.6-138		mg/Kg mg/Kg %Rec	1 1 1	8/27/2018	11:57:31 AM 11:57:31 AM 11:57:31 AM	39995
EPA MET	HOD 8260B: VOLATILES SHO	ORT LIST							Analyst:	AG
Benzene Toluene Ethylben:	zene		ND ND ND	0.019 0.039 0.039		mg/Kg mg/Kg mg/Kg	1 1 1	8/27/2018	11:57:08 AM 11:57:08 AM 11:57:08 AM	B53722 B53722 B53722
	Total I-Bromofluorobenzene <sup>-</sup> oluene-d8		ND 136 101	0.077 70-130 70-130	S	mg/Kg %Rec %Rec	1 1 1	8/27/2018	11:57:08 AM 11:57:08 AM 11:57:08 AM	B53722 B53722 B53722

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
- PQL Practical Quanitative Limit

Qualifiers:

- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 9 J

**Analytical Report** 

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

Lab Order 1808F82         Lab Order 1808F82         Date Reported: 8/28/2018         CLIENT: Blagg Engineering       Client Sample ID: East Wall (6'-14')         Project:       GCU 198       Collection Date: 8/24/2018 2:49:00 PM         Lab ID:       1808F82-004       Matrix: MEOH (SOIL)       Received Date: 8/25/2018 9:45:00 AM									8
Analyses		Re	esult	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS							Analyst	MRA
Chloride			ND	30		mg/Kg	20	8/27/2018 12:47:11 PM	40002
EPA MET	HOD 8015D MOD: GASOLIN	E RANGE						Analyst	AG
Gasoline	Range Organics (GRO)		ND	4.0		mg/Kg	1	8/27/2018 12:20:24 PM	A53722
Surr: E	FB		109	70-130		%Rec	1	8/27/2018 12:20:24 PM	A53722
EPA MET	HOD 8015M/D: DIESEL RAN	GE ORGANIC	S					Analyst	Irm
Diesel Ra	ange Organics (DRO)		ND	9.9		mg/Kg	1	8/27/2018 12:48:48 PM	39995
Motor Oil	Range Organics (MRO)		ND	50		mg/Kg	1	8/27/2018 12:48:48 PM	39995
Surr: D	NOP		122	50.6-138		%Rec	1	8/27/2018 12:48:48 PM	39995
EPA MET	HOD 8260B: VOLATILES SH	ORT LIST						Analyst	AG
Benzene			ND	0.020		mg/Kg	1	8/27/2018 12:20:24 PM	B53722
Toluene			ND	0.040		mg/Kg	1	8/27/2018 12:20:24 PM	B53722
Ethylben	zene		ND	0.040		mg/Kg	1	8/27/2018 12:20:24 PM	B53722
Xylenes,	Total		ND	0.080		mg/Kg	1	8/27/2018 12:20:24 PM	B53722
Surr: 4	-Bromofluorobenzene		123	70-130		%Rec	1	8/27/2018 12:20:24 PM	B53722
Surr: T	oluene-d8		98.8	70-130		%Rec	1	8/27/2018 12:20:24 PM	B53722

**Analytical Report** 

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 o	fQ
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	17
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specifie	d

Client: Blagg Engineering Project: GCU 198

Sample ID MB-40002	SampType: mblk TestCode: EPA Method 300.0: Anions						
Client ID: PBS	Batch ID: 40002	RunNo: 53720					
Prep Date: 8/27/2018	Analysis Date: 8/27/2018	SeqNo: 1773219	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Chloride	ND 1.5						
Sample ID LCS-40002	SampType: Ics	TestCode: EPA Method	300.0: Anions				
Client ID: LCSS	Batch ID: 40002	RunNo: 53720					
Prep Date: 8/27/2018	Analysis Date: 8/27/2018	SeqNo: 1773220	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual			
Chloride	14 1.5 15.00	0 93.0 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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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WO#: 1808F82 28-Aug-18

		A NUMBER OF STREET, ST	Contractor of the local division of the	
-				

Client: Blagg E Project: GCU 19	ngineering 98									
Sample ID         MB-39995         SampType:         MBLK         TestCode:         EPA Method 8015M/D: Diesel Range Organics										
Client ID: PBS	Batch	ID: 39	995	F	RunNo: 5	3721				
Prep Date: 8/27/2018	Analysis Da	ate: 8/	27/2018	S	SeqNo: 1	772205	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
[ Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		115	50.6	138			
Sample ID LCS-39995	SampTy	pe: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	ID: 39	995	F	RunNo: 5	3721				
Prep Date: 8/27/2018	Analysis Da	ate: 8/	27/2018	5	SeqNo: 1	772206	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	70	130			
Surr: DNOP	5.4		5.000		108	50.6	138			

### Qualifiers:

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- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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WO#: 1808F82 28-Aug-18

### **Client: Blagg Engineering**

**Project:** 

GCU 198

Sample ID	100ng Ics	SampT	ype: LC	S4	Test	tCode: E	PA Method	8260B: Volat	tiles Short	List	
Client ID:	BatchQC	Batch	ID: <b>B5</b>	3722	R	RunNo: 5	3722				
Prep Date:		Analysis D	ate: 8/	27/2018	S	SeqNo: 1	772225	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	102	80	120			
Toluene		1.1	0.050	1.000	0	112	80	120			
Ethylbenzene		1.1	0.050	1.000	0	111	80	120			
Xylenes, Total		3.2	0.10	3.000	0	106	80	120			
Surr: 4-Brom	ofluorobenzene	0.51		0.5000		103	70	130			
Surr: Toluen	e-d8	0.52		0.5000		104	70	130			
Sample ID	rb	SampT	ype: ME	BLK	Test	tCode: E	PA Method	8260B: Volat	tiles Short	List	********************
Client ID:	PBS	Batch	ID: <b>B5</b>	3722	R	RunNo: 5	3722				
Prep Date:		Analysis D	ate: 8/	27/2018	S	eqNo: 1	772235	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-Brom	nofluorobenzene	0.56		0.5000		112	70	130			
Surr: Toluen	e-d8	0.51	and fair and the State Sub-Streepen	0.5000		101	70	130			- the second strength of the
Sample ID	1808f82-002ams	SampT	ype: MS	34	Test	tCode: E	PA Method	8260B: Volat	tiles Short	List	
Client ID:	South Base @ 16'	Batch	ID: <b>B5</b>	3722	RunNo: 53722						
Prep Date:		Analysis D	ate: 8/	27/2018	S	SeqNo: 1	772714	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		3.7	0.092	3.674	0	101	80	120			
Toluene		4.1	0.18	3.674	0	110	80	120			
Ethylbenzene		4.2	0.18	3.674	0.03766	114	82	121			
Xylenes, Total		12	0.37	11.02	0	112	80.2	120			
	ofluorobenzene	2.4		1.837		131	70	130			S
Surr: Toluen	e-d8	1.9		1.837		106	70	130			
Sample ID	1808f82-002amsd	SampT	ype: MS	D4	Test	tCode: E	PA Method	8260B: Volat	tiles Short	List	
Client ID:	South Base @ 16'	Batch ID: B53722			RunNo: 53722						
Prep Date:		Analysis Date: 8/27/2018			S	eqNo: 1	772715	Units: mg/K	ζg		
Analyte		Result	PQL	and the second se	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		3.4	0.092	3.674	0	93.8	80	120	7.69	20	
Toluene		3.7	0.18	3.674	0	102	80	120	7.92	20	
		4.0	0 10	2 674	0.02766	407	00	101	6 24	20	
Ethylbenzene		4.0	0.18	3.674	0.03766	107	82 80.2	121	6.31	20	

### **Qualifiers:**

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- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- 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
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

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WO#: 1808F82

28-Aug-18

Client: Blagg Engineering Project: GCU 198

dana ya kutoka kutok											
Sample ID 1	808f82-002amsd	SampTyp	e: Ms	SD4	Test	Code: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: S	South Base @ 16'	Batch ID	: B5	53722	R	unNo: 5	3722				
Prep Date:		Analysis Date: 8/27/2018		SeqNo: 1772715			Units: mg/Kg				
Analyte		Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromot	fluorobenzene	2.3		1.837		125	70	130	0	0	
Surr: Toluene-	d8	1.8		1.837		99.8	70	130	0	0	

Qualifiers:

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- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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28-Aug-18

1808F82

WO#:

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Client: Blagg Engineering

**Project:** 

GCU 198

3														
Sample ID 2.5ug gro lcs					tCode: El	PA Method	8015D Mod:	Gasoline	soline Range					
Client ID: LCSS	Batch ID: A53722			F	RunNo: 5	3722								
Prep Date:	Analysis D	Date: 8/	27/2018	5	SeqNo: 1	772222	Units: mg/k	٢g						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.0	70	130							
Surr: BFB	460		500.0		91.4	70	130							
Sample ID rb	SampT	SampType: MBLK			TestCode: EPA Method 8015D Mod: Gasoline Range									
Client ID: PBS	Batch	h ID: A5	3722	F	RunNo: 5	3722								
Prep Date:	Analysis D	Date: 8/	27/2018	S	SeqNo: 1	772223	Units: mg/k	٢g						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Gasoline Range Organics (GRO)	ND	5.0												
the design of the local sector of the local sector of the sector of the local sector of the local sector of the	ND 500	5.0	500.0		99.2	70	130							
Gasoline Range Organics (GRO)	500	5.0	an an California a da an an an Araba an Araba A Sangaran an Araba an Araba an Araba an Araba	Tes			130 8015D Mod:	Gasoline	Range					
Gasoline Range Organics (GRO) Surr: BFB	500 SampT		6			PA Method		Gasoline	Range					
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b>	500 SampT	Type: MS	3722	F	tCode: Ef	PA Method 3722			Range					
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b> Client ID: <b>North Base @ 16</b>	500 SampT Batch	Type: MS	3722 27/2018	F	tCode: Ef RunNo: 5 SeqNo: 17	PA Method 3722	8015D Mod:		Range RPDLimit	Qual				
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b> Client ID: <b>North Base @ 16</b> Prep Date: Analyte Gasoline Range Organics (GRO)	500 SampT Batch Analysis D Result 100	Type: MS h ID: A5 Date: 8/	<b>3722</b> <b>27/2018</b> SPK value 92.72	F	tCode: EF RunNo: 5 SeqNo: 17 %REC 97.7	PA Method 3722 772712 LowLimit 64.7	8015D Mod: Units: mg// HighLimit 142	(g		Qual				
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b> Client ID: <b>North Base @ 16</b> Prep Date: Analyte	500 SampT Batch Analysis D Result	Type: <b>MS</b> h ID: <b>A5</b> Date: <b>8</b> / PQL	3 3722 27/2018 SPK value	F S SPK Ref Val	tCode: Ef RunNo: 5 SeqNo: 1 %REC	PA Method 3722 772712 LowLimit	8015D Mod: Units: mg/k HighLimit	(g		Qual				
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b> Client ID: <b>North Base @ 16</b> Prep Date: Analyte Gasoline Range Organics (GRO)	500 SampT Batch Analysis D Result 100 1900	Type: <b>MS</b> h ID: <b>A5</b> Date: <b>8</b> / PQL	<b>3722</b> <b>27/2018</b> SPK value 92.72 1855	F S SPK Ref Val 13.54	tCode: Ef RunNo: 5; SeqNo: 1; %REC 97.7 103	<b>PA Method</b> 3722 772712 LowLimit 64.7 70	8015D Mod: Units: mg// HighLimit 142	<b>(g</b> %RPD	RPDLimit	Qual				
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b> Client ID: <b>North Base @ 16</b> Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB	500 SampT Batch Analysis D Result 100 1900	Fype: <b>MS</b> h ID: <b>A5</b> Date: <b>8</b> / PQL 19	3722 27/2018 SPK value 92.72 1855	F S SPK Ref Val 13.54 Tes	tCode: Ef RunNo: 5; SeqNo: 1; %REC 97.7 103	<b>PA Method</b> 3722 772712 LowLimit 64.7 70 <b>PA Method</b>	8015D Mod: Units: mg/P HighLimit 142 130	<b>(g</b> %RPD	RPDLimit	Qual				
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b> Client ID: <b>North Base @ 16</b> Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001amsc</b>	500 SampT Batch Analysis D Result 100 1900	Type: MS h ID: A5 Date: 8/ PQL 19 Type: MS h ID: A5	3722 27/2018 SPK value 92.72 1855 SD 3722	F S SPK Ref Val 13.54 Tes F	tCode: EF RunNo: 5 SeqNo: 17 %REC 97.7 103 tCode: EF	PA Method 3722 772712 LowLimit 64.7 70 PA Method 3722	8015D Mod: Units: mg/P HighLimit 142 130	(g %RPD Gasoline	RPDLimit	Qual				
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b> Client ID: <b>North Base @ 16</b> Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001amsc</b> Client ID: <b>North Base @ 16</b>	500 SampT Batch Analysis D Result 100 1900 I SampT Batch	Type: MS h ID: A5 Date: 8/ PQL 19 Type: MS h ID: A5	3722 27/2018 SPK value 92.72 1855 SD 3722 27/2018	F S SPK Ref Val 13.54 Tes F	tCode: EF RunNo: 5: SeqNo: 17 %REC 97.7 103 tCode: EF RunNo: 5: SeqNo: 17	PA Method 3722 772712 LowLimit 64.7 70 PA Method 3722	8015D Mod: Units: mg// HighLimit 142 130 8015D Mod:	(g %RPD Gasoline	RPDLimit	Qual				
Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001ams</b> Client ID: <b>North Base @ 16</b> Prep Date: Analyte Gasoline Range Organics (GRO) Surr: BFB Sample ID <b>1808f82-001amsc</b> Client ID: <b>North Base @ 16</b> Prep Date:	500 SampT Batch Analysis D Result 100 1900 I SampT Batch Analysis D	Type: MS h ID: A5 Date: 8/ PQL 19 Type: MS h ID: A5 Date: 8/	3722 27/2018 SPK value 92.72 1855 SD 3722 27/2018	F SPK Ref Val 13.54 Tes F S	tCode: EF RunNo: 5: SeqNo: 17 %REC 97.7 103 tCode: EF RunNo: 5: SeqNo: 17	PA Method 3722 772712 LowLimit 64.7 70 PA Method 3722 772713	8015D Mod: Units: mg/k HighLimit 142 130 8015D Mod: Units: mg/k	(g %RPD Gasoline	RPDLimit Range					

**Qualifiers:** 

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- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
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- P Sample pH Not In Range
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WO#: 1808F82

ANALYSIS LABORAT Y	Albı TEL: 505-345-3975 Website: www.ha		109 <b>San</b>	nple Log-In Cheo	ck List
Client Name: BLAGG	Work Order Number:	1808F82	2000.000000000000000000000000000000000	RcptNo: 1	
Received By: Jazzmine Burkhead	8/25/2018 9:45:00 AM		fair Bockhall		
Completed By: Ashley Gallegos	8/27/2018 8:33:10 AM		AF		lini
Reviewed By: ENM 8	127/18 labe	d bat	4:	XAS 08/21	18
Chain of Custody					
1. Is Chain of Custody complete?		Yes 🗹	No	Not Present	
2. How was the sample delivered?		Courier			
Log In 3. Was an attempt made to cool the samples?		Yes 🖌	No	NA 🗌	
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗌		
5. Sample(s) in proper container(s)?		Yes 🖌	No		
6. Sufficient sample volume for indicated test(s	;)?	Yes 🗹	No 🗌		
7. Are samples (except VOA and ONG) proper	ly preserved?	Yes 🗹	No 🗌		
8. Was preservative added to bottles?		Yes	No 🖌	NA 🗌	
9. VOA vials have zero headspace?		Yes	No	No VOA Viais 🗹	
0. Were any sample containers received broke	en?	Yes	No 🗹	# of preserved	
1. Does paperwork match bottle labels?		Yes 🗹	No 🗆	bottles checked for pH: (<2 or >12,e	x12"
(Note discrepancies on chain of custody)	Custody2	Yes 🖌	No 🗌	Adjusted?	() () () () () () () () () () () () () (
<ol> <li>Are matrices correctly identified on Chain of</li> <li>Is it clear what analyses were requested?</li> </ol>	ouslouy	Yes 🗹	No 🗌	O.R	
4. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:	)
pecial Handling (if applicable)			-		
5. Was client notified of all discrepancies with	this order?	Yes	No 🗌	NA 🗹	
Person Notified:	Date				
By Whom:	Via:	eMail P	hone 🗌 Fax	In Person	
Regarding:					
Client Instructions:		0.00.00.00.00.00.00.00.000.000.000.000			
16. Additional remarks:					
17. Cooler Information Cooler No Temp °C Condition S 1 5.1 Good Ye		eal Date	Signed By		

Page 1 of 1



Client:	BPA	Merica 6 En6	ustody Record	Turn-Around   Standard  Project Name  G-C-U  Project #:	Rush	SAME DAK			01 H	awki	www ins N	AL v.hal NE -	lenv Alb	<b>SIS</b> vironi	<b>5</b> L menterqu	tal.co	<b>30</b>	<b>R</b> /			
Phone #	#: 509	5-320	0-1183									Stations	Contraction of the local division of the loc	And a local division of the local division o	14.000	ues	and the second second				
email or	r Fax#:			Project Mana	ger:			(ylr	(ô)				14	04)						T	
QA/QC Package: Standard				re Bei	*	MB's (8021)	(Gas of	DRO / MRO)			SIMS)		,PO4,SC	2 PCB's							
Accredi	AP	□ Othe	er	On Ice:	EAF BL	No No	HAT T	HGT +	(GRO / DI	418.1)	504.1)	8270	s	O3,NO2	s / 8082	e	(AC				or N)
Date	(Type)_	Matrix	Sample Request ID	Sample Tem Container Type and #	Preservative Type	and the second second	BTEX + MERE	BTEX + MTBE + TPH (Gas only)	TPH 8015B (G	TPH (Method 4	EDB (Method !	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082 PCB	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
8/24/18	1429	SOIL	NORTH BASE C 16	407×1	COUL	- 001	x		X									X			
11	1437	1	SONTH BASE C 16	1	1	-002	1		1									1			
4	1441		South Wall (RAMP) (6-14)			-003													-	1	
"	1449	1	EASTWALL (6'-14')		1	-004			1						-			1	-		
														-							
8/24/19 Date:	Time: Time:	Rel/nquish	L Slegg ed by:	Received by: Must Received by:	w Wael	Date Time 5/2-1/15 1652 Date Time 08/25/18 09:44 page of this	Rer	nark:	s:	Bicon	LEtac	SP +: Ja	54	HBR Sp	2E Pecí	Be	EEB	Ξ 2,0,			
8/24/18	1820	hri		mulacted to other ac		MOSISILE 09:4 es. This serves as notice of this	5	hillity	Any eu	h cont	racter	t data	will be		lu potr	ated or	the e	abtic		+	

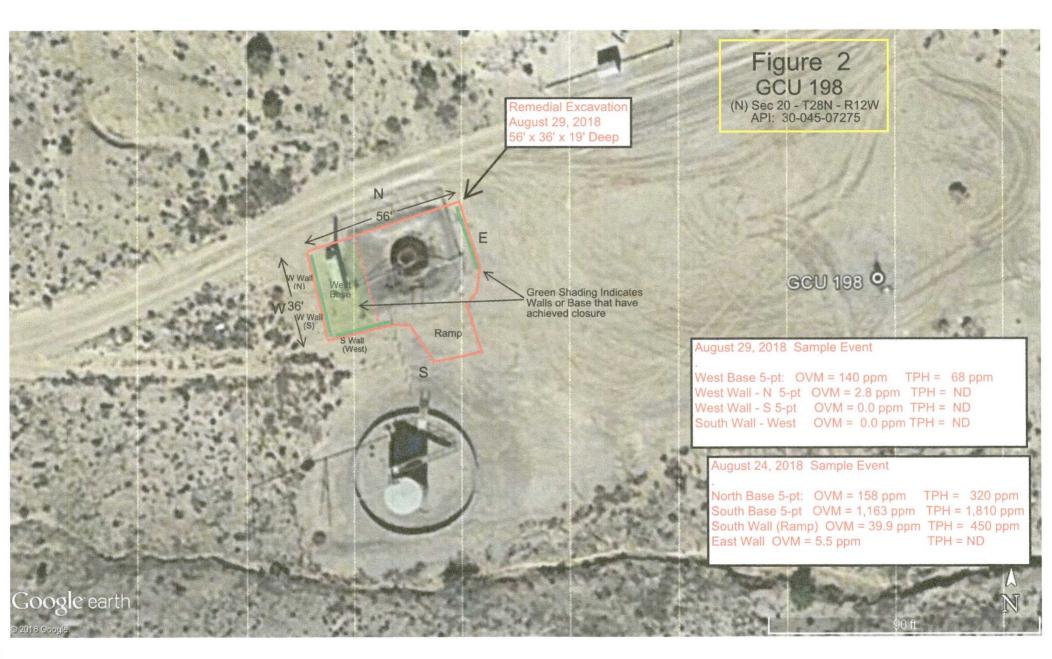
ry, samples submitte

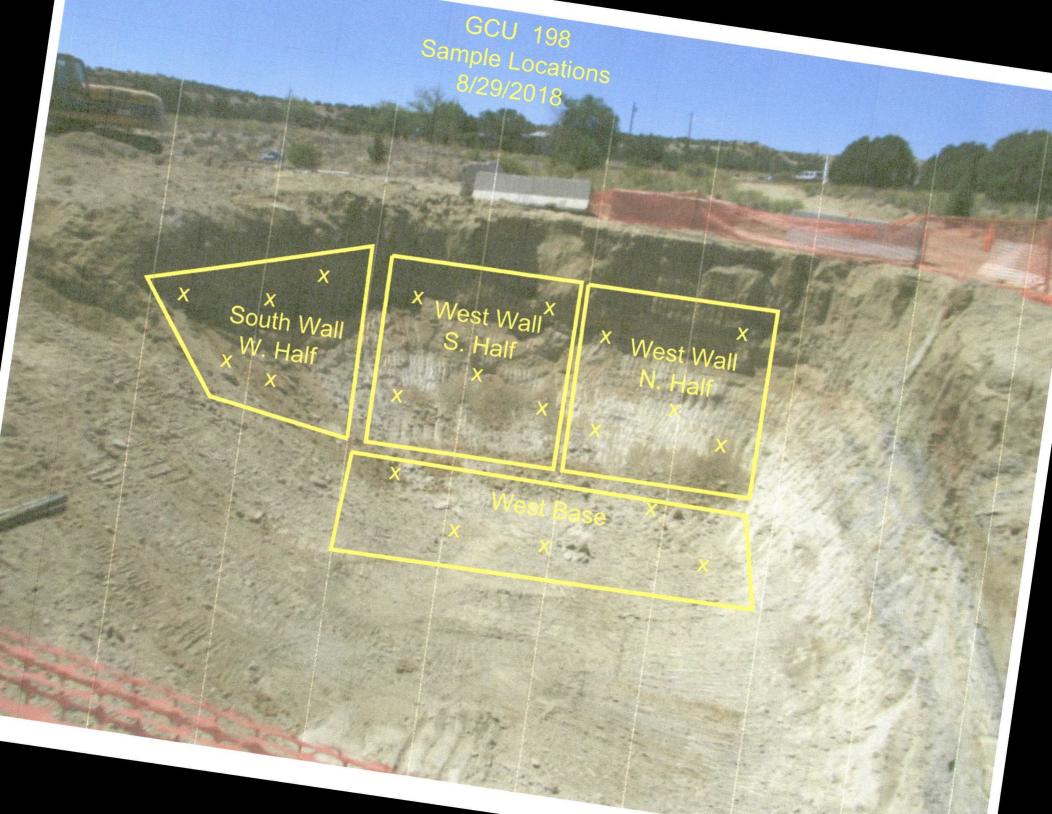
ronmental may be subconfracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analy

# GCU 198

Site Remediation August 29, 2018

Figure 2 Photographs Lab Reports







August 31, 2018 Sabre Beebe Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: GCU 198

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

OrderNo.: 1808H73

Dear Sabre Beebe:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/30/2018 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 <u>www.hallenvironmental.com</u> 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 #NM0901

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

<b>Analytical Report</b>
Lab Order 1808H73
Date Reported: 8/31/2018

8/30/2018 10:04:46 AM 40054

8/30/2018 10:04:46 AM 40054

8/30/2018 10:04:46 AM 40054

8/30/2018 10:04:46 AM 40054

### Hall Environmental Analysis Laboratory, Inc.

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

CLIENT:	est Base @ 19'										
<b>Project:</b>	GCU 198	Collection Date: 8/29/2018 12:29:00 PM									
Lab ID:	1808H73-001	Matrix: SOII	rix: SOIL Received Date: 8/30/2018 7:00:00 AM								
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch				
EPA MET	HOD 300.0: ANIONS					Analyst	MRA				
Chloride		44	30	mg/Kg	20	8/30/2018 1:28:20 PM	40066				
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	Irm				
Diesel Ra	ange Organics (DRO)	68	9.8	mg/Kg	1	8/30/2018 9:20:24 AM	40064				
Motor Oil	Range Organics (MRO)	ND	49	mg/Kg	1	8/30/2018 9:20:24 AM	40064				
Surr: D	NOP	101	50.6-138	%Rec	1	8/30/2018 9:20:24 AM	40064				
EPA MET	HOD 8015D: GASOLINE RANGE					Analyst	NSB				
Gasoline	Range Organics (GRO)	ND	3.9	mg/Kg	1	8/30/2018 10:04:46 AM	40054				
Surr: B	BFB	98.1	15-316	%Rec	1	8/30/2018 10:04:46 AM	40054				
EPA MET	HOD 8021B: VOLATILES					Analyst	NSB				
Benzene		ND	0.020	mg/Kg	1	8/30/2018 10:04:46 AM	40054				

ND

ND

ND

91.3

0.039

0.039

0.079

80-120

mg/Kg

%Rec

mg/Kg 1

mg/Kg 1

1

1

*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	Е	Value above quantitation range
Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 8
ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
	H ND PQL	<ul> <li>D Sample Diluted Due to Matrix</li> <li>H Holding times for preparation or analysis exceeded</li> <li>ND Not Detected at the Reporting Limit</li> <li>PQL Practical Quanitative Limit</li> </ul>	DSample Diluted Due to MatrixEHHolding times for preparation or analysis exceededJNDNot Detected at the Reporting LimitPPQLPractical Quanitative LimitRL

#### **Analytical Report** Lab Order 1808H73 Date Reported: 8/31/2018

### Hall Environmental Analysis Laboratory, Inc.

Project: GCU 198

Lab ID:

1808H73-002

**CLIENT:** Blagg Engineering Client Sample ID: West Wall North Half Collection Date: 8/29/2018 12:39:00 PM Matrix: SOIL Received Date: 8/30/2018 7:00:00 AM D .14 POL Qual Units DE Data Analyzed Datah

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	8/30/2018 1:40:44 PM	40066
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS				Analyst	Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/30/2018 9:44:35 AM	40064
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/30/2018 9:44:35 AM	40064
Surr: DNOP	89.4	50.6-138	%Rec	1	8/30/2018 9:44:35 AM	40064
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	8/30/2018 10:51:20 AM	40054
Surr: BFB	90.9	15-316	%Rec	1	8/30/2018 10:51:20 AM	40054
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.019	mg/Kg	1	8/30/2018 10:51:20 AM	40054
Toluene	ND	0.038	mg/Kg	1	8/30/2018 10:51:20 AM	40054
Ethylbenzene	ND	0.038	mg/Kg	1	8/30/2018 10:51:20 AM	40054
Xylenes, Total	ND	0.077	mg/Kg	1	8/30/2018 10:51:20 AM	40054
Surr: 4-Bromofluorobenzene	90.5	80-120	%Rec	1	8/30/2018 10:51:20 AM	40054

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H Holding times for preparation or analysis exceeded		J	Analyte detected below quantitation limits Page 2 of 8
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

<b>Analytical Report</b>
Lab Order 1808H73
Date Reported: 8/31/2018

**CLIENT:** Blagg Engineering Client Sample ID: West Wall South Half Project: GCU 198 Collection Date: 8/29/2018 12:44:00 PM Lab ID: 1808H73-003 Matrix: SOIL Received Date: 8/30/2018 7:00:00 AM PQL Qual Units DF Date Analyzed Result Batch Analyses . . ......

EPA METHOD 300.0: ANIONS					Analyst:	MRA				
Chloride	ND	30	mg/Kg	20	8/30/2018 1:53:09 PM	40066				
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst:										
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/30/2018 10:08:59 AM	40064				
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/30/2018 10:08:59 AM	40064				
Surr: DNOP	90.9	50.6-138	%Rec	1	8/30/2018 10:08:59 AM	40064				
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB				
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	8/30/2018 11:14:37 AM	40054				
Surr: BFB	89.4	15-316	%Rec	1	8/30/2018 11:14:37 AM	40054				
EPA METHOD 8021B: VOLATILES					Analyst:	NSB				
Benzene	ND	0.019	mg/Kg	1	8/30/2018 11:14:37 AM	40054				
Toluene	ND	0.039	mg/Kg	1	8/30/2018 11:14:37 AM	40054				
Ethylbenzene	ND	0.039	mg/Kg	1	8/30/2018 11:14:37 AM	40054				
Xylenes, Total	ND	0.077	mg/Kg	1	8/30/2018 11:14:37 AM	40054				
Surr: 4-Bromofluorobenzene	88.8	80-120	%Rec	1	8/30/2018 11:14:37 AM	40054				

and the second sec				
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 8
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

<b>Analytical Report</b>	
Lab Order 1808H73	
Date Reported: 8/31/2018	3

**CLIENT:** Blagg Engineering

1808H73-004

Project: GCU 198

Lab ID:

Analyses

 Client Sample ID: South Wall West Half

 Collection Date: 8/29/2018 12:48:00 PM

 Matrix: SOIL
 Received Date: 8/30/2018 7:00:00 AM

 Result
 PQL Qual Units
 DF Date Analyzed
 Batch

renary ses	Result	TQL	Quai Units	DI	Date Analyzed	Daten
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	8/30/2018 2:05:33 PM	40066
EPA METHOD 8015M/D: DIESEL RANGE ORG	GANICS				Analyst	Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/30/2018 10:33:24 AM	40064
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/30/2018 10:33:24 AM	40064
Surr: DNOP	90.9	50.6-138	%Rec	1	8/30/2018 10:33:24 AM	40064
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	8/30/2018 11:38:00 AM	40054
Surr: BFB	90.4	15-316	%Rec	1	8/30/2018 11:38:00 AM	40054
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.020	mg/Kg	1	8/30/2018 11:38:00 AM	40054
Toluene	ND	0.039	mg/Kg	1	8/30/2018 11:38:00 AM	40054
Ethylbenzene	ND	0.039	mg/Kg	1	8/30/2018 11:38:00 AM	40054
Xylenes, Total	ND	0.079	mg/Kg	1	8/30/2018 11:38:00 AM	40054
Surr: 4-Bromofluorobenzene	90.6	80-120	%Rec	1	8/30/2018 11:38:00 AM	40054

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 8
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Client: Blagg Engineering Project:** GCU 198

Sample ID MB-40066	SampType: mblk	TestCode: EPA Method	300.0: Anions	a an
Client ID: PBS	Batch ID: 40066	RunNo: 53830		
Prep Date: 8/30/2018	Analysis Date: 8/30/2018	SeqNo: 1776658	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID LCS-40066	SampType: Ics	TestCode: EPA Method	300.0: Anions	i ga da da de cara de Cara de cara de
Client ID: LCSS	Batch ID: 40066	RunNo: 53830		
Prep Date: 8/30/2018	Analysis Date: 8/30/2018	SeqNo: 1776659	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 94.9 90	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
- PQL Practical Quanitative Limit
- % 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
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

WO#: 1808H73

31-Aug-18

Page 5 of 8

WO#: 1808H73

Page 6 of 8

31-Aug-18

Client: Blagg Engineering Project: GCU 198

Sample ID LCS-40064	SampType: LCS	5	Test	Code: EF	PA Method	8015M/D: Die	sel Rang	e Organics		
Client ID: LCSS	Batch ID: 400	64	R	unNo: 53	3813					
Prep Date: 8/30/2018	Analysis Date: 8/3	0/2018	S	eqNo: 17	775783	Units: mg/K	g			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	48 10	50.00	0	96.4	70	130				
Surr: DNOP	5.1	5.000		102	50.6	138				
Sample ID MB-40064	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: PBS	Batch ID: 40064 RunNo: 53813									
Prep Date: 8/30/2018	Analysis Date: 8/3	0/2018	S	eqNo: 17	75784	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	11	10.00		110	50.6	138		And a state of the	un maket of the game and a merid of the data and a	
Sample ID LCS-40046	SampType: LCS	;	Test	Code: EF	A Method	8015M/D: Die	sel Range	e Organics		
Client ID: LCSS	Batch ID: 4004	46	R	unNo: 53	3809					
Prep Date: 8/29/2018	Analysis Date: 8/3	0/2018	S	eqNo: 17	76771	Units: %Rec				
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	3.8	5.000		75.6	50.6	138				
Sample ID MB-40046	SampType: MBI	_K	Test	Code: EF	PA Method	8015M/D: Die	sel Range	e Organics		
Client ID: PBS	Batch ID: 4004	46	R	unNo: 53	3809					
Prep Date: 8/29/2018	Analysis Date: 8/3	0/2018	S	eqNo: 17	76772	Units: %Rec	;			
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	9.6	10.00		96.5	50.6	138				

Qualifiers:

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

Р

W Sample container temperature is out of limit as specified

Client:Blagg EngineeringProject:GCU 198

Sample ID MB-40054	SampT	ype: ME	BLK	Tes	stCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	n ID: 40	054	F	RunNo: 53819						
Prep Date: 8/29/2018	Analysis Date: 8/30/2018			S	SeqNo: 1776352 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	920		1000		91.8	15	316				
Sull. DFD	920	-	1000		91.0	15	310				
Sample ID LCS-40054		ype: LC		Tes			8015D: Gaso	line Rang	0		
	SampT	ype: LC	S			PA Method		line Rang	9		
Sample ID LCS-40054	SampT	n ID: 40	S 054	F	tCode: El	PA Method 3819			9		
Sample ID LCS-40054 Client ID: LCSS	SampT Batch	n ID: 40	S 054 30/2018	F	tCode: El	PA Method 3819	8015D: Gaso		e RPDLimit	Qual	
Sample IDLCS-40054Client ID:LCSSPrep Date:8/29/2018	SampT Batch Analysis D	n ID: <b>40</b> 0 Date: <b>8/</b> 3	S 054 30/2018	F	tCode: El RunNo: 5 SeqNo: 1	PA Method 3819 776353	8015D: Gaso Units: mg/K	(g		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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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WO#: 1808H73 31-Aug-18

Client: Blagg Engineering

**Project:** 

GCU 198

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Sample ID MB-40054	SampType: MBLK TestCode: EPA Method						8021B: Volat	iles		
Client ID: PBS	Batch	ID: 40	054	R	unNo: 5	3819				
Prep Date: 8/29/2018	Analysis D	ate: 8/	30/2018	S	eqNo: 1	776374	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025						period and the starty of distance rain		
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		90.9	80	120			
Sample ID LCS-40054	SampT	ype: LC	S	Test	Code: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	ID: 40	054	R	unNo: 5	3819				
Prep Date: 8/29/2018	Analysis D	ate: 8/	30/2018	S	eqNo: 1	776375	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	91.4	77.3	128			
Toluene	0.94	0.050	1.000	0	94.2	79.2	125			
Ethylbenzene	0.94	0.050	1.000	0	94.0	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	94.7	81.6	129			
0 10 0 1	0.04		4 000		00.0	00	400			
Surr: 4-Bromofluorobenzene	0.91		1.000		90.6	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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 8 of 8

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3975	4901 Hawkins N Iquerque, NM 8710	<sup>E</sup> 9 <b>San</b> 7	nple Log-In Check List
Client Name: BLAGG	Work Order Number:	1808H73		RcptNo: 1
Received By: Anne Thorne	8/30/2018 7:00:00 AM		ann A.	
Completed By: Anne Thome / /	8/30/2018 7:28:56 AM		ame An	
Reviewed By: JAB 08/30/18	0.0072010 7.20.00 All		Come An	~~~
Reviewed By: JAB 08/30/18 Labeled by: A- 08/30/18	7			
Chain of Custody				
1. Is Chain of Custody complete?		Yes 🖌	No 🗌	Not Present
2. How was the sample delivered?		Courier		
Log In				
3. Was an attempt made to cool the samples?		Yes 🗸	No	NA
4. Were all samples received at a temperature of	of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗌
5. Sample(s) in proper container(s)?		Yes 🗹	No 🗌	
6. Sufficient sample volume for indicated test(s)	?	Yes 🖌	No 🗌	
7. Are samples (except VOA and ONG) properly	preserved?	Yes 🗹	No 🗌	
8. Was preservative added to bottles?		Yes	No 🖌	NA 🗌
9. VOA vials have zero headspace?		Yes	No 🗌	No VOA Vials 🗹
10. Were any sample containers received broken	?	Yes	No 🗹	# of preserved
11. Does paperwork match bottle labels?		Yes 🗹	No 🗌	for pH: (<2 or >12 unless noted)
(Note discrepancies on chain of custody) 12. Are matrices correctly identified on Chain of C	ustody?	Yes 🖌	No 🗌	Adjusted?
13. Is it clear what analyses were requested?		Yes V		a.
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:
Special Handling (if applicable)				
15. Was client notified of all discrepancies with the	is order?	Yes	No 🗌	NA 🖌
Person Notified:	Date	1000-000000000000000000000000000000000	waamaanda daaraa ahaa	
By Whom:	Via:	eMail Phor	ne 🗌 Fax	In Person
Regarding:				
Client Instructions:			no alla francista de Calendara	
16. Additional remarks:	an namachana anns àrd carlon Yalasan anns 1 s			and a second second second second
17. <u>Cooler Information</u>				
Cooler No Temp °C Condition Sea	al Intact Seal No Se	eal Date Sig	ned By	
1 1.1 Good Yes		a for the most score sector and an interest score sufficient for		

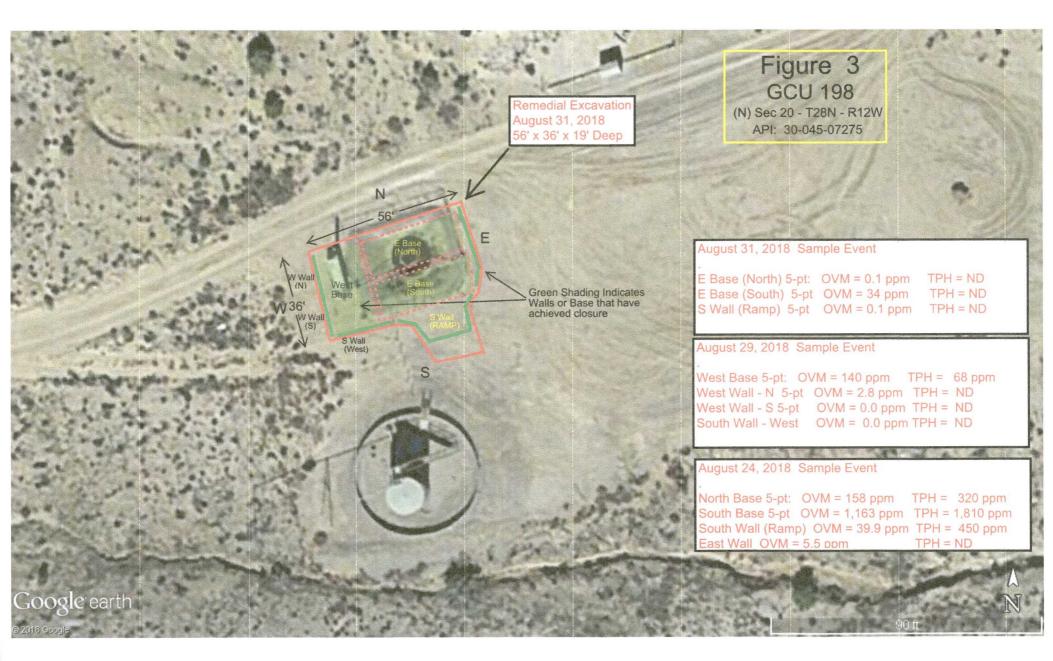
Client:	hain	MERICA	istody Record	Turn-Around		SAME Dav													NT		
	BLAGG Address	ENGW	EERING, INC.	Project Name GCL				100		V	www	.hal	lenv	ironi	ment	tal.co	om		ATC	Л	T
-	150	r) 77	0.007	Project #:						аwкіі 5-34		75	F	ax	505-	345	410	7109 7			
		5/30	0 - 1183	Droiget Mone				5	<u></u>			A	naiy		Req	ues					
email or QA/QC I	Package:	-	□ Level 4 (Full Validation)	Project Mana	E BEEBE		\$ (8021)	TPH (Gas only)	/ DRO / MRO)			SIMS)		,PO4,SO4	2 PCB's						
	AP	□ Othe	r	On Ice:		é ⊒No /		E + TPH		418.1)	504.1)	8270	als	NO <sub>3</sub> ,NO <sub>2</sub>	es / 8082		(A)				Y or N)
Date	Time	Matrix	Sample Request ID	Sample rem Container Type and # Me off Kd	Preservative Type		BTEX + MTB	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,Cl,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides /	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
125/2018	1229	SOIL	WEST BASE @ 19'	403×1	COOL	201	X		X									×			
1	1239		WEST WALL- NORTH HALF			202	1		1									1			
	1244		WEST WALL-SOUTH HALF			-003															
	1248		SOUTH WAR- WEST FLALE						(		-										_
																			-		
												-									
					1 																
						*			$\rightarrow$	$\rightarrow$	-+								+		_
Date: 9/29/19 Date: 8/29/18	Time: 1513 Time: 1817	Relinquish Relinquish	4 Blagg	Received by:	whet	Date Time 8/29/15 1513 Date Time 08/30/18 0700	Ren	narks		BILL	Br	>	SAB	I.	Bē	EBE					

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

# GCU 198

Site Remediation August 31, 2018

Figure 3 Photographs Lab Reports



GCU 198 Sample Locations 8/31/2018

> x x South Wall (Ramp)

> > East Base S. Half

East Base N. Half



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

September 05, 2018 Sabre Beebe Blagg Engineering P. O. Box 87 Bloomfield, NM 87413

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

RE: GCU 198

OrderNo.: 1809001

Dear Sabre Beebe:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/1/2018 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 <u>www.hallenvironmental.com</u> 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 #NM0901

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

<b>Analytical Report</b>
Lab Order 1809001
Date Reported: 9/5/2018

**CLIENT:** Blagg Engineering Client Sample ID: East Base, North Half @ 19' GCU 198 Collection Date: 8/31/2018 12:35:00 PM **Project:** Lab ID: 1809001-001 Matrix: SOIL Received Date: 9/1/2018 7:30:00 AM PQL Qual Units Analyses Result **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride ND 30 20 9/4/2018 11:59:23 AM 40114 mg/Kg EPA METHOD 8015D MOD: GASOLINE RANGE Analyst: AG

Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	9/4/2018 10:30:09 AM	A53876
Surr: BFB	106	70-130	%Rec	1	9/4/2018 10:30:09 AM	A53876
EPA METHOD 8015M/D: DIESEL RANGE ORG	SANICS				Analyst:	Irm
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/4/2018 10:31:07 AM	40110
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/4/2018 10:31:07 AM	40110
Surr: DNOP	111	50.6-138	%Rec	1	9/4/2018 10:31:07 AM	40110
EPA METHOD 8260B: VOLATILES SHORT LIS	τ.				Analyst:	AG
LEAMETHOD 02000. VOLATILLO STORT LI					Analyst.	AG
Benzene	ND	0.017	mg/Kg	1	9/4/2018 10:30:09 AM	B53876
		0.017 0.033	mg/Kg mg/Kg	1 1	,	
Benzene	ND		0 0		9/4/2018 10:30:09 AM	B53876
Benzene Toluene	ND ND	0.033	mg/Kg	1	9/4/2018 10:30:09 AM 9/4/2018 10:30:09 AM	B53876 B53876
Benzene Toluene Ethylbenzene	ND ND ND	0.033	mg/Kg mg/Kg	1 1	9/4/2018 10:30:09 AM 9/4/2018 10:30:09 AM 9/4/2018 10:30:09 AM	B53876 B53876 B53876

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 8
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

<b>Analytical Report</b>
Lab Order 1809001
Date Reported: 9/5/2018

**CLIENT:** Blagg Engineering

1809001-002

Project: GCU 198

Lab ID:

Client Sample ID: East Base, South Half @ 19' Collection Date: 8/31/2018 12:41:00 PM

Received Date: 9/1/2018 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	MRA
Chloride	ND	30		mg/Kg	20	9/4/2018 12:11:47 PM	40114
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst	AG
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	9/4/2018 10:53:15 AM	A53876
Surr: BFB	109	70-130		%Rec	1	9/4/2018 10:53:15 AM	A53876
EPA METHOD 8015M/D: DIESEL RANGE ORGA	NICS					Analyst	Irm
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/4/2018 10:53:11 AM	40110
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/4/2018 10:53:11 AM	40110
Surr: DNOP	115	50.6-138		%Rec	1	9/4/2018 10:53:11 AM	40110
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst	AG
Benzene	ND	0.016		mg/Kg	1	9/4/2018 10:53:15 AM	B53876
Toluene	ND	0.032		mg/Kg	1	9/4/2018 10:53:15 AM	B53876
Ethylbenzene	ND	0.032		mg/Kg	1	9/4/2018 10:53:15 AM	B53876
Xylenes, Total	ND	0.064		mg/Kg	1	9/4/2018 10:53:15 AM	B53876
Surr: 4-Bromofluorobenzene	122	70-130		%Rec	1	9/4/2018 10:53:15 AM	B53876
Surr: Toluene-d8	97.0	70-130		%Rec	1	9/4/2018 10:53:15 AM	B53876

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 8
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
PQL		Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

	<b>Analytical Report</b>
	Lab Order 1809001
	Date Reported: 9/5/2018
Client Sample ID:	South Wall (Ramp) (6'-17')

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CLIENT:	Blagg Engineering		Cl	ient Sample II	D: So	uth Wall (Ramp) (6'-17	7')
Project:	GCU 198		(	Collection Dat	e: 8/3	31/2018 12:48:00 PM	
Lab ID:	1809001-003	Matrix: SOIL		<b>Received Dat</b>	<b>e:</b> 9/1	/2018 7:30:00 AM	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA MET	THOD 300.0: ANIONS					Analyst	MRA
Chloride		ND	30	mg/Kg	20	9/4/2018 12:24:11 PM	40114
EPA MET	THOD 8015D MOD: GASOL	INE RANGE				Analyst	AG
Gasoline	e Range Organics (GRO)	ND	3.2	mg/Kg	1	9/4/2018 11:16:14 AM	A53876
Surr: I	BFB	111	70-130	%Rec	1	9/4/2018 11:16:14 AM	A53870
EPA MET	THOD 8015M/D: DIESEL R	ANGE ORGANICS				Analyst	Irm
Diesel R	ange Organics (DRO)	ND	9.9	mg/Kg	1	9/4/2018 11:15:05 AM	40110
Motor Oi	I Range Organics (MRO)	ND	49	mg/Kg	1	9/4/2018 11:15:05 AM	40110
Surr: I	DNOP	116	50.6-138	%Rec	1	9/4/2018 11:15:05 AM	40110
EPA MET	HOD 8260B: VOLATILES	SHORT LIST				Analyst	AG
Benzene		ND	0.016	mg/Kg	1	9/4/2018 11:16:14 AM	B53876
Toluene		ND	0.032	mg/Kg	1	9/4/2018 11:16:14 AM	B53876
Ethylben	izene	ND	0.032	mg/Kg	1	9/4/2018 11:16:14 AM	B53876
Xylenes,	Total	ND	0.064	mg/Kg	1	9/4/2018 11:16:14 AM	B5387
Surr: 4	4-Bromofluorobenzene	125	70-130	%Rec	1	9/4/2018 11:16:14 AM	B5387
Surr:	Toluene-d8	96.5	70-130	%Rec	1	9/4/2018 11:16:14 AM	B5387

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 8
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
PQL S		Practical Quanitative Limit	RL	Reporting Detection Limit
		% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Client: Blagg** Engineering GCU 198 **Project:** 

Sample ID MB-40114	SampType: mblk	TestCode: EPA Method 300.0: Anions									
Client ID: PBS	Batch ID: 40114	RunNo: 53883	RunNo: 53883								
Prep Date: 9/4/2018	Analysis Date: 9/4/2018	SeqNo: 1779460	Units: mg/Kg								
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual							
Chloride	ND 1.5										
Sample ID LCS-40114	SampType: Ics	TestCode: EPA Method 300.0: Anions									
Client ID: LCSS	Batch ID: 40114	RunNo: 53883									
Prep Date: 9/4/2018	Analysis Date: 9/4/2018	SeqNo: 1779461	Units: mg/Kg								
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual							
Chloride	14 1.5 15.00	0 92.6 90	110								

WO#:

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1809001

05-Sep-18

#### **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
- PQL Practical Quanitative Limit
- 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
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client:	Blagg Engineering
Project:	GCU 198

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8015M/D: Diesel Range Organics Units: mg/Kg HighLimit %RPD RPDLimit 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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: 1809001

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#### **Client: Blagg Engineering**

**Project:** 

GCU 198

Sample ID	100ng lcs	Sampl	ype: LC	S4	Test	tCode: El	PA Method	8260B: Volat	tiles Short	List					
Client ID:	BatchQC	Batc	h ID: <b>B5</b>	3876	R	RunNo: 5	3876								
Prep Date:		Analysis Date: 9/4/2018			S	eqNo: 1	777900	Units: mg/Kg							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene		0.98	0.025	1.000	0	97.7	80	120							
Toluene		1.1	0.050	1.000	0	107	80	120							
Ethylbenzene		1.0	0.050	1.000	0	103	80	120							
Xylenes, Total		3.0	0.10	3.000	0	101	80	120							
Surr: 4-Brom	nofluorobenzene	0.51		0.5000		102	70	130							
Surr: Toluen	e-d8	0.51		0.5000		101	70	130							
Sample ID	ample ID rb SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List														
Client ID:	PBS	Batc	h ID: <b>B5</b>	3876	R	anNo: 5	3876								
Prep Date:		Analysis [	Date: 9/	4/2018	S	eqNo: 1	777904	Units: mg/M	(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												
	nofluorobenzene	0.55		0.5000		110	70	130							
Surr: Toluen	ie-d8	0.50		0.5000		101	70	130							
Sample ID	1809001-002am	s Samp1	ype: MS	4	Test	Code: El	PA Method	8260B: Volat	tiles Short	List					
Client ID:	East Base, Sout	th H Batcl	h ID: <b>B5</b>	3876	R	anNo: 5	3876								
Prep Date:		Analysis E	Date: 9/	4/2018	S	eqNo: 1	778833	Units: mg/M	(g						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene		0.59	0.016	0.6369	0	92.6	80	120							
Toluene		0.64	0.032	0.6369	0	100	80	120							
Ethylbenzene		0.69	0.032	0.6369	0	109	82	121							
Xylenes, Total		2.0	0.064	1.911	0.01299	106	80.2	120							
Surr: 4-Brom	nofluorobenzene	0.36		0.3184		113	70	130							
Surr: Toluen	e-d8	0.30	Comment of the owner	0.3184		94.9	70	130	a laga sa ang a sa ang alaway						
Sample ID	1809001-002am	sd Samp1	ype: MS	D4	Test	Code: E	PA Method	8260B: Volat	tiles Short	List					
Client ID:	East Base, Sout	th H Batcl	n ID: <b>B5</b>	3876	R	anNo: 5	3876								
Prep Date:		Analysis D	Date: 9/	4/2018	S	eqNo: 1	778834	Units: mg/K	(g						
Amelida		Result	PQL	and the second	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Analyte		0.59	0.016	0.6369	0	92.9	80	120	0.367	20					
Benzene			0 0 0 0 0	0.6369	0	100	80	120	0.150	20					
Benzene Toluene		0.64	0.032												
Benzene		0.64 0.67 2.0	0.032	0.6369	0 0.01299	105 103	82 80.2	121 120	3.45 2.31	20 20					

#### Qualifiers:

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

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WO#: 1809001

05-Sep-18

**Client:** Blagg Engineering GCU 198 **Project:** 

Sample ID         1809001-002amsd         SampType:         MSD4         TestCode:         EPA Method         8260B:         Volatiles         Short List											
Client ID: East Base, South H Batch ID: B53876 RunNo: 53876											
Prep Date:	S	eqNo: 1	778834	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	0.36		0.3184		113	70	130	0	0		
Surr: Toluene-d8	0.31		0.3184		97.6	70	130	0	0		

**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
- PQL Practical Quanitative Limit
- 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
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

- - Page 7 of 8

05-Sep-18

WO#: 1809001

Client: Blagg Engineering Project: GCU 198

Sample ID 2.5ug gro Ics	SampT	ype: LC	S	TestCode: EPA Method 8015D Mod: Gasoline Range											
Client ID: LCSS	Batch	n ID: A5	3876	RunNo: 53876											
Prep Date:	Analysis D	ate: 9/	4/2018	S	SeqNo: 1	777897	Units: mg/k	٢g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	70	130								
Surr: BFB	480		500.0		96.3	70	130								
					00.0	10	100								
Sample ID rb		ype: ME		Tes			8015D Mod:	Gasoline	Range						
Sample ID <b>rb</b> Client ID: <b>PBS</b>	SampT	ype: ME	BLK			PA Method		Gasoline	Range						
	SampT	1D: A5	BLK	F	tCode: El	PA Method 3876			Range						
Client ID: PBS	SampT Batch	1D: A5	3LK 3876 4/2018	F	tCode: Ef	PA Method 3876	8015D Mod:		Range RPDLimit	Qual					
Client ID: PBS Prep Date:	SampT Batch Analysis D	a ID: A5	3LK 3876 4/2018	F	tCode: EF RunNo: 5 SeqNo: 1	PA Method 3876 777898	8015D Mod: Units: mg/M	(g		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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: **1809001** 

05-Sep-18

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Client Name:       BLAGG       Work Order Number:       1809001       RcptNo:       1         Received By:       John Caldwell       9/1/2018       7:30:00 AM       Qhallarth       0         Completed By:       Anne Thome       9/4/2018       7:09:46 AM       Qere       Main         Completed By:       Anne Thome       9/4/2018       7:09:46 AM       Qere       Main	
an in the	
an louise	
Reviewed By: ID 09/04/18 Lobeled by: Ar 09/04/18	
Chain of Custody	
1. Is Chain of Custody complete? Yes 🗹 No 🗌 Not Present 🗌	
2. How was the sample delivered? Courier	
Log In       3. Was an attempt made to cool the samples?   Yes ♥ No □ NA □	
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No □ NA □	
5. Sample(s) in proper container(s)? Yes 🗹 No 🗌	
6. Sufficient sample volume for indicated test(s)? Yes 🗹 No	
7. Are samples (except VOA and ONG) properly preserved? Yes 🗹 No	
8. Was preservative added to bottles? Yes No 🗹 NA	
9. VOA vials have zero headspace? Yes No No VOA Vials 🗹	
10. Were any sample containers received broken? Yes No ✔ # of preserved bottles checked	
11. Does paperwork match bottle labels? Yes 🗹 No 🗌 for pH:	2 unless noted)
12, Are matrices correctly identified on Chain of Custody? Yes 🗹 No 🗌 Adjusted?	
13. is it clear what analyses were requested? Yes 🗹 No 🗌	
14. Were all holding times able to be met? Yes  ✓ No Checked by:	
Special Handling (if applicable)	
15. 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:	
16. Additional remarks:	
17. <u>Cooler Information</u> <u>Cooler No</u> Temp <sup>e</sup> C Condition Seal Intact Seal No Seal Date Signed By 1 6.0 Good Yes	

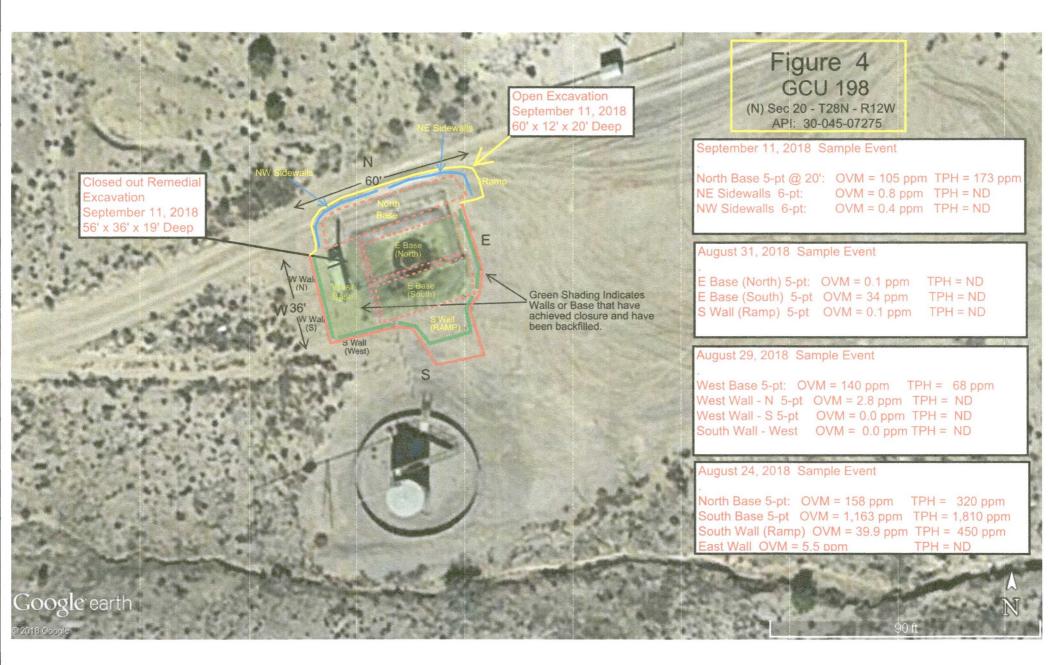
Chain-of-Custody Record Client: BP AMERICA BLAGG ENGINEERING, INC. Mailing Address:				Turn-Around Time: SAME DAY Project Name: GCU 198 Project #:					HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107													٢		
Phone	#: 50	5-3	20 -	163	-					Analysis Request														
email o	r Fax#:				Proje	ect Mana	iger:				only)	(0)					O4)							
QA/QC Package: Standard   Level 4 (Full Validation)					re Beeb			s (8021)	(Gas o	RO / MF			SIMS)	-	,PO4,S(	2 PCB's								
Accreditation  NELAP Other			On Ic	æ:	TEFF BLAC	🗆 No			E + TPH (Gas	SRO / DF	418.1)	504.1)	or 8270 :	s	103, NO2	ss / 808		(A)	w			( or N)		
Date	Time	Matrix		mple Request ID	Тур	tainer e and #	Preservative Type		AL No.	BTEX + MTBE	BTEX + MTBE	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE	-		Air Bubbles (Y or N)
3/3/18	1235	SOIL	EAST	BASE, NORTH HALF 19	40	e ×I	CODC		105	X		X									X			
1	1241		EAST B	ASE SOUTH HALF @ 19"			1		202	X		X									X			
1	1248		South	BASE, NORTH HALF (9 INSE, SOLTH HALF (19' Wall(RAMP)(6'-11')	2 703			X		Х									X					
Date: Time: Relinquished by: 9/3/2008 1417 Jul Blogg Date: Time: Relinquished by:		G	ved by:	Alua	Date Gil Date	Time 111 073 Time	1	nark	s:	BUL	BA	<b>•</b>	SA	Bre	E Í	368	BE							

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

# GCU 198

Site Remediation September 11, 2018

Figure 4 Photographs Lab Reports



GCU 198 Sample Locations 9/11/2018

X

X



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

September 13, 2018 Sabre Beebe Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: FAX

RE: GCU 198

OrderNo.: 1809580

Dear Sabre Beebe:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/12/2018 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 <u>www.hallenvironmental.com</u> 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 #NM0901

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

<b>Analytical Report</b>		
Lab Order 1809580		
Date Reported: 9/13/2018		

# Hall Environmental Analysis Laboratory, Inc.

A	
Lab ID: 1809580-001	Matrix: MEOH (SOIL) Received Date: 9/12/2018 7:50:00 AM
Project: GCU 198	Collection Date: 9/11/2018 10:21:00 AM
CLIENT: Blagg Engineering	Client Sample ID: North Base 5-pt @ 20'

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	33	30	mg/Kg	20	9/12/2018 12:17:57 PM	40298
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst:	Irm
Diesel Range Organics (DRO)	120	9.9	mg/Kg	1	9/12/2018 10:30:34 AM	40297
Motor Oil Range Organics (MRO)	53	50	mg/Kg	1	9/12/2018 10:30:34 AM	40297
Surr: DNOP	118	50.6-138	%Rec	1	9/12/2018 10:30:34 AM	40297
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	9/12/2018 9:38:51 AM	G54096
Surr: BFB	104	15-316	%Rec	1	9/12/2018 9:38:51 AM	G54096
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.018	mg/Kg	1	9/12/2018 9:38:51 AM	B54096
Toluene	ND	0.036	mg/Kg	1	9/12/2018 9:38:51 AM	B54096
Ethylbenzene	ND	0.036	mg/Kg	1	9/12/2018 9:38:51 AM	B54096
Xylenes, Total	ND	0.072	mg/Kg	1	9/12/2018 9:38:51 AM	B54096
Surr: 4-Bromofluorobenzene	98.8	80-120	%Rec	1	9/12/2018 9:38:51 AM	B54096

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	D	Sample Diluted Due to Matrix	E	Value above quantitation range		
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 8		
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range		
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit		
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified		

<b>Analytical Report</b>	
Lab Order 1809580	
Date Reported: 9/13/2018	

## Hall Environmental Analysis Laboratory, Inc.

CLIENT.	Blagg Engineering	Client Sample ID: NE Sidewalls 6-pt (6'-18')
	GCU 198	<b>Collection Date:</b> 9/11/2018 10:34:00 AM
0		
Lab ID:	1809580-002	Matrix: MEOH (SOIL) Received Date: 9/12/2018 7:50:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	9/12/2018 12:30:21 PM	40298
EPA METHOD 8015M/D: DIESEL RANGE ORG/	ANICS				Analyst	Irm
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	9/12/2018 10:52:44 AM	40297
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	9/12/2018 10:52:44 AM	40297
Surr: DNOP	108	50.6-138	%Rec	1	9/12/2018 10:52:44 AM	40297
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	9/12/2018 10:02:04 AM	G54096
Surr: BFB	91.3	15-316	%Rec	1	9/12/2018 10:02:04 AM	G54096
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.019	mg/Kg	1	9/12/2018 10:02:04 AM	B54096
Toluene	ND	0.038	mg/Kg	1	9/12/2018 10:02:04 AM	B54096
Ethylbenzene	ND	0.038	mg/Kg	1	9/12/2018 10:02:04 AM	B54096
Xylenes, Total	ND	0.077	mg/Kg	1	9/12/2018 10:02:04 AM	B54096
Surr: 4-Bromofluorobenzene	96.3	80-120	%Rec	1	9/12/2018 10:02:04 AM	B54096

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 8
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

<b>Analytical Report</b>
Lab Order 1809580
Date Reported: 9/13/2018

## Hall Environmental Analysis Laboratory, Inc.

Matrix: MEOH (SOIL) Received Date: 9/12/2018 7:50:00 AM
Matrix: MEOH (SOIL) Received Date: 9/12/2018 7:50:00 AM
Collection Date: 9/11/2018 10:44:00 AM
Client Sample ID: NW Sidewalls 6-pt (6'-18')

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	40	30	mg/Kg	20	9/12/2018 12:42:46 PM	40298
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	Irm
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	9/12/2018 11:14:40 AM	40297
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/12/2018 11:14:40 AM	40297
Sur: DNOP	122	50.6-138	%Rec	1	9/12/2018 11:14:40 AM	40297
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.7	mg/Kg	1	9/12/2018 10:25:27 AM	G54096
Surr: BFB	93.9	15-316	%Rec	1	9/12/2018 10:25:27 AM	G54096
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.019	mg/Kg	1	9/12/2018 10:25:27 AM	B54096
Toluene	ND	0.037	mg/Kg	1	9/12/2018 10:25:27 AM	B54096
Ethylbenzene	ND	0.037	mg/Kg	1	9/12/2018 10:25:27 AM	B54096
Xylenes, Total	ND	0.074	mg/Kg	1	9/12/2018 10:25:27 AM	B54096
Surr: 4-Bromofluorobenzene	99.2	80-120	%Rec	1	9/12/2018 10:25:27 AM	B54096

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 8
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Client:** GCU 198 **Project:** 

## Blagg Engineering

	and the second	والمتعاومة والمراز معرفه معارك والمسترجع المراجع والمتنافعة ومحروط والمترجع والمرجع والمراجع والمراجع فيترك والمراجع المراجع والمراجع والمرا		
Sample ID MB-40298	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 40298	RunNo: 54103		
Prep Date: 9/12/2018	Analysis Date: 9/12/2018	SeqNo: 1788910	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID LCS-40298	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 40298	RunNo: 54103		
		1(dill'10, 34103		
Prep Date: 9/12/2018	Analysis Date: 9/12/2018	SeqNo: 1788911	Units: mg/Kg	
Prep Date: <b>9/12/2018</b> Analyte	,		0 0	RPDLimit Qual

#### 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
- PQL Practical Quanitative Limit
- % 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
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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WO#: 1809580

**Client: Blagg Engineering Project:** GCU 198

Sample ID LCS-40297	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 40297	RunNo: <b>54091</b>							
Prep Date: 9/12/2018	Analysis Date: 9/12/2018	SeqNo: 1787479 Units: mg/Kg							
Analyte	Result PQL SPK value	e SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual							
Diesel Range Organics (DRO)	48 10 50.00	0 96.6 70 130							
Surr: DNOP	5.2 5.000	0 104 50.6 138							
Sample ID MB-40297	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 40297	RunNo: 54091							
Prep Date: 9/12/2018	Analysis Date: 9/12/2018	SeqNo: 1787480 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	11 10.00	113 50.6 138							
Sample ID MB-40270	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 40270	RunNo: 54091							
Prep Date: 9/11/2018	Analysis Date: 9/12/2018	SeqNo: 1788492 Units: %Rec							
Analyte	Result PQL SPK value	e SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual							
Surr: DNOP	12 10.00	) 119 50.6 138							
Sample ID LCS-40270	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 40270	RunNo: 54091							
Prep Date: 9/11/2018	Analysis Date: 9/12/2018	SeqNo: 1788493 Units: %Rec							
Analyte	Result PQL SPK value	e SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual							
Surr: DNOP	5.1 5.000	0 102 50.6 138							

**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
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Value above quantitation range Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

WO#: 1809580

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Client: Blagg Engineering

Project:	GCU 198										
Sample ID	RB	SampTyp	pe: ME	BLK	Test	Code: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batch I	D: G5	4096	R	unNo: 5	4096				
Prep Date:		Analysis Dat	te: 9/	12/2018	S	eqNo: 1	788217	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 900	5.0	1000		90.1	15	316			
Sample ID	2.5UG GRO LCS	SampTy	pe: LC	S	Test	tCode: El	PA Method	8015D: Gaso	line Rang	6	
Client ID:	LCSS	Batch I	D: <b>G5</b>	4096	R	unNo: 5	4096				
Prep Date:		Analysis Dat	te: 9/	12/2018	S	eqNo: 1	788218	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2	e Organics (GRO)	30	5.0	25.00	0	118	75.9	131			
Surr: BFB	the financian my discussible propi for terms backs in personan mapping and statements	1000		1000	ana ang kanalang sa	105	15	316			
Sample ID	1809580-001AMS	SampTy	pe: MS	6	Test	Code: E	PA Method	8015D: Gaso	line Rang	e	
Client ID:	North Base 5-pt @	2 Batch I	D: G5	4096	R	anNo: 5	4096				
Prep Date:		Analysis Dat	te: 9/	12/2018	S	eqNo: 1	788219	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	21	3.6	17.88	0	120	77.8	128			
Surr: BFB		880		715.3		123	15	316			
Sample ID	1809580-001AMSI	SampTy	pe: MS	SD.	Test	Code: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	North Base 5-pt @	2 Batch I	D: <b>G5</b>	4096	R	anNo: 5	4096				
Prep Date:		Analysis Dat	te: 9/	12/2018	S	eqNo: 1	788220	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	21	3.6	17.88	0	117	77.8	128	2.30	20	
Surr: BFB		870		715.3	N (1918) - Jacobian Martina and States of States o	121	15	316	0	0	ett at sealer a same diskeyten ad som
Sample ID	MB-40280	SampTy	pe: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batch I	D: 40	280	R	anNo: 5	4096				
Prep Date:	9/11/2018	Analysis Dat	te: 9/	12/2018	S	eqNo: 1	788284	Units: %Re	c		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		970		1000		96.9	15	316			
Sample ID	LCS-40280	SampTy	pe: LC	S	Test	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	LCSS	Batch I	D: 40	280	R	unNo: 5	4096				
Prep Date:	9/11/2018	Analysis Dat	te: 9/	12/2018	S	SeqNo: 1	788285	Units: %Ree	с		
Analita		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte		Result	L CL	Of it value	Of It Ito Vui	/UILO	LOAAFILLI	rightin	10111	IN DEITH	Guai

#### Qualifiers:

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

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WO#: **1809580** 

13-Sep-18

**Client:** Blagg Engineering GCU 198 Project:

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Sample ID	RB	Samp	Туре: МЕ	BLK	Test	tCode: El	PA Method	8021B: Volat	iles	artandiya Wanasayarta da taka martaka pakar	, an
Client ID:	PBS	Batc	h ID: <b>B5</b>	4096	R	RunNo: 54	4096				
Prep Date:		Analysis [	Date: 9/	12/2018	S	SeqNo: 1	788312	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-Bron	nofluorobenzene	0.95	-	1.000	a general des portes presentant de la desta de la desta	94.9	80	120			a para mina mangana pana mina mina mina mi
Sample ID 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles											
Client ID:	LCSS	Batc	h ID: <b>B5</b>	4096	R	RunNo: 54	4096				
Prep Date:		Analysis [	Date: 9/	12/2018	S	SeqNo: 17	788313	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.91	0.025	1.000	0	90.7	77.3	128			
Toluene		0.95	0.050	1.000	0	94.7	79.2	125			
Ethylbenzene		0.94	0.050	1.000	0	93.8	80.7	127			
Xylenes, Total		2.8	0.10	3.000	0	94.0	81.6	129			
Surr: 4-Bron	nofluorobenzene	1.0		1.000		101	80	120		Automation (for the interspective to compare	gegi kerenda dari dari dari berkan dari kerenda dari kerenda dari kerenda dari kerenda dari kerenda dari kerend
Sample ID	1809580-002AMS	Samp	Type: MS	6	Test	Code: El	PA Method	8021B: Volat	iles		
Client ID:	NE Sidewalls 6-pt	(6 Batc	h ID: 85	4096	R	anNo: 54	4096				
Prep Date:		Analysis [	Date: 9/	12/2018	S	SeqNo: 17	788314	Units: mg/K	g		
Analyte											
Information and an an and an an an and a local distance		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.73	PQL 0.019	SPK value 0.7686	SPK Ref Val 0	%REC 95.3	LowLimit 68.5	HighLimit 133	%RPD	RPDLimit	Qual
Toluene		0.73 0.77		0.7686 0.7686	0 0		68.5 75	133 130	%RPD	RPDLimit	Qual
		0.73	0.019	0.7686	0	95.3	68.5	133	%RPD	RPDLimit	Qual
Toluene		0.73 0.77 0.76 2.3	0.019 0.038	0.7686 0.7686 0.7686 2.306	0 0	95.3 100 99.1 100	68.5 75 79.4 77.3	133 130 128 131	%RPD	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total	nofluorobenzene	0.73 0.77 0.76	0.019 0.038 0.038	0.7686 0.7686 0.7686	0 0 0	95.3 100 99.1	68.5 75 79.4	133 130 128	%RPD	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron		0.73 0.77 0.76 2.3 0.80	0.019 0.038 0.038	0.7686 0.7686 0.7686 2.306 0.7686	0 0 0	95.3 100 99.1 100 104	68.5 75 79.4 77.3 80	133 130 128 131		RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID	nofluorobenzene	0.73 0.77 0.76 2.3 0.80	0.019 0.038 0.038 0.077	0.7686 0.7686 0.7686 2.306 0.7686	0 0 0 0 Test	95.3 100 99.1 100 104	68.5 75 79.4 77.3 80 PA Method	133 130 128 131 120		RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID	nofluorobenzene 1809580-002AMSE	0.73 0.77 0.76 2.3 0.80	0.019 0.038 0.038 0.077 Fype: <b>MS</b>	0.7686 0.7686 2.306 0.7686 0.7686 0.7686	0 0 0 Test R	95.3 100 99.1 100 104	68.5 75 79.4 77.3 80 PA Method 4096	133 130 128 131 120	iles	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID:	nofluorobenzene 1809580-002AMSE	0.73 0.77 0.76 2.3 0.80 D Samp1 (6 Batcl Analysis E Result	0.019 0.038 0.038 0.077 Fype: <b>MS</b>	0.7686 0.7686 2.306 0.7686 0.7686 0.7686 <b>5D</b> 4096 12/2018	0 0 0 Test R	95.3 100 99.1 100 104 Code: EF	68.5 75 79.4 77.3 80 PA Method 4096	133 130 128 131 120 8021B: Volat	iles	RPDLimit	Qual
Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID: Prep Date:	nofluorobenzene 1809580-002AMSE	0.73 0.77 0.76 2.3 0.80 <b>D</b> SampT (6 Batcl Analysis E	0.019 0.038 0.038 0.077 Type: <b>MS</b> h ID: <b>B5</b> Date: <b>9</b> /	0.7686 0.7686 2.306 0.7686 0.7686 0.7686 <b>5D</b> 4096 12/2018	0 0 0 Test R S	95.3 100 99.1 100 104 Code: EF RunNo: 54 SeqNo: 17	68.5 75 79.4 77.3 80 PA Method 4096 788315	133 130 128 131 120 8021B: Volat Units: mg/K	iles g		
Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID: Prep Date: Analyte	nofluorobenzene 1809580-002AMSE	0.73 0.77 0.76 2.3 0.80 D Samp1 (6 Batcl Analysis I Result 0.72 0.75	0.019 0.038 0.038 0.077 Type: <b>MS</b> h ID: <b>B5</b> Date: <b>9</b> / PQL	0.7686 0.7686 2.306 0.7686 0.7686 0.7686 5D 4096 12/2018 SPK value	0 0 0 Test R SPK Ref Val	95.3 100 99.1 100 104 tCode: EF RunNo: 54 SeqNo: 17 %REC	68.5 75 79.4 77.3 80 PA Method 4096 788315 LowLimit	133 130 128 131 120 8021B: Volat Units: mg/K HighLimit	iles 9 %RPD	RPDLimit	
Toluene Ethylbenzene Xylenes, Total Surr: 4-Bron Sample ID Client ID: Prep Date: Analyte Benzene	1809580-002AMSI NE Sidewalls 6-pt	0.73 0.77 0.76 2.3 0.80 D Samp1 (6 Batcl Analysis E Result 0.72	0.019 0.038 0.038 0.077 Fype: <b>MS</b> h ID: <b>B5</b> Date: <b>9</b> / PQL 0.019	0.7686 0.7686 2.306 0.7686 0.7686 0.7686 12/2018 SPK value 0.7686	0 0 0 Test R SPK Ref Val 0	95.3 100 99.1 100 104 Code: EF RunNo: 54 SeqNo: 17 %REC 94.0	68.5 75 79.4 77.3 80 PA Method 4096 788315 LowLimit 68.5	133 130 128 131 120 8021B: Volat Units: mg/K HighLimit 133	iles 9 %RPD 1.36	RPDLimit 20	

#### Qualifiers:

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

Surr: 4-Bromofluorobenzene

Н Holding times for preparation or analysis exceeded

0.80

0.7686

Р

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range

- J Analyte detected below quantitation limits
  - Sample pH Not In Range

104

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

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120

0

0

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WO#: 1809580

13-Sep-18

		0 T
Project:	GCU 19	98
Client:	Blagg E	Ingineering

Sample ID MB-40280	SampType: MBLK	TestCode: EPA	Method 8021B: Vola	tiles		
Client ID: PBS	Batch ID: 40280	RunNo: 540	96			
Prep Date: 9/11/2018	Analysis Date: 9/12/2018	SeqNo: 178	8316 Units: %Re	с		
Analyte	Result PQL SPK v	alue SPK Ref Val %REC L	_owLimit HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0 1.	.000 101	80 120			
and the second section of the section o					help and the help that are particular providence of the	the second s
Sample ID LCS-40280	SampType: LCS	TestCode: EPA	Method 8021B: Vola	tiles		
Sample ID LCS-40280 Client ID: LCSS	SampType: LCS Batch ID: 40280	TestCode: EPA RunNo: 540		tiles		
		RunNo: 540	96			
Client ID: LCSS	Batch ID: <b>40280</b> Analysis Date: <b>9/12/2018</b>	RunNo: 540 SeqNo: 178	96		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
- PQL Practical Quanitative Limit
- 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
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

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WO#: 1809580

13-Sep-18

ANALYSIS LABORATORY	Alb TEL: 505-345-3975	Anatysis Laborator, 4901 Hawkins NE uquerque, NM 87109 FAX: 505-345-4107 allenvironmental.com	San	nple Log-In Ch	eck List
Client Name: BLAGG	Work Order Number	1809580		RcptNo: 1	
Received By: Erin Melendrez	9/12/2018 7:50:00 AM	U	LUZ	5	
Completed By: Ashley Gallegos	9/12/2018 8:31:12 AM		AZ		
Reviewed By: TO 9	liz lia Lo	ibeled	by	ENHA	12/18
Chain of Custody					
1. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present	
2. How was the sample delivered?		Courier			
Log In					
3. Was an attempt made to cool the samples?		Yes 🗹	No 🗌	NA	
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗌	
5. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
6. Sufficient sample volume for indicated test(s	)?	Yes 🗹	No 🗌		
7. Are samples (except VOA and ONG) propert	y preserved?	Yes 🗹	No 🗌		
8. Was preservative added to bottles?		Yes 🗌	No 🖌	NA 🗌	
9. VOA vials have zero headspace?		Yes	No 🗌	No VOA Vials 🗹	
10, Were any sample containers received broke	n?	Yes	No 🗹	# of preserved	~ /
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	for pH:	adnless noted)
12. Are matrices correctly identified on Chain of	Custody?	Yes 🗹	No 🗌	Adjusted 2	
13. Is it clear what analyses were requested?		Yes 🗹	No 🗌	1 M	
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Cenecked by:	
Special Handling (if applicable)			/		
15. Was client notified of all discrepancies with	this order?	Yes	No 🗌	NA 🗹	
Person Notified:	Date				
By Whom:	Via: [	eMail Phor	ne 🗌 Fax	In Person	
Regarding:	an a succession and the second se	in an		All Coperation and a second and a	
Client Instructions:					
16. Additional remarks:					
17. <u>Cooler Information</u> Cooler No Temp °C Condition S 1 1.1 Good Yes	and the second se	Seal Date Sig	gned By		

12 . UNL a Server Million (Conc. 1974)

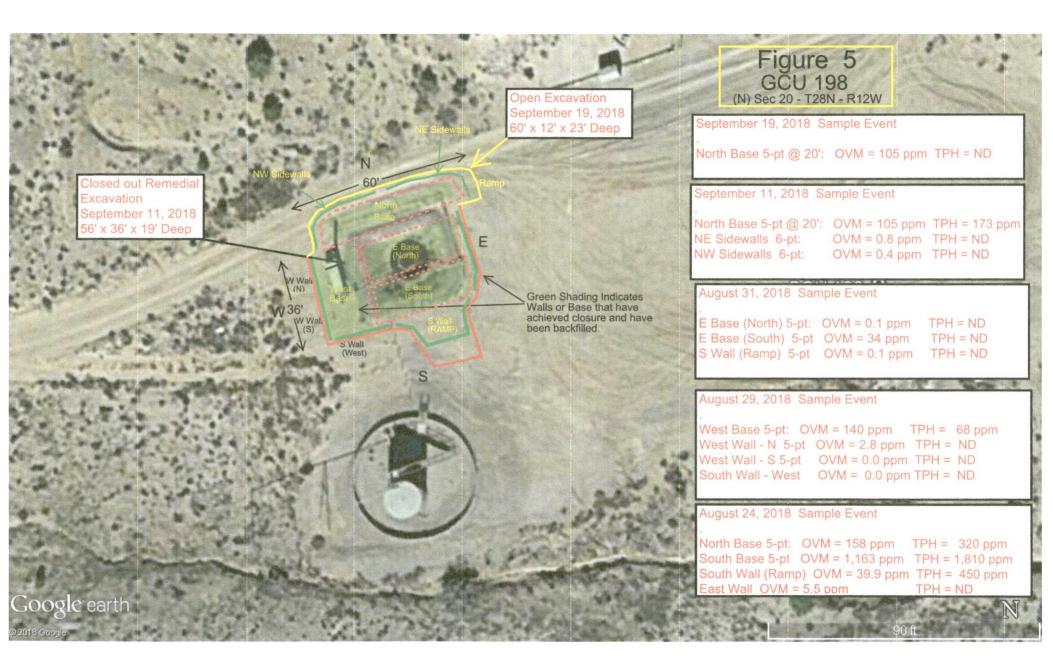
С	hain	of-Cu	istody Record	Turn-Around																	
Client:	BP A	MERICA		□ Standard	🖉 Rush	SAME DAK													NT/		
	Bi 460	ENG	Neery Inc.	Project Name	<del>)</del> :										ment		_				
Mailing	Address	:	the second secon	GC	U 198	3		400	01 L									7109			
	1			Project #:						awki )5-34					505-						
Phone	#: 50	25-2	320 - 1193			a de se			1. 00	5-54	10-01	Statement in the local division in the local	Contract States	and the second second	Req	CANE INCOMENCE	A Statement of the				
email o				Project Mana	ger:		-	only)	0					)4)		-					Т
QA/QC	Package:		an <sub>a</sub> a	SAR	RE BEEB	E	(8021)	IS OF	MR			ŝ		4,SC	PCB's		2				
Stan	and the second se	1 	Level 4 (Full Validation)				S	(Ga	DRO / MRO)			SIM		PO	2 PC						
Accredi					TEFF BU		SINT	TPH (Gas	-	<del>[</del> ]	÷.	270		NO	8082						IN
			er	and the second se	X Yes		H	+	(GRO	418	504	or 8,	IIS	NO <sub>3</sub>	es /		(OA)	N			5
	(Type)		1			+0.7 (04)=1.1	ALT BE	+ MTBE	5B (	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides /	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Buhhlas (Y or N)
Date	Time	Matrix	Sample Request ID	Container	Preservative	HEAL No.	+	2 + 	8015B	(Met	(Me	s (8;	A 8 I	IS (F	Pes	BC	(Sel	HLL			Inhh
				Type and #	Туре	1809580	BTEX	BTEX	HdT	Hd	DB	'HA	SCR	Anior	3081	3260	\$270	0			Air B.
9/11/2019	1021	SUIL	NORTH BASE 5- DE R 20	40221	COOL	-001	X		X	-			-	H				X		+	-
1	1034	1	NORTH BASE 5- pt 0.20 NE SIDEWALLS 6-pt (6-16) NW SIDEWALLS 6-pt (6-18)	1	1	-002	X		X									X		1	T
1	1044		Nul Sinsuelle ( At 1/ -19)			7003	X		X									X			+
	10.1		INN SURVIUS 6-FOLGEND)				~			-								<u> </u>	-	+	+
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Date:	Time:	Relinquish	ed by:	Received by:	Couri	er page time											-				
8/11/10	1830	1911	ist half	lit	E q/p/	189/12/18 0750													2		

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

# GCU 198

Site Remediation September 19, 2018

Figure 5 Photographs Lab Reports



GCU 198 Sample Locations 9/19/2018

> North Base Extended to 23'



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

September 24, 2018 Steve Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: FAX

RE: GCU 198

OrderNo.: 1809B65

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/20/2018 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 <u>www.hallenvironmental.com</u> 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 #NM0901

Sincerely,

Only

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

<b>Analytical Report</b>
Lab Order 1809B65
Date Reported: 9/24/2018

# Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Blagg Engineering	Client Sample ID: North Base 5-pt @ 23'
<b>Project:</b>	GCU 198	Collection Date: 9/19/2018 12:56:00 PM
Lab ID:	1809B65-001	Matrix: MEOH (SOIL) Received Date: 9/20/2018 8:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	SRM
Chloride	ND	30		mg/Kg	20	9/20/2018 12:06:51 PM	40476
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS					Analyst	TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2018 10:30:48 AM	40471
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/20/2018 10:30:48 AM	40471
Surr: DNOP	89.8	50.6-138		%Rec	1	9/20/2018 10:30:48 AM	40471
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	9/20/2018 9:55:48 AM	40453
Surr: BFB	92.8	15-316		%Rec	1	9/20/2018 9:55:48 AM	40453
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.018		mg/Kg	1	9/20/2018 9:55:48 AM	40453
Toluene	ND	0.037		mg/Kg	1	9/20/2018 9:55:48 AM	40453
Ethylbenzene	ND	0.037		mg/Kg	1	9/20/2018 9:55:48 AM	40453
Xylenes, Total	ND	0.074		mg/Kg	1	9/20/2018 9:55:48 AM	40453
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	9/20/2018 9:55:48 AM	40453

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 5
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Client: Blagg** Engineering **Project:** GCU 198

3				
Sample ID MB-40476	SampType: MBLK	TestCode: EPA Method 3	300.0: Anions	en nya a hine dadi akan kaya mina kan kaya kana kaya kana kana kaya kana kan
Client ID: PBS	Batch ID: 40476	RunNo: 54324		
Prep Date: 9/20/2018	Analysis Date: 9/20/2018	SeqNo: 1798127	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID LCS-40476	SampType: LCS	TestCode: EPA Method 3	300.0: Anions	de general de la compansie de la compansie de la companya de la companya de la companya de la companya de la co
Client ID: LCSS	Batch ID: 40476	RunNo: 54324		
Prep Date: 9/20/2018	Analysis Date: 9/20/2018	SeqNo: 1798128	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 93.4 90	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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analyte detected in the associated Method Blank

1809B65 24-Sep-18

WO#:

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**Client: Blagg** Engineering

**Project:** 

GCU 198

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Sample ID 1809B65-001AM	SampType	e: MS		Test	Code: E	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: North Base 5-pt	@ 2 Batch ID	): <b>404</b>	171	R	unNo: 5	4274				
Prep Date: 9/20/2018	Analysis Date	e: 9/2	20/2018	S	eqNo: 1	796282	Units: mg/k	٢g		
Analyte	Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.9	49.36	0	96.1	53.5	126			
Surr: DNOP	4.0		4.936		80.9	50.6	138		dru per Schol i u koj nu koj nu koj ski sta	nderstande staatslike op s
Sample ID 1809B65-001AM	SD SampType	e: MS	D	Test	Code: E	PA Method	8015M/D: Di	esel Range	e Organics	della constante y en
Client ID: North Base 5-pt	@ 2 Batch ID	): <b>404</b>	71	R	unNo: 5	4274				
Prep Date: 9/20/2018	Analysis Date	e: 9/2	20/2018	S	eqNo: 1	796283	Units: mg/M	٢g		
Analyte	Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.5	47.26	0	101	53.5	126	0.345	21.7	
Surr: DNOP	3.6		4.726		75.7	50.6	138	0	0	an an sea thair a than an tait
Sample ID LCS-40471	SampType	e: LC	S	Test	Code: E	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: LCCC										
Client ID: LCSS	Batch ID	): <b>404</b>	71	R	tunNo: 5	4274				
Prep Date: 9/20/2018	Batch ID Analysis Date				tunNo: 5 SeqNo: 1		Units: mg/k	(g		
	Analysis Date		20/2018		eqNo: 1		Units: <b>mg/k</b> HighLimit	(g %RPD	RPDLimit	Qual
Prep Date: 9/20/2018 Analyte	Analysis Date	e: 9/2	20/2018	S	eqNo: 1	796284	Ū	•	RPDLimit	Qual
Prep Date: 9/20/2018 Analyte	Analysis Date Result F	9/2 PQL	20/2018 SPK value	S SPK Ref Val	eqNo: 1 %REC	796284 LowLimit	HighLimit	•	RPDLimit	Qual
Prep Date: 9/20/2018 Analyte Diesel Range Organics (DRO)	Analysis Date Result F 44	e: <b>9/2</b> PQL 10	20/2018 SPK value 50.00 5.000	SPK Ref Val 0	6eqNo: 1 %REC 88.7 90.3	796284 LowLimit 70 50.6	HighLimit 130	%RPD		Qual
Prep Date: 9/20/2018 Analyte Diesel Range Organics (DRO) Surr: DNOP	Analysis Date Result F 44 4.5	e: 9/2 PQL 10 e: MB	20/2018 SPK value 50.00 5.000	SPK Ref Val 0 Test	6eqNo: 1 %REC 88.7 90.3	796284 LowLimit 70 50.6 PA Method	HighLimit 130 138	%RPD		Qual
Prep Date: 9/20/2018 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-40471	Analysis Date Result F 44 4.5 SampType	e: 9/2 PQL 10 e: MB D: 404	20/2018 SPK value 50.00 5.000	SPK Ref Val 0 Test R	eqNo: 1 %REC 88.7 90.3 Code: E	796284 LowLimit 70 50.6 PA Method 4274	HighLimit 130 138	%RPD		Qual
Prep Date: 9/20/2018 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-40471 Client ID: PBS	Analysis Date Result F 44 4.5 SampType Batch ID Analysis Date	e: 9/2 <sup>2</sup> QL 10 e: MB 0: 404 e: 9/2	20/2018 SPK value 50.00 5.000 LLK 20/2018	SPK Ref Val 0 Test R	eqNo: 1 %REC 88.7 90.3 Code: E cunNo: 5 eqNo: 1	796284 LowLimit 70 50.6 PA Method 4274	HighLimit 130 138 8015M/D: Die	%RPD		Qual
Prep Date: 9/20/2018 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-40471 Client ID: PBS Prep Date: 9/20/2018 Analyte Diesel Range Organics (DRO)	Analysis Date Result F 44 4.5 SampType Batch ID Analysis Date Result F ND	e: 9/2 PQL 10 e: MB D: 404 e: 9/2 PQL 10	20/2018 SPK value 50.00 5.000 LLK 20/2018	S SPK Ref Val 0 Test R S	eqNo: 1 %REC 88.7 90.3 Code: E cunNo: 5 eqNo: 1	796284 LowLimit 70 50.6 PA Method 4274 796285	HighLimit 130 138 8015M/D: Die Units: mg/K	%RPD esel Range	e Organics	
Prep Date: 9/20/2018 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID MB-40471 Client ID: PBS Prep Date: 9/20/2018 Analyte	Analysis Date Result F 44 4.5 SampType Batch ID Analysis Date Result F	e: 9/2 PQL 10 e: MB D: 404 e: 9/2 PQL	20/2018 SPK value 50.00 5.000 LLK 20/2018	S SPK Ref Val 0 Test R S	eqNo: 1 %REC 88.7 90.3 Code: E cunNo: 5 eqNo: 1	796284 LowLimit 70 50.6 PA Method 4274 796285	HighLimit 130 138 8015M/D: Die Units: mg/K	%RPD esel Range	e Organics	

#### **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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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**Client:** Blagg Engineering **Project:** GCU 198

Sample ID MB-40453	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	9	
Client ID: PBS	Batch	n ID: 40	453	F	RunNo: 54	4282				
Prep Date: 9/19/2018	Analysis D	ate: 9/	20/2018	5	SeqNo: 1	796709	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								
Surr: BFB	910		1000		91.4	15	316			
	510		1000		51.4	15	510			
Sample ID LCS-40453		ype: LC		Tes			8015D: Gasc	line Rang	9	
	SampT	ype: LC	S			PA Method	en alege en en sette plet et de sette de la deserver en de la deserver et de la deserver et de la deserver et d La deserver et de la d	line Rang	Ð	in team and a start of the star
Sample ID LCS-40453	SampT	n ID: 40	:S 453	F	tCode: El	PA Method 4282	en alege en en sette plet et de sette de la deserver en de la deserver et de la deserver et de la deserver et d La deserver et de la d	0	Ð	
Sample ID LCS-40453 Client ID: LCSS	SampT Batch	n ID: 40	:S 453 20/2018	F	tCode: El RunNo: 54 SeqNo: 1	PA Method 4282	8015D: Gaso	0	e RPDLimit	Qual
Sample ID         LCS-40453           Client ID:         LCSS           Prep Date:         9/19/2018	SampT Batch Analysis D	n ID: 404 Date: 9/	:S 453 20/2018	F	tCode: El RunNo: 54 SeqNo: 1	PA Method 4282 796710	8015D: Gaso Units: mg/K	(g		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
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

- Value above quantitation range

24-Sep-18

WO#: 1809B65

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Client: Blagg Engineering

Project: GCU 198

SampT	ype: ME	BLK	Test	Code: El	PA Method	8021B: Volat	iles		
Batch	n ID: 40	453	R	unNo: 54	4282				
Analysis D	)ate: 9/	20/2018	S	eqNo: 1	796749	Units: mg/K	g		
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ND	0.025								
ND	0.050								
ND	0.050								
ND	0.10								
ND	0.10								
0.92	0.10	1.000		91.5	80	120			
0.92	ype: LC		Tes			120 8021B: Volat	iles		
0.92 SampT		S			PA Method		iles		
0.92 SampT	ype: <b>LC</b>	S 453	R	Code: El	PA Method 1282				
0.92 SampT Batch	ype: <b>LC</b>	S 453 20/2018	R	Code: El	PA Method 1282	8021B: Volat		RPDLimit	Qual
0.92 SampT Batch Analysis D	ype: LC 1 ID: 40 Date: 9/	S 453 20/2018	R	Code: El cunNo: 54 ceqNo: 1	PA Method 4282 796750	8021B: Volat Units: mg/K	g	RPDLimit	Qual
0.92 SampT Batch Analysis D Result	ype: <b>LC</b> n ID: <b>40</b> Date: <b>9</b> / PQL	<b>S</b> 453 20/2018 SPK value	R S SPK Ref Val	Code: El tunNo: 54 GeqNo: 1 %REC	PA Method 1282 796750 LowLimit	8021B: Volat Units: mg/K HighLimit	g	RPDLimit	Qual
0.92 SampT Batch Analysis D Result 0.94	ype: LC 1D: 40 Date: 9/ PQL 0.025	<b>S</b> 453 20/2018 SPK value 1.000	R S SPK Ref Val 0	Code: El RunNo: 54 SeqNo: 17 %REC 93.8	PA Method 4282 796750 LowLimit 77.3	8021B: Volat Units: mg/K HighLimit 128	g	RPDLimit	Qual
0.92 SampT Batch Analysis D Result 0.94 0.98	ype: LC n ID: 40 Date: 9/ PQL 0.025 0.050	<b>S</b> 453 20/2018 SPK value 1.000 1.000	R S SPK Ref Val 0 0	Code: EF RunNo: 54 SeqNo: 17 %REC 93.8 98.0	PA Method 4282 796750 LowLimit 77.3 79.2	8021B: Volat Units: mg/K HighLimit 128 125	g	RPDLimit	Qual
	Batch Analysis D Result ND ND ND	Batch ID:         40           Analysis Date:         9/           Result         PQL           ND         0.025           ND         0.050           ND         0.050	ND 0.025 ND 0.050 ND 0.050	Batch ID:         40453         R           Analysis Date:         9/20/2018         S           Result         PQL         SPK value         SPK Ref Value           ND         0.025         S           ND         0.050         S	Batch ID:         40453         RunNo:         54           Analysis Date:         9/20/2018         SeqNo:         12           Result         PQL         SPK value         SPK Ref Val         %REC           ND         0.025         ND         0.050         Image: Sequence         Sequence         Image: Seque: Se	Batch ID: 40453       RunNo: 54282         Analysis Date: 9/20/2018       SeqNo: 1796749         Result       PQL       SPK value       SPK Ref Val       %REC       LowLimit         ND       0.025	Batch ID:       40453       RunNo:       54282         Analysis Date:       9/20/2018       SeqNo:       1796749       Units:       mg/K         Result       PQL       SPK value       SPK Ref Val       %REC       LowLimit       HighLimit         ND       0.025       0.050       0.050       0.050       0.050       0.050	RunNo: 54282         Analysis Date: 9/20/2018       SeqNo: 1796749       Units: mg/Kg         Result       PQL       SPK value       SPK Ref Val       %REC       LowLimit       HighLimit       %RPD         ND       0.025                   ND       0.050   <	Batch ID: 40453       RunNo: 54282         Analysis Date: 9/20/2018       SeqNo: 1796749       Units: mg/Kg         Result       PQL       SPK value       SPK Ref Val       %REC       LowLimit       HighLimit       %RPD       RPDLimit         ND       0.025       0.050       0.050       0.050       0.050       0.050       0.050

Qualifiers:

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

De

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1809B65 24-Sep-18

WO#:

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3975	4901 Hawkins N uquerque, NM 8710	s San	nple Log-In Check List	
Client Name: BLAGG	Work Order Number:	1809B65		RcptNo: 1	
Received By: Jazzmine Burkhead	9/20/2018 8:30:00 AM		you Perektal		
Completed By: Ashley Gallegos	9/20/2018 8:45:42 AM		AZ		
Reviewed By: 09/20	18 1	abeled	by:	ENM9/20/18	
Chain of Custody					-
1. Is Chain of Custody complete?		Yes 🗹	No	Not Present	
2. How was the sample delivered?		Courier			
Log In 3. Was an attempt made to cool the samples?		Yes 🗹	No 🗌	NA 🗌	
4. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗌	
5. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
6. Sufficient sample volume for indicated test(s)	)?	Yes 🖌	No 🗌		
7. Are samples (except VOA and ONG) property	y preserved?	Yes 🗹	No 🗌		
8. Was preservative added to bottles?		Yes	No 🗹	NA 🗌	
9. VOA vials have zero headspace?		Yes	No 🗌	No VOA Vials 🗹	)
10. Were any sample containers received broke	n?	Yes	No 🗹		1
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	# of preserved bottles checked for pH: (2 gr > 12 unless noted)	
12. Are matrices correctly identified on Chain of 0	Custody?	Yes 🖌	No 🗌	Adjusted?	18
13, Is it clear what analyses were requested?		Yes 🖌	No 🗌	DOW	1
14. Were all holding times able to be met?		Yes 🗹	No 🗌	Checked by:	
(If no, notify customer for authorization.)			/		1
Special Handling (if applicable)					
15. Was client notified of all discrepancies with t	his order?	Yes	No 🗌	NA 🗹	
Person Notified:	Date				
By Whom:	Via:	eMail Phor	ne 🗌 Fax	In Person	
Regarding:		a and the set of the second second		an and a line of the second second second second	
Client Instructions: 16. Additional remarks:	<u>a a a cara antina anna a' ann</u>	Second R. A. Second		No. 1. No	
17. Cooler Information					
Cooler No Temp C Condition Se	al Intact   Seal No   S	eal Date Si	gned By		
1 4.9 Good Yes					
2 2.2 Good Yes 3 1.7 Good Yes	1. AND 1. IN THE R. I. AND 1.				

C	hain	-of-Cu	ustody Record	Turn-Around	Time:																
Client:	BPA	MERICA		Standard	Rush	SAME DAY	HALL ENVIRONMENTAL														
	Client: BP AMERICA DAT BLACK ENGINEERN INC- Project Name:		www.hallenvironmental.com																		
BLAGE ENGINEERY INC- Mailing Address:		GCU 198			4901 Hawkins NE - Albuquerque, NM 87109																
	and a state of the			Project #:						5-34					-		4107				
Phone	#: 50	05-3	20-1193						1.00	0.04	0-00	Statement of the	alys	Sector Sector	No. of Lot of Lot	and the second second	10000				
			Project Manager:			-	(Al	30)				i	04)								
QA/QC Package:			STEVE MOSKAL/SABRE BEEBE			<b>TMD'</b> s (8021)	(Gas ol	RO / MF			IMS)		PO4,SO	PCB's							
	Accreditation  NELAP  Other			STEVE MOSKAL/SABRE BEEBE Sampler: JEFF BLAGG On Ice: BY Yes DNO				+ TPH (Gas only)	CO/DF	(8.1)	04.1)	8270 S		3,NO <sub>2</sub> ,	/ 8082		4)				r N)
	(Type)			Sample Tem	perature: Sa	remarks		MTBE -	(GR	d 4	od 5(	0 or	tals	NC I	ides	F	107-				ς v
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		вшI	BTEX + MT	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	CHLORIDE			Air Bubbles (Y or N)
9/19/2018	1256	SOIL	NORTH BASE 5-PE @ Z3	402 ×1	COUL	-001	X		X									x			
											_			_		_			$\rightarrow$	+	_
													+	+						-	
																			-		
													-	+	-	_	-	-		+	
Anton por sur transported production					-									-	_				-+	+	
																				+	
						-															
Date:	Time:	Relinquish	H Blegg	Received by:	Walter	Date Time 9/9/18 1640		narks	s: - 4	BILL	BP	-: 5	SAB	RE	Ze	ER	E	0	=1.7		
Date: 9/19/18	Time:		the Walk	Received by:	Buch	Date Time				2						2.6	- 0,0	(cr):	-1.7	7	
and the second distance of the second se	f necessary,	samples sub	mitted to Hall Environmental may be subo	contracted to other a	ccredited laboratori	es. This serves as notice of this										ted on	the ar	natytic	al repor	t.	