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

\* Attach Additional Sheets If Necessary

State of New Mexico Energy Minerals and Natural Resources

APK 17 2018

Form C-141 Revised April 3, 2017

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit Copy to appropriate District Office in accordance with 19.15.29 NMAC.

			Rele	ease Notific	atio	n and Co	rrective A	ction				
						<b>OPERA</b>	ГOR		Initia	al Report	X	Final Report
Name of Co				Corp.			ach Stradling					
Address 490							No. 505-325-8874					
Facility Nar	ne Homeste	ead Ranch A #2				Facility Typ	e Producing Well			- 4		
Surface Ow	ner Private			Mineral O	wner	Private			API No	. 30-039-23	586	
				LOCA	TIO	N OF RE	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North	/South Line	Feet from the	East/V	Vest Line	County		
N	34	25N	02W	990'	5	South	1850'	V	Vest	Rio Arriba	, NM	
			Latitud	le_ N36.349903	L	ongitude	W107.040127	NAD	83			
				NAT	URE	OF REL	EASE					
Type of Rele						Volume of				Recovered	None	
		er drilling reserv	re pit				Hour of Occurrence	e Unkno	wPate and	Hour of Dis	covery	Nov 8, 2017
Was Immedia	ate Notice (		Yes [	No X Not Re	quired	If YES, To	whom?					
By Whom?						Date and I						
Was a Water	course Read		Yes 🗓	] No		If YES, Vo	olume Impacting t	the Wate	ercourse.			
If a Watercou	irse was Im	pacted, Descr	ibe Fully.	*							-	
									way and the second	NMOC	CD	National States
										100 4 5	004	
Describe Cau	ise of Probl	em and Reme	dial Actio	n Taken.*						APR 1/	201	8
On November vegetation, tim	8th, 2017, Bit ers, and a cr	MG discovered e ushed/cut drum	evidence of containing s	historic contamination soils saturated with pr	oduct a	nd paraffin. BM						
remediate rem	aining contar	ninated soil via	soil shreddir	ng. Please see attach	ned rem	ediation report.						See January State and the
Describe Are	a Affected	and Cleanup	Action Tal	ken.*								
		77		il by means of soil sh	redding	. Please see atta	ached remediation re	port.				
71 1 · ·	C 11 11					1 1 0					0.00	
				e is true and comp nd/or file certain re								
				ce of a C-141 repo								
				investigate and re								
		addition, NM0 ws and/or reg		otance of a C-141	report	does not reliev	e the operator of	respons	ibility for c	compliance v	with an	y other
Todorai, state	//	1 dillo or reg	diations.				OIL CON	SERV	MONTA	DIVISIO	N	
Ciamatuma	/						OIL COIL	<u>DLIC (</u>	X			
Signature:	$\rightarrow$	14					F		a			
Printed Name	e: Zach Stra	adling				Approved by	Environmental S	pecialis			2	
Title: Vice Pr	esident					Approval Da	te:4/23/21	PL	Expiration	Date:		
E-mail Addre	ess: zstradli	ng@bmgdrilling	com			Conditions o	f Approval:			Attached		
Date: 04/16/	2018		Phone	: 505-325-8874							_	

N2K130603051H

123

#### Remediaton of Hydrocarbon Impacted Soil

NMOCD
APR 17 2018
DISTRICT III

Homestead Ranch A #2 (N) Sec 34 – T25N – R2W API: 30-039-23586 Rio Arriba County, New Mexico

Prepared for: Benson-Montin-Greer Drilling Corp. Farmington, New Mexico

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

# REMEDIATION OF HYDROCARBON IMPACTED SOIL

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# REMEDIAION OF HYDROCARBON IMPACTED SOILS

#### INTRODUCTION

Blagg Engineering Inc. (BEI) has been retained by Benson-Montin-Greer Drilling Corp. (BMG) to monitor, sample and document environmental remediation of hydrocarbon impacts at the Homestead Ranch A #2, an oil well located in rural Rio Arriba County, New Mexico at (N) Sec. 34 – T25N – R2W (Figure 1). The historical origin of the hydrocarbon release at the site is not known but may have been from potential flow line leaks or use of unlined discharge pits, a practice previously authorized by regulatory agencies. BMG began remedial excavations in 2017 with other contractors to mitigate the impacts. However, dig and haul did not appear to be the best available technology for remediation and BMG contracted with Unlimited Construction, Inc. to complete site remediation via 'soil shredding,' a proprietary process for on-site chemical removal of hydrocarbons from soil. This work was resumed on January 29, 2018 and impact removal was completed on February 14, 2018. Final soil shredding was completed on February 15, 2018 and final site backfilling, contouring and background sampling was concluded on March 9, 2018.

#### REMEDIATION ACTIVITIES

Site remediation consisted of 3 separate activities: (1) excavation of impacted soil in all directions until site closure standards had been achieved, (2) on-site treatment of impacted media to remove hydrocarbon impacts to below site closure standards, followed by placing the treated soil back into cleaned up areas of the remedial excavation, and (3) post remedial sampling of temporary use areas outside of impact zones to confirm residual hydrocarbon impacts were not present in concentrations exceeding site closure standards. The procedures to carry out these activities are discussed below.

The closure standard for the site as determined by the New Mexico Oil Conservation Division (NMOCD) was based on the potential risk to ground and surface water from hydrocarbon impacts. At this site the closure standard was established as follows:

Total Petroleum Hydrocarbons (TPH) = 1,000 mg/Kg (parts per million)
Benzene = 10 mg/Kg
Benzene, Toluene, Ethyl-Benzene and Total Xylenes (BTEX) combined = 50 mg/Kg
Total Chlorides = 600 mg/Kg

#### Excavation of Impacted Media to Achieve Site Remediation

Remedial work at the site in 2017 by other contractors included removal of approximately 3,000 cubic yards of soil to a total depth of 17 feet below surface grade (bsg) within the original source

area (Figure 5). Prior drilling by others identified impacts exceeding the 1,000 ppm site closure standard were present to a depth of 40 feet bsg in the source area.

Remediation was resumed by Unlimited Construction on January 29, 2018 by removal of impacted soil using trackhoe excavators, front end loaders and a dozer to strip clean top soils and excavate impacted media. Clean top soils were stacked on the east, west and south sides of the advancing excavation. Excavated impacted media was stacked and stored on the well pad for subsequent treatment via shredding and chemical treatment (discussed below). Excavation continued in all directions until composite samples submitted for laboratory analytical testing confirmed that sidewalls and base areas were within site closure standards. The final excavating and sampling was concluded on February 14, 2018. The excavated area was conical shaped and approximately 275' in diameter with a maximum depth of approximately 48' bgs (Figure 2). A total of approximately 35,440 cubic yards (CY) of soil was disturbed during the remediation, and of this approximately 10,870 CY was chemically treated on-site. Included in the total excavated volume was approximately 3,000 CY that had previously been excavated by others, with approximately 1,260 CY of this transported to a commercial landfarm for off-site remediation.

Closure sampling was progressive as the excavation advanced. Sampling areas were marked out on the excavation walls and base for collection of 5-point composites from each area (Figure 3). Due to the slumping nature of the loose soils and risk of entering the excavation most sampling was performed using an excavator trackhoe to retrieve soils for composite collection. All closure sampling was witnessed by the NMOCD. Representative composite portions of sample were placed into a gallon sized Ziploc® baggie for field headspace analysis of organic vapors with a calibrated IonScience Tiger model photo-ionization detector (PID) containing a 11.2 eV lamp. Split samples were placed into a 4-ounce laboratory supplied jar with Teflon® lid, labeled and placed on ice in an ice chest for further laboratory testing. The jarred samples were hand delivered to a representative of Hall Environmental Analytical Laboratories for analysis via U.S. EPA Method 8021B (volatile organics limited to benzene, toluene, ethyl benzene and total xylenes), U.S. EPA Method 8015 (gasoline range (GRO), diesel range (DRO) and motor oil range (MRO) organics), and chlorides via U.S. EPA Method 300. A chain-of-custody followed the samples.

A summary of laboratory analytical results is included in <u>Table 1: Summary Excavation Closure Analytical Data</u>. Laboratory test reports are attached in Appendix B.

At the completion of remedial excavations a there were a total of 21 separate composite sampling areas. All areas passed laboratory testing for the site closure standard.

#### Remediation of Excavated Impacted Media via Soil Shredding

A proprietary process (termed 'soil shredding') was used to mix and chemically treat the fine grained media with hydrogen peroxide to remove hydrocarbons. Following soil shredding, the treated material was placed into labeled stock piles and subsequently sampled to confirm that site

closure standards had been achieved. This process progressed at the same approximate rate as the excavation advanced.

The pile sampling was performed using an excavator trackhoe to dig into each pile and collect composite samples for initial field analysis and subsequent laboratory testing. Sample handling, regulatory witnessing, preservation, chain-of-custody and laboratory test procedures were the same as previously described. A summary of treated soil laboratory test data is presented in <u>Table 2</u>, <u>Summary Treated Soil Pile Analytical Data</u>. Laboratory test reports are attached in Appendix C.

#### Vadose Zone Closure

The original well pad area was insufficient in size for storage of both excavated impacted material and storage of treated shredded soil. It was necessary to temporary place treated soils off the well pad for this storage (Figure 4). These areas were located on the east and west sides of the well pad.

Following completion of the remedial excavation and backfilling with shredded soils, the temporary storage areas, and the treating zone area, were sampled to insure no residual hydrocarbon impacts exceeding site closure standards were present. This sampling was performed on March 9, 2018 by hand sampling composites from each use area. Sample handling, preservation, chain-of-custody and laboratory test procedures were the same as previously described. All areas tested below site closure standards. A summary of the test data is presented in <u>Table 3, Vadose Zone Analytical Data</u>. Laboratory test reports are attached in Appendix D.

#### **CONCLUSIONS AND RECOMMENDATIONS**

- 1) Hydrocarbon impacted soil at the Homestead Ranch A #2, apparently historical in nature, from BMG operations has been successfully excavated and treated. Excavation sampling and analytical testing has confirmed that all 21 separate sampling zones within the remedial excavation test below site closure standards. No additional site remediation of impacts is indicated. Regulatory closure of remedial activities is recommended.
- All soils treated on-site via the proprietary 'soil shredding' process and backfilled into the remedial excavation have demonstrated via analytical testing to be within site closure standards. These treated soils are not indicated to contribute a risk to surface or groundwater. No additional treatment is recommended.

3) Off-pad temporary use areas have been sampled and analytical testing has indicated that the residual ground surface meets site closure standards. No additional confirmation sampling is recommended.

#### **CLOSURE AND LIMITATIONS**

This report has been prepared for the exclusive use of Benson-Montin-Greer Drilling Corp. as it pertains to hydrocarbon impact remediation at the Homestead Ranch A #2 in Rio Arriba County, New Mexico. The data presented herein is based on visual observations, subsurface soil conditions encountered at sampling locations and on information reported by analytical laboratory testing of soils. This report does not reflect variations which may exist between sampling locations.

I certify that the work performed by Blagg Engineering, Inc. as described in this report was directed by my supervision, and that I am personally familiar with the remedial actions and the contents of this report.

Submitted by: Blagg Engineering, Inc.

Jeffrey C Blagg, PE DN: cn=Jeffrey C Blagg, PE, o, ou, Date: 2018.04.13 12:51:01 -06'00'

Digitally signed by Jeffrey C Blagg, PE

Jeffrey C. Blagg, PE NMPE 11607

# **TABLES**

## Benson-Montin-Greer Homestead Ranch A No. 2

TABLE 1
Summary Excavation Closure Test Results
Updated: February 22, 2018

Sample	Figure	Depth	No.	Date	Field OVM	Benz.	втех	TPH GRO	TPH DRO	TPH MRO	TPH Total	CI-
ID	ID ID	Range	Comps	Sampled	(ppm)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
East Base	1	48'	5	2/8/2018	22.8	ND	ND	ND	ND	ND	ND	ND
NE Wall	2	35'-45'	5	2/8/2018	14.7	ND	ND	ND	ND	ND	ND ·	ND
NW Wall	3	35'-45'	5	2/8/2018	2,099	ND	3.2	200	540	78	818	ND
SE Wall	4	35'-45'	5	2/8/2018	15.2	ND	ND	ND	ND	ND	ND	ND
NE Wall	5	21'-35'	5	2/8/2018	12.3	ND	ND	ND	ND	ND	ND	ND
NW Wall	6	21'-35'	5	2/8/2018	13.9	ND	ND	ND	130	130	260	ND
SE Wall	7	21'-35'	5	2/8/2018	4.9	ND	ND	ND	ND	ND	ND	39
NE Wall	8	10'-21'	5	2/8/2018	2.9	ND	ND	ND	ND	ND	ND	ND
N Wall	9	10'-21'	5	2/8/2018	849	ND	1.9	97	30	ND	127	ND
E Wall	10	10'-21'	5	2/8/2018	10.3	ND	ND	ND	ND	ND	ND	ND
S Wall	11	10'-21'	5	2/8/2018	6.0	ND	ND	ND	ND	ND	ND	ND
West Base	12	45'	5	2/14/2018	15.6	ND	ND	ND	ND	ND	ND	ND
NW Wall	13	25'-45'	5	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND
NW Wall	14	15'-25'	5	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND
West Wall	15	25'-45'	5	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND
West Wall	16	15'-25'	5	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND
SW Wall	17	25'-45'	5	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND
SW Wall	18	15'-25'	5	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND
West Wall	19	10'-15'	6	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND
NW Wall	20	10'-15'	3	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND
West Top	21	0'-10'	7	2/14/2018	0.0	ND	ND	ND	ND	ND	ND	ND

Site Closure Standard = 1,000 ppm total TPH, 10 ppm Benzene, 50 ppm BTEX and 600 ppm Chloride

# Benson-Montin-Greer Homestead Ranch A No. 2

TABLE 2

## **Summary Treated Soil Pile Test Results**

Updated: February 24, 2018

<u> </u>					Field	<u> </u>	BTEX	TPH	TPH	TPH	TPH	
Pile ID	Volume	No.	Date	Date	OVM	Benz.	Total	GRO	DRO	MRO	Total	Cl-
	(CY)	Comps	Created	Sampled	(ppm)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
TSP-1	100	5	2/1/2018	2/5/2018	890	ND	14.1	400	200	ND	600	ND
TSP-2	100	5	2/1/2018	2/5/2018	975	ND	11.93	350	240	ND	590	ND
TSP-3	100	5	2/1/2018	2/5/2018	1,128	ND	8.61	300	140	ND	440	ND
TSP-4	100	5	2/1/2018	2/5/2018	1,180	ND	6.93	260	120	ND	380	ND
TSP-5	100	5	2/1/2018	2/5/2018	1,026	ND	13.53	430	160	ND	590	ND
TSP-6	100	5	2/1/2018	2/5/2018	1,375	ND	12.1	400	170	ND	570	ND
TSP-7	100	5	2/1/2018	2/5/2018	1,293	ND	7.35	280	170	ND	450	ND
TSP-8	100	5	2/1/2018	2/5/2018	883	ND	8.17	320	130	ND	450_	ND
TSP-9	100	5	2/1/2018	2/5/2018	912	ND	10.6	430	96	ND	526	ND
TSP-10	100	5	2/1/2018	2/5/2018	883	ND	7.97	280	120	ND	400	ND
TSP-11	500	7	2/6/2018	2/8/2018	781	ND	0.86	68	63	ND	131	ND
TSP-12	500	7	2/6/2018	2/8/2018	662	ND	4.8	200	100	ND	300	ND
TSP-13	500	7	2/6/2018	2/8/2018	812	ND	2.1	130	110	ND	240	ND
TSP-14	500	7	2/6/2018	2/8/2018	1,081	ND	5.1	190	180	ND	370	ND
TSP-15	500	7	2/5/2018	2/8/2018	1,740	ND	8.82	220	140	ND	360	ND
TSP-16	500	7	2/8/2018	2/14/2018	382	ND	ND	50	63	ND	113	ND
TSP-17	500	7	2/8/2018	2/14/2018	0.0	ND	ND	23	39	ND	62	ND
TSP-18	500	7	2/9/2018	2/14/2018	0.0	ND	ND	ND	30	ND	30	ND
TSP-19	500	7	2/9/2018	2/14/2018	0.0	ND	1.8	120	120	ND	240	ND
TSP-20	500	7	2/9/2018	2/14/2018	0.0	ND	ND	29	44	ND	73	ND
TSP-21	500	7	2/12/2018	2/14/2018	0.0	ND	0.66	46	94	ND	140	ND
TSP-22	500	7	2/12/2018	2/14/2018	0.0	ND	0.76	60	95	ND	155	ND
TSP-23	500	7	2/13/2018	2/14/2018	0.0	ND	ND	ND _	25	ND	25	ND
TSP-24	500	7	2/13/2018	2/14/2018	0.0	ND	ND	36	54	ND	90	ND
TSP-25	1,000	10	2/14/2018	2/16/2018	396	ND	1.4	73	80	ND	153	ND
TSP-26	1,000	10	2/14/2018	2/16/2018	239	ND	ND	23	39	ND	62	ND
TSP-27	870	10	2/15/2018	2/16/2018	310	ND	1.0	52	41	ND	93	ND
Total:	10,870											

## TABLE 3

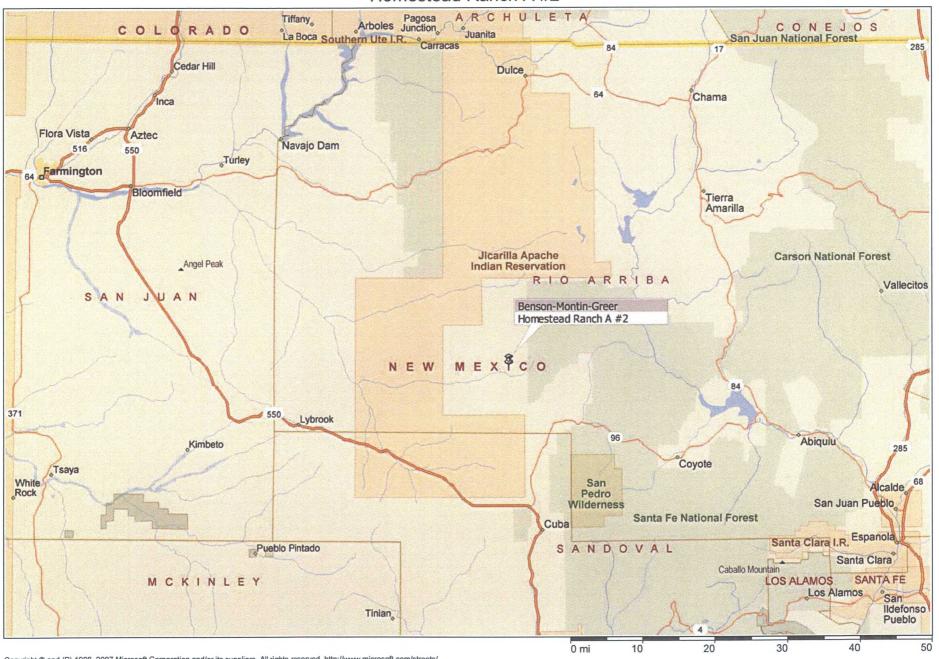
#### BMG – Homestead Ranch A #2 Summary Vadose Zone Analytical Data

Sample ID	Date	BTEX (mg/Kg)	Benzene (mg/Kg)	TPH GRO (mg/Kg)	TPH DRO (mg/Kg)	TPH MRO (mg/Kg)	TPH Total (mg/Kg)	Chloride
Zone 1 (5-pt Comp)	5/1/2017	ND	ND	ND	ND	ND	ND	ND
Zone 2 (5-pt Comp)	5/1/2017	ND	ND	ND	ND	ND	ND	ND
Zone 3 (5-pt Comp)	5/1/2017	ND	ND	ND	ND	ND	ND	ND
Zone 4 (5-pt Comp)	5/1/2017	ND	ND	ND	ND	ND	ND	ND
NMOCD Closure Standard		50	10				1,000	600

ND = Not Detected

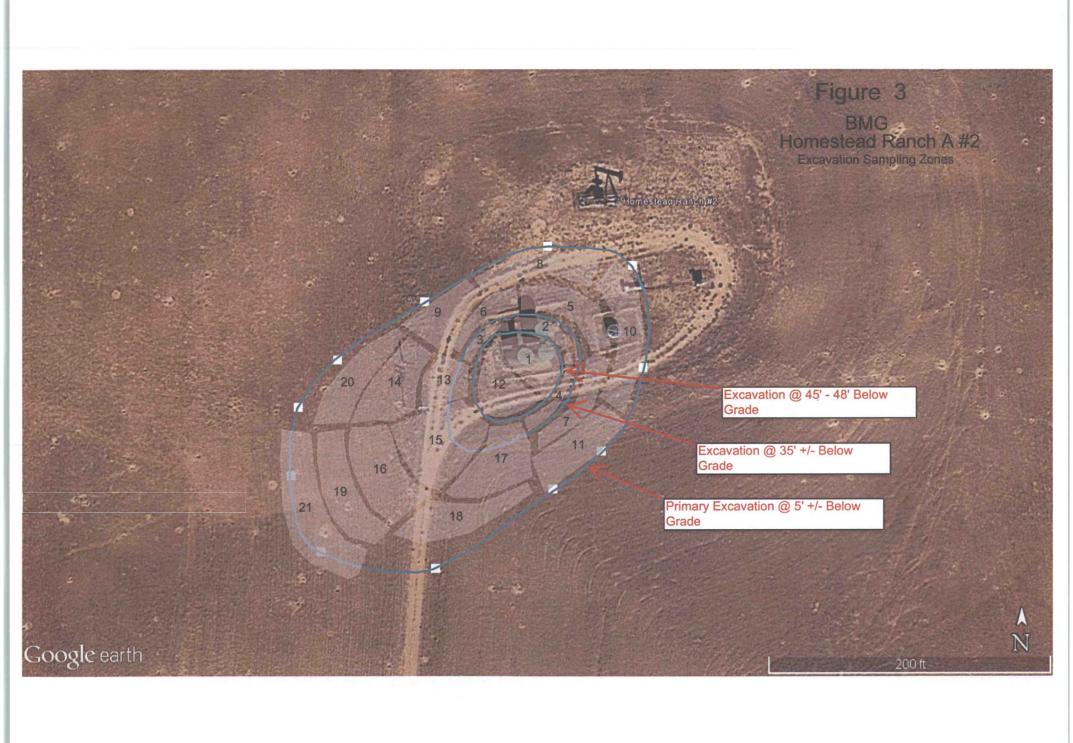
# Appendix A Figures

Figure 1
Homestead Ranch A #2

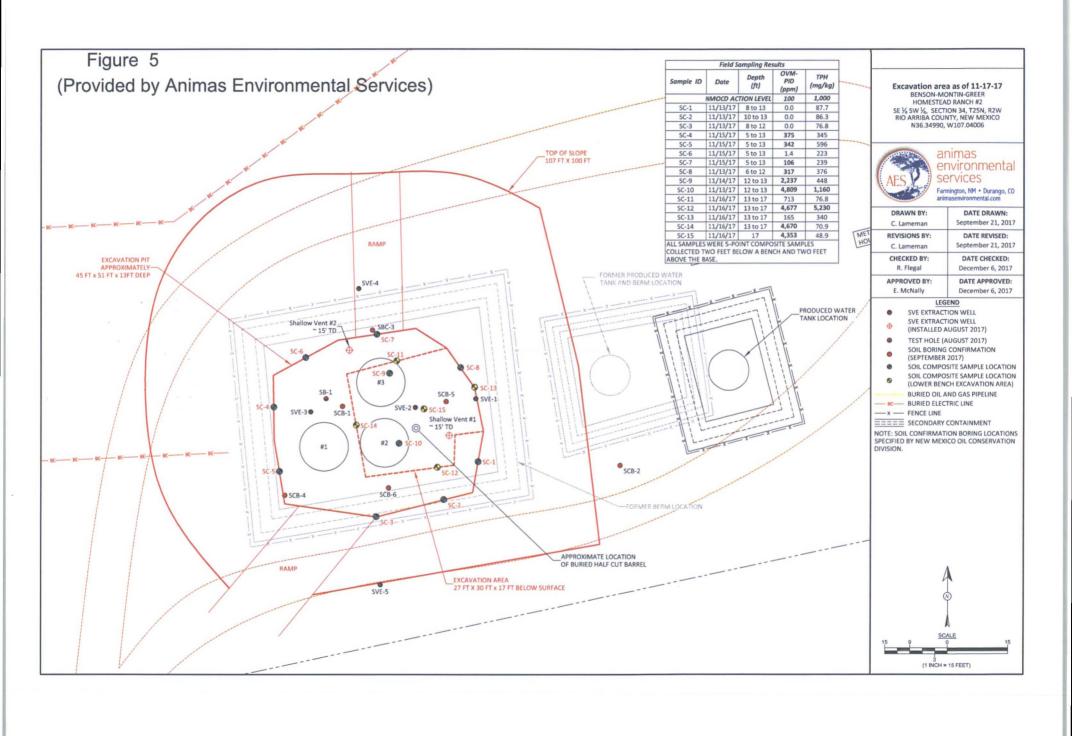


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# Appendix B Excavation Closure Analytical Data Reports



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

February 12, 2018

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199

FAX (505) 632-3903

RE: Homestead Ranch 2

OrderNo.: 1802538

#### Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 11 sample(s) on 2/9/2018 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andid

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: Base @ 48'

Project: Homestead Ranch 2

Collection Date: 2/8/2018 10:30:00 AM

Lab ID: 1802538-001

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS			-		Analyst	MRA
Chloride	ND	30	mg/Kg	20	2/9/2018 10:39:35 AM	36450
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	2/9/2018 9:38:31 AM	36444
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/9/2018 9:38:31 AM	36444
Surr: DNOP	93.6	70-130	%Rec	1	2/9/2018 9:38:31 AM	36444
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	18	mg/Kg	5	2/9/2018 9:47:11 AM	36440
Surr: BFB	112	15-316	%Rec	5	2/9/2018 9:47:11 AM	36440
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.091	mg/Kg	5	2/9/2018 9:47:11 AM	36440
Toluene	ND	0.18	mg/Kg	5	2/9/2018 9:47:11 AM	36440
Ethylbenzene	ND	0.18	mg/Kg	5	2/9/2018 9:47:11 AM	36440
Xylenes, Total	ND	0.36	mg/Kg	5	2/9/2018 9:47:11 AM	36440
Surr: 4-Bromofluorobenzene	119	80-120	%Rec	5	2/9/2018 9:47:11 AM	36440

#### 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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: NE Wall (35'-45')

Project: Homestead Ranch 2

Collection Date: 2/8/2018 10:37:00 AM

Lab ID: 1802538-002

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	st: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 10:52:00 AM	36450
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analys	st: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/9/2018 10:00:37 AM	36444
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/9/2018 10:00:37 AM	36444
Surr: DNOP	98.2	70-130		%Rec	1	2/9/2018 10:00:37 AM	36444
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	st: NSB
Gasoline Range Organics (GRO)	ND	8.6		mg/Kg	2	2/9/2018 10:10:41 AM	36440
Surr: BFB	115	15-316		%Rec	2	2/9/2018 10:10:41 AM	36440
EPA METHOD 8021B: VOLATILES						Analys	st: NSB
Benzene	ND	0.043		mg/Kg	2	2/9/2018 10:10:41 AM	36440
Toluene	ND	0.086		mg/Kg	2	2/9/2018 10:10:41 AM	36440
Ethylbenzene	ND	0.086		mg/Kg	2	2/9/2018 10:10:41 AM	36440
Xylenes, Total	ND	0.17		mg/Kg	2	2/9/2018 10:10:41 AM	36440
Surr: 4-Bromofluorobenzene	122	80-120	S	%Rec	2	2/9/2018 10:10:41 AM	36440

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 15
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Wall (35'-45')

Project: Homestead Ranch 2

Collection Date: 2/8/2018 10:40:00 AM

Lab ID: 1802538-003

Matrix: SOIL Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				-		Analys	t: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 11:04:25 AM	36450
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS		•			Analys	t: TOM
Diesel Range Organics (DRO)	540	9.3		mg/Kg	1	2/9/2018 10:22:34 AM	36444
Motor Oil Range Organics (MRO)	78	46		mg/Kg	1	2/9/2018 10:22:34 AM	36444
Surr: DNOP	103	70-130		%Rec	1	2/9/2018 10:22:34 AM	36444
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	200	19		mg/Kg	. 5	2/9/2018 11:21:08 AM	36440
Surr: BFB	608	15-316	s	%Rec	5	2/9/2018 11:21:08 AM	36440
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.095		mg/Kg	5	2/9/2018 11:21:08 AM	36440
Toluene	ND	0.19		mg/Kg	5	2/9/2018 11:21:08 AM	36440
Ethylbenzene	ND	0.19		mg/Kg	5	2/9/2018 11:21:08 AM	36440
Xylenes, Total	3.2	0.38		mg/Kg	5	2/9/2018 11:21:08 AM	36440
Surr: 4-Bromofluorobenzene	141	80-120	S	%Rec	5	2/9/2018 11:21:08 AM	36440

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: SE Wall (35'-45')

Homestead Ranch 2 Project:

Collection Date: 2/8/2018 10:54:00 AM

Lab ID: 1802538-004

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL Q	Qual Ui	nits	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	٠			_		Analyst	MRA
Chloride	ND	30	m	ıg/Kg	20	2/9/2018 11:16:50 AM	36450
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.4	m	ıg/Kg	1	2/9/2018 10:44:44 AM	36444
Motor Oil Range Organics (MRO)	ND	47	m	ıg/Kg	1	2/9/2018 10:44:44 AM	36444
Surr: DNOP	98.8	70-130	%	Rec	1	2/9/2018 10:44:44 AM	36444
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.8	m	ıg/Kg	1	2/9/2018 10:34:03 AM	36440
Surr: BFB	115	15-316	%	Rec	1	2/9/2018 10:34:03 AM	36440
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.019	m	ıg/Kg	1	2/9/2018 10:34:03 AM	36440
Toluene	ND	0.038	m	ıg/Kg	1	2/9/2018 10:34:03 AM	36440
Ethylbenzene	ND	0.038	m	ıg/Kg	1	2/9/2018 10:34:03 AM	36440
Xylenes, Total	ND	0.076	m	ıg/Kg	1	2/9/2018 10:34:03 AM	36440
Surr: 4-Bromofluorobenzene	122	80-120	s %	Rec	1	2/9/2018 10:34:03 AM	36440

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 15
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: NE Wall (21'-35')

Project: Homestead Ranch 2

Collection Date: 2/8/2018 10:50:00 AM

Lab ID: 1802538-005

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	2/9/2018 11:29:14 AM	36450
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	2/9/2018 11:06:35 AM	36444
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/9/2018 11:06:35 AM	36444
Surr: DNOP	97.2	70-130	%Rec	1	2/9/2018 11:06:35 AM	36444
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	2/9/2018 10:57:41 AM	36440
Surr: BFB	117	15-316	%Rec	1	2/9/2018 10:57:41 AM	36440
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.023	mg/Kg	1	2/9/2018 10:57:41 AM	36440
Toluene	ND	0.045	mg/Kg	1	2/9/2018 10:57:41 AM	36440
Ethylbenzene	ND	0.045	mg/Kg	1	2/9/2018 10:57:41 AM	36440
Xylenes, Total	ND	0.091	mg/Kg	1	2/9/2018 10:57:41 AM	36440
Surr: 4-Bromofluorobenzene	124	80-120	S %Rec	1	2/9/2018 10:57:41 AM	36440

#### 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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: NW Wall (21'-35')

Homestead Ranch 2 Project:

Collection Date: 2/8/2018 10:45:00 AM

Lab ID: 1802538-006

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 11:41:38 AM	36450
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS					Analyst	: TOM
Diesel Range Organics (DRO)	130	9.6		mg/Kg	1	2/9/2018 12:23:57 PM	36444
Motor Oil Range Organics (MRO)	130	48		mg/Kg	1	2/9/2018 12:23:57 PM	36444
Surr: DNOP	108	70-130		%Rec	1	2/9/2018 12:23:57 PM	36444
EPA METHOD 8015D: GASOLINE RAI	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	2/9/2018 11:44:38 AM	36440
Surr: BFB	118	15-316		%Rec	1	2/9/2018 11:44:38 AM	36440
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.019		mg/Kg	1	2/9/2018 11:44:38 AM	36440
Toluene	ND	0.039		mg/Kg	1	2/9/2018 11:44:38 AM	36440
Ethylbenzene	ND	0.039		mg/Kg	1	2/9/2018 11:44:38 AM	36440
Xylenes, Total	ND	0.078		mg/Kg	1	2/9/2018 11:44:38 AM	36440
Surr: 4-Bromofluorobenzene	127	80-120	S	%Rec	1	2/9/2018 11:44:38 AM	36440

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range E
- Analyte detected below quantitation limits Page 6 of 15 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

#### Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: SE Wall (21'-35')

Project: Homestead Ranch 2 Collection Date: 2/8/2018 10:58:00 AM

Lab ID: 1802538-007

Received Date: 2/9/2018 7:00:00 AM Matrix: SOIL

Analyses	Result	PQL Q	ual U	Inits	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANÌONS			•			Analyst	MRA
Chloride	39	30	ı	mg/Kg	20	2/9/2018 11:54:03 AM	36450
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analyst	: TOM
Diesel Range Organics (DRO)	ND	9.5	ı	mg/Kg	1	2/9/2018 11:50:45 AM	36444
Motor Oil Range Organics (MRO)	ND	47	1	mg/Kg	1	2/9/2018 11:50:45 AM	36444
Surr: DNOP	100	70-130	•	%Rec	1	2/9/2018 11:50:45 AM	36444
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.8	1	mg/Kg	1	2/9/2018 12:08:10 PM	36440
Sun: BFB	118	15-316	•	%Rec	1	2/9/2018 12:08:10 PM	36440
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.019		mg/Kg	1	2/9/2018 12:08:10 PM	36440
Toluene	ND	0.038		mg/Kg	1	2/9/2018 12:08:10 PM	36440
Ethylbenzene	ND	0.038		mg/Kg	1	2/9/2018 12:08:10 PM	36440
Xylenes, Total	ND	0.076	1	mg/Kg	1	2/9/2018 12:08:10 PM	36440
Surr: 4-Bromofluorobenzene	126	80-120	s '	%Rec	1	2/9/2018 12:08:10 PM	36440

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 7 of 15
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

#### Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: N Wall (10'-21')

**Project:** Homestead Ranch 2

**Collection Date:** 2/8/2018 12:09:00 PM

Lab ID: 1802538-008

Matrix: SOIL Received Date: 2/9/2018 7:00:00 AM

Analyses	Result PQL Qual Units				DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 12:06:28 PM	36450
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS					Analys	t: TOM
Diesel Range Organics (DRO)	30	9.7		mg/Kg	1	2/9/2018 12:12:56 PM	36444
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/9/2018 12:12:56 PM	36444
Surr: DNOP	97.6	70-130		%Rec	1	2/9/2018 12:12:56 PM	36444
EPA METHOD 8015D: GASOLINE RAI	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	97	4.2		mg/Kg	1	2/9/2018 12:31:40 PM	36440
Surr: BFB	998	15-316	S	%Rec	1	2/9/2018 12:31:40 PM	36440
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.021		mg/Kg	1	2/9/2018 12:31:40 PM	36440
Toluene	ND	0.042		mg/Kg	1	2/9/2018 12:31:40 PM	36440
Ethylbenzene	ND	0.042		mg/Kg	1	2/9/2018 12:31:40 PM	36440
Xylenes, Total	1.9	0.084		mg/Kg	1	2/9/2018 12:31:40 PM	36440
Surr: 4-Bromofluorobenzene	147	80-120	s	%Rec	1	2/9/2018 12:31:40 PM	36440

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: NE Wall (10'-21')

**Project:** Homestead Ranch 2

Collection Date: 2/8/2018 11:05:00 AM

Lab ID: 1802538-009

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	2/9/2018 11:05:56 AM	36451
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	2/9/2018 11:59:27 AM	36444
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	2/9/2018 11:59:27 AM	36444
Surr: DNOP	103	70-130	%Rec	1	2/9/2018 11:59:27 AM	36444
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	2/9/2018 11:41:45 AM	G49019
Surr: BFB	93.4	15-316	%Rec	1	2/9/2018 11:41:45 AM	G49019
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.020	mg/Kg	1	2/9/2018 11:41:45 AM	B49019
Toluene	ND	0.039	mg/Kg	1	2/9/2018 11:41:45 AM	B49019
Ethylbenzene	ND	0.039	mg/Kg	1	2/9/2018 11:41:45 AM	B49019
Xylenes, Total	ND	0.078	mg/Kg	1	2/9/2018 11:41:45 AM	B49019
Surr: 4-Bromofluorobenzene	95.9	80-120	%Rec	1	2/9/2018 11:41:45 AM	B49019

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: E Wall (10'-21')

Homestead Ranch 2 **Project:** 

Collection Date: 2/8/2018 12:12:00 PM Received Date: 2/9/2018 7:00:00 AM

1802538-010 Lab ID:

Matrix: SOIL

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	: MRA
Chloride	ND	30	mg/Kg	20	2/9/2018 11:18:20 AM	36451
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	;			Analys	: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	2/9/2018 11:35:09 AM	36444
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/9/2018 11:35:09 AM	36444
Surr: DNOP	101	70-130	%Rec	1	2/9/2018 11:35:09 AM	36444
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	2/9/2018 12:05:22 PM	G49019
Surr: BFB	90.6	15-316	%Rec	1	2/9/2018 12:05:22 PM	G49019
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.020	mg/Kg	1	2/9/2018 12:05:22 PM	B49019
Toluene	ND	0.040	mg/Kg	1	2/9/2018 12:05:22 PM	B49019
Ethylbenzene	ND	0.040	mg/Kg	1	2/9/2018 12:05:22 PM	B49019
Xylenes, Total	ND	0.079	mg/Kg	1	2/9/2018 12:05:22 PM	B49019
Surr: 4-Bromofluorobenzene	91.8	80-120	%Rec	1	2/9/2018 12:05:22 PM	B49019

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limit Page 10 of 15 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

#### Lab Order 1802538

Date Reported: 2/12/2018

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: S Wall (10'-21')

**Project:** Homestead Ranch 2

**Collection Date: 2/8/2018 12:15:00 PM** 

Lab ID: 1802538-011

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analyst:	MRA
Chloride	ND	30	mg/Kg	20 2/9/2018 11:30:44 AM	36451
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	i		Analyst:	TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1 2/9/2018 11:10:46 AM	36444
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1 2/9/2018 11:10:46 AM	36444
Surr: DNOP	101	70-130	%Rec	1 2/9/2018 11:10:46 AM	36444
EPA METHOD 8015D: GASOLINE RAN	NGE			Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1 2/9/2018 12:28:57 PM	G49019
Surr: BFB	90.6	15-316	%Rec	1 2/9/2018 12:28:57 PM	G49019
EPA METHOD 8021B: VOLATILES				Analyst:	NSB
Benzene	ND	0.020	mg/Kg	1 2/9/2018 12:28:57 PM	B49019
Toluene	ND	0.040	mg/Kg	1 2/9/2018 12:28:57 PM	B49019
Ethylbenzene	ND	0.040	mg/Kg	1 2/9/2018 12:28:57 PM	B49019
Xylenes, Total	ND	0.081	mg/Kg	1 2/9/2018 12:28:57 PM	B49019
Surr: 4-Bromofluorobenzene	92.2	80-120	%Rec	1 2/9/2018 12:28:57 PM	B49019

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 11 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### **QC SUMMARY REPORT**

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1802538

12-Feb-18

Client: Project: Blagg Engineering

Homestead Ranch 2

Sample ID MB-36450

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 36450

**PQL** 

RunNo: 49015

Analysis Date: 2/9/2018

SPK value SPK Ref Val %REC LowLimit

0

Prep Date: 2/9/2018

SeqNo: 1578602

Units: mg/Kg

HighLimit

**RPDLimit** 

Qual

Analyte Chloride

ND 1.5

SampType: Ics

TestCode: EPA Method 300.0: Anions

%RPD

%RPD

Sample ID LCS-36450 Client ID: LCSS

Batch ID: 36450

Result

14

Result

RunNo: 49015

Prep Date: 2/9/2018

Analysis Date: 2/9/2018

SeqNo: 1578603

Units: ma/Ka

110

SPK value SPK Ref Val PQL 1.5 15.00

%REC LowLimit 93.7

HighLimit

**RPDLimit** Qual

Analyte Chloride

Sample ID MB-36451

**PBS** 

Sample ID LCS-36451

SampType: mblk

TestCode: EPA Method 300.0: Anions

RunNo: 49016

90

Prep Date: 2/9/2018

Client ID:

Batch ID: 36451 Analysis Date: 2/9/2018

SeqNo: 1578762

Units: mg/Kg

Analyte

Result ND

**PQL** 

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit** 

Qual

Chloride

1.5

SampType: Ics

TestCode: EPA Method 300.0: Anions RunNo: 49016

Prep Date: 2/9/2018

Client ID: LCSS

Batch ID: 36451 Analysis Date: 2/9/2018

**PQL** 

SeqNo: 1578763

Units: mg/Kg

**RPDLimit** 

Page 12 of 15

Analyte Chloride

14

SPK value SPK Ref Val 15.00 1.5

%REC 94.1

LowLimit

%RPD

HighLimit 110

#### Qualifiers:

ND

Value exceeds Maximum Contaminant Level.

Not Detected at the Reporting Limit

- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- POL Practical Quanitative Limit
- % 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
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

#### QC SUMMARY REPORT

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1802538

12-Feb-18

Client: Project:

Analyte

**Blagg Engineering** Homestead Ranch 2

Sample ID LCS-36444

SampType: LCS

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

Client ID: LCSS

Batch ID: 36444

**PQL** 

10

RunNo: 49006

70

70

LowLimit

Prep Date: 2/9/2018

Analysis Date: 2/9/2018

SeqNo: 1577367

95.6

Units: mg/Kg HighLimit

130

130

%RPD **RPDLimit** 

Qual

Diesel Range Organics (DRO) Surr: DNOP

48 4.6

Result

50.00 5.000

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

Sample ID MB-36444 Client ID:

PBS

SampType: MBLK Batch ID: 36444

**PQL** 

10

50

RunNo: 49006

Prep Date: 2/9/2018

Analysis Date: 2/9/2018

SeqNo: 1577368

Units: mg/Kg

**HighLimit** 

Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)

ND ND 9.8

53

4.7

Result

10.00

97.6

70

%RPD **RPDLimit** 

Qual

Sur: DNOP

Analyte

Prep Date: 2/9/2018

SampType: MS

SPK value SPK Ref Val %REC

SPK value SPK Ref Val %REC

130

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

Sample ID 1802538-001AMS Client ID: Base @ 48'

Batch ID: 36444 Analysis Date: 2/9/2018 RunNo: 49006

LowLimit

Units: mg/Kg

Analyte Diesel Range Organics (DRO)

Result

**PQL** SPK value SPK Ref Val 9.7

SeqNo: 1578371 %REC LowLimit 103

96.8

**HighLimit** 55.8 125 %RPD **RPDLimit** 

Qual

Qual

Sur: DNOP

Sample ID 1802538-001AMSD

2/9/2018

3.071

3.071

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

Client ID: Base @ 48' SampType: MSD Batch ID: 36444

Analysis Date: 2/9/2018

RunNo: 49006

**PQL** 

10

SeqNo: 1578372

70

Units: mg/Kg

130

130

Analyte Diesel Range Organics (DRO)

Prep Date:

Surr: DNOP

Result 50 4.6

50.56 5.056

SPK value SPK Ref Val

48.31

4.831

%REC 93.3

90.6

LowLimit 55.8

70

HighLimit 125

%RPD

**RPDLimit** 4.63 20 0

0

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL **Practical Quanitative Limit** 

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits J

Page 13 of 15

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

#### **OC SUMMARY REPORT**

#### Hall Environmental Analysis Laboratory, Inc.

WO#: 1802538

12-Feb-18

Client: Project: Blagg Engineering

Homestead Ranch 2

Sample ID MB-36440 Client ID: PBS

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Batch ID: 36440

**PQL** 

5.0

RunNo: 49018

Prep Date: 2/8/2018

Analysis Date: 2/9/2018

Result

SeqNo: 1578201

Units: mg/Kg

Analyte Gasoline Range Organics (GRO)

ND 1100

1000

SPK value SPK Ref Val %REC LowLimit

316

HighLimit

**RPDLimit** Qual

Sample ID LCS-36440

SampType: LCS

110 TestCode: EPA Method 8015D: Gasoline Range

%RPD

Client ID: LCSS

Batch ID: 36440

RunNo: 49018

Analysis Date: 2/9/2018

SeqNo: 1578202

Units: mg/Kg

Analyte Gasoline Range Organics (GRO)

Surr: BFB

Prep Date: 2/8/2018 Result **PQL** 

SPK value SPK Ref Val %REC 0 102

LowLimit HighLimit 75.9 131

%RPD **RPDLimit** Qual

Surr: BFB

25 5.0 1200

116

SPK value SPK Ref Val %REC LowLimit

15 316

Client ID: PBS

SampType: MBLK

RunNo: 49019

TestCode: EPA Method 8015D: Gasoline Range

Prep Date:

Sample ID RB

Batch ID: G49019 Analysis Date: 2/9/2018

**PQL** 

5.0

SeqNo: 1578224

Units: mg/Kg HighLimit

Qual

Analyte Gasoline Range Organics (GRO)

Sample ID 2.5UG GRO LCS

Result ND 930

1000

25.00

1000

93.5

15

%RPD **RPDLimit** 

Surr: BFB

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: G49019

RunNo: 49019

Prep Date:

Analysis Date: 2/9/2018

SeqNo: 1578225

Units: mg/Kg

Analyte

Result **PQL** SPK value SPK Ref Val 25.00 5.0

%REC

LowLimit

**HighLimit** 

316

%RPD **RPDLimit** 

Qual

Gasoline Range Organics (GRO) Surr: BFB

25 1100

1000

0

101 109 75.9 15

131 316

Page 14 of 15

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- **PQL Practical Quanitative Limit**
- % 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
- Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

#### **QC SUMMARY REPORT**

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

Page 15 of 15

1802538

12-Feb-18

Client: **Project:**  Blagg Engineering

Homestead Ranch 2

Sample ID MB-36440	Samp	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles									
Client ID: PBS	Batc	h ID: 36	440	F	RunNo: 4								
Prep Date: 2/8/2018	Analysis [	9/2018	S	SeqNo: 1	578215	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	ND 0.10											
Surr: 4-Bromofluorobenzene	1.2				115	80	120						

Sample ID LCS-36440	SampT	ype: LC	s	Tes	d 8021B: Volatiles									
Client ID: LCSS	Batch	Batch ID: 36440 RunNo: 49018												
Prep Date: 2/8/2018	Analysis D	Analysis Date: 2/9/2018 SeqNo: 1578216 Ur					Units: mg/Kg							
Analyte	Result	Result PQL SPK value		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	1.0	0.025	1.000	0	103	77.3	128			_				
Toluene	1.0	0.050	1.000	0	104	79.2	125							
Ethylbenzene	1.0	0.050	1.000	0	104	80.7	127							
Xylenes, Total	3.2	0.10	3.000	0	107	81.6	129							
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120							

Sample ID RB	Samp	Гуре: МЕ	BLK	TestCode: EPA Method 8021B: Volatiles									
Client ID: PB\$	Batc	h ID: B4	9019	F	RunNo: 4	9019							
Prep Date:	Analysis Date: 2/9/2018			S	SeqNo: 1	578234	Units: mg/F	(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	ND 0.10											
Surr: 4-Bromofluorobenzene	0.95				94.7 80								

Sample ID 100NG BTEX LCS	S SampT	ype: <b>LC</b>	s	Tes	8021B: Vola	tiles					
Client ID: LCSS	Batch	1D: <b>B4</b>	9019	F	RunNo: 4						
Prep Date:	Analysis Date: 2/9/2018 SeqNo: 1578235 Ur					Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.94	0.025	1.000	0	94.0	77.3	128				
Toluene	0.87	0.050	1.000	0	87.1	79.2	125				
Ethylbenzene	0.90	0.050	1.000	0	89.9	80.7	127				
Xylenes, Total	2.7	0.10	3.000	0	91.1	81.6	129				
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120				

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



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

### Sample Log-In Check List

Client Name:	BLAGG	Work Order Num	ber: 1802538		RcptNo: 1	
Received By:	Anne Thome	2/9/2018 7:00:00 A	M	an I	_	
Completed By:	Anne Thorne	2/9/2018 7:26:46 A	M	Arne St-		
Reviewed By:	Rt 2.9/18			Cina Ji	<b>-</b> .	
Chain of Cus	<u>tody</u>					
1. Is Chain of Co	ustody complete?		Yes 🗹	No 🗆	Not Present	
2. How was the	sample delivered?		Courier			
Log In						
	npt made to cool the s	amples?	Yes 🗹	No 🗆	na 🗆	
4. Were all samp	oles received at a tem	perature of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗆	
5. Sample(s) in p	proper container(s)?		Yes 🗹	No 🗆		
6. Sufficient sam	ple volume for indicat	ted test(s)?	Yes 🗹	No 🗆		
		3) property preserved?	Yes 🗹	No 🗆		
	tive added to bottles?	•	Yes	No 🗹	NA 🗆	
9. VOA vials hav	e zero headspace?		Yes 🗌	No 🗆	No VOA Vials 🗹	
10. Were any san	nple containers receiv	red broken?	Yes	No 🗹	# of preserved	
	ork match bottle labels		Yes 🗹	No 🗆	bottles checked for pH:	unless noted)
•	ancles on chain of cus correctly identified on	••	Yes 🗹	No □	Adjusted?	unicos notou)
	t analyses were reque		Yes 🗹	No 🗆	<del></del>	
14. Were all holdi	ng times able to be mustomer for authorizat	et?	Yes 🗹	No 🗆	Checked by:	· ————
Special Handl	ing (if applicable	<u>)</u>				
15. Was client no	tified of all discrepand	cies with this order?	Yes 🗌	No 🗆	NA 🗹	
Person	Notified:	Date				
. By Who	om:	Via:	eMail P	hone 🗌 Fax	In Person	
Regard						
Client In	nstructions:					
16. Additional re	marks:					
17. Cooler Infor	matlon					
Cooler No		<del></del>	Seal Date	Signed By		
<u> </u>	1.0 Good	Yes				

Chain-of-Custody Record Turn-Around Time:													_					-						
Client:	Benso	n- Ma	JTIN - GREER	□ St	andard		Same	Dau			K	_									IN:		_	
	BLAGE	ENGINE	ERW INC	Projec	t Name	<del>)</del> :		0						v.hal						-				
Mailing	Address	:			LOME	STEAD RAJ	uch #	Z.		40	04.1									400				
				Projec				_	1					NE -		-	-							•
Phone :	#· (< 8	5/32	10-1183	1						1,6	JI. OL	)5-34	· <b>フ</b> - <b>J</b> :					345- uest		<u></u>				
email o			100	Projec	t Mana	iger: 🎺 🚉 🚊				<b>y</b> )	ô									÷.,				
	Package:			1		4.42			21)	luo s	MR					SO,	B's					- }		
Stan	•		☐ Level 4 (Full Validation)		JEF	F BLAG	6 .		EMB4s (8021)	+ TPH (Gas only)	/DRO/MRO	1		SIMS)	•	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's			*	.			
Accredi				Sampler: Jeff Blogy					量	H	护	=	1	8270 S		Š	3082		l			- 1		3
□ NEL		□ Othe	r			A YOU'S AND			Ä	+	RO	418.1)	504.1)		<sub>6</sub> 0	o.	3 / E		<u> </u>	·				6
	(Type)_ I	<del></del>	<del></del> - <del>_</del>			peralure/			H	TBE	9) E	700	, p	0	etal	N.	clde	₹	<u> </u>	B		- 1	1	اي
	_			A-UZ I	. 4/17 tainer	Preservative			BTEX FELTE	BTEX + MTBE	TPH 8015B (GRO	TPH (Method	(Method (	PAH's (8310 or	RCRA 8 Metals	(F,(	esti	8260B (VOA)	8270 (Semi-VOA)	CHOUSE		ļ	-	Air Bubbles (Y or N)
Date	Time	Matrix	Sample Request ID		and#	Preservative Type	#HE/	L No.	ĭ	Ä	H 8	Ę	B (	T,s	Ϋ́	ions	81 F	909	2	3				B
										18		₽	EDB	A	8	Αn	80	82	85					₹
79/2018	1030	Soil	BASE @ 48'	402=1 COOL -COIX				X				·				·	X							
1	1037		NE Wall (35-45')					-002			1												$\perp$	
	1040		NW wall (35 - 45)					703											·	Ш				
	1054		SE Wall (35'-45')					-004												$\prod$				
	1050		NE WILL (21-35)					-05												$\prod$				
$\supset$	1045		NW wall (21-35')					rdo		13	$\cdot T$													
	1058		SE wall (21-35')					207	П		T									$\prod$		П		
	1209		N Wall (10'-ZI')					-208	П		$\top$									П				
$\neg$	1105		NE WILL (10'-21')				i	-209												$\prod$				
	1212		E wall (10'-21')					010												$\prod$				
1	1215		5 Wall (10'-21')	1		1		-011							,									
Date:	Time:	Relinquish	ed by: 1 Blagg	Received by: Date Time					Rer	narks	s:	Bill	· E	3mc	<del>,</del> _									
2/8/2018	,,,,,			Christians 28/2018 1540					Remarks: Bill BMG Courteet: Zach Stredly										ļ					
Date:	Time:	Relinquish	ed by:	Received by: Date Time														(	U -					
2/8/14	11821	1/ Thu	stillable (	ste Walle & Chm - 000													$\Box$							
H	necessary,	samples subi	nples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this pos-										racteo	data v	will be	dear	ly nota	ted on	the ar	nalytic	al repo	rt.		



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

February 16, 2018

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199

FAX (505) 632-3903

RE: Homestead Ranch 2

OrderNo.: 1802858

## Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 10 sample(s) on 2/15/2018 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

# Analytical Report Lab Order 1802858

Date Reported: 2/16/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: West Base @ 45'

Project: Homestead Ranch 2

**Collection Date: 2/14/2018 10:35:00 AM** 

Lab ID: 1802858-001

Matrix: SOIL

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	Result PQL Qual Units		DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 11:37:55 AM	36544
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	2/15/2018 9:32:30 AM	36540
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	2/15/2018 9:32:30 AM	36540
Surr: DNOP	98.3	70-130	%Rec	1	2/15/2018 9:32:30 AM	36540
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	17	mg/Kg	5	2/15/2018 9:40:40 AM	G49154
Surr: BFB	91.3	15-316	%Rec	5	2/15/2018 9:40:40 AM	G49154
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.086	mg/Kg	5	2/15/2018 9:40:40 AM	B49154
Toluene	ND	0.17	mg/Kg	5	2/15/2018 9:40:40 AM	B49154
Ethylbenzene	ND	0.17	mg/Kg	5	2/15/2018 9:40:40 AM	B49154
Xylenes, Total	ND	0.34	mg/Kg	5	2/15/2018 9:40:40 AM	B49154
Surr: 4-Bromofluorobenzene	89.3	80-120	%Rec	5	2/15/2018 9:40:40 AM	B49154

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Lab Order 1802858

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: NW Wall @ 25'-45'

Project: Homestead Ranch 2

Collection Date: 2/14/2018 10:42:00 AM Received Date: 2/15/2018 7:00:00 AM

Lab ID: 1802858-002 Matrix: SOIL

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	-				Analys	t: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 11:50:20 AM	A 36544
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS	;			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.0	mg/Kg	1	2/15/2018 9:56:59 AM	36540
Motor Oil Range Organics (MRO)	ND	45	mg/Kg	1	2/15/2018 9:56:59 AM	36540
Sur: DNOP	98.1	70-130	%Rec	1	2/15/2018 9:56:59 AM	36540
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	18	mg/Kg	5	2/15/2018 10:04:03 AN	/ G49154
Surr: BFB	93.9	15-316	%Rec	5	2/15/2018 10:04:03 AM	/ G49154
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.090	mg/Kg	5	2/15/2018 10:04:03 AM	И B49154
Toluene	ND	0.18	mg/Kg	5	2/15/2018 10:04:03 AM	M B49154
Ethylbenzene	ND	0.18	mg/Kg	5	2/15/2018 10:04:03 AM	M B49154
Xylenes, Total	ND	0.36	mg/Kg	5	2/15/2018 10:04:03 AM	A B49154
Surr: 4-Bromofluorobenzene	89.7	80-120	%Rec	5	2/15/2018 10:04:03 AM	M B49154

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
  - J Analyte detected below quantitation limits Page 2 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802858

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/16/2018

**CLIENT:** Blagg Engineering

Client Sample ID: NW Wall @ 15'-25'

Project: Homestead Ranch 2 Lab ID:

1802858-003

Collection Date: 2/14/2018 10:45:00 AM Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS		,	<u>-</u>		Analyst:	CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 12:02:45 PM	36544
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	<b>3</b>			Analyst:	TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	2/15/2018 10:21:06 AM	36540
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/15/2018 10:21:06 AM	36540
Surr: DNOP	99.5	70-130	%Rec	1	2/15/2018 10:21:06 AM	36540
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	20	mg/Kg	5	2/15/2018 10:27:23 AM	G4915
Surr: BFB	90.3	15-316	%Rec	5	2/15/2018 10:27:23 AM	G4915
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.10	mg/Kg	5	2/15/2018 10:27:23 AM	B49154
Toluene	ND	0.20	mg/Kg	5	2/15/2018 10:27:23 AM	B49154
Ethylbenzene	ND	0.20	mg/Kg	5	2/15/2018 10:27:23 AM	B49154
Xylenes, Total	ND	0.40	mg/Kg	5	2/15/2018 10:27:23 AM	B49154
Surr: 4-Bromofluorobenzene	89.9	80-120	%Rec	5	2/15/2018 10:27:23 AM	B49154

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 14 j
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1802858

Date Reported: 2/16/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: West Wall @ 25'-45'

Project: Homestead Ranch 2

Collection Date: 2/14/2018 10:47:00 AM

Lab ID: 1802858-004

Matrix: SOIL

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS		1			Analys	st: <b>CJS</b>
Chloride	ND	30	mg/Kg	20	2/15/2018 12:15:10 P	M 36544
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analys	st: TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	2/15/2018 10:45:27 A	M 36540
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/15/2018 10:45:27 A	M 36540
Surr: DNOP	103	70-130	%Rec	1	2/15/2018 10:45:27 A	M 36540
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	2/15/2018 12:48:04 P	M G49154
Surr: BFB	104	15-316	%Rec	1	2/15/2018 12:48:04 P	M G49154
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.019	mg/Kg	1	2/15/2018 12:48:04 P	M B49154
Toluene	ND	0.038	mg/Kg	1	2/15/2018 12:48:04 P	M B49154
Ethylbenzene	ND	0.038	mg/Kg	1	2/15/2018 12:48:04 P	M B49154
Xylenes, Total	ND	0.077	mg/Kg	1	2/15/2018 12:48:04 P	M B49154
Surr: 4-Bromofluorobenzene	94.6	80-120 ·	%Rec	1	2/15/2018 12:48:04 P	M B49154

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Lab Order 1802858

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: West Wall @ 15'-25'

Homestead Ranch 2 Project:

Collection Date: 2/14/2018 10:49:00 AM Received Date: 2/15/2018 7:00:00 AM

Lab ID: 1802858-005

Matrix: SOIL

Analyses	Result	PQL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Anal	yst: CJS
Chloride	ND	30	mg/Kg	20 2/15/2018 12:27:35	PM 36544
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS			Anal	yst: TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1 2/15/2018 11:09:32	AM 36540
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1 2/15/2018 11:09:32	AM 36540
Surr: DNOP	93.9	70-130	%Rec	1 2/15/2018 11:09:32	AM 36540
EPA METHOD 8015D: GASOLINE RAI	NGE			Anal	yst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1 2/15/2018 10:50:42	AM G49154
Surr: BFB	89.5	15-316	%Rec	1 2/15/2018 10:50:42	AM G49154
EPA METHOD 8021B: VOLATILES				Anal	yst: NSB
Benzene	ND	0.017	mg/Kg	1 2/15/2018 10:50:42	AM B49154
Toluene	ND	0.035	mg/Kg	1 2/15/2018 10:50:42	AM B49154
Ethylbenzene	ND	0.035	mg/Kg	1 2/15/2018 10:50:42	AM B49154
Xylenes, Total	ND	0.069	mg/Kg	1 2/15/2018 10:50:42	AM B49154
Surr: 4-Bromofluorobenzene	92.6	80-120	%Rec	1 2/15/2018 10:50:42	AM B49154

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 14
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

### Lab Order 1802858

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: SW Wall @ 25'-45'

Project: Homestead Ranch 2

Collection Date: 2/14/2018 10:52:00 AM

Lab ID: 1802858-006

Matrix: SOIL

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 12:39:59 P	M 36544
EPA METHOD 8015M/D: DIESEL RAN	NGE ORGANICS				Analys	st: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	2/15/2018 11:33:47 A	M 36540
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/15/2018 11:33:47 A	M 36540
Surr: DNOP	96.4	70-130	%Rec	1	2/15/2018 11:33:47 A	M 36540
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.7	mg/Kg	1	2/15/2018 11:14:08 A	M G49154
Surr: BFB	88.7	15-316	%Rec	1	2/15/2018 11:14:08 A	M G49154
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.018	mg/Kg	1	2/15/2018 11:14:08 A	M B49154
Toluene	ND	0.037	mg/Kg	1	2/15/2018 11:14:08 A	M B49154
Ethylbenzene	ND	0.037	mg/Kg	1	2/15/2018 11:14:08 A	M B49154
Xylenes, Total	ND	0.073	mg/Kg	1	2/15/2018 11:14:08 A	M B49154
Surr: 4-Bromofluorobenzene	89.5	80-120	%Rec	1	2/15/2018 11:14:08 A	M B49154

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Lab Order 1802858

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: SW Wall @ 15'-25'

Collection Date: 2/14/2018 10:57:00 AM

Received Date: 2/15/2018 7:00:00 AM

Project: Homestead Ranch 2 Lab ID: 1802858-007

Matrix: SOIL

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	==				Analy	st: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 12:52:23 P	M 36544
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	;			Analy	st: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	2/15/2018 11:58:07 A	M 36540
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	2/15/2018 11:58:07 A	M 36540
Surr: DNOP	92.5	70-130	%Rec	1	2/15/2018 11:58:07 A	M 36540
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	2/15/2018 1:11:31 PM	1 G49154
Surr. BFB	93.6	15-316	%Rec	1	2/15/2018 1:11:31 PM	1 G49154
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.019	mg/Kg	1	2/15/2018 1:11:31 PM	1 B49154
Toluene	ND	0.038	mg/Kg	1	2/15/2018 1:11:31 PM	1 B49154
Ethylbenzene	ND	0.038	mg/Kg	1	2/15/2018 1:11:31 PN	1 B49154
Xylenes, Total	ND	0.077	mg/Kg	1	2/15/2018 1:11:31 PN	1 B49154
Surr: 4-Bromofluorobenzene	91.4	80-120	%Rec	1	2/15/2018 1:11:31 PN	1 B49154

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Lab Order 1802858

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: West Wall @ 10'-15'

Collection Date: 2/14/2018 11:00:00 AM

Homestead Ranch 2 Project: 1802858-008 Lab ID:

Matrix: SOIL

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analyst:	CJS
Chloride	ND	30	mg/Kg	20 2/15/2018 1:04:47 PM	36544
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANICS	<b>,</b>		Analyst:	TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1 2/15/2018 12:22:30 PM	36540
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1 2/15/2018 12:22:30 PM	36540
Surr: DNOP	94.7	70-130	%Rec	1 2/15/2018 12:22:30 PM	36540
EPA METHOD 8015D: GASOLINE RAN	GE			Analyst:	NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1 2/15/2018 11:37:35 AM	G49154
Surr: BFB	93.2	15-316	%Rec	1 2/15/2018 11:37:35 AM	G49154
EPA METHOD 8021B: VOLATILES				Analyst:	NSB
Benzene	ND	0.018	mg/Kg	1 2/15/2018 11:37:35 AM	B49154
Toluene	ND	0.035	mg/Kg	1 2/15/2018 11:37:35 AM	B49154
Ethylbenzene	ND	0.035	mg/Kg	1 2/15/2018 11:37:35 AM	B49154
Xylenes, Total	ND	0.071	mg/Kg	1 2/15/2018 11:37:35 AM	B49154
Surr: 4-Bromofluorobenzene	92.5	80-120	%Rec	1 2/15/2018 11:37:35 AM	B49154

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 8 of 14
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

## Lab Order 1802858

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: NW Wall @ 10'-15'

Project: Homestead Ranch 2

Collection Date: 2/14/2018 11:06:00 AM

Lab ID: 1802858-009

Matrix: SOIL

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF D	ate Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: CJS
Chloride	ND	30	mg/Kg	20 2	2/15/2018 1:42:01 PM	36544
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analys	st: TOM
Diesel Range Organics (DRO)	ND	9.1	mg/Kg	1 2	2/15/2018 12:46:59 P	M 36540
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1 2	2/15/2018 12:46:59 P	M 36540
Surr: DNOP	97.6	70-130	%Rec	1 2	2/15/2018 12:46:59 P	M 36540
EPA METHOD 8015D: GASOLINE RAI	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1 2	2/15/2018 12:01:01 P	M G49154
Surr: BFB	91.5	15-316	%Rec	1 :	2/15/2018 12:01:01 P	M G49154
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.017	mg/Kg	1 2	2/15/2018 12:01:01 P	M B49154
Toluene	ND	0.035	mg/Kg	1 2	2/15/2018 12:01:01 P	M B49154
Ethylbenzene	ND	0.035	mg/Kg	1 2	2/15/2018 12:01:01 P	M B49154
Xylenes, Total	ND	0.069	mg/Kg	1 2	2/15/2018 12:01:01 P	M B49154
Surr: 4-Bromofluorobenzene	90.7	80-120	%Rec	1 :	2/15/2018 12:01:01 P	M B49154

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## **Analytical Report** Lab Order 1802858

Date Reported: 2/16/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: West Top @ 0'-10'

Homestead Ranch 2 Project:

Collection Date: 2/14/2018 11:12:00 AM Received Date: 2/15/2018 7:00:00 AM

Lab ID: 1802858-010

Matrix: SOIL

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS		-			Analyst	:: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 1:54:25 PM	36544
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	;			Analyst	:: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	2/15/2018 1:11:23 PM	36540
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	2/15/2018 1:11:23 PM	36540
Surr: DNOP	95.5	70-130	%Rec	1	2/15/2018 1:11:23 PM	36540
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.7	mg/Kg	1	2/15/2018 12:24:31 PM	G49154
Surr: BFB	91.7	15-316	%Rec	1	2/15/2018 12:24:31 PM	G49154
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	0.019	mg/Kg	1	2/15/2018 12:24:31 PM	B49154
Toluene	ND	0.037	mg/Kg	1	2/15/2018 12:24:31 PM	B49154
Ethylbenzene	ND	0.037	mg/Kg	1	2/15/2018 12:24:31 PM	B49154
Xylenes, Total	ND	0.074	mg/Kg	1	2/15/2018 12:24:31 PM	B49154
Surr: 4-Bromofluorobenzene	90.3	80-120	%Rec	1	2/15/2018 12:24:31 PM	B49154

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 10 of 14 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1802858

16-Feb-18

Client:

Blagg Engineering

**Project:** 

Homestead Ranch 2

Sample ID MB-36544

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

**PBS** 

Batch ID: 36544 Analysis Date: 2/15/2018

RunNo: 49157

SeqNo: 1585942

Units: mg/Kg

Qual

Analyte Chloride

Result ND PQL 1.5

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD

**RPDLimit** 

Sample ID LCS-36544

Prep Date: 2/15/2018

Prep Date: 2/15/2018

SampType: Ics

TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 36544

RunNo: 49157

SeqNo: 1585943

Units: mg/Kg

%RPD

**RPDLimit** Qual

Analyte

Analysis Date: 2/15/2018

SPK value SPK Ref Val

95.2

Chloride

%REC

90

14 1.5 15.00

HighLimit 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

В Analyte detected in the associated Method Blank

Ε Value above quantitation range

J Analyte detected below quantitation limits Page 11 of 14

Sample pH Not In Range

RLReporting Detection Limit

Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1802858

16-Feb-18

Client:

Blagg Engineering

Project:

Homestead Ranch 2

Sample ID LCS-36540	SampT	ype: LC	s	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 36540 RunNo: 49144									
Prep Date: 2/15/2018	Analysis D	ate: 2/	15/2018	S	584635	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.4	70	130			
Surr: DNOP	4.5		5.000		89.8	70	130			

Sample ID MB-36540	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	d 8015M/D: Diesel Range Organics				
Client ID: PBS	Batch	ID: 36	540	F	RunNo: 4	9144					
Prep Date: 2/15/2018	Analysis D	ate: 2/	15/2018	SeqNo: 1584636			SeqNo: 1584636 Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	9.6		10.00		95.7	70	130				

- \* 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
- Page 12 of 14

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802858

16-Feb-18

Client: Project:

Blagg Engineering Homestead Ranch 2

Sample ID RB

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID: PRS

Batch ID: G49154

RunNo: 49154

LowLimit

Prep Date:

Analysis Date: 2/15/2018

SeqNo: 1585380

Units: mg/Kg

HighLimit

**RPDLimit** Qual

Analyte Gasoline Range Organics (GRO)

**PQL** Result ND 5.0

1000

90.4

316

Surr: BFB

900

15

Sample ID 2.5UG GRO LCS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

%RPD

%RPD

Client ID: LCSS

Batch ID: G49154

RunNo: 49154

SPK value SPK Ref Val %REC

15

LowLimit

77.8

15

Qual

Qual

Prep Date: Analyte

Analysis Date: 2/15/2018

SeqNo: 1585381

Units: mg/Kg

316

Gasoline Range Organics (GRO)

Result **PQL** 25

SPK value SPK Ref Val 5.0 25.00

1000

85.91

SPK value SPK Ref Val

%REC 99.6 106

LowLimit **HighLimit** 75.9 131 **RPDLimit** Qual

Surr: BFB

Sample ID 1802858-001AMS

SampType: MS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: West Base @ 45'

Batch ID: G49154

Result

1100

RunNo: 49154

Prep Date:

Analyte

Analysis Date: 2/15/2018

SeqNo: 1585382 %REC

100

106

Units: mg/Kg

HighLimit

316

%RPD **RPDLimit** 128

Gasoline Range Organics (GRO) Surr: BFB

Sample ID 1802858-001AMSD

West Base @ 45'

86 3600

3437

TestCode: EPA Method 8015D: Gasoline Range

RunNo: 49154

Client ID: Prep Date:

Analyte

Analysis Date: 2/15/2018

Result

85

3700

SeqNo: 1585383

99.1

108

Units: mg/Kg

%RPD

**RPDLimit** 20

0

Gasoline Range Organics (GRO) Surr: BFB

PQL

SampType: MSD

Batch ID: G49154

17

85.91 3437

SPK value SPK Ref Val 0

%REC LowLimit

77.8 15 HighLimit 128 316

1.24

0

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- 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
- Analyte detected in the associated Method Blank В
- Ε Value above quantitation range
- J Analyte detected below quantitation limits
- Page 13 of 14

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802858

16-Feb-18

Client: Project: Blagg Engineering

Sample ID RB

Homestead Ranch 2

SampType: MBLK

**PQL** 

TestCode: EPA Method 8021B: Volatiles

TestCode: EPA Method 8021B: Volatiles

Client ID: PBS Batch ID: **B49154** 

Result

RunNo: 49154

Prep Date:

Analysis Date: 2/15/2018

SeqNo: 1585412

SPK value SPK Ref Val %REC LowLimit

Units: mg/Kg

%RPD

%RPD

HighLimit

**RPDLimit** 

Qual

Qual

**RPDLimit** Qual

Analyte Benzene Toluene Ethylbenzene

ND 0.025 ND 0.050 ND 0.050 Xylenes, Total ND 0.10

0.94

1.000

94.2

120

Sample ID 100NG BTEX LCS

Surr: 4-Bromofluorobenzene

Client ID: LCSS

SampType: LCS

Batch ID: **B49154** 

RunNo: 49154

Prep Date:

Prep Date:

Analysis Date: 2/15/2018

SeqNo: 1585413

Units: mg/Kg

SPK value SPK Ref Val %REC Analyte Result **PQL** LowLimit HighLimit 1.0 0.025 1.000 101 77.3 128 Benzene 0 Toluene 1.0 0.050 1.000 0 101 79.2 125 0.050 80.7 127 Ethylbenzene 0.99 1.000 0 99.4 3.1 0.10 3.000 103 81.6 129 Xylenes, Total Surr: 4-Bromofluorobenzene 0.95 1.000 95.5 80 120

Sample ID 1802858-002AMS

SampType: MS

Batch ID: **B49154** 

TestCode: EPA Method 8021B: Volatiles

NW Wall @ 25'-45' Client ID:

Analysis Date: 2/15/2018

RunNo: 49154 SeqNo: 1585414

RunNo: 49154

Units: mg/Kg

%RPD Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit **RPDLimit** 3.8 0.090 3.613 104 80.9 132 Benzene 3.8 0.18 0.03649 103 79.8 Toluene 3.613 136 Ethylbenzene 3.7 0.18 3.613 0 102 79.4 140 Xylenes, Total 11 0.36 10.84 106 78.5 142 Surr: 4-Bromofluorobenzene 3.4 3.613 93.4 80 120

Sample ID 1802858-002AMSD

SampType: MSD

TestCode: EPA Method 8021B: Volatiles

Client ID:

NW Wall @ 25'-45'

Batch ID: **B49154** 

Prep Date:	Analysis Date: 2/15/2018			s	SeqNo: 1	585415	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.7	0.090	3.613	0	102	80.9	132	2.51	20	
Toluene	3.6	0.18	3.613	0.03649	99.4	79.8	136	3.45	20	
Ethylbenzene	3.6	0.18	3.613	0	99.5	79.4	140	2.43	20	
Xylenes, Total	11	0.36	10.84	0	103	78.5	142	3.11	20	
Surr: 4-Bromofluorobenzene	3.3		3.613		92.6	80	120	0	0	

- 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
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 14 of 14

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



#### Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

# Sample Log-In Check List

Client Name:	BLAGG		Work Order Number	: 180285	8		RcptNo:	1
Received By:	Anne Tho	eme	2/15/2018 7:00:00 AM	<b>1</b> .	Ann	1-	_	
Completed By	r: Anne Tha	me	2/15/2018 8:13:54 AM		Aons Aons	1		
Reviewed By:	SRe C	12/15/18			ana			
	led B							
Chain of Cu								
	Custody comp	lete?		Yes 🗹	no No		Not Present	
2. How was ti	ne sample deliv	rered?		Courler			•	
Log In								
	empt made to o	cool the samples?		Yes 🗹	. No		na 🗆	
						_		
4. Were all sa	mples received	l at a temperature	of >0° C to 6.0°C	Yes 🗹	No No		NA 🗆	
5. Sample(s)	In proper conta	iner(s)?		Yes 🗹	no No			
						_		
		or indicated test(s)		Yes 🗹				
	•	and ONG) properly	preserved?	Yes 🗹			🗖	
8. Was preser	vative added to	bottles?		Yes 🗌	No No	V	NA L	
9. VOA vials h	ave zero head:	space?		Yes 🗌	No		No VOA Viais 🗹	
10. Were any s	ample containe	ers received broker	1?	Yes	] No	<b>2</b>	# of preserved	
44.5.				· .	) <b>N</b> -	$_{\neg}$	bottles checked	
<ol> <li>Does paper</li> <li>(Note discrete)</li> </ol>	work match bo epancies on ch			Yes 🗹	) No		for pH:	>12 unless noted)
12. Are matrice	s correctly iden	itified on Chain of (	Custody?	Yes 🗹	No		Adjusted?	
13. Is it clear w	hat analyses w	ere requested?		Yes 🗹				
14. Were all ho	lding times able customer for a			Yes 🗹	No	⊔ Į	Checked by:	
Special Han			hia andre	V [	] ava		na 🗹	
	·	iscrepancies with t	nis order?	Yes ∟	No No		NA 🖭	1
	on Notified:		Date			<sup>.</sup>		
-	/hom: irding:		Via: (	eMail	Phone	Fax	In Person	
	t Instructions:					*****		
16. Additional		e de la	<u> </u>		er mer mer er er er er er er			
17. <u>Cooler Inf</u>	omauon √o Temp°C	Condition Se	al Intact   Seal No	Seal Date	Signed	By III	•	
1	1.0	Good Yes			may managade Markada	ra¥allati		
							-	

C	hain-	-of-Cu	stody Record	Turn-Aroui	nd Time:	Short.	HALL ENVIRONMEN			: NET	ra'											
Client:	BEY20	w - 60	ONTH - GREEK	□ Standa	/ 💆	1	┇		H										i VI: OTA			
			WEEKING, INC.	Project Na								v.hai										
Vailing	Address			Home	STEAD RAI	とりませる		49	01 H	lawki								7109	}			
				Project #:	:		1			)5-34				=	-	345-						
Phone :	#: (5	65) 3	20-1183						)i. OC	00-0-1	0.00					uest						
email o				Project Ma	nager:	^	_	(yl	(Q)					)4)				$\Box$				
2A/QC I	Package:				JETT	= Black	(18021)	S OF	DRO/MRO			္တ		4,SC	B's					ľ	出	
Stan	dard		☐ Level 4 (Full Validation)					(3)	8		ĺ	SIMS)		Θ,	2 PC						15	
Accredi		<b>-</b> 0"		Sampler:		VELEC MS	12	TPH (Gas only)	_	든	듼	200		NO2	808;						COM POSITE	z
□ NEL		□ Othe	?r			E No.		+	똤	418	504.1)	۲ 8	<u>s</u>	Ş	/ se		8	異		- 1	9	্চ
□ FDD	(Type)_	<u> </u>	T	Sample le	mperature: //	0	#	TBE	9	ğ	Pod pod	5	leta	2,	icid	<u>₹</u>	j-	7		ĺ	0	اي
Date	Time	Matrix	Somple Beguest ID	Containe	r Preservative	HEAL No.	#	+	015	Met	Met	8	181	s (F,	Pest	اچ ا	(Ser	CHORIDE		-	3	힑
Dale	Time	Matrix	Sample Request ID	Type and	" I .,po		BTEX +	BTEX + MTBE	тРН 8015В (GRO	TPH (Method 418.1)	EDB (Method	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	3	١,		井口	Air Bubbles (Y or N)
414/18	1035	<b>500</b>	WEST BASE @ 451	Meather		1802858	\ \ \	B	<del>     </del>	F	Ш	<u>o.</u>	ĸ	Ā	8	80	8	7	$\vdash$	ᆉ	5	≝
<u> </u>		301 -	· · · · · · · · · · · · · · · · · · ·	<del>                                     </del>	1	-60(			V	Sec.		$\dashv$				$\vdash$		<b> </b>	$\vdash \vdash$	$\dashv$	5	ᅱ
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	1049		WEST WALL @15-25			705			Ŋ	$\Box$		_	_			Щ		V	Ш		5	_
	1025		5W WALL & 25-45'			-al	$ \checkmark $		$ \mathbf{V} $									Y			2	
	1057		5W WALL C 15'-25'			-67	~											$\mathbf{V}$			2	
	((80)		WEST WALL CIO'-15'			708	$\checkmark$		$\checkmark$									V			6	
	こひと		NW WALL @10'-15'			709	V		V									V			3	
<u> </u>	ZIII	1	WEST TOP @ 5'-15'			7010	1		V												7	
				<u> </u>																		
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ate:	Time:	Relinquish	but Walk	Received by:	2º	Date Time		(	۱۵۸	STAC	T -	Z	AC	Η.	571	qas	Цr	<b>₽</b>				
if	necessary,	samples subi	mitted to Hall Environmental may be subc	ontracted to othe	r accredited laboratori		possil	oility. /	Any su	ıb-contr	acted	data v	viil be	clear	y nota	ited on	the a	nalytic	al repor	rt.		

# Appendix C

# Treated Soil Pile Analytical Data Reports



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

Website: www.hallenvironmental.com

February 08, 2018

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199

FAX (505) 632-3903

RE: Homestead Ranch 2

OrderNo.: 1802226

## Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 10 sample(s) on 2/6/2018 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1802226

Date Reported: 2/8/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Homestead Ranch 2

Engineering Client Sample ID: TSP-1

Lab ID: 1802226-001

Project:

Matrix: SOIL

Collection Date: 2/5/2018 10:05:00 AM

**Received Date:** 2/6/2018 7:30:00 AM

Analyses	Result	PQL (	)ual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: MRA
Chloride	ND	30		mg/Kg	20	2/6/2018 9:21:22 AM	36368
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	;				Analys	t: TOM
Diesel Range Organics (DRO)	200	9.7		mg/Kg	1	2/6/2018 11:32:17 AM	36366
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/6/2018 11:32:17 AM	36366
Surr: DNOP	96.8	70-130		%Rec	1	2/6/2018 11:32:17 AM	36366
EPA METHOD 8015D: GASOLINE RAI	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	400	67		mg/Kg	20	2/6/2018 9:45:44 AM	36352
Surr: BFB	341	15-316	S	%Rec	20	2/6/2018 9:45:44 AM	36352
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.33		mg/Kg	20	2/6/2018 9:45:44 AM	36352
Toluene	ND	0.67		mg/Kg	20	2/6/2018 9:45:44 AM	36352
Ethylbenzene	1.1	0.67		mg/Kg	20	2/6/2018 9:45:44 AM	36352
Xylenes, Total	13	1.3		mg/Kg	20	2/6/2018 9:45:44 AM	36352
Surr: 4-Bromofluorobenzene	118	80-120		%Rec	20	2/6/2018 9:45:44 AM	36352

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802226

Date Reported: 2/8/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-2

Project: Homestead Ranch 2

**Collection Date:** 2/5/2018 10:08:00 AM

Lab ID: 1802226-002

Matrix: SOIL

Received Date: 2/6/2018 7:30:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	30	mg/Kg	20	2/6/2018 9:35:20 AM	36368
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	: TOM
Diesel Range Organics (DRO)	240	9.9	mg/Kg	1	2/6/2018 11:54:21 AM	36366
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	2/6/2018 11:54:21 AM	36366
Surr: DNOP	100	70-130	%Rec	1	2/6/2018 11:54:21 AM	36366
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	350	64	mg/Kg	20	2/6/2018 10:09:09 AM	36352
Surr: BFB	286	15-316	%Rec	20	2/6/2018 10:09:09 AM	36352
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.32	mg/Kg	20	2/6/2018 10:09:09 AM	36352
Toluene	ND	0.64	mg/Kg	20	2/6/2018 10:09:09 AM	36352
Ethylbenzene	0.93	0.64	mg/Kg	20	2/6/2018 10:09:09 AM	36352
Xylenes, Total	11	1.3	mg/Kg	20	2/6/2018 10:09:09 AM	36352
Surr: 4-Bromofluorobenzene	110	80-120	%Rec	20	2/6/2018 10:09:09 AM	36352

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802226

Date Reported: 2/8/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

**Lab ID:** 1802226-003

Client Sample ID: TSP-3

Collection Date: 2/5/2018 10:11:00 AM

Received Date: 2/6/2018 7:30:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: MRA
Chloride	ND	30		mg/Kg	20	2/6/2018 9:47:44 AM	36368
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analys	t: TOM
Diesel Range Organics (DRO)	140	9.2		mg/Kg	1	2/6/2018 12:16:16 PM	36366
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/6/2018 12:16:16 PM	36366
Surr: DNOP	100	70-130		%Rec	1	2/6/2018 12:16:16 PM	36366
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	300	33		mg/Kg	10	2/6/2018 10:27:07 AM	G48931
Surr: BFB	537	15-316	s	%Rec	10	2/6/2018 10:27:07 AM	G48931
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.16		mg/Kg	10	2/6/2018 10:27:07 AM	B48931
Toluene	ND	0.33		mg/Kg	10	2/6/2018 10:27:07 AM	B48931
Ethylbenzene	0.81	0.33		mg/Kg	10	2/6/2018 10:27:07 AM	B48931
Xylenes, Total	7.8	0.66		mg/Kg	10	2/6/2018 10:27:07 AM	B48931
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	10	2/6/2018 10:27:07 AM	B48931

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Lab Order 1802226

Date Reported: 2/8/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-4

Project: Homestead Ranch 2

Collection Date: 2/5/2018 10:14:00 AM

Lab ID: 1802226-004

Matrix: SOIL

Received Date: 2/6/2018 7:30:00 AM

Analyses	Result	PQL (	)ual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: MRA
Chloride	ND	30		mg/Kg	20	2/6/2018 10:00:09 AM	36368
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analys	t: TOM
Diesel Range Organics (DRO)	120	10		mg/Kg	1	2/6/2018 12:38:13 PM	36366
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	2/6/2018 12:38:13 PM	36366
Surr: DNOP	99.2	70-130		%Rec	1	2/6/2018 12:38:13 PM	36366
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	260	30		mg/Kg	10	2/6/2018 10:50:48 AM	G48931
Surr: BFB	517	15-316	s	%Rec	10	2/6/2018 10:50:48 AM	G48931
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.15		mg/Kg	10	2/6/2018 10:50:48 AM	B48931
Toluene	ND	0.30		mg/Kg	10	2/6/2018 10:50:48 AM	B48931
Ethylbenzene	0.63	0.30		mg/Kg	10	2/6/2018 10:50:48 AM	B48931
Xylenes, Total	6.3	0.60		mg/Kg	10	2/6/2018 10:50:48 AM	B48931
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	10	2/6/2018 10:50:48 AM	B48931

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802226

Date Reported: 2/8/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

**Project:** Homestead Ranch 2

Lab ID: 1802226-005

**Client Sample ID: TSP-5** 

**Collection Date: 2/5/2018 10:16:00 AM** 

Received Date: 2/6/2018 7:30:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: MRA
Chloride	ND	30		mg/Kg	20	2/6/2018 10:12:33 AM	36368
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS					Analys	t: TOM
Diesel Range Organics (DRO)	160	9.8		mg/Kg	1	2/6/2018 1:00:07 PM	36366
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/6/2018 1:00:07 PM	36366
Surr: DNOP	101	70-130		%Rec	1	2/6/2018 1:00:07 PM	36366
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	430	30		mg/Kg	10	2/6/2018 11:14:36 AM	G48931
Surr: BFB	795	15-316	s	%Rec	10	2/6/2018 11:14:36 AM	G48931
<b>EPA METHOD 8021B: VOLATILES</b>						Analys	t: NSB
Benzene	ND	0.15		mg/Kg	10	2/6/2018 11:14:36 AM	B48931
Toluene	0.33	0.30		mg/Kg	10	2/6/2018 11:14:36 AM	B48931
Ethylbenzene	1.2	0.30		mg/Kg	10	2/6/2018 11:14:36 AM	B48931
Xylenes, Total	12	0.60		mg/Kg	10	2/6/2018 11:14:36 AM	B48931
Surr: 4-Bromofluorobenzene	121	80-120	s	%Rec	10	2/6/2018 11:14:36 AM	B48931

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802226

Date Reported: 2/8/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

**Client Sample ID: TSP-6** 

Homestead Ranch 2 Project:

Collection Date: 2/5/2018 10:18:00 AM

Lab ID: 1802226-006

Matrix: SOIL

Received Date: 2/6/2018 7:30:00 AM

Analyses	Result	PQL (	)ual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	ND	30		mg/Kg	20	2/6/2018 10:24:57 AM	36368
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analyst	: TOM
Diesel Range Organics (DRO)	170	9.7		mg/Kg	1	2/6/2018 1:22:24 PM	36366
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/6/2018 1:22:24 PM	36366
Surr: DNOP	104	70-130		%Rec	1	2/6/2018 1:22:24 PM	36366
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	400	31		mg/Kg	10	2/6/2018 11:38:16 AM	G48931
Surr: BFB	697	15-316	s	%Rec	10	2/6/2018 11:38:16 AM	G48931
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.16		mg/Kg	10	2/6/2018 11:38:16 AM	B48931
Toluene	ND	0.31		mg/Kg	10	2/6/2018 11:38:16 AM	B48931
Ethylbenzene	1.1	0.31		mg/Kg	10	2/6/2018 11:38:16 AM	B48931
Xylenes, Total	11	0.63		mg/Kg	10	2/6/2018 11:38:16 AM	B48931
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	10	2/6/2018 11:38:16 AM	B48931

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 6 of 14
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1802226

Date Reported: 2/8/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

**Lab ID:** 1802226-007

Client Sample ID: TSP-7

Collection Date: 2/5/2018 10:20:00 AM

Received Date: 2/6/2018 7:30:00 AM

Analyses	Result	PQL Q	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	ND	30		mg/Kg	20	2/6/2018 10:37:22 AM	36368
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analyst	:: TOM
Diesel Range Organics (DRO)	170	9.8		mg/Kg	1	2/6/2018 1:44:26 PM	36366
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/6/2018 1:44:26 PM	36366
Surr: DNOP	102	70-130		%Rec	1	2/6/2018 1:44:26 PM	36366
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	280	35		mg/Kg	10	2/6/2018 12:01:56 PM	G4893 <sup>2</sup>
Surr: BFB	503	15-316	s	%Rec	10	2/6/2018 12:01:56 PM	G4893
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.18		mg/Kg	10	2/6/2018 12:01:56 PM	B48931
Toluene	ND	0.35		mg/Kg	10	2/6/2018 12:01:56 PM	B48931
Ethylbenzene	0.75	0.35		mg/Kg	10	2/6/2018 12:01:56 PM	B48931
Xylenes, Total	6.6	0.70		mg/Kg	10	2/6/2018 12:01:56 PM	B48931
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	10	2/6/2018 12:01:56 PM	B48931

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802226

Date Reported: 2/8/2018

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: TSP-8

Project: Homestead Ranch 2

**Collection Date: 2/5/2018 10:22:00 AM** 

Lab ID: 1802226-008

Matrix: SOIL

Received Date: 2/6/2018 7:30:00 AM

Analyses	Result	PQL C	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	ND	30		mg/Kg	20	2/6/2018 10:49:47 AM	36368
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analyst	:: TOM
Diesel Range Organics (DRO)	130	9.5		mg/Kg	1	2/6/2018 2:06:35 PM	36366
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/6/2018 2:06:35 PM	36366
Surr: DNOP	101	70-130		%Rec	1	2/6/2018 2:06:35 PM	36366
<b>EPA METHOD 8015D: GASOLINE RA</b>	NGE					Analyst	:: NSB
Gasoline Range Organics (GRO)	320	33		mg/Kg	10	2/6/2018 12:25:33 PM	G48931
Surr: BFB	564	15-316	s	%Rec	10	2/6/2018 12:25:33 PM	G48931
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.17		mg/Kg	10	2/6/2018 12:25:33 PM	B48931
Toluene	ND	0.33		mg/Kg	10	2/6/2018 12:25:33 PM	B48931
Ethylbenzene	0.77	0.33		mg/Kg	10	2/6/2018 12:25:33 PM	B48931
Xylenes, Total	7.4	0.67		mg/Kg	10	2/6/2018 12:25:33 PM	B48931
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	10	2/6/2018 12:25:33 PM	B48931

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802226

Date Reported: 2/8/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-9

**Project:** Homestead Ranch 2

**Collection Date:** 2/5/2018 10:24:00 AM

Lab ID: 1802226-009

Matrix: SOIL

Received Date: 2/6/2018 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	2/6/2018 11:27:01 AM	36368
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS					Analyst	: TOM
Diesel Range Organics (DRO)	96	9.3		mg/Kg	1	2/6/2018 2:28:39 PM	36366
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/6/2018 2:28:39 PM	36366
Surr: DNOP	102	70-130		%Rec	1	2/6/2018 2:28:39 PM	36366
EPA METHOD 8015D: GASOLINE RAI	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	430	39		mg/Kg	10	2/6/2018 12:49:08 PM	G48931
Surr: BFB	598	15-316	s	%Rec	10	2/6/2018 12:49:08 PM	G48931
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.19		mg/Kg	10	2/6/2018 12:49:08 PM	B48931
Toluene	ND	0.39		mg/Kg	10	2/6/2018 12:49:08 PM	B48931
Ethylbenzene	1.1	0.39		mg/Kg	10	2/6/2018 12:49:08 PM	B48931
Xylenes, Total	9.5	0.78		mg/Kg	10	2/6/2018 12:49:08 PM	B48931
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	10	2/6/2018 12:49:08 PM	B48931

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802226

Date Reported: 2/8/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-10

**Project:** Homestead Ranch 2

**Collection Date:** 2/5/2018 10:26:00 AM

Lab ID: 1802226-010

Matrix: SOIL

**Received Date:** 2/6/2018 7:30:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	· ·					Analys	t: MRA
Chloride	ND	30		mg/Kg	20	2/6/2018 11:39:25 AM	36368
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	<b>;</b>				Analys	t: TOM
Diesel Range Organics (DRO)	120	9.4		mg/Kg	1	2/6/2018 2:50:51 PM	36366
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/6/2018 2:50:51 PM	36366
Surr: DNOP	102	70-130		%Rec	1	2/6/2018 2:50:51 PM	36366
EPA METHOD 8015D: GASOLINE RANG	GE					Analys	t: NSB
Gasoline Range Organics (GRO)	280	33		mg/Kg	10	2/6/2018 1:12:43 PM	G48931
Surr: BFB	523	15-316	S	%Rec	10	2/6/2018 1:12:43 PM	G48931
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.17		mg/Kg	10	2/6/2018 1:12:43 PM	B48931
Toluene	ND	0.33		mg/Kg	10	2/6/2018 1:12:43 PM	B48931
Ethylbenzene	0.77	0.33		mg/Kg	10	2/6/2018 1:12:43 PM	B48931
Xylenes, Total	7.2	0.66		mg/Kg	10	2/6/2018 1:12:43 PM	B48931
Surr: 4-Bromofluorobenzene	118	80-120		%Rec	10	2/6/2018 1:12:43 PM	B48931

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1802226

08-Feb-18

Client:

Blagg Engineering

Project:

Homestead Ranch 2

Sample ID MB-36368

Prep Date: 2/6/2018

Sample ID LCS-36368

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

**PBS** 

Batch ID: 36368 Analysis Date: 2/6/2018 RunNo: 48924

SeqNo: 1575789

Units: mg/Kg HighLimit

%RPD

**RPDLimit** 

Analyte Chloride

Result **PQL** ND

SampType: Ics

SPK value SPK Ref Val %REC LowLimit

TestCode: EPA Method 300.0: Anions

Client ID: LCSS

Batch ID: 36368

PQL

1.5

RunNo: 48924

LowLimit

Prep Date: 2/6/2018

Analysis Date: 2/6/2018

SeqNo: 1575790

Units: mg/Kg HighLimit

%RPD

**RPDLimit** Qual

Analyte

SPK value SPK Ref Val %REC 15.00

94.8

90

Chloride

14

110

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % 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
- Page 11 of 14

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802226

08-Feb-18

Client: Project: Blagg Engineering

Sample ID LCS-36366

Homestead Ranch 2

Client ID: LCSS SampType: LCS Batch ID: 36366 TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 48919

Analysis Date: 2/6/2018

Prep Date: 2/6/2018

SeqNo: 1574281

Units: mg/Kg HighLimit

70

70

Analyte Diesel Range Organics (DRO) Result PQL 47 50.00 4.4 5.000

SPK value SPK Ref Val %REC LowLimit 93.8

87.9

130

**RPDLimit** 

Surr: DNOP

SampType: MBLK

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

%RPD

%RPD

Client ID: **PBS** Prep Date: 2/6/2018

Sample ID MB-36366

Batch ID: 36366 Analysis Date: 2/6/2018 RunNo: 48919

Units: mg/Kg

Analyte

Result PQL 10 SeqNo: 1574282

HighLimit

**RPDLimit** Qual

Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) ND ND

SPK value SPK Ref Val %REC LowLimit

SeqNo: 1574702

Sur: DNOP

9.6

10.00

96.4

130

Sample ID 1802226-001AMS

SampType: MS

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

Client ID: TSP-1

Batch ID: 36366 Prep Date: 2/6/2018 Analysis Date: 2/6/2018

RunNo: 48919

198.6

Units: mg/Kg

125

Qual

Analyte Diesel Range Organics (DRO) Result **PQL** SPK value SPK Ref Val

50

%REC

LowLimit HighLimit %RPD **RPDLimit** Qual

Surr: DNOP

240 4.7 94 46.82 4.682 91.2 99.6

130

Sample ID 1802226-001AMSD

SampType: MSD

RunNo: 48919

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

Prep Date: 2/6/2018

Client ID: TSP-1

Batch ID: 36366

**PQL** 

Analysis Date: 2/6/2018

SeqNo: 1574703

Units: mg/Kg

240 47.85 9.6

SPK value SPK Ref Val %REC LowLimit

55.8

**HighLimit** %RPD

**RPDLimit** 20

0

Page 12 of 14

Diesel Range Organics (DRO) Surr: DNOP

4.8

Result

4.785

198.6

94.1 99.5 55.8 70 125 130

0

0.959

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802226

08-Feb-18

Client: **Project:**  Blagg Engineering

Sample ID RB

Homestead Ranch 2

SampType: MBLK Batch ID: G48931 TestCode: EPA Method 8015D: Gasoline Range

LowLimit

Client ID: **PBS** 

Analysis Date: 2/6/2018

RunNo: 48931

Prep Date:

SeqNo: 1574759

Units: mg/Kg

Analyte

Result **PQL** ND 5.0

HighLimit

**RPDLimit** 

Qual

Gasoline Range Organics (GRO)

1000

SPK value SPK Ref Val %REC

91.2

15

Surr: BFB

910

SampType: LCS

25

1100

Result

Result

27

1200

ND

Client ID: LCSS

TestCode: EPA Method 8015D: Gasoline Range

316

Sample ID 2.5UG GRO LCS

Batch ID: G48931

RunNo: 48931

%RPD

Prep Date:

Analysis Date: 2/6/2018

SeqNo: 1574760

109

Units: mg/Kg

131

316

Analyte

Gasoline Range Organics (GRO)

Result **PQL** 

5.0

SPK value SPK Ref Val 25.00 1000

%REC 98.8

LowLimit 75.9 15

HighLimit %RPD **RPDLimit** 

Qual

Surr: BFB

Sample ID MB-36352

Prep Date: 2/5/2018

Prep Date: 2/5/2018

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS

Batch ID: 36352

PQL

5.0

Analysis Date: 2/6/2018

RunNo: 48930

SPK value SPK Ref Val %REC LowLimit

SeqNo: 1574768

Units: mg/Kg

HighLimit

Gasoline Range Organics (GRO) Sum: BFB

1000

102

15

%RPD

**RPDLimit** 

Qual

Sample ID LCS-36352

SampType: LCS

1000

TestCode: EPA Method 8015D: Gasoline Range

131

316

Client ID:

**LCSS** 

Batch ID: 36352

SeqNo: 1574769

RunNo: 48930

Analyte

Analysis Date: 2/6/2018 **PQL** 

5.0

SPK value SPK Ref Val

%REC

LowLimit HighLimit

Units: mg/Kg

%RPD

**RPDLimit** Qual

Gasoline Range Organics (GRO) Surr: BFB

25.00 1000

0

107 119

75.9 15

316

D

Qualifiers:

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

Value exceeds Maximum Contaminant Level.

ND Not Detected at the Reporting Limit Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

R

Ė Value above quantitation range

J Analyte detected below quantitation limits

Sample pH Not In Range Reporting Detection Limit

P

Sample container temperature is out of limit as specified

Analyte detected in the associated Method Blank

Page 13 of 14

# Hall Environmental Analysis Laboratory, Inc.

ND

1.1

0.10

1.000

WO#:

1802226 *08-Feb-18* 

Client:

Blagg Engineering

Project:

Homestead Ranch 2

Sample ID RB	3	SampT	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles											
Client ID: PB	s	Batch	ID: <b>B4</b>	8931	F	RunNo: 4	8931									
Prep Date:		Analysis D	ate: 2/	6/2018	. 8	eqNo: 1	574763	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-Bromofluo	orobenzene	0.94		1.000		94.2	80	120								
Sample ID 100	ONG BTEX LCS	SampT	ype: LC	s	TestCode: EPA Method 8021B: Volatiles											
Client ID: LC	ss	Batch	ID: <b>B4</b>	8931	F	RunNo: 4	8931									
Prep Date:		Analysis D	ate: 2/	6/2018	8	SeqNo: 1	574764	Units: mg/K								
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Benzene		0.90	0.025	1.000	0	90.4	77.3	128								
Toluene		0.85	0.050	1.000	0	84.6	79.2	125								
Ethylbenzene		0.87	0.050	1.000	0	87.4	80.7	127								
Xylenes, Total		2.7	0.10	3.000	0	88.3	81.6	129								
Surr: 4-Bromoflue	orobenzene	1.0		1.000		103	80	120								
Sample ID ME	3-36352	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		<del></del>					
Client ID: PB	s	Batch	ID: <b>36</b>	352	F	RunNo: 4										
Prep Date: 2/	/5/2018	Analysis D	ate: 2/	6/2018	\$	SeqNo: 1	574788	Units: mg/Kg								
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Benzene		ND	0.025				•	•	•	•						
Toluene		ND	0.050													

Sample ID LCS-36352	SampT	ype: LC	S	TestCode: EPA Method 8021B: Volatiles												
Client ID: LCSS	Batcl	n ID: 36	352	F												
Prep Date: 2/5/2018	Analysis D	)ate: 2/	6/2018	S	SeqNo: 1	574789	Units: mg/k	(g								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual						
Benzene	1.1	0.025	1.000	0	107	77.3	128									
Toluene	1.1	0.050	1.000	0	106	79.2	125									
Ethylbenzene	1.1	0.050	1.000	0	106	80.7	127									
Xylenes, Total	3.2	0.10	3.000	0	108	81.6	129									
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120									

## Qualifiers:

Xylenes, Total

Surr: 4-Bromofluorobenzene

- \* 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

109

80

120

- J Analyte detected below quantitation limits
- Page 14 of 14

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



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

# Sample Log-In Check List

Client Name:	BLAGG		Work	Order Numb	er: 1802226			RcptN	0: 1
Received By: Completed By:	Anne Tho			8 7:30:00 AM 8 7:44:48 AM		Asnı Asnı	St. II.		·
Reviewed By:	SOC	m	2	16/18			•		
Chain of Cus	todv								
1. Is Chain of C		lete?			Yes 🗹	No		Not Present	
2. How was the	sample deliv	ered?			Courier				
Log In									
3. Was an atten	npt made to o	cool the sampl	es?		Yes 🗹	No		NA 🗆	
4. Were all samp	ples received	at a temperat	ure of >0°C	to 6.0°C	Yes 🗹	No		NA 🗆	
5. Sample(s) in	proper conta	ner(s)?			Yes 🗹	No			
6. Sufficient sam	nple volume f	or indicated te	st(s)?		Yes 🗹	No			
7. Are samples (	except VOA	and ONG) pro	perly preserve	ed?	Yes 🗹	No ·			
8. Was preserva	itive added to	bottles?			Yes 🗌	No	V	NA 🗆	
9. VOA vials hav	ve zero heads	pace?			Yes 🗌	No		No VOA Vials 🗹	
10. Were any sar	mple contains	ers received br	oken?		Yes	No	<b>y</b>	# of preserved	
11. Does paperwo	ork match bot	tle labels?			Yes 🗹	No		bottles checked for pH:	
(Note discrepa							_		or >12 unless noted)
12. Are matrices of	correctly iden	tified on Chain	of Custody?		Yes 🗹	No		Adjusted?	
13, is it clear wha	t analyses we	ere requested?	•		Yes 🗹	No			
14. Were all holdi (If no, notify c	_				Yes 🗹	No		Checked by:	
Special Handl		•							
15. Was client no			ith this order?	•	Yes 🗌	No		NA 🗹	,
Person	Notified:		57000M/WAY	Date			محمده		
By Who	om:			Vla:	☐ eMail [	] Phone [	Fax	☐ In Person	
Regard	ing:								
Client II	nstructions:			***************************************					
16. Additional re	marks:					_		<del></del>	
17. <u>Cooler infor</u>	mation								
Cooler No		Condition	Seal Intact	Seal No	Seal Date	Signed E	Ву.	]	
1	1.0		Yes				<u> </u>	]	

•	3/12/1/2	Date:	100 J	Date:					_	<u> </u>			<u> </u>	<u>_</u>	15/2018	Date	0 EC	O NELAP	Accre	¥St George	email	Phone #:		Mailir		Client:	
lf,necessai	1826		3 1533	Time:		 1026	1024	1022	iozo	1018	1016	1014	101	१००३	1005	Time	☐ EDD (Type)	LAP	Accreditation	Standard	email or hax#:	e# (5		Mailing Address:	BLAGE	1	Chair
া, necessary, sईmples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this		Re Set	ر کی	Relinquished by:		عمري.									, 201r	Matrix			<b>)</b>	, <u>,</u>		05)	-    -			BENSON-MONTHA-GREER	Chain-ot-Custody Record
ubmitted	Mushu	quished by:	Z	shed by		73	73	73	ス	73	73	7	-1	7	<del>  ,</del>	<u> </u>		Other				<del>320-</del>			عداجا	דיניסר	1sn
to Hall E	V M	,	1621C)	7		TSP-10	73P-9	158-8	73P-7	TSP-6	75P-5	TSP-4	TSP-3	73P-1	<u>-451</u>	Sample Request ID		.		Level 4 (Full Validation)		1183			ENGINEERNG, INC	えし	ody
nvironmė	Mollar		160											(~	٢٠	e Re				(Full				-	E I	SKII	Ke(
ntal may	)>															quest				Validat	•				اب م	*	ord
be subco	_					 														ion)			<u> </u>				
ntracted (		Receive	/ K	Received by:		_	_		-	_	_				4 08×1	o2 /ou/ <sup>R</sup> AT Container Type and #	Sample Temperature J. 6 124	On loa: SEL Yes	Sampler: JEFF		Project Manager:		Project #:	Z Q	Project Name:	□ St	-
to other a	de	d by:	Mast	d by:											×	2 1001 18 AT Container Type and #	e Tem		er: J	JEFF	Mana		#	HOMESTERO	t Nam	□ Standard	Tum-Around Time:
ocredited	7		W			_	_	_	_						8	Prese	peratu	N. P.	77		iger: S				b		I ime:
l laborato	1/2	7	معد	^											COOL	Preservative Type	re:).6		BLAZE	BLAK	•			NANCH		Rush	
ries. This	0	\\\ \\	1/2/	»		 			-		_						COOL		6				-	ا ک	#	II .	
serves :	0,0	Date	TEWIB	Date			,									AREACON Bosinsar:		0						,	-	SAME DAY	,
as notica	0730	Time	15	Time		2016	202	ZZ ZZ	28	206	285	ğ	203	202	8											<b>∦</b> ₹	
			1533	77		5		8		9	<u>Ο</u>	_	<u> </u>	10			W					-				<u> </u>	
possibility. Any sub-contracted data will be clearly notated on the analytical report	NOTE:			Remarks:	•	È									×	BTEX + MT					·	·)	L	<u>4</u>			
Any sı	7	T 10	. ^			_				_				E	×	TPH 8015B							Tel. 505-345-3975	4901 Hawkins NE			
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Air Bubbles (Y or N)

Chain-of-Custody Record

Tum-Around Time:



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

February 12, 2018

Jeff Blagg

**Blagg Engineering** 

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199

FAX (505) 632-3903

RE: Homestead Ranch 2

OrderNo.: 1802539

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/9/2018 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1802539

Date Reported: 2/12/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1802539-001

Client Sample ID: TSP-11

Collection Date: 2/8/2018 11:46:00 AM

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	ND	30	mg/Kg	20	2/9/2018 11:43:09 AM	36451
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	<b>;</b>			Analys	:: TOM
Diesel Range Organics (DRO)	63	9.7	mg/Kg	1	2/9/2018 9:08:50 AM	36444
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/9/2018 9:08:50 AM	36444
Surr: DNOP	102	70-130	%Rec	1	2/9/2018 9:08:50 AM	36444
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	: NSB
Gasoline Range Organics (GRO)	68	16	mg/Kg	5	2/9/2018 11:17:56 AM	G49019
Surr: BFB	289	15-316	%Rec	5	2/9/2018 11:17:56 AM	G49019
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.082	mg/Kg	5	2/9/2018 11:17:56 AM	B49019
Toluene	ND	0.16	mg/Kg	5	2/9/2018 11:17:56 AM	B49019
Ethylbenzene	ND	0.16	mg/Kg	5	2/9/2018 11:17:56 AM	B49019
Xylenes, Total	0.86	0.33	mg/Kg	5	2/9/2018 11:17:56 AM	B49019
Surr: 4-Bromofluorobenzene	109	80-120	%Rec	5	2/9/2018 11:17:56 AM	B49019

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

### Lab Order 1802539

Date Reported: 2/12/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

**Client Sample ID: TSP-12** 

Project: Homestead Ranch 2 Collection Date: 2/8/2018 11:50:00 AM

Lab ID: 1802539-002

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL (	Qual Units		DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analysi	: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 11:55:33 AM	36451
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS					Analys	:: TOM
Diesel Range Organics (DRO)	100	9.6		mg/Kg	1	2/9/2018 9:33:14 AM	36444
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/9/2018 9:33:14 AM	36444
Surr: DNOP	104	70-130		%Rec	1	2/9/2018 9:33:14 AM	36444
EPA METHOD 8015D: GASOLINE RAI	NGE					Analys	: NSB
Gasoline Range Organics (GRO)	200	16		mg/Kg	5	2/9/2018 9:43:05 AM	G49019
Surr: BFB	792	15-316	s	%Rec	5	2/9/2018 9:43:05 AM	G49019
EPA METHOD 8021B: VOLATILES						Analys	:: NSB
Benzene	ND	0.080		mg/Kg	5	2/9/2018 9:43:05 AM	B49019
Toluene	ND	0.16		mg/Kg	5	2/9/2018 9:43:05 AM	B49019
Ethylbenzene	ND	0.16		mg/Kg	5	2/9/2018 9:43:05 AM	B49019
Xylenes, Total	4.8	0.32		mg/Kg	5	2/9/2018 9:43:05 AM	B49019
Surr: 4-Bromofluorobenzene	120	80-120		%Rec	5	2/9/2018 9:43:05 AM	B49019

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 9

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

Lab Order 1802539

Date Reported: 2/12/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-13

Project: Homestead Ranch 2

Collection Date: 2/8/2018 11:54:00 AM

Lab ID: 1802539-003

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 12:07:58 PM	36451
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS					Analyst	: TOM
Diesel Range Organics (DRO)	110	9.9		mg/Kg	1	2/9/2018 9:57:48 AM	36444
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/9/2018 9:57:48 AM	36444
Surr: DNOP	105	70-130		%Rec	1	2/9/2018 9:57:48 AM	36444
EPA METHOD 8015D: GASOLINE RAN	IGE					Analyst	: NSB
Gasoline Range Organics (GRO)	130	16		mg/Kg	5	2/9/2018 10:06:46 AM	G49019
Surr: BFB	436	15-316	S	%Rec	5	2/9/2018 10:06:46 AM	G49019
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.080		mg/Kg	5	2/9/2018 10:06:46 AM	B49019
Toluene	ND	0.16		mg/Kg	5	2/9/2018 10:06:46 AM	B49019
Ethylbenzene	ND	0.16		mg/Kg	5	2/9/2018 10:06:46 AM	B49019
Xylenes, Total	2.1	0.32		mg/Kg	5	2/9/2018 10:06:46 AM	B49019
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	5	2/9/2018 10:06:46 AM	B49019

### 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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

### Lab Order 1802539

Date Reported: 2/12/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-14

Project: Homestead Ranch 2 Collection Date: 2/8/2018 11:57:00 AM

Lab ID: 1802539-004

Matrix: SOIL

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					=	Analys	t: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 12:20:22 PM	36451
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	;				Analys	t: TOM
Diesel Range Organics (DRO)	180	9.9		mg/Kg	1	2/9/2018 10:22:02 AM	36444
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/9/2018 10:22:02 AM	36444
Surr: DNOP	99.9	70-130		%Rec	1	2/9/2018 10:22:02 AM	36444
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	190	15		mg/Kg	5	2/9/2018 10:30:29 AM	G49019
Surr: BFB	790	15-316	S	%Rec	5	2/9/2018 10:30:29 AM	G49019
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.075		mg/Kg	5	2/9/2018 10:30:29 AM	B49019
Toluene	ND	0.15		mg/Kg	5	2/9/2018 10:30:29 AM	B49019
Ethylbenzene	ND	0.15		mg/Kg	5	2/9/2018 10:30:29 AM	B49019
Xylenes, Total	5.1	0.30		mg/Kg	5	2/9/2018 10:30:29 AM	B49019
Surr: 4-Bromofluorobenzene	125	80-120	S	%Rec	5	2/9/2018 10:30:29 AM	B49019

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 9
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

### Lab Order 1802539

Date Reported: 2/12/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

**Client Sample ID: TSP-15** 

Project: Homestead Ranch 2 Collection Date: 2/8/2018 12:01:00 PM

Lab ID: 1802539-005

Received Date: 2/9/2018 7:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analysi	: MRA
Chloride	ND	30		mg/Kg	20	2/9/2018 12:32:47 PM	36451
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS					Analys	t: TOM
Diesel Range Organics (DRO)	140	9.1		mg/Kg	1	2/9/2018 10:46:25 AM	36444
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/9/2018 10:46:25 AM	36444
Surr: DNOP	98.9	70-130		%Rec	1	2/9/2018 10:46:25 AM	36444
EPA METHOD 8015D: GASOLINE RAI	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	220	3.0		mg/Kg	1	2/9/2018 10:54:19 AM	G49019
Surr: BFB	2960	15-316	s	%Rec	1	2/9/2018 10:54:19 AM	G49019
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.015		mg/Kg	1	2/9/2018 10:54:19 AM	B49019
Toluene	0.12	0.030		mg/Kg	1	2/9/2018 10:54:19 AM	B49019
Ethylbenzene	ND	0.030		mg/Kg	1	2/9/2018 10:54:19 AM	B49019
Xylenes, Total	8.7	1.2		mg/Kg	20	2/9/2018 3:14:33 PM	B49019
Surr: 4-Bromofluorobenzene	398	80-120	S	%Rec	1	2/9/2018 10:54:19 AM	B49019

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 9 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1802539 12-Feb-18

Client:

**Blagg Engineering** 

Project:

Homestead Ranch 2

Sample ID MB-36451

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

Prep Date:

PBS

2/9/2018

Batch ID: 36451

RunNo: 49016

Analysis Date: 2/9/2018

SeqNo: 1578762

Units: mg/Kg

%RPD **RPDLimit**  Qual

Analyte Chloride

PQL Result ND

1.5

SPK value SPK Ref Val %REC LowLimit HighLimit

Qual

Sample ID LCS-36451

Prep Date: 2/9/2018

Client ID: LCSS

SampType: Ics

Batch ID: 36451

**PQL** 

1.5

RunNo: 49016

TestCode: EPA Method 300.0: Anions

LowLimit

SeqNo: 1578763

Units: mg/Kg

**RPDLimit** 

Analyte

Analysis Date: 2/9/2018

SPK value SPK Ref Val

HighLimit

%RPD

Result

15.00

%REC 94.1

90

Page 6 of 9

Chloride

14

0

110

#### Qualifiers:

ND

Value exceeds Maximum Contaminant Level.

Not Detected at the Reporting Limit

- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded Н
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits j
  - Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

9.8

WO#: 18

1802539 *12-Feb-18* 

Client:

Blagg Engineering

Project:

Surr: DNOP

Homestead Ranch 2

Sample ID LCS-36444 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 36444 RunNo: 49006 Prep Date: 2/9/2018 Analysis Date: 2/9/2018 SeqNo: 1577367 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit HighLimit Analyte Result **PQL** %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 48 10 50.00 95.6 70 130 Surr: DNOP 4.6 5.000 91.0 70 130 Sample ID MB-36444 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Batch ID: 36444 Client ID: PBS RunNo: 49006 Prep Date: 2/9/2018 Analysis Date: 2/9/2018 SeqNo: 1577368 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit **RPDLimit** Result **PQL** HighLimit %RPD Qual Analyte 10 Diesel Range Organics (DRO) ND Motor Oil Range Organics (MRO) ND 50

97.6

70

130

10.00

### 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

Page 7 of 9

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802539 12-Feb-18

Client:

Blagg Engineering

**Project:** 

Homestead Ranch 2

Sample ID RB

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

15

75.9

15

Client ID: PBS

Batch ID: G49019

RunNo: 49019

Prep Date:

Analysis Date: 2/9/2018

SeqNo: 1578224

Units: mg/Kg

Analyte

SPK value SPK Ref Val %REC Result **PQL** 

Gasoline Range Organics (GRO)

ND

%RPD HighLimit

**RPDLimit** Qual

Surr: BFB

930

1000

93.5

316

Sample ID 2.5UG GRO LCS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

LCSS

Batch ID: G49019

5.0

5.0

RunNo: 49019

Prep Date:

Analysis Date: 2/9/2018

SeqNo: 1578225

Units: mg/Kg

HighLimit

Analyte Gasoline Range Organics (GRO) Result POL 25

SPK value SPK Ref Val 25.00

80.34

3214

80.34

3214

%REC LowLimit 101

%RPD

**RPDLimit** 

Qual

S

Qual

S

Surr: BFB

1100

1000

109

131 316

Sample ID 1802539-002AMS

Client ID: **TSP-12**  SampType: MS Batch ID: G49019 TestCode: EPA Method 8015D: Gasoline Range RunNo: 49019

Prep Date: Analyte

Analysis Date: 2/9/2018 Result

SeqNo: 1578226

SPK value SPK Ref Val %REC

LowLimit

LowLimit

77.8

15

77.8

15

Units: mg/Kg HighLimit

128

316

%RPD **RPDLimit** 

Qual

Gasoline Range Organics (GRO) Surr: BFB

280 25000

SampType: MSD

PQL

16

TestCode: EPA Method 8015D: Gasoline Range

Sample ID 1802539-002AMSD

Batch ID: G49019

RunNo: 49019

103

769

99.9

777

Prep Date:

Client ID: **TSP-12** 

Gasoline Range Organics (GRO)

16

Analyte

Surr: BFB

Analysis Date: 2/9/2018 PQL Result

280

25000

SPK value SPK Ref Val %REC

201.3

SeqNo: 1578227

Units: mg/Kg HighLimit

128

316

%RPD

0.864

**RPDLimit** 

20 0

Qualifiers:

ND

Value exceeds Maximum Contaminant Level.

Not Detected at the Reporting Limit

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

PQL **Practical Quanitative Limit** 

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 8 of 9

Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802539

12-Feb-18

Client: Project: Blagg Engineering

Sample ID RB

Homestead Ranch 2

SampType: MBLK

PQL

TestCode: EPA Method 8021B: Volatiles

Client ID:

Batch ID: **B49019** 

Result

ND

0.95

RunNo: 49019

SPK value SPK Ref Val %REC LowLimit

Prep Date:

Analysis Date: 2/9/2018

SeqNo: 1578234

Units: mg/Kg

**HighLimit** 

%RPD

%RPD

**RPDLimit** 

Qual

Qual

**RPDLimit** Qual

Analyte

Benzene ND 0.025 0.050 Toluene ND Ethylbenzene ND 0.050

Xylenes, Total Surr: 4-Bromofluorobenzene

1.000

0.10

94.7

RN

TestCode: EPA Method 8021B: Volatiles

120

Sample ID 100NG BTEX LCS LCSS

Batch ID: **B49019** 

SampType: LCS

RunNo: 49019

Client ID: Prep Date:

Analysis Date: 2/9/2018

SeqNo: 1578235

Units: mg/Kg

SPK value SPK Ref Val **PQL** %REC LowLimit **HighLimit** Analyte Result 0.025 1.000 Benzene 0.94 94.0 77.3 128 0.87 0.050 1.000 87.1 79.2 125 Toluene 0 1.000 0.90 0.050 0 80.7 127 Ethylbenzene 899 Xylenes, Total 2.7 0.10 3.000 n 91.1 81.6 129 Surr: 4-Bromofluorobenzene 1.0 1.000 102 80 120

Sample ID 1802539-003AMS

SampType: MS

Analysis Date: 2/9/2018

TestCode: EPA Method 8021B: Volatiles

Client ID: Prep Date:

**TSP-13** 

Batch ID: **B49019** 

RunNo: 49019 SeqNo: 1578236

Units: mg/Kg

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Benzene 3.2 0.080 3.205 100 80.9 132 0 3.205 0 108 79.8 136 Toluene 3.5 0.16 Ethylbenzene 3.5 0.16 3.205 0 108 79.4 140 Xvlenes, Total 12 0.32 9.615 2.051 100 78.5 142 Surr: 4-Bromofluorobenzene 3.7 3.205 116 120

Sample ID 1802539-003AMSD

SampType: MSD

TestCode: EPA Method 8021B: Volatiles

Client ID: TSP-13	Batc	h ID: <b>B4</b>	9019	F	RunNo: 4	9019					
Prep Date:	Analysis [	Date: 2/	9/2018	8	SeqNo: 1	578237	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	3.1	0.080	3.205	0	98.3	80.9	132	1.72	20		
Toluene	3.1	0.16	3.205	0	97.4	79.8	136	10.6	20		
Ethylbenzene	3.4	0.16	3.205	0	107	79.4	140	0.871	20		
Xylenes, Total	11	0.32	9.615	2.051	97.9	78.5	142	1.74	20		
Surr: 4-Bromofluorobenzene	3.7		3.205		117	80	120	0	0		

#### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL **Practical Quanitative Limit** 

% 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 Page 9 of 9

Sample pH Not In Range

Reporting Detection Limit RL

Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

# Sample Log-In Check List

Client Name: BLAGG	Work Order Number:	1802539		RcptNo:	4
Received By: Anne Thome Completed By: Anne Thome	2/9/2018 7:00:00 AM 2/9/2018 8:16:22 AM		Aone H-	_	·
Reviewed By: 12 DS	2/9/18		Cina JiC		
Chain of Custody  1. Is Chain of Custody complete?  2. How was the sample delivered?		Yes 🗹	No 🗆	Not Present	
Log In  3. Was an attempt made to cool the sample	s?	Yes 🗹	No 🗆	NA 🗆	
4. Were all samples received at a temperature	re of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗆	
5. Sample(s) in proper container(s)?		Yes 🗹	No 🗆		
<ul><li>6. Sufficient sample volume for indicated tes</li><li>7. Are samples (except VOA and ONG) prop</li><li>8. Was preservative added to bottles?</li></ul>		Yes ☑ Yes ☑ Yes ☐	No □ No □ No ☑	na 🗀	
9. VOA vials have zero headspace?		Yes 🗌	No □	No VOA Viats	
<ul><li>10. Were any sample containers received bro</li><li>11. Does paperwork match bottle labels?</li></ul>	oken?	Yes ☑	No ☑	# of preserved bottles checked for pH:	
(Note discrepancies on chain of custody)		res 🖭			>12 unless noted)
12. Are matrices correctly identified on Chain	of Custody?	Yes 🗹	No 🗆	Adjusted?	
<ul><li>13. Is it clear what analyses were requested?</li><li>14. Were all holding times able to be met? (If no, notify customer for authorization.)</li></ul>		Yes ☑ Yes ☑	No 🗌   No 🗀	Checked by:	
Special Handling (if applicable)		•			
15. Was client notified of all discrepancies wi	th this order?	Yes 🗆	No 🗆 .	NA 🗹	
Person Notified:  By Whom:  Regarding:  Client Instructions:	Date Via:		Phone  Fax	☐ In Person	
16. Additional remarks:		· <u>-</u>	· ·	· -	)
	Seal Intact   Seal No   S	eal Date	Signed By		

C	hain	-of-Cu	stody Record	Turn-Around	Time:	<u> </u>		HALL ENVIRONMENT													
Client:	BENSO	oM-Mo	NTIN- GREER	☐ Standard		SameDa	<u>u</u>				A	NA	LY	SI	5 L	A	30				
	OLA66 Address		EERING INC.	HOMEST	EAD RAWCH	1 #2			400	14 LL	w awkin		nallen					7100			
				Project #:	<del></del>						awkiii 15-345			Fax	-						
Phone	#: (5	05) 32	20-1183										Ana	lysis	Req	ues					
email o			· · · · · · · · · · · · · · · · · · ·	Project Mana	nger:			<u>ڪ</u> ا	(ylu	8				o	,,						
QA/QC I	Package: dard		☐ Level 4 (Full Validation)	JE	FF BLAG	6		s (802	(Gas o	/ DRO / MRO)			OIIMO)	PO4,S	PCB's						
Accredi	tation	□ Othe	r	Sampler:	<b>EXPENSE</b>	□ No 🐇 👈		ETAMB	+ TPH	30 / DE	18.1)	E   5	272	NO <sub>2</sub>	/ 808		(A				S Z
□ EDD	(Type)			Sample Tem	oerentinez est		<b>在</b> 积5000		BE	9	<b>8</b>	<u>a</u>	U or	N.	ides	ि	Ş Ş				٤
Date	Time	Matrix	Sample Request ID	Container Type and #  Mottlet	Preservative Type	HEAL1	10-31- 9	BTEX + MITEE + TMB'S (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	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's	8260B (VOA)	8270 (Semi-VOA)	CHLORUNE	-		Air Bubbles (Y or N)
2/8/2013	1146	SOIL	TSP-11	400×1	COOL		col	X		X								X			
1	1150		TSP-12				702	Ц		$\perp \downarrow$	·			<u> </u>							
	1154		T3P- L3				703	Ш		Ц											$\bot$
	1157		T3P - 14				204	Ш		$\perp$	$\perp$							Ш		$\Box$	$\bot$
1	120(	1	T3P - 15	1 .	1		205			1	_	+	+	1					<u>.                                    </u>	$\dashv$	+
																				$\dashv$	-
																				$\dashv$	1
		 										-	‡							$\dashv$	$\perp$
Date:	Time:	Relinquish H Relinquish	Blasy	Received by:  Received by:  Received by:	Whey	Date T	ime /540	Ren	narks	<u> </u>	Bu	BI	16 ? Z/	/ен 	<u></u> \$74	I				1	
2/8/1:	1851	1/m	of the Walls  mitted to Hall Environmental may be subc	Uh	multiple libraries	202/01/18	<u> </u>				SAV	_						_	_		
u	посизаи у,	University subj	into a real chancelling the sury of sure		Janua impliant	11110 061700 65	VI UIR	, pecouli	y. <i>-</i> -	,	<del></del>	U			.,		a	,			



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

Website: www.hallenvironmental.com

February 16, 2018

Jeff Blagg

**Blagg Engineering** 

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199

FAX (505) 632-3903

RE: Homestead Ranch 2

OrderNo.: 1802857

### Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 9 sample(s) on 2/15/2018 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

### Lab Order 1802857

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: TSP-16

Project: Homestead Ranch 2 Collection Date: 2/14/2018 11:55:00 AM

Lab ID: 1802857-001

Matrix: SOIL

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 11:15:59 Al	M 36542
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analys	st: <b>TOM</b>
Diesel Range Organics (DRO)	63	9.4	mg/Kg	1	2/15/2018 9:35:29 AM	36540
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	2/15/2018 9:35:29 AM	36540
Surr: DNOP	99.2	70-130	%Rec	1	2/15/2018 9:35:29 AM	36540
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	st: NSB
Gasoline Range Organics (GRO)	50	16	mg/Kg	5	2/15/2018 12:22:47 PI	M G49155
Surr: BFB	273	15-316	%Rec	5	2/15/2018 12:22:47 PI	M G49155
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.081	mg/Kg	5	2/15/2018 12:22:47 PI	M B49155
Toluene	ND	0.16	mg/Kg	5	2/15/2018 12:22:47 PI	M B49155
Ethylbenzene	ND	0.16	mg/Kg	5	2/15/2018 12:22:47 PI	M B49155
Xylenes, Total	0.63	0.32	mg/Kg	5	2/15/2018 12:22:47 PI	M B49155
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	5	2/15/2018 12:22:47 PI	M B49155

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 13
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1802857

Date Reported: 2/16/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

**Lab ID:** 1802857-002

Client Sample ID: TSP-17

Collection Date: 2/14/2018 12:00:00 PM

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS			<u> </u>		Analyst	CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 11:28:23 AM	36542
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analyst	TOM
Diesel Range Organics (DRO)	39	9.3	mg/Kg	1	2/15/2018 9:57:29 AM	36540
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	2/15/2018 9:57:29 AM	36540
Surr: DNOP	98.3	70-130	%Rec	1	2/15/2018 9:57:29 AM	36540
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	23	16	mg/Kg	5	2/15/2018 12:46:31 PM	G49155
Surr. BFB	164	15-316	%Rec	5	2/15/2018 12:46:31 PM	G49155
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.080	mg/Kg	5	2/15/2018 12:46:31 PM	B49155
Toluene	ND	0.16	mg/Kg	5	2/15/2018 12:46:31 PM	B49155
Ethylbenzene	ND	0.16	mg/Kg	5	2/15/2018 12:46:31 PM	B49155
Xylenes, Total	ND	0.32	mg/Kg	5	2/15/2018 12:46:31 PM	B49155
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	5	2/15/2018 12:46:31 PM	B49155

Matrix: SOIL

### 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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802857

Date Reported: 2/16/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Homestead Ranch 2

Cing

Lab ID: 1802857-003

Project:

Client Sample ID: TSP-18

Collection Date: 2/14/2018 12:05:00 PM

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	:: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 11:40:48 AM	36542
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	}			Analyst	:: TOM
Diesel Range Organics (DRO)	30	9.8	mg/Kg	1	2/15/2018 10:19:28 AM	36540
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/15/2018 10:19:28 AM	36540
Surr: DNOP	99.0	70-130	%Rec	1	2/15/2018 10:19:28 AM	36540
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	16	mg/Kg	5	2/15/2018 9:36:33 AM	G49155
Surr: BFB	133	15-316	%Rec	5	2/15/2018 9:36:33 AM	G49155
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.079	mg/Kg	5	2/15/2018 9:36:33 AM	B49155
Toluene	ND	0.16	mg/Kg	5	2/15/2018 9:36:33 AM	B49155
Ethylbenzene	ND	0.16	mg/Kg	5	2/15/2018 9:36:33 AM	B49155
Xylenes, Total	ND	0.32	mg/Kg	5	2/15/2018 9:36:33 AM	B49155
Surr: 4-Bromofluorobenzene	99.7	80-120	%Rec	5	2/15/2018 9:36:33 AM	B49155

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802857

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1802857-004

Client Sample ID: TSP-19

Collection Date: 2/14/2018 12:10:00 PM

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: CJS
Chloride	ND	30		mg/Kg	20	2/15/2018 11:53:13 AN	1 36542
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS					Analys	t: TOM
Diesel Range Organics (DRO)	120	9.7		mg/Kg	1	2/15/2018 10:41:35 AN	A 36540
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/15/2018 10:41:35 AM	A 36540
Surr: DNOP	95.3	70-130		%Rec	1	2/15/2018 10:41:35 AM	<b>1</b> 36540
<b>EPA METHOD 8015D: GASOLINE RAN</b>	IGE					Analys	t: NSB
Gasoline Range Organics (GRO)	120	16		mg/Kg	5	2/15/2018 10:00:15 AM	A G49155
Surr: BFB	446	15-316	s	%Rec	5	2/15/2018 10:00:15 AM	M G49155
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.081		mg/Kg	5	2/15/2018 10:00:15 AM	M B49155
Toluene	ND	0.16		mg/Kg	5	2/15/2018 10:00:15 AN	M B49155
Ethylbenzene	ND	0.16		mg/Kg	5	2/15/2018 10:00:15 AM	M B49155
Xylenes, Total	1.8	0.32		mg/Kg	5	2/15/2018 10:00:15 AM	и B49155
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	5	2/15/2018 10:00:15 AM	M B49155

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802857

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1802857-005 Client Sample ID: TSP-20

**Collection Date: 2/14/2018 12:15:00 PM** 

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS		<u> </u>			Analys	st: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 12:05:38 P	M 36542
EPA METHOD 8015M/D: DIESEL RAM	NGE ORGANICS	<b>;</b>			Analys	st: <b>TOM</b>
Diesel Range Organics (DRO)	44	9.6	mg/Kg	1	2/15/2018 11:03:37 A	M 36540
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	2/15/2018 11:03:37 A	M 36540
Surr: DNOP	99.0	70-130	%Rec	1	2/15/2018 11:03:37 A	M 36540
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	st: NSB
Gasoline Range Organics (GRO)	29	19	mg/Kg	5	2/15/2018 10:23:58 A	M G49155
Surr: BFB	167	15-316	%Rec	5	2/15/2018 10:23:58 A	M G49155
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.095	mg/Kg	5	2/15/2018 10:23:58 A	M B49155
Toluene	ND	0.19	mg/Kg	5	2/15/2018 10:23:58 A	M B49155
Ethylbenzene	ND	0.19	mg/Kg	5	2/15/2018 10:23:58 A	M B49155
Xylenes, Total	ND	0.38	mg/Kg	5	2/15/2018 10:23:58 A	M B49155
Surr: 4-Bromofluorobenzene	104	80-120	%Rec	5	2/15/2018 10:23:58 A	M B49155

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 13 J
- Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

Lab Order 1802857

Date Reported: 2/16/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1802857-006

Client Sample ID: TSP-21

Collection Date: 2/14/2018 12:20:00 PM

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 12:18:02 P	M 36542
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analy	st: TOM
Diesel Range Organics (DRO)	94	9.9	mg/Kg	1	2/15/2018 11:25:31 A	M 36540
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/15/2018 11:25:31 A	M 36540
Surr: DNOP	97.2	70-130	%Rec	1	2/15/2018 11:25:31 A	M 36540
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	46	16	mg/Kg	5	2/15/2018 10:47:48 A	M G49155
Surr: BFB	251	15-316	%Rec	5	2/15/2018 10:47:48 A	M G49155
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.081	mg/Kg	5	2/15/2018 10:47:48 A	M B49155
Toluene	ND	0.16	mg/Kg	5	2/15/2018 10:47:48 A	M B49155
Ethylbenzene	ND	0.16	mg/Kg	5	2/15/2018 10:47:48 A	M B49155
Xylenes, Total	0.66	0.33	mg/Kg	5	2/15/2018 10:47:48 A	M B49155
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	5	2/15/2018 10:47:48 A	M B49155

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802857

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1802857-007

Client Sample ID: TSP-22

Collection Date: 2/14/2018 12:25:00 PM

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 12:30:27 PM	A 36542
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS	;			Analys	t: TOM
Diesel Range Organics (DRO)	95	9.8	mg/Kg	1	2/15/2018 11:47:30 Af	И 36540
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/15/2018 11:47:30 Af	d 36540
Surr: DNOP	102	70-130	%Rec	1	2/15/2018 11:47:30 Af	и 36540
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	t: NSB
Gasoline Range Organics (GRO)	60	20	mg/Kg	5	2/15/2018 11:11:34 Al	M G49155
Surr: BFB	255	15-316	%Rec	5	2/15/2018 11:11:34 Al	M G49155
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.099	mg/Kg	5	2/15/2018 11:11:34 Al	M B49155
Toluene	ND	0.20	mg/Kg	5	2/15/2018 11:11:34 Al	M B49155
Ethylbenzene	ND	0.20	mg/Kg	5	2/15/2018 11:11:34 Al	M B49155
Xylenes, Total	0.76	0.39	mg/Kg	5	2/15/2018 11:11:34 Al	M B49155
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	5	2/15/2018 11:11:34 AI	M B49155

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802857

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1802857-008

**Client Sample ID:** TSP-23

Collection Date: 2/14/2018 12:30:00 PM

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analysi	:: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 12:42:51 PM	36542
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analys	:: TOM
Diesel Range Organics (DRO)	25	9.2	mg/Kg	1	2/15/2018 12:09:25 PM	36540
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	2/15/2018 12:09:25 PM	36540
Surr: DNOP	103	70-130	%Rec	1	2/15/2018 12:09:25 PM	36540
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	16	mg/Kg	5	2/15/2018 11:35:21 AM	G49155
Surr: BFB	137	15-316	%Rec	5	2/15/2018 11:35:21 AM	G49155
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.079	mg/Kg	5	2/15/2018 11:35:21 AM	B49155
Toluene	ND	0.16	mg/Kg	5	2/15/2018 11:35:21 AM	B49155
Ethylbenzene	ND	0.16	mg/Kg	5	2/15/2018 11:35:21 AM	B49155
Xylenes, Total	ND	0.32	mg/Kg	5	2/15/2018 11:35:21 AM	B49155
Surr: 4-Bromofluorobenzene	97.4	80-120	%Rec	5	2/15/2018 11:35:21 AM	B49155

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802857

Date Reported: 2/16/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1802857-009

Client Sample ID: TSP-24

Collection Date: 2/14/2018 12:35:00 PM

Received Date: 2/15/2018 7:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: CJS
Chloride	ND	30	mg/Kg	20	2/15/2018 1:20:04 PM	36542
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analys	st: TOM
Diesel Range Organics (DRO)	54	9.7	mg/Kg	1	2/15/2018 12:31:34 P	M 36540
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	2/15/2018 12:31:34 P	M 36540
Surr: DNOP	102	70-130	%Rec	1	2/15/2018 12:31:34 P	M 36540
<b>EPA METHOD 8015D: GASOLINE RA</b>	NGE				Analys	st: NSB
Gasoline Range Organics (GRO)	36	17	mg/Kg	5	2/15/2018 11:59:02 A	M G49155
Surr: BFB	199	15-316	%Rec	5	2/15/2018 11:59:02 A	M G49155
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.085	mg/Kg	5	2/15/2018 11:59:02 A	M B49155
Toluene	ND	0.17	mg/Kg	5	2/15/2018 11:59:02 A	M B49155
Ethylbenzene	ND	0.17	mg/Kg	5	2/15/2018 11:59:02 A	M B49155
Xylenes, Total	ND	0.34	mg/Kg	5	2/15/2018 11:59:02 A	M B49155
Surr: 4-Bromofluorobenzene	105	80-120	%Rec	5	2/15/2018 11:59:02 A	M B49155

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802857

16-Feb-18

Client:

**Blagg Engineering** 

Project:

Homestead Ranch 2

Sample ID MB-36542

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 36542

Batch ID: 36542

1.5

RunNo: 49156

Prep Date: 2/15/2018

Analysis Date: 2/15/2018

SeqNo: 1586301

Units: mg/Kg

%RPD

Analyte

Result ND **PQL** SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit**  Qual

Chloride

SampType: Ics

TestCode: EPA Method 300.0: Anions

RunNo: 49156

%REC LowLimit

Prep Date: 2/15/2018

Client ID: LCSS

Sample ID LCS-36542

Analysis Date: 2/15/2018

SeqNo: 1586302

Units: mg/Kg

**RPDLimit** 

Qual

Analyte

Result **PQL** 

15.00

SPK value SPK Ref Val

92.6

HighLimit 110

Chloride

14

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% 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 Page 10 of 13

Sample pH Not In Range

Reporting Detection Limit RL

Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802857

16-Feb-18

**Client:** 

Blagg Engineering

**Project:** 

Homestead Ranch 2

SampType: LCS

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

Client ID: LCSS

Batch ID: 36540

RunNo: 49144

Prep Date: 2/15/2018

Analysis Date: 2/15/2018

Units: mg/Kg

130

130

**PQL** Result

SeqNo: 1584635

Analyte Diesel Range Organics (DRO) Sur: DNOP

46 10 50.00 4.5 5.000

SPK value SPK Ref Val %REC LowLimit HighLimit 92.4 70

70

%RPD **RPDLimit** Qual

Sample ID MB-36540

SampType: MBLK

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

Client ID: PBS Batch ID: 36540

RunNo: 49144

89.8

Analyte

Analysis Date: 2/15/2018

**PQL** 

SeqNo: 1584636

Units: mg/Kg

HighLimit

**RPDLimit** %RPD Qual

Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)

Prep Date: 2/15/2018

ND 10 ND 50

Result

9.6

95.7

130

Sample ID 1802857-001AMS

SampType: MS

SPK value SPK Ref Val %REC LowLimit

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

Client ID: TSP-16

Batch ID: 36540

RunNo: 49144

Prep Date: 2/15/2018

Surr: DNOP

Analysis Date: 2/15/2018

SeqNo: 1585370

103

93.8

Units: mg/Kg

130

Qual

Analyte Diesel Range Organics (DRO)

Result **PQL** 120

SPK value SPK Ref Val %REC 63.10

LowLimit HighLimit 55.8 125 70

70

**RPDLimit** Qual

0

Surr: DNOP

4.8

SampType: MSD

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

%RPD

Client ID: TSP-16

Batch ID: 36540

RunNo: 49144

Prep Date: 2/15/2018

Sample ID 1802857-001AMSD

Analysis Date: 2/15/2018

SeqNo: 1585371

Units: mg/Kg

Analyte

Result PQL 100 9.6

SPK value SPK Ref Val %REC

LowLimit

HighLimit

%RPD

**RPDLimit** 

Diesel Range Organics (DRO) Surr: DNOP

4.5

47.76

4.776

10.00

51.07

5.107

63.10 80.0 94.5

55.8

70

125 130

0

13.1

- 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
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Detection Limit RL Sample container temperature is out of limit as specified
- Page 11 of 13

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802857

16-Feb-18

Client:

**Blagg Engineering** 

Project:

Homestead Ranch 2

Sample ID RB

SampType: MBLK

**PQL** 

5.0

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

Batch ID: G49155

RunNo: 49155

Prep Date:

Analysis Date: 2/15/2018

Units: mg/Kg

**HighLimit** 

Analyte

Result

ND

960

1000

SeqNo: 1585450

**RPDLimit** 

Qual

Gasoline Range Organics (GRO) Surr: BFB

**PBS** 

SampType: LCS

96.2

316

%RPD

Sample ID 2.5UG GRO LCS

RunNo: 49155

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

LCSS

Batch ID: G49155

SeqNo: 1585455

15

LowLimit

Units: mg/Kg

Analyte

Prep Date:

Analysis Date: 2/15/2018 Result PQL

SPK value SPK Ref Val

11.29

SPK value SPK Ref Val %REC

%REC LowLimit HighLimit

%RPD Qual

Gasoline Range Organics (GRO) Surr: BFB

25 5.0 25.00 1100 1000

101 113 75.9 131 15 316 **RPDLimit** 

Sample ID 1802857-003AMS

SampType: MS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: TSP-18 Prep Date:

Batch ID: G49155 Analysis Date: 2/15/2018

PQL

16

RunNo: 49155

77.8

15

Units: mg/Kg

128

316

Analyte Gasoline Range Organics (GRO) Surr: BFB

Result 97 5100 SPK value SPK Ref Val

79.06

3162

SeaNo: 1585457 %REC

108

161

LowLimit HighLimit **RPDLimit** Qual

Qual

Sample ID 1802857-003AMSD

SampType: MSD Batch ID: G49155

PQL

16

TestCode: EPA Method 8015D: Gasoline Range

RunNo: 49155

Prep Date:

Client ID: TSP-18

Analysis Date: 2/15/2018

SeqNo: 1585458

Units: mg/Kg

HighLimit

%RPD

**RPDLimit** 20

0

Page 12 of 13

Analyte Gasoline Range Organics (GRO) Surr: BFB

Result 96 4800 SPK value SPK Ref Val

79.06 11.29 3162

%REC 107 151

77.8 15

LowLimit

128 316 0.720 0

%RPD

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802857

16-Feb-18

Client: Project: Blagg Engineering Homestead Ranch 2

Sample ID RB

SampType: MBLK

TestCode: EPA Method 8021B: Volatiles

80

TestCode: EPA Method 8021B: Volatiles

Client ID: **PBS** 

Batch ID: **B49155** 

RunNo: 49155

Prep Date:

Prep Date:

Analysis Date: 2/15/2018

SeqNo: 1585487

Units: mg/Kg

HighLimit

%RPD

**RPDLimit** Qual

Qual

Qual

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit ND 0.025 Benzene ND 0.050 Toluene ND 0.050 Ethylbenzene Xylenes, Total ND 0.10 Surr: 4-Bromofluorobenzene 0.96

Sample ID 100NG BTEX LCS

1.000

120

Client ID: LCSS SampType: LCS Batch ID: **B49155** 

RunNo: 49155

96.4

SeqNo: 1585489

Units: mg/Kg

Analysis Date: 2/15/2018 Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** 0.91 0.025 77.3 Benzene 1.000 90.5 128 Toluene 0.88 0.050 1.000 0 88.0 79.2 125 Ethylbenzene 0.90 0.050 1.000 0 89.5 80.7 127 81.6 Xylenes, Total 2.7 0.10 3.000 90.9 129 Surr: 4-Bromofluorobenzene 1.0 1.000 102 80 120

Sample ID 1802857-004AMS

SampType: MS

TestCode: EPA Method 8021B: Volatiles

Client ID: **TSP-19** 

Prep Date:

Batch ID: **B49155** Analysis Date: 2/15/2018 RunNo: 49155 SeqNo: 1585490

Units: mg/Kg

%RPD

**RPDLimit** 

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit **HighLimit** Benzene 3.3 0.081 3.238 102 80.9 132 Toluene 3.6 0.16 3 238 O 110 79.8 136 Ethylbenzene 3.5 0.16 108 79.4 3.238 0 140 Xylenes, Total 12 0.32 9.716 1.769 105 78.5 142 Surr: 4-Bromofluorobenzene 3.7 3.238 115 80 120

Sample ID 1802857-004AMSD

SampType: MSD

TestCode: EPA Method 8021B: Volatiles

Client ID: TSP-19	Batc	h ID: <b>B4</b>	9155	F	RunNo: 4	9155				
Prep Date:	Analysis [	Date: 2/	15/2018	8	SeqNo: 1	585491	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.3	0.081	3.238	0	101	80.9	132	0.872	20	
Toluene	3.3	0.16	3.238	0	103	79.8	136	6.62	20	
Ethylbenzene	3.5	0.16	3.238	0	107	79.4	140	0.582	20	
Xylenes, Total	12	0.32	9.716	1.769	103	78.5	142	1.22	20	
Surr: 4-Bromofluorobenzene	3.8		3.238		117	80	120	0	0	

### Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

POL **Practical Quanitative Limit** 

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits

Page 13 of 13

Sample pH Not In Range

RI. Reporting Detection Limit

Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

# Sample Log-In Check List

Client Name:	BLAGG		Work Order Numb	er: 180	2857			Ro	ptNo:	1
						1	10			
Received By:	Anne Thor	ne	2/15/2018 7:00:00 A	M		Um	. S.	~		
Completed By:	Anne Thor	ne	2/15/2018 7:27:05 A	M		am	. <i>I</i> !-	_		
Reviewed By:	Pt2	15.18								
Chain of Cus	tody									
1. Is Chain of C	ustody comple	ete?		Yes	$\checkmark$	No		Not Present		
2. How was the	sample delive	red?		Cou	<u>rier</u>					
<u>Log In</u>										
3. Was an atten	npt made to co	ool the samples?		Yes	$\checkmark$	No		NA		
							_			
4. Were all samp	ples received a	at a temperature o	of >0° C to 6.0°C	Yes	$ \mathbf{\nabla}$	No		NA		
5. Sample(s) in	proper contair	ner(s)?		Yes	$\checkmark$	No				
					_		_			
6. Sufficient sam				Yes						
7. Are samples (	except VOA a	ind ONG) properly	preserved?	Yes	$\mathbf{Z}$					
8. Was preserva	itive added to	bottles?		Yes	□ .	No	$\checkmark$	NA	Ц	
9. VOA vials hav	e zero heads;	pace?		Yes		No		No VOA Viais	V	
10. Were any sar	nple containe	rs received broker	17	Yes		No	<b>v</b>			· · · · · · · · · · · · · · · · · · ·
								# of preserved bottles checked	d	
11. Does paperwo				Yes	$\mathbf{V}$	No		for pH:	1-0	- 40 · · · · · · · · · · · · · · · · · ·
(Note discrepa		• •				NI-		Adjusted	•	>12 unless noted)
12. Are matrices of			Justody?					,	·	
13. Is it clear wha 14. Were all holdi	_			Yes Yes				Checked	bv:	
(If no, notify c	_			103	Œ	140	<u> </u>			
Special Handi	ling (if app	licable)								•
15. Was client no			nis order?	Yes		No		NA	$\checkmark$	
Person	Notified:		Date					-		
By Who	om:	THE RESERVE OF THE PARTY OF THE	Via:	□ eM	lail 🔲	Phone [	Fax	☐ In Person		
Regard	ling:									
Client I	nstructions:							.,	i	
16. Additional re	marks:									
17. Cooler Infor	mation									
Cooler No	Temp °C		al intact   Seal No	Seal D	ate	Signed	Ву			
2	1.0	Good Yes						]		

C	<u>:hain</u>	<u>-of-Cι</u>	stody Record	Tum <sub>-</sub>	Around	Time:		Some	. ■							/TE	Ċ	<b>.</b>		NIT!		
Client:			MONTIN - GREER	+	tandard	<u></u>	Rush	5000E												NT/ NTO		
Mailing	Address		BINEERING, INC.	1 -				S# FON				V	ww.l	naller	viron	ment	al.co	om				
	Audiess	<u> </u>	<del></del>		•	2 CAT		720111112	ļ	49	01 H	awkin	s NE	- A	buqu	erqu	e, N	M 87	'109			
				Projec	Ct #:					Te	el. 50	5-345	-397		Fax				7			ستست
Phone		05)	320-1183	+									Ļ	Ana	lysis	_	uesi					
email o		<del> </del>		_ Projed	ct Mana	ger:			(1)	only	묎				) (4)	၂						
QA/QC	Package: dard		□ Level 4 (Full Validation)					CLASS	<b>æ</b> (8021)	TPH (Gas only)	RO / №			(SIMO)	Po,	2 PCB					composition	
Accredi		_ •		Samp	ler: N	£1204	<u> V</u>	ther av		핍	0	=		0770	ĮŠ	808					8	Î
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	(Type)_		<u></u>	+		perature:	· · · /c	O 2 Coders	歴	+ MTBE	) 9	В	일 (		2	icid	JA)	j-j-	2		8	ر ک
Date	Time	Matrix	Sample Request ID	Con Type	and#	Preserva Type			BTEX #	BTEX + M	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	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)	CHLORIOE		7 87.	Air Bubbles (Y or N)
2/14/18	1135	5016	TSP-16		1	C60	_	-00	V		7						3		1			
	1200	1	TSP-17		<u> </u>	1		702	1		1	Ġ							$\checkmark$			
	1205		TSP-18					703	<b>✓</b>		$\checkmark$	Ī							1			
	1216		T5P-19					-204	<b>✓</b>		マ								7		<b>V</b>	
	1215		T5P-20					705	<b>V</b>		$\checkmark$				:				<b>7</b>		7	
	1220		75P-21					-20%	<b>V</b>	•	V								$\sqrt{\ }$		<b>V</b>	
	1225		75P-28					707	>		V								<b>7</b>			
	1230		758-23					-UB	<b>V</b>		<b>4</b>						-		$\sqrt{}$		<b>V</b>	
	i235		75P-24			1		-209	Y	·	Y								4		V	
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Date: 2/14/18		Relinquish	May f	Receive	Mrs	+Va	U	Date Time 7/4/1/1746	Ren	narks		BIL				{ <del>5</del>	TRI	ነው፦	٠٤٠	Ś		
Date:	Time: 1964	Relinquish	ed by: HJaur	Fleceive	ed by:	m-	2	Date Time 02/15/18 10000	<b>~</b>	का स		SAM	PCT	<u>:5</u>	TRE	गर्स	<b>د</b>	) <del>11</del>	a İ	₹ <b>0</b>	ح	
l f	necessary,	samples subi	mitted to Hall Environmental may be subc	contracted	to other ac	credited laborated	oratorie	s. This serves as notice of this	possil	bility.	Any su	b-contra	cted d	ata will l	e dea	1y nota	ted on	the a	nalytice	A report.		



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

February 21, 2018

Jeff Blagg

**Blagg Engineering** 

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199

FAX (505) 632-3903

RE: Homestead Ranch 2

OrderNo.: 1802973

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 3 sample(s) on 2/17/2018 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1802973

Date Reported: 2/21/2018

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1802973-001

Client Sample ID: TSP-25

**Collection Date: 2/16/2018 10:40:00 AM** 

Received Date: 2/17/2018 10:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: CJS
Chloride	ND	30		mg/Kg	20	2/19/2018 11:15:36 AM	A 36589
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analys	t: TOM
Diesel Range Organics (DRO)	80	9.9		mg/Kg	1	2/19/2018 11:29:13 AM	A 36587
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/19/2018 11:29:13 AM	A 36587
Surr: DNOP	101	70-130		%Rec	1	2/19/2018 11:29:13 AM	A 36587
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	73	18		mg/Kg	5	2/19/2018 9:42:54 AM	G49216
Surr: BFB	378	15-316	S	%Rec	5	2/19/2018 9:42:54 AM	G49216
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.089		mg/Kg	5	2/19/2018 9:42:54 AM	B49216
Toluene	ND	0.18		mg/Kg	5	2/19/2018 9:42:54 AM	B49216
Ethylbenzene	ND	0.18		mg/Kg	5	2/19/2018 9:42:54 AM	B49216
Xylenes, Total	1.4	0.36		mg/Kg	5	2/19/2018 9:42:54 AM	B49216
Surr: 4-Bromofluorobenzene	128	80-120	S	%Rec	5	2/19/2018 9:42:54 AM	B49216

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1802973

Date Reported: 2/21/2018

## Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: TSP-25

CLIENT: Blagg Engineering
Project: Homestead Ranch 2

**Collection Date: 2/16/2018 10:40:00 AM** 

**Lab ID:** 1802973-001

Matrix: SOIL

Received Date: 2/17/2018 10:00:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	st: CJS
Chloride	ND	30		mg/Kg	20	2/19/2018 11:15:36 A	M 36589
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS					Analys	st: TOM
Diesel Range Organics (DRO)	80	9.9		mg/Kg	1	2/19/2018 11:29:13 A	M 36587
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/19/2018 11:29:13 A	M 36587
Surr: DNOP	101	70-130		%Rec	1	2/19/2018 11:29:13 A	M 36587
EPA METHOD 8015D: GASOLINE RAI	NGE					Analys	st: NSB
Gasoline Range Organics (GRO)	73	18		mg/Kg	5	2/19/2018 9:42:54 AM	G49216
Surr: BFB	378	15-316	s	%Rec	5	2/19/2018 9:42:54 AM	G49216
EPA METHOD 8021B: VOLATILES						Analys	st: NSB
Benzene	ND	0.089		mg/Kg	5	2/19/2018 9:42:54 AM	B49216
Toluene	ND	0.18		mg/Kg	5	2/19/2018 9:42:54 AM	B49216
Ethylbenzene	ND	0.18		mg/Kg	5	2/19/2018 9:42:54 AM	B49216
Xylenes, Total	1.4	0.36		mg/Kg	5	2/19/2018 9:42:54 AM	B49216
Surr: 4-Bromofluorobenzene	128	80-120	s	%Rec	5	2/19/2018 9:42:54 AM	B49216

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

### Lab Order 1802973

Date Reported: 2/21/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Homestead Ranch 2 Project:

Lab ID: 1802973-002 Client Sample ID: TSP-26

Collection Date: 2/16/2018 10:50:00 AM

Received Date: 2/17/2018 10:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	ND	30	mg/Kg	20	2/19/2018 11:28:00 AM	36589
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	1			Analyst	TOM
Diesel Range Organics (DRO)	39	9.4	mg/Kg	1	2/19/2018 11:51:15 AM	36587
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	2/19/2018 11:51:15 AM	36587
Surr: DNOP	101	70-130	%Rec	1	2/19/2018 11:51:15 AM	36587
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	23	15	mg/Kg	5	2/19/2018 10:07:28 AM	G49216
Surr: BFB	193	15-316	%Rec	5	2/19/2018 10:07:28 AM	G49216
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.077	mg/Kg	5	2/19/2018 10:07:28 AM	B49216
Toluene	ND	0.15	mg/Kg	5	2/19/2018 10:07:28 AM	B49216
Ethylbenzene	ND	0.15	mg/Kg	5	2/19/2018 10:07:28 AM	B49216
Xylenes, Total	ND	0.31	mg/Kg	5	2/19/2018 10:07:28 AM	B49216
Surr: 4-Bromofluorobenzene	98.6	80-120	%Rec	5	2/19/2018 10:07:28 AM	B49216

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 7 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1802973

Date Reported: 2/21/2018

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: TSP-27

Project: Homestead Ranch 2 Collection Date: 2/16/2018 11:00:00 AM

Lab ID: 1802973-003 Matrix: SOIL Received Date: 2/17/2018 10:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	-				Analyst	: CJS
Chloride	ND	30	mg/Kg	20	2/19/2018 11:40:25 AM	36589
EPA METHOD 8015M/D: DIESEL RAN		Analyst	: ТОМ			
Diesel Range Organics (DRO)	41	9.9	mg/Kg	1	2/19/2018 12:13:26 PM	36587
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	2/19/2018 12:13:26 PM	36587
Surr: DNOP	105	70-130	%Rec	1	2/19/2018 12:13:26 PM	36587
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	:: NSB
Gasoline Range Organics (GRO)	52	16	mg/Kg	5	2/19/2018 10:31:08 AM	G49216
Surr: BFB	293	15-316	%Rec	5	2/19/2018 10:31:08 AM	G49216
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.081	mg/Kg	5	2/19/2018 10:31:08 AM	B49216
Toluene	ND	0.16	mg/Kg	5	2/19/2018 10:31:08 AM	B49216
Ethylbenzene	ND	0.16	mg/Kg	5	2/19/2018 10:31:08 AM	B49216
Xylenes, Total	1.0	0.33	mg/Kg	5	2/19/2018 10:31:08 AM	B49216
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	5	2/19/2018 10:31:08 AM	B49216

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802973

21-Feb-18

Client:

Blagg Engineering

Project:

Homestead Ranch 2

Sample ID MB-36589

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID:

**PBS** 

Batch ID: 36589

RunNo: 49214

Prep Date: 2/19/2018

Analysis Date: 2/19/2018

SeqNo: 1588713

Units: mg/Kg

Qual

Analyte

Result **PQL** 

1.5

SPK value SPK Ref Val %REC LowLimit

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD **RPDLimit** 

Chloride

ND

TestCode: EPA Method 300.0: Anions

Sample ID LCS-36589

Client ID: LCSS

SampType: Ics Batch ID: 36589

RunNo: 49214

Prep Date: 2/19/2018

Analysis Date: 2/19/2018

SeqNo: 1588714

Units: mg/Kg HighLimit

Page 4 of 7

Analyte

PQL Result 1.5

15.00

94.8

%RPD **RPDLimit** 

Qual

Chloride

14

90

110

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

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802973

21-Feb-18

Client:

Blagg Engineering

**Project:** 

Homestead Ranch 2

Sample ID LCS-36587

SampType: LCS

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

Client ID: LCSS

Batch ID: 36587

RunNo: 49208

Prep Date: 2/19/2018

Analysis Date: 2/19/2018

SeqNo: 1587555

Units: mg/Kg

Analyte

Result PQL 48 10 %REC

95.1

130

**HighLimit** 

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

%RPD **RPDLimit** 

Qual

Diesel Range Organics (DRO) Surr: DNOP

4.6 SampType: MBLK 91.9

70 130

Sample ID MB-36587 Client ID: PBS

Surr: DNOP

Batch ID: 36587

SPK value SPK Ref Val

50.00

5.000

10.00

%RPD

Prep Date: 2/19/2018

Analysis Date: 2/19/2018

Result

9.8

SeqNo: 1587556

SPK value SPK Ref Val %REC LowLimit

Units: mg/Kg

**HighLimit** 

**RPDLimit** Qual

Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)

ND 10 ND 50

**PQL** 

98.0

70

LowLimit

70

130

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

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

В Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit RL

P

Sample container temperature is out of limit as specified

Page 5 of 7

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802973

21-Feb-18

**Client:** Project: **Blagg Engineering** 

Sample ID RB

Homestead Ranch 2

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

15

15

Client ID:

Batch ID: G49216

RunNo: 49216

Prep Date:

Analysis Date: 2/19/2018

SeqNo: 1587978

Units: mg/Kg

Analyte Gasoline Range Organics (GRO) Result **PQL** ND

SPK value SPK Ref Val %REC

HighLimit

%RPD **RPDLimit** 

Surr: BFB

1200

1000

116

316

Sample ID 2.5UG GRO LCS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS

Batch ID: G49216

RunNo: 49216

Prep Date:

Units: mg/Kg

Analyte

Analysis Date: 2/19/2018

SeqNo: 1587979

Gasoline Range Organics (GRO)

30 1300

Result

Result

SPK value SPK Ref Val %REC 25.00

1000

77.25

3090

118 134

LowLimit **HighLimit** 75.9 131 %RPD **RPDLimit** Qual

Surr: BFB

SampType: MS

TestCode: EPA Method 8015D: Gasoline Range

316

Client ID: TSP-26 Prep Date:

Sample ID 1802973-002AMS

Batch ID: G49216 Analysis Date: 2/19/2018

PQL

**PQL** 

5.0

RunNo: 49216

SeqNo: 1587981

Units: mg/Kg

Analyte Gasoline Range Organics (GRO) Surr: BFB

130 15 6800

SPK value SPK Ref Val %REC

23.05

23.05

LowLimit HighLimit

77.8

15

%RPD **RPDLimit** 

Qual

Sample ID 1802973-002AMSD

SampType: MSD

15

TestCode: EPA Method 8015D: Gasoline Range

132

219

128

316

Client ID: TSP-26 Prep Date:

Batch ID: G49216

RunNo: 49216

SeqNo: 1587982

Units: mg/Kg

%RPD **RPDLimit** Qual

Analyte Gasoline Range Organics (GRO) Surr: BFB

Result POL

120

6700

Analysis Date: 2/19/2018 SPK value SPK Ref Val

77.25

3090

%REC

131

218

Low imit

77.8

15

HighLimit 128

316

0.843

0

20 0

S

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded Н

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits 1

Page 6 of 7

Sample pH Not In Range

RLReporting Detection Limit

Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1802973

21-Feb-18

Client: Project: Blagg Engineering

Sample ID RB

Homestead Ranch 2

Result

1.1

Result

SampType: MBLK

TestCode: EPA Method 8021B: Volatiles

LowLimit

80

TestCode: EPA Method 8021B: Volatiles

Client ID:

Batch ID: **B49216** 

PQL

RunNo: 49216

Prep Date:

Analysis Date: 2/19/2018

SeqNo: 1587988

Units: mg/Kg

**HighLimit** 

**RPDLimit** 

Analyte Benzene Toluene

ND 0.025 ND 0.050 ND 0.050 Ethylbenzene ND 0.10 Xylenes, Total

Surr: 4-Bromofluorobenzene

Sample ID 100NG BTEX LCS

1.000

SPK value SPK Ref Val

SPK value SPK Ref Val %REC

115

120

Client ID: LCSS

SampType: LCS

**PQL** 

RunNo: 49216

%REC

Prep Date:

Batch ID: **B49216** 

Analysis Date: 2/19/2018

SeqNo: 1587989

Units: mg/Kg

%RPD **RPDLimit** LowLimit **HighLimit** Qual

%RPD

Analyte Benzene 0.90 0.025 1.000 0 89.7 77.3 128 0.050 79.2 125 Toluene 0.84 1.000 0 84.2 86.6 80.7 127 0.87 0.050 1.000 Ethylbenzene n Xylenes, Total 2.6 0.10 3.000 87.9 81.6 129 Surr: 4-Bromofluorobenzene 1.2 1.000 120

Sample ID 1802973-001AMS

SampType: MS

TestCode: EPA Method 8021B: Volatiles

Client ID: TSP-25

Batch ID: **B49216** 

RunNo: 49216

Prep Date: Analysis Date: 2/19/2018 SeqNo: 1587990 Units: mg/Kg SPK value SPK Ref Val Analyte Result **PQL** %REC LowLimit **HighLimit** %RPD **RPDLimit** Qual 91.5 80.9 Benzene 3.3 0.089 3.564 132 Toluene 3.2 0.18 3.564 0 88.5 79.8 136 Ethylbenzene 3.4 0.18 3.564 0 96.1 79.4 140 12 0.36 1.402 96.8 78.5 142 Xylenes, Total 10.69 Surr: 4-Bromofluorobenzene 3.7 3.564 103 80 120

Sample ID 1802973-001AMSD

Client ID: **TSP-25**  SampType: MSD

TestCode: EPA Method 8021B: Volatiles

Batch ID: **B49216** RunNo: 49216

Analysis Date: 2/19/2018			•						
			SeqNo: 1587991			Units: mg/K	(g		
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3.4	0.089	3.564	0	96.3	80.9	132	5.12	20	
3.4	0.18	3.564	0	94.6	79.8	136	6.64	20	
3.5	0.18	3.564	0	98.8	79.4	140	2.71	20	
12	0.36	10.69	1.402	96.6	78.5	142	0.245	20	
3.7		3.564		105	80	120	0	0	
	Analysis [ Result 3.4 3.4 3.5 12	Analysis Date: 2/  Result PQL  3.4 0.089  3.4 0.18  3.5 0.18  12 0.36	Analysis Date: 2/19/2018           Result         PQL         SPK value           3.4         0.089         3.564           3.4         0.18         3.564           3.5         0.18         3.564           12         0.36         10.69	Analysis Date: 2/19/2018         SPK value         SPK Ref Val           Result         PQL         SPK value         SPK Ref Val           3.4         0.089         3.564         0           3.4         0.18         3.564         0           3.5         0.18         3.564         0           12         0.36         10.69         1.402	Result         PQL         SPK value         SPK Ref Val         %REC           3.4         0.089         3.564         0         96.3           3.4         0.18         3.564         0         94.6           3.5         0.18         3.564         0         98.8           12         0.36         10.69         1.402         96.6	Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit           3.4         0.089         3.564         0         96.3         80.9           3.4         0.18         3.564         0         94.6         79.8           3.5         0.18         3.564         0         98.8         79.4           12         0.36         10.69         1.402         96.6         78.5	Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit           3.4         0.089         3.564         0         96.3         80.9         132           3.4         0.18         3.564         0         94.6         79.8         136           3.5         0.18         3.564         0         98.8         79.4         140           12         0.36         10.69         1.402         96.6         78.5         142	Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit         %RPD           3.4         0.089         3.564         0         96.3         80.9         132         5.12           3.4         0.18         3.564         0         94.6         79.8         136         6.64           3.5         0.18         3.564         0         98.8         79.4         140         2.71           12         0.36         10.69         1.402         96.6         78.5         142         0.245	Analysis Date:         2/19/2018         SeqNo: 1587991         Units: mg/Kg           Result         PQL         SPK value         SPK Ref Val         %REC         LowLimit         HighLimit         %RPD         RPDLimit           3.4         0.089         3.564         0         96.3         80.9         132         5.12         20           3.4         0.18         3.564         0         94.6         79.8         136         6.64         20           3.5         0.18         3.564         0         98.8         79.4         140         2.71         20           12         0.36         10.69         1.402         96.6         78.5         142         0.245         20

- 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
- POL **Practical Quanitative Limit**
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- Page 7 of 7

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



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

# Sample Log-In Check List

Client Name:	BLAGG	Work Order Numb	per: 1802973		RcptNo: 1						
Baratas A Bar	A 44 - Mallana	8478848		A							
Received By:	Ashley Gallegos	2/17/2018		am In							
Completed By:	Anne Thome	2/19/2018 10:02:09	AM	an Il-	_						
Reviewed By:	ENM	2/9/8									
Chain of Cus	tody										
	ustody complete?		Yes 🗹	No 🗆	Not Present						
2. How was the	sample delivered?		Courier								
Log In											
	npt made to cool the sar	mples?	Yes 🗹	No 🗀	na 🗆						
4. Were all sam	ples received at a tempo	erature of >0° C to 6.0°C	Yes 🗹	No 🗆	na 🗆						
5. Sample(s) in	proper container(s)?		Yes 🗹	No 🗆							
6. Sufficient san	nple volume for indicated	d test(s)?	Yes 🗹	No 🗆							
	(except VOA and ONG)		Yes 🗹	No 🗆							
8. Was preserva	ative added to bottles?		Yes 🗆	No 🗹	NA 🗆						
9. VOA vials hav	ve zero headspace?		Yes 🗌	No 🗆	No VOA Vials						
10. Were any sai	mple containers receive	d broken?	Yes 🗆	No 🗹 [	# of preserved						
			<u></u>		bottles checked						
	ork match bottle labels? ancies on chain of custo		Yes 🗹	No ∐	for pH: (<2 o	r >12 unless noted)					
•	correctly identified on Cl	**	Yes 🗹	No 🗆	Adjusted?	·					
	it analyses were reques		Yes 🗹	No 🗆							
	ing times able to be met		Yes 🗹	No 🗆	Checked by:						
	ling (if applicable)										
	otified of all discrepancie		Yes 🗆	No 🗆	NA 🗹	_					
Person	Notified:	Date									
By Wh	om:	Via:	eMail F	hone Fax	☐ In Person						
Regard		2-15-00 h 1-20 (8-11-11-11-11-11-11-11-11-11-11-11-11-11				ļ					
Client I	nstructions:	· · · · · · · · · · · · · · · · · · ·									
16. Additional re	emarks:										
17. Cooler Info	mation										
	Temp C Condition		Seal Date	Signed By							
1	4.3 Good	Yes	<u> </u>								

C	<u>hain</u>	-of-Cu	ustody Record	Turn-Around Time:					<b>=</b>			E	M	/TE			ae	NT.	<b>A</b> 1	
Client:	BEUSO	N-M	OUTIN - GREER	☐ Standard	Rush	DA	╽┝	12-26										NI.		
•	B. Alak	a Favor	WEERNG IN C	Project Name			] 🖿				v.hai									•
Mailing	Address	;;	WESTING DIC	HOMES	STEAD RAN	CH #2		490	1 Hav								'109			
				Project #:			1		. 505-							4107				
Phone	# 150	K) 32	10 - U93	1		101	. 500	040 0				Req								
email o		<u></u>		Project Mana		3	ଚା										Т	П		
	Package:		<del></del>	1 '		•	12	BTEX ***MEBE*** TMB**> (8021) BTEX + MTBE + TPH (Gas only) TPH 8015B (GRO / DRO / MRO) TPH (Method 418.1) EDB (Method 504.1) PAH'S (8310 or 8270 SIMS) 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*s 8260B (VOA)												
Stan	•		□ Level 4 (Full Validation)	JEFF BLAGG					ွဲ		SIMS)		Anions (F,CI,NO3,NO2,PO4,SO4)	S						
Accredi				Sampler: Je	FF BLAG	of Dino-		표	[ =	1 =	8		Š	38						5
□ NEL		□ Othe	er	On Ice:		D'No -	3 W I	-	윉	8	r 82	S	် ်	) / S		8				ō
	(Type) ַ ɪ	I		Sample Tem		m1243	翼	副	9 2	g	[일 	etal	2   Z,	cide	Æ	\ <u>-</u>	¥			<u>&gt;</u>
		<b> </b>		Container	Preservative		#	+ MTBE	TPH 8015B (GRO / [ TPH (Method 418 1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	ñ.	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	CHLOCIDE			Air Bubbles (Y or N)
Date	Time	Matrix	Sample Request ID	Type and #	Туре	ME REAL NOT	ВТЕХ	BTEX	בו ב		Ή.	ξ	ğ	2	60B	70 (	3			Bu
47.	ļ					W62475	<u></u>	_		<u>:                                     </u>	4	쮼	₹	8	82	82	_	$\dashv$		<u> ₹</u>
46/10/18	1040	SOK	TSP- 25	402 ×1	උනද	70	X		X		Ш						×			Ш
<u> </u>	1050		TSP- Z6			702	Ш		Ш	_										
	1100		T3P- 27			703	1		<u> </u>								)	$\bot$		
																			$\top$	
						-		1			П									П
									_	+	П						$\Box$		1	$\top$
		<del>                                     </del>						$\top$	_	+							一		$\top$	$\dagger \exists$
							1 1			╁	$\Box$						一		十	$\top$
							$\vdash$	+		+	H						$\neg$	-+	十	+
				-			$\vdash$			+	H				-		$\dashv$	$\dashv$	十	+
Date:	Time:	Relinquish	ed by:	Received by:	<del>'                                    </del>	Date Time	Rem	arks:	1211	<u> </u>	<b>M</b> /	لبا								ᅫ
2/14/2018	الناا	Ju	H Blays	Preceived by: Jake Time R					Remarks: BILL BMG CONTACT: ZACH STRAKING SAMPLES Treated WITH HZOZ											
Date:	Time:	Religions	ed by:	Received by: Date Time													_			
2/14/18	1829	V War	otuliale i		02/	17/19 1000		Au	ples	Tr	eat a	l o	<u>ار</u>	4	H	<u>z</u> C	) <sub>ح</sub> _			
19	necessary.	aamples sub	mitted to Hall Environmental may be subc	ontracted to other a	credited laboratorie	es. This serves as notice of this	possibi	ility. A	ny sub-c	ontracte	d data	will be	clearl	y nota	ted on	the ar	nalytica	l report		

# Appendix D

# Vadose Zone Analytical Data Reports



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

March 21, 2018

Jeff Blagg

Blagg Engineering

P. O. Box 87

Bloomfield, NM 87413

TEL: (505) 632-1199

FAX (505) 632-3903

RE: Homestead Ranch 2

OrderNo.: 1803566

#### Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/9/2018 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Andy Freeman

Laboratory Manager

Only

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1803566

Date Reported: 3/21/2018

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1803566-001

Client Sample ID: Zone 1

Collection Date: 3/9/2018 10:20:00 AM

Received Date: 3/9/2018 1:50:00 PM

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: CJS
Chloride	ND	30	mg/Kg	20	3/18/2018 2:41:00 PM	37083
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS				Analyst	TOM
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/13/2018 8:01:16 PM	36966
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/13/2018 8:01:16 PM	36966
Surr: DNOP	108	70-130	%Rec	1	3/13/2018 8:01:16 PM	36966
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/13/2018 1:58:47 PM	36964
Surr: BFB	98.0	15-316	%Rec	1	3/13/2018 1:58:47 PM	36964
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.023	mg/Kg	1	3/13/2018 1:58:47 PM	36964
Toluene	ND	0.047	mg/Kg	1	3/13/2018 1:58:47 PM	36964
Ethylbenzene	ND	0.047	mg/Kg	1	3/13/2018 1:58:47 PM	36964
Xylenes, Total	ND	0.093	mg/Kg	1	3/13/2018 1:58:47 PM	36964
Surr: 4-Bromofluorobenzene	93.4	80-120	%Rec	1	3/13/2018 1:58:47 PM	36964

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1803566

Date Reported: 3/21/2018

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Project: Homestead Ranch 2

Lab ID: 1803566-002

Client Sample ID: Zone 2

Collection Date: 3/9/2018 10:27:00 AM

Received Date: 3/9/2018 1:50:00 PM

Analyses	Result	PQL Qual Units		DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	ND	30	mg/Kg	20	3/18/2018 2:53:24 PM	37083
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analys	t: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	3/13/2018 8:25:35 PM	36966
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/13/2018 8:25:35 PM	36966
Surr: DNOP	113	70-130	%Rec	1	3/13/2018 8:25:35 PM	36966
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	3/13/2018 2:21:58 PM	36964
Surr: BFB	97.0	15-316	%Rec	1	3/13/2018 2:21:58 PM	36964
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.023	mg/Kg	1	3/13/2018 2:21:58 PM	36964
Toluene	ND	0.047	mg/Kg	1	3/13/2018 2:21:58 PM	36964
Ethylbenzene	ND	0.047	mg/Kg	1	3/13/2018 2:21:58 PM	36964
Xylenes, Total	ND	0.094	mg/Kg	1	3/13/2018 2:21:58 PM	36964
Surr: 4-Bromofluorobenzene	93.5	80-120	%Rec	1	3/13/2018 2:21:58 PM	36964

Matrix: SOIL

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1803566

Date Reported: 3/21/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: Zone 3

Project: Homestead Ranch 2 Collection Date: 3/9/2018 10:34:00 AM

Lab ID: 1803566-003

Matrix: SOIL

Received Date: 3/9/2018 1:50:00 PM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	ND	30	mg/Kg	20	3/18/2018 3:05:48 PM	37083
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS				Analys	t: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	3/13/2018 8:49:57 PM	36966
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	3/13/2018 8:49:57 PM	36966
Surr: DNOP	110	70-130	%Rec	1	3/13/2018 8:49:57 PM	36966
<b>EPA METHOD 8015D: GASOLINE RAI</b>	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/13/2018 2:45:11 PM	36964
Surr. BFB	97.2	15-316	%Rec	1	3/13/2018 2:45:11 PM	36964
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.024	mg/Kg	1	3/13/2018 2:45:11 PM	36964
Toluene	ND	0.049	mg/Kg	1	3/13/2018 2:45:11 PM	36964
Ethylbenzene	ND	0.049	mg/Kg	1	3/13/2018 2:45:11 PM	36964
Xylenes, Total	ND	0.098	mg/Kg	1	3/13/2018 2:45:11 PM	36964
Surr: 4-Bromofluorobenzene	93.5	80-120	%Rec	1	3/13/2018 2:45:11 PM	36964

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

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

Lab Order 1803566

Date Reported: 3/21/2018

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Blagg Engineering

Client Sample ID: Zone 4

Project: Homestead Ranch 2

**Collection Date: 3/9/2018 10:40:00 AM** 

Lab ID: 1803566-004

Matrix: SOIL

Received Date: 3/9/2018 1:50:00 PM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: CJS
Chloride	ND	30	mg/Kg	20	3/18/2018 3:43:01 PM	37083
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANICS				Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/13/2018 9:14:18 PM	36966
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/13/2018 9:14:18 PM	36966
Surr: DNOP	108	70-130	%Rec	1	3/13/2018 9:14:18 PM	36966
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/13/2018 6:15:19 PM	36964
Surr: BFB	95.6	15-316	%Rec	1	3/13/2018 6:15:19 PM	36964
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.024	mg/Kg	1	3/13/2018 6:15:19 PM	36964
Toluene	ND	0.049	mg/Kg	1	3/13/2018 6:15:19 PM	36964
Ethylbenzene	ND	0.049	mg/Kg	1	3/13/2018 6:15:19 PM	36964
Xylenes, Total	ND	0.097	mg/Kg	1	3/13/2018 6:15:19 PM	36964
Surr: 4-Bromofluorobenzene	90.8	80-120	%Rec	1	3/13/2018 6:15:19 PM	36964

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
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# **QC SUMMARY REPORT**

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1803566

21-Mar-18

Client:

Blagg Engineering

**Project:** 

Homestead Ranch 2

Sample ID LCS-36966

SampType: LCS

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

Client ID: LCSS

Batch ID: 36966

Result

51

5.3

RunNo: 49733

Prep Date: 3/12/2018

Analyte

Analysis Date: 3/13/2018

**PQL** 

**PQL** 

10

10

SeqNo: 1609104

103

107

%REC

Units: mg/Kg

130

130

HighLimit

**RPDLimit** 

Qual

Qual

Diesel Range Organics (DRO) Surr: DNOP

Sample ID MB-36966

SampType: MBLK

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

%RPD

%RPD

Client ID: PBS

Batch ID: 36966

RunNo: 49733

SPK value SPK Ref Val %REC LowLimit

Prep Date: 3/12/2018

Analysis Date: 3/13/2018

SeqNo: 1609105

Units: mg/Kg

HighLimit

**RPDLimit** 

Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)

Surr: DNOP

Result ND ND

10

50 10.00

SPK value SPK Ref Val

50.00

5.000

105

70

LowLimit

70

70

130

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- 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
- Analyte detected in the associated Method Blank В
- J
- Sample pH Not In Range
- RLReporting Detection Limit
- Sample container temperature is out of limit as specified

Value above quantitation range

Analyte detected below quantitation limits

Page 5 of 7

# **QC SUMMARY REPORT**

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1803566

21-Mar-18

Client:

Blagg Engineering

Project:

Homestead Ranch 2

Sample ID MB-36964

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS

Batch ID: 36964

PQL

RunNo: 49750

LowLimit

LowLimit

HighLimit

Prep Date: 3/12/2018

Analysis Date: 3/13/2018

Result

ND

930

SeqNo: 1609795

Units: mg/Kg

Qual

Analyte Gasoline Range Organics (GRO) Surr: BFB

5.0

1000

SPK value SPK Ref Val %REC

92.8

15 316 %RPD **RPDLimit** 

**RPDLimit** 

Qual

Sample ID LCS-36964

SampType: LCS

%REC

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Prep Date: 3/12/2018

Batch ID: 36964 Analysis Date: 3/13/2018

**PQL** 

RunNo: 49750 SeqNo: 1609796

Units: mg/Kg

%RPD

Analyte Gasoline Range Organics (GRO)

Surr: BFB

Result 26

1000

SPK value SPK Ref Val 25.00 1000

105 104

75.9 15

HighLimit 131 316

**Qualifiers:** 

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank В

Value above quantitation range E

J Analyte detected below quantitation limits

Page 6 of 7

Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

# **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1803566

21-Mar-18

Client:

Blagg Engineering

Project:

Homestead Ranch 2

Sample ID MB-36964	Samp	Гуре: МЕ	BLK	TestCode: EPA Method 8021B: Volatiles									
Client ID: PBS	Batc	h ID: 36	964	F									
Prep Date: 3/12/2018	Analysis [	Date: 3/	13/2018	s	SeqNo: 1	609836	Units: mg/K	(g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	ND	0.025											
Toluene	ND	0.050											
Ethylbenzene	ND	0.050											
Xylenes, Total	ND	0.10											
Surr: 4-Bromofluorobenzene	0.90		1.000		89.8	80	120						

Sample ID LCS-36964	SampT	Type: LC	:S	TestCode: EPA Method 8021B: Volatiles											
Client ID: LCSS	Batcl	h ID: 36	964	F	RunNo: 4										
Prep Date: 3/12/2018	Analysis D	Date: 3/	13/2018	5	SeqNo: 1	609837	Units: mg/H	<b>(</b> g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Benzene	1.0	0.025	1.000	0	105	77.3	128		· <del>-</del> ·						
Toluene	1.0	0.050	1.000	0	104	79.2	125								
Ethylbenzene	1.0	0.050	1.000	0	103	80.7	127								
Xylenes, Total	(ylenes, Total 3.1 0.10				105	81.6	129								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.3	80	120								

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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
- Page 7 of 7

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



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

# Sample Log-In Check List

LABORATORY	Website: www.ha	llenvironmentai			
Client Name: BLAGG	Work Order Number:	1803566		RcptN	lo: 1
Received By: Isalah Ortiz	3/9/2018 1:50:00 PM		ICH	-	
Completed By: Isaigh Ortiz	3/9/2018 2:11:43 PM		IO	_	
Reviewed By: CB:ENM	03/09/18				
Chain of Custody			_	_	
1. Is Chain of Custody complete?		Yes 🔽	No _	Not Present	
2. How was the sample delivered?		Client			
Log In  3. Was an attempt made to cool the same	ples?	Yes 🗹	No 🗆	NA :	1
4. Were all samples received at a temper	ature of >0° C to 6.0°C	Yes 🗹	No 🗔	NA 🗆	I
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) p	roperly 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? (Note discrepancies on chain of custod	y)	Yes 🗹	No 🗆	bottles checked for pH: (<2	or >12 unless noted)
12. Are matrices correctly identified on Cha	ain of Custody?	Yes 🗹	No 🗌	Adjusted?	
13. Is it clear what analyses were requeste	d?	Yes 🗹	No 🗀	•	
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 this order?	Yes 🗆	No =	NA 🗹	
Person Notified:	Date:				
By Whom:	Via:	eMail 🗍 F	Phone 🔲 Fax	In Person	
Regarding:	AND	·····			
Client Instructions:		THE STATE OF THE S			
16. Additional remarks:					
17. Cooler Information					
Cooler No Temp °C Condition	Seal Intact   Seal No   S	eal Date	Signed By		
1 5.9 Good	Not Present				

Care. Titte. Ochidanian 2).	1350										1034   Bone 3	1027	Mis 1020 SOIL FOUT 1	Date Time Matrix Sample Request ID	□ EDD (Type)	D NELAP D Other	ğ	QA/QC Package:  Standard  Level 4 (Full Validation)	email or Fax#:	Phone #: 505-320-1183		Mailing Address: ${\it IJ}$	BAGG EUGWORM INC	BENSON - MONTIN - GREER
incurrence of . /	RECEIVED DE												405×1 CODC	Container Preservative Type and # Type	Sample Temperature:	On Ice: KYes	Sampler: JEFF BLAGE	m) JEFF BLAGG	Project Manager:		Project #:	FIDMESTEAN KANCH 2	Project Name:	X Standard
	120									12 CD 4	<b>Ф</b> 3	ලා ම	8	Ne HEAL No.	5.900	□ No	Alaso	66				CANCH - Z	J It	sh
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£ 42	בית 131 פירד 131	$\vdash$	-							_	┢			PAH's (831				SIMS)			3976	NE NE	v/ww.hallenvironmental.com	ANALYSIS
√% . δ	ڲ	一	一	$\vdash$			_							RCRA 8 M						Ana	-	≽	allen	Z
200	m k	T	-											Anions (F,C			NO <sub>2</sub>	,PO <sub>4</sub> ,S	O <sub>4</sub> )	Analysis	Fox	ğud.	viror	SI
γø	NACE.			······					-					8081 Pestic	ide	s / 8	3082	2 PCB's	s	Rec	505	<u>е</u> д	men	
\$ \$														8260B (VO						Request	Fax 505-345-4107	Albuquerque, NM 87109	1 <u>1</u> 100	⅀
•	Ĕ													8270 (Sem	-VC	)A)					400	M 87	ì	80
	Stradiling												×	CHLOCI	DE						7	109		LABORATORY
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		<u></u>	<u> </u>		<u> </u>	<u> </u>	<u> </u>	_	L															<b>~</b>

Air Bubbles (Y or N)

If necessory, samples submitted to Hall Environmental may be eutroniracted to other secredited isperstories. This serves as notice of this possibility. Any sub-contracted data will be clearly necessed on the analytical report.



Chain-of-Custody Record

Turn-Around Time:

# HALL ENVIRONMENTAL

