State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 8, 2011

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

	Release Notifica	tion	and Co	rrective A	ction	l			
		(OPERA'	ГOR		🗌 Inita	al Report	\boxtimes	Final Report
Name of Company: BP America F				ve Moskal					
Address: 380 Airport Road, Durar		The second division of	Telephone No.: 505-330-9179						
Facility Name: JACQUEZ COM	No. 005	Fa	acility Typ	e: Natural Gas	Well				
Surface Owner: Fee	Mineral Ow	vner: Fe	e			API No	. 30045268	33	
			OF REI	manufacture and starty and the start start					
Unit LetterSectionTownshipA3031N		North/Sc North	outh Line	Feet from the 790	East/V East	West Line	County: Sa	ın Juan	l
Latitu	de <u>36.873387°</u>	1	Longitude	-107.814973	0		-		
	NATU	JRE O	F RELI	EASE					
Type of Release: produced water, con			Volume of	Release: 10 bbl			ecovered: 1		
Source of Release: BGT overfilled du			our of Occurrence	ce:		Hour of Dise	covery:	July 31,	
Was Immediate Notice Given?			July 29, 20 If YES, To			2017; 3:3	0 PM		
	Yes 🗌 No 🗌 Not Req			- NMOCD - Ph	none cal	l	OILC	ONG	DIV DIST.
By Whom?			Date and H	our: 7/31/17 - 3	:50 PM			DINU.	DIV DIST.
Was a Watercourse Reached?	Yes 🛛 No			lume Impacting 1		ercourse.	(J)	N -	3 1 20 18
If a Watercourse was Impacted, Descr	ibe Fully *								
Entered private livestock pond while t									
Describe Cause of Problem and Reme broke the earthen berm of the tank con approximately ¹ / ₂ mile, across opened pads, the pond was skimmed using hy was fenced to prevent livestock and w	ntainment, entering the below pasture land, into a livestock p drophobic water booms and th	grade tai pond. The access	nk and wash he freestand sible materia	ning away the con ling oil along the al in the containn	ntents. flood fl nent are	The flood w ow path wa a was remov	vater carried s picked up ved via hydr	the tan using a o-vac.	ik contents ibsorbent
Describe Area Affected and Cleanup The final extents of the flow path and negotiated and approved with the priv the reclamation of the site on October	containment areas will be dete ate landowner. A total of 1,57	ermined 70 cubic	through exercise yards of so	cavation and remail was removed fi	oval of	the impacte	d soil. The	remedia	al work was
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.									
20 200				OIL CON	SERV	ATION	DWISIQ	N	2
Signature: Man Mu						//			A
Printed Name: Steve Moskal		Ap	pproved by	Environmental S	pecialis	t:	y		\swarrow
Title: Field Environmental Coordinate	٥r	Ar	oproval Dat	-2/27/1	8	Expiration	Pate:		
E-mail Address: steven.moskal@bp.cd	om	Co	onditions of	Approval:			Attached		
Date: January 30, 2018	Phone: 505-326-9497							_	
Attach Additional Sheets If Necess	ary HNCS 17212	5710	21						
	1.								

105



October 10, 2017

Project Number 03143-1237

Mr. Steve Moskal BP America Production Company 200 Energy Court Farmington, New Mexico 87401

Phone: (505) 330-9179 Email: <u>steven.moskal@bp.com</u>

RE: SPILL CLEANUP REPORT FOR THE JACQUEZ COM 005 WELL SITE, SAN JUAN COUNTY, NEW MEXICO

Dear Mr. Moskal:

Enclosed please find the *Spill Cleanup Report* detailing cleanup activities at the Jacquez Com 005 well site located in Section 30, Township 31 North, Range 9 West, San Juan County, New Mexico.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted, ENVIROTECH, INC.

sutty Hou

Brittany Hall Environmental Field Technician bhall@envirotech-inc.com

Enclosures: Spill Cleanup Report Site Photography Vicinity Map Site Map Pond Site Map

Cc: Client File 03143

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

SPILL CLEANUP REPORT

LOCATED AT: JACQUEZ COM 005 SECTION 30, TOWNSHIP 31 NORTH, RANGE 11 WEST SAN JUAN COUNTY, NEW MEXICO

> PREPARED FOR: BP AMERICA MR. STEVE MOSKAL 200 ENERGY COURT FARMINGTON, NEW MEXICO 87401

PROJECT NUMBER 03143-1237 AUGUST 2017

BP AMERICA SPILL CLEANUP REPORT JACQUEZ COM 005 SECTION 30, TOWNSHIP 31N, RANGE 9W SAN JUAN COUNTY, NEW MEXICO

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	Figure 3, Pond Site Map

Appendices: Appendix A, Site Photography

INTRODUCTION

Envirotech, Inc. of Farmington, New Mexico, was contracted by BP America to provide spill cleanup activities for a release of produced water at the Jacquez Com 005 well site, located in Section 30, Township 31 North, Range 9 West, San Juan County, New Mexico; see enclosed *Figure 1, Vicinity Map.* The below grade tank (BGT) was flooded by storm water, releasing produced water and condensate into the surrounding area. The impacted area included the area surrounding the BGT, an approximately 2,000-foot spill path, and a pond located to the east of the wellsite. Activities included spill cleanup activities.

ACTIVITIES PERFORMED

Envirotech, Inc. was contacted on August 2, 2017, with a request to respond to a release of produced water that occurred at the above referenced location. Oil absorbent booms and pads were used to collect the product along the edges of a pond. Envirotech personnel also utilized a boat in order to remove the sheen from the deeper east side of the pond. Absorbent booms were attached to the boat and Envirotech personnel on the shore kept the booms taut in order to confine and absorb the contaminants floating on the surface of the pond. Absorbent booms and pads were placed on the perimeter of the pond on the west and northeast shorelines to absorb any additional product from the surface of the pond. The booms and pads were left in place by Envirotech personnel to be subsequently removed by BP America, or their representatives.

SUMMARY AND CONCLUSIONS

Spill cleanup activities were performed for a release of produced water and oil at the Jacquez Com 005 well site, located in Section 30, Township 31 North, Range 9 West, San Juan County, New Mexico. Envirotech, Inc. recommends no further action in regards to this incident.

STATEMENT OF LIMITATIONS

Envirotech, Inc. has completed spill cleanup activities for a release of produced water at the Jacquez Com 005 well site, located in Section 30, Township 31 North, Range 9 West, San Juan County, New Mexico. All observations and conclusions provided here are based on the information and current site conditions found at the site of the incident.

The undersigned has conducted this service at the above referenced site. This work has been conducted and reported in accordance with generally accepted professional practices in geology, engineering, environmental chemistry, and hydrogeology.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,

ENVIROTECH, INC.

butty you

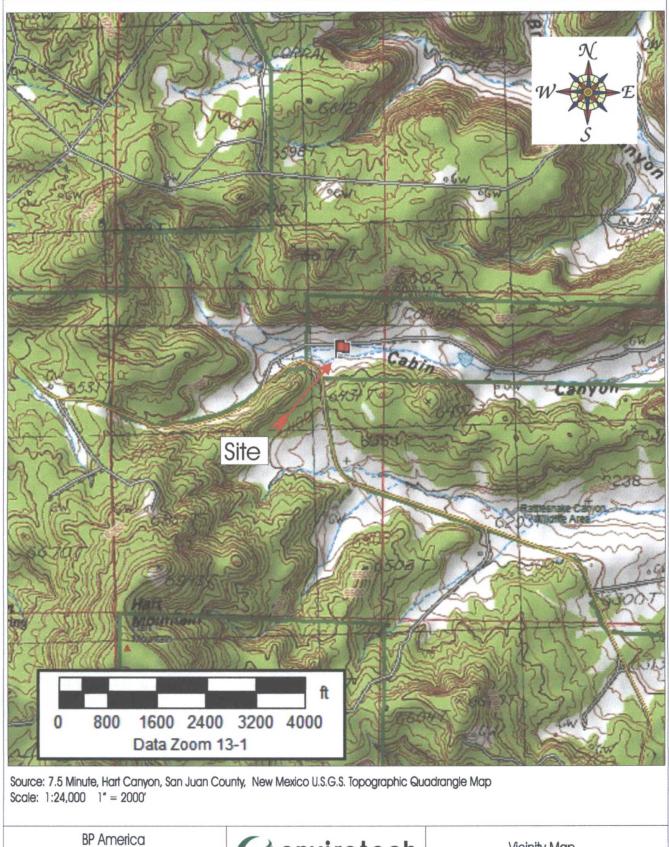
Brittany Hall Staff Scientist bhall@envirotech-inc.com Reviewed by:

elon Han Felipe Aragon, CES

Environmental Coordinator faragon@envirotech-inc.com

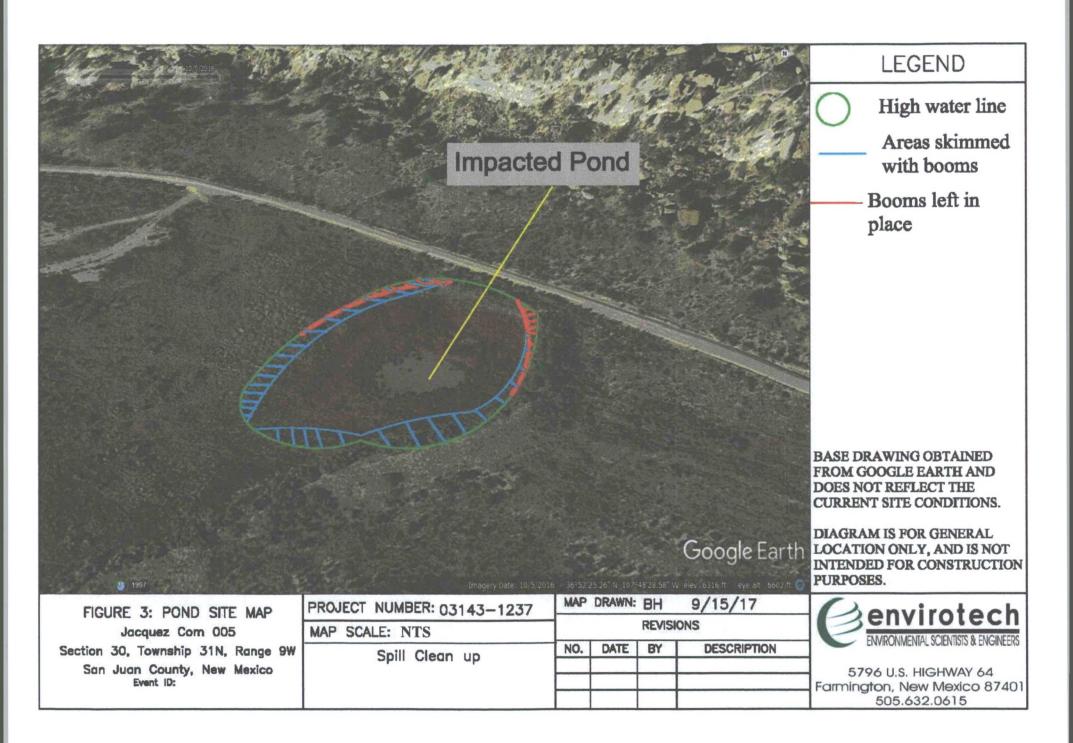
FIGURES

Figure 1, Vicinity Map Figure 2, Site Map Figure 3, Pond Site Map



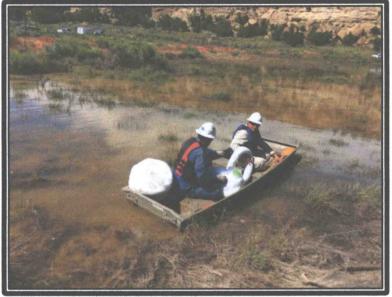
BP America Jacquez Com 005	Jacquez Com 005		Vicinity Map				
Section 30, Township 31N, Range 9W San Juan County, New Mexico		ENMRONMENTAL SCIENTISTS & ENGINEERS	Figure #1				
PROJECT Number:03143-1237 Date Drawn:	9/13/17	Farmington, New Mexico 87401 505.632.0615	DRAWN BY: Brittany Hall	PROJECT MANAGER: Felipe Aragon			

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10/5/2016					X		LEGEND
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a stated was						\cap	Location of pond
All the second	All a foreign a					\cup	Location of pond
4	Here and the second			<u></u>			Path of Release
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Jacquez Com 005 Well site							
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and the second	All and a start	and the		à.	C LE II	DIAGRAN	IS FOR GENERAL
	for a start of the start				Google Earth	LOCATIO	N ONLY, AND IS NOT D FOR CONSTRUCTION
1917	Imagery Date: 10/5/2016	5 36°52"	8.23" N 107°	48'42.04" v	/ elev 6348 ft eye alt 7847 ft 🜔	PURPOSE	S.
FIGURE 2: SITE MAP	PROJECT NUMBER: 03143-1237	MAP	DRAWN:		9/15/17	P	envirotech
Jacques Com 005	MAP SCALE: NTS	NO	DATE	REVISI	45 19.00		WRONMENTAL SCIENTISTS & ENGINEERS
Section 30, Township 31N, Range 9W San Juan County, New Mexico	Spill Clean up	NO.	DATE	BY	DESCRIPTION		
Event ID:						Farmingt	6 U.S. HIGHWAY 64 on, New Mexico 87401
							505.632.0615



APPENDIX A

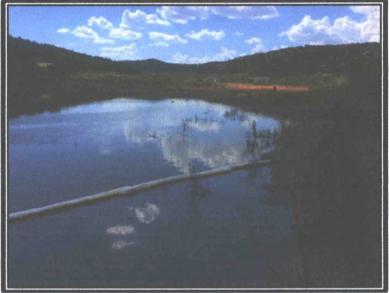
Site Photography



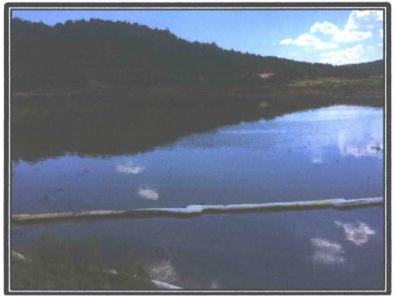
Picture 1: Boat utilized to clean up spill (view 1)



Picture 2: Boom Skimming Activity (View 1)



Picture 3: Boom Skimming Activities (View 2)



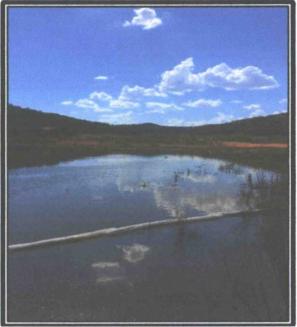
Picture 4: Boom Skimming Activities (View 3)



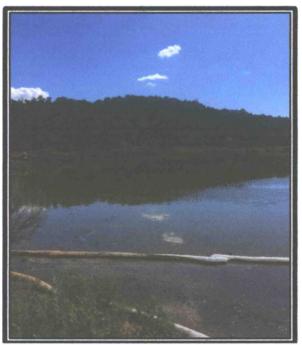
Picture 5: Boom Skimming Activities (View 4)



Picture 6: Impacted Area (View 1)



Picture 7: Impacted Area (View 2)



Picture 8: Impacted area (View 3)

Response and Remediation of Hydrocarbon Impacts Resulting from a Catastrophic Storm Event

Jacquez Com 5 (A) Sec 30 – T31N – R9W API: 30-045-26833 San Juan County, New Mexico

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

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

October 31, 2017

JACQUEZ COM 5

RESPONSE AND REMEDIATION OF HYDROCARBON IMPACTS RESULTING FROM A CATASTROPHIC STORM EVENT

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Figure	2:	Wellpad and Historic Pit Sampling Zones
Figure	3:	Off-Pad Remedial Sampling Zones

Appendix B: Laboratory Analytical Data Reports

JACQUEZ COM 5

RESPONSE AND REMEDIATION OF HYDROCARBON IMPACTS RESULTING FROM A CATASTROPHIC STORM EVENT

INTRODUCTION AND RESPONSE TIMELINE

Blagg Engineering Inc. (BEI) has been retained by BP America Production Co. (BP) to monitor, sample and document environmental remediation of hydrocarbon impacts at the Jacquez Com 5, a natural gas well located in rural San Juan County, New Mexico at (A) Sec. 30 - T31N - R9W (Figure 1). On the afternoon of Monday, July 31, 2017 during a routine site inspection it was discovered that one or more storm events resulted in a flash flood that cascaded across the wellpad, breaking through a containment wall and discharging approximately 10 barrels of hydrocarbon from a below grade tank. Localized storm events were known to have been in the region on both Friday and Saturday evenings of July 28 - 29, 2017 and it is believed that one of these events caused the hydrocarbon release. Immediately upon discovery the New Mexico Oil Conservation Division (NMOCD), Aztec District Office, was notified. The flow path of the hydrocarbon release was assessed and found to follow a narrow corridor, approximately 20' - 30' wide, a distance of approximately 700 yards eastward and down-gradient were it entered a man made water stock pond. The flash flood filled the stock pond and caused damage to the earthen dam. allowing water to overflow. A minor amount of hydrocarbon spotting was found immediately east of the pond. No free floating oil was observed in the pond, but there were spots of visible sheen.

On Tuesday, August 1, 2017 an immediate remediation response was initiated. On the wellpad a hydro-vac truck was used to vacuum up the residual oil residue still within the containment berm and within the below grade tank. The stock pond was fenced off to prevent livestock from entering. With NMOCD personnel observing, the pond was sampled and the sample was delivered to an analytical laboratory to determine water quality.

On Wednesday, August 3, 2017 oil soaker rags were used to remove any remaining free standing hydrocarbon from the ground surface along the release flow path. Oil booms were used to skim any sheen off the surface and edges of the pond, and booms were placed along the inlet to capture potential run-in if another storm event were to occur. The private surface owner was apprised of the extent of impacts and further remedial action was postponed pending landowner approval of a remediation plan. Following use, the oil booms and soaker rags were promptly disposed at a NMOCD authorized BP operated special waste bin.

Remedial actions to remove the remaining hydrocarbons on the ground surface were resumed on August 22, 2017 and continued through September 6, 2017. A backhoe was used to excavate impacted soils on the wellpad. Off the wellpad the primary hydrocarbon impacts were on vegetation, which had trapped oil as the flash flood progressed down the narrow corridor to the stock pond. This corridor was first addressed with a brush hog, then both a dozer and grader were used to collect the loose vegetation and first several inches of top soil. This material was stockpiled and then transported to a commercial landfarm for final remediation. Replacement soil was obtained from another area on the private landowners property and placed back into the remediated area. Additionally, the isolated spots of impacts just east of the stock pond were removed by hand and the damaged stock pond dam was repaired. Confirmation closure sampling was conducted in each area remediated, as further discussed in the following report section.

During the remedial actions to remove hydrocarbon impacts BP elected to re-address an unlined earthen pit that was previously closed out in April, 2003 pursuant to NMOCD guidelines. This pit was not affected by the flash flood but the private landowner had concerns with potential remaining hydrocarbons within the pit. The original pit remediation included an excavation of 16' x 15' x 11' deep and sampling at that time tested residual hydrocarbons at 2,000 parts per million (ppm). The pit closure standard was 1,000 ppm TPH. In November, 2003 a mobile drill unit was used to drill a boring to 18' below grade and collect a sample at that depth for determination of residual hydrocarbons. Laboratory analytical testing reported a hydrocarbon level at 663 ppm and no further action was required by NMOCD. However, BP installed a passive vent in the drill hole to facilitate in-situ remediation.

On August 25, 2017 a backhoe was used to dig into the center of the original unlined pit. A NMOCD representative was present to observe the activities. Backfill soils were encountered to a depth of 11' below grade, with fencing debris and short steel pipe pieces discovered within the fill. Native soils were found from 11'-14', and dense sandstone was present from 14'-18'. A composite sample from 11' - 18' was collected for laboratory testing of residual hydrocarbons. On September 6, 2017 an excavator trackhoe was used to re-dig soils from the original pit remediation for removal of all abandoned piping and debris. A landowner representative and NMOCD were present to observe this activity. The pit was backfilled following removal of all abandoned material.

SAMPLING METHODOLOGY AND SUMMARY ANALYTICAL DATA

The stock pond water was sampled on August 1, 2017 with NMOCD observing. A representative sample of water was collected at the west pond inlet at the entrance path of the flash flood. The sample was placed into laboratory supplied containers, labeled and placed in an ice chest with ice for delivery to the laboratory representative. Analytical testing included volatile organics by U.S. EPA Method 8260 and dissolved salts/metals (API Water) by various EPA Methods. Summary results of key hydrocarbon related constituents are presented below in <u>Table 1, Summary Pond</u> <u>Water Analytical Results</u>. No constituents were in excess of New Mexico Water Quality Control Commission standards for domestic drinking water.

Table 1

Summary Pond Water Analytical Data August 1, 2017

Sample ID	Benzene (ug/L)	Toluene (ug/L)	Ethyl- Benzene (ug/L)	Total Xylenes (ug/L)	Chloride (mg/L)	Sulfate (mg/L)
Stock Pond	ND	5.7	1.0	18	ND	170
NMWQCC Closure Standard	10	750	750	620	250	600

ND = Not Detected

Soil closure confirmation sampling following cleanup of the surface release was conducted using a sampling spade to collect representative composite soils from each sampling zone (Figures 2 and 3). All closure sampling was witnessed by the NMOCD. Representative composite portions of soil 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.

There were a total of 17 separate composite sampling areas. The soil closure standard for the surface release was assigned a value of 100 ppm TPH due to the proximity of portions of the release to surface drainages and the water stock pond. Groundwater at the site, as documented in the approved permit for the below grade tank, is estimated to be greater than 100 feet from the ground surface. Summary laboratory analytical results are included below in <u>Table 2: Summary</u> <u>Surface Release Closure Analytical Data</u>. Laboratory test reports are attached in Appendix B. No sample was found to exceed the approved closure standard.

Sammary St			Analytical Da		Chlorida
Sample ID	Date	TPH Total	BTEX Total	Benzene	Chloride
p		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
95 BGT Area, 7-pt	8/23/2017	ND	ND	ND	ND
West On-Pad Area, 7-pt	8/23/2017	ND	ND	ND	ND
Zone 0'-100' (Off Pad) 8-pt	8/28/2017	ND	ND	ND	ND
Zone 100'-200' (Off Pad) 8-pt	8/28/2017	ND	ND	ND	ND
Zone 200'-300' (Off Pad) 8-pt	8/28/2017	ND	ND	ND	ND
Zone 300'-400' (Off Pad) 8-pt	8/28/2017	ND	ND	ND	ND
Zone 400'-500' (Off Pad) 8-pt	8/28/2017	ND	ND	ND	ND
Zone 500'-600' (Off Pad) 8-pt	8/29/2017	ND	ND	ND	ND
Zone 600'-700' (Off Pad) 8-pt	8/29/2017	ND	ND	ND	ND
Zone 700'-800' (Off Pad) 8-pt	8/29/2017	ND	ND	ND	ND
Zone 800'-900' (Off Pad) 8-pt	8/29/2017	ND	ND	ND	ND
Zone 900'-1,000' (Off Pad) 8-pt	8/29/2017	ND	ND	ND	ND
Zone 1,000'-1,100' (Off Pad) 8-pt	8/29/2017	ND	ND	ND	ND
Zone 1,100'-1,200' (Off Pad) 8-pt	8/29/2017	ND	ND	ND	ND
Zone 1,200'-1,493' (Off Pad) 10-pt	8/30/2017	ND	ND	ND	ND -
Zone 1,493'-1,855' (Off Pad) 10-pt	8/30/2017	ND	ND	ND	ND
East On-Pad Surface, 5-pt	9/6/2017	ND	ND	ND	ND
NMOCD Closure Standard		100	50	10	600

<u>Table 2</u> Summary Surface Release Closure Analytical Data

ND = Not Detected

The historic pit was re-sampled on August 25, 2017 at the request of NMOCD. The agencies primary concern was with soils that remained deeper than the original April 2003 remedial excavation, which extended to a depth of 11' below grade. Following NMOCD's directive, a backhoe was used to collect a 10-point composite sample from 11' - 18' below grade. Pursuant to NMOCD "Spill and Release Guidelines", this pit has been assigned a closure standard of 1,000 ppm TPH which is based on groundwater greater than 100 feet from surface and a measured distance to the nearest surface drainage greater than 200 feet. Summary laboratory analytical data from this sample event are presented below in Table 3. The sample tested within closure standards for all constituents.

<u>Table 3</u> Summary Historical Pit Analytical Data August 25, 2017

Sample ID	TPH Total (mg/Kg)	BTEX Total (mg/Kg)	Benzene (mg/Kg)	Chloride (mg/Kg)	
Historic Pit 10-pt (11' - 18')	514	ND	ND	ND	
NMOCD Closure Standard	1,000	50	10	600	

ND = Not Detected

CONCLUSIONS AND RECOMMENDATIONS

Hydrocarbon impacted soil resulting from a catastrophic flash flood event at the BP operated Jacquez Com 5 has been remediated. Additionally, re-examination of a previously closed historic unlined earthen pit has determined that residual soils do not exceed NMOCD site closure standards. Therefore, no additional site remediation of impacts is indicated. Regulatory closure of remedial activities is recommended.

CLOSURE AND LIMITATIONS

This report has been prepared for the exclusive use of BP America Production Company as it pertains to hydrocarbon impact remediation at the Jacquez Com 5 in San Juan 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.

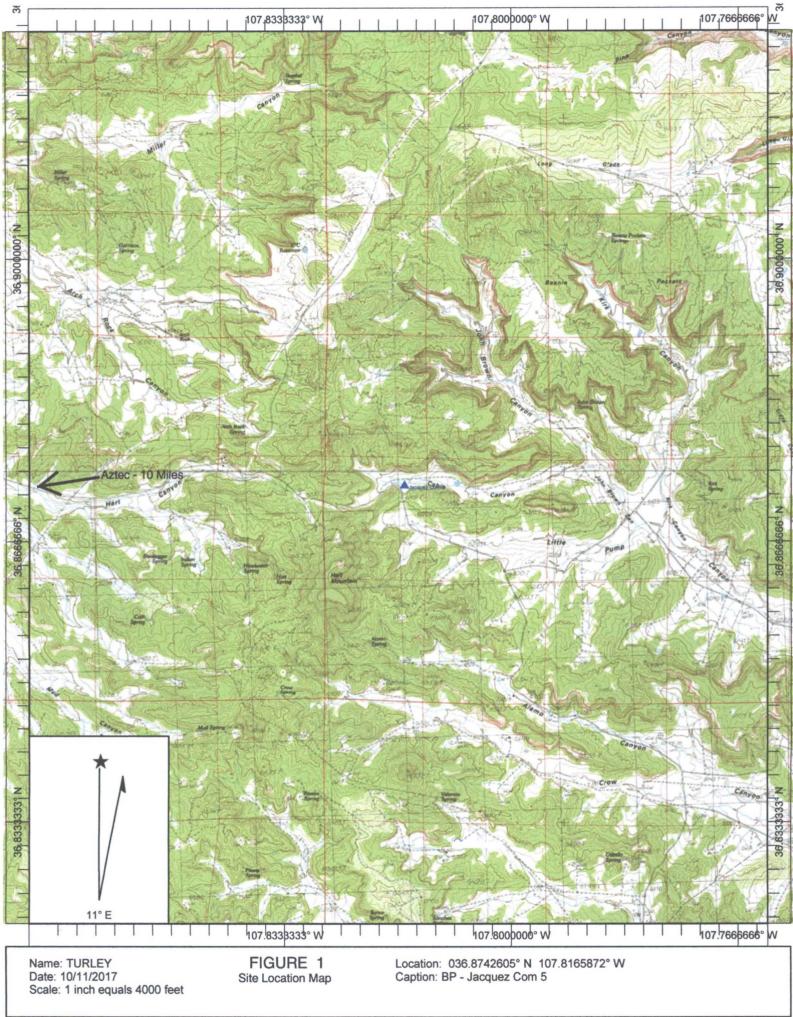
Submitted by: Blagg Engineering, Inc.

Jeffy C. Blogg

Jeffrey C. Blagg, PE NMPE 11607

Appendix A

Figures



Jacques Com 5 **•** Figure 2

Wellpad and Historic Pit Sampling Areas

> East On-Pad Excavation Depth 0" to 6"

Historic Pit

95 BGT Area -(BGT Removed for sample event)

West Area -Excavation Depth: 3 Feet

Google earth

West Area -Average Excavation Depth: 6-inches (100 bbl tank removed for sample event)

N

Historic Pit		Figur Jacque Off-Wellpad Sa	z Com 5		
300' 400	00' 600' 700'	800' 900'	1,000' 1,10	00' 1,200'	1,493' 1,855' Stock
0, 100' 200' ³⁰⁰ Zone	Date	#Composites	Field OVM	Lab TPH/BTEX	Pond
0'-100)' 8/28/2017	7 8	11.2 ppm	ND	
East On-Pad			1.3	ND	
West On-Pad			1.8	ND	
and 95 BGT areas 300'-4			1.4	ND	
400'-3			1.2	ND	
500'-0			2.1	ND	
600'-1			1.2	ND	
700'-6			1.4	ND	
800'-3			1.0	ND	행동, 승규가 있는 것 모르는 것이 같이 하는 것이다. 가격 방송 방송
900'-			1.2	ND	2011년 1월 201
	-1100' 8/29/2017		1.2	ND	
	-1200' 8/29/2017		1.8	ND	
	-1493' 8/30/2017		0.3	ND	
	-1855' 8/30/2017		2.0	ND	N
@ 2017 Google		198 198 1			600 ft

Appendix B

Laboratory Analytical Data Reports

Laboratory Data Report

Stock Pond Water Sample

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 16, 2017

Steve Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: JACQUEZ COM 5

OrderNo.: 1708109

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/2/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1708109

Date Reported: 8/16/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Project: JACQUEZ COM 5 Lab ID: 1708109-001	Matrix:	AQUEOU			te: 8/ 1	ock Pond 4/2017 9:05:00 AM 2/2017 7:25:00 AM	
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2340B: HARDNESS						Analyst:	ELS
Hardness (As CaCO3)	190	6.6		mg/L	1	8/12/2017 10:06:00 AM	R44916
SPECIFIC GRAVITY						Analyst:	JRR
Specific Gravity	0.9983	0			1	8/3/2017 11:43:00 AM	R44699
EPA METHOD 300.0: ANIONS		-				Analyst:	MRA
Chloride	ND	2.5		mg/L	5	8/2/2017 8:47:58 PM	R44708
Sulfate	170	2.5		mg/L	5	8/2/2017 8:47:58 PM	R44708
SM2510B: SPECIFIC CONDUCTANCE		2.0		g.=	·	Analyst:	
	420	50		umbeelem	4	8/2/2017 4:46:24 PM	R44694
Conductivity	430	5.0		µmhos/cm	1		
SM2320B: ALKALINITY						Analyst:	
Alkalinity, Hydroxide (As CaCO3)	ND	2.000		mg/L CaCO3	1	8/2/2017 4:46:24 PM	R44694
Bicarbonate (As CaCO3)	33.84	20.00		mg/L CaCO3	1	8/2/2017 4:46:24 PM	R44694
Carbonate (As CaCO3)	NĐ	2.000		mg/L CaCO3	1	8/2/2017 4:46:24 PM	R44694
Total Alkalinity (as CaCO3)	33.84	20.00		mg/L CaCO3	1	8/2/2017 4:46:24 PM	R44694
SM2540C MOD: TOTAL DISSOLVED S	olids					Analyst:	KS
Total Dissolved Solids	324	40.0	D	mg/L	1	8/4/2017 5:30:00 PM	33162
SM4500-H+B: PH						Analyst:	JRR
pH	6.94		н	pH units	1	8/2/2017 4:46:24 PM	R44694
EPA METHOD 6010B: DISSOLVED ME	TALS					Analyst:	ELS
Calcium	67	1.0		mg/L	1	8/12/2017 11:25:04 AM	A44916
Iron	0.028	0.020		mg/L	1	8/12/2017 11:25:04 AM	A44916
Magnesium	6.2	1.0		mg/L	1	8/12/2017 11:25:04 AM	A44916
Potassium	7.8	1.0		mg/L	1	8/12/2017 11:25:04 AM	A44916
Sodium	3.1	1.0		mg/L	1	8/12/2017 11:25:04 AM	A44916
EPA METHOD 8260B: VOLATILES						Analyst:	DJF
Benzene	ND	1.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
Toluene	5.7	1.0		μg/L	1	8/2/2017 10:32:17 AM	W4466
Ethylbenzene	1.0	1.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
1,2,4-Trimethylbenzene	9.0	1.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
1,3,5-Trimethylbenzene	4.0	1.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
Naphthalene	2.6	2.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
1-Methylnaphthalene	ND	4.0		µg/L	1	8/2/2017 10:32:17 AM	W4466
2-Methylnaphthalene	ND	4.0		µg/L	1	8/2/2017 10:32:17 AM	W4466

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

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1708109

Date Reported: 8/16/2017

CLIENT: Blagg Engineering		C	lient Samp	ole ID: Sto	ock Pond						
Project: JACQUEZ COM 5	Collection Date: 8/1/2017 9:05:00 AM										
Lab ID: 1708109-001	Matrix: A	AQUEOUS	Date: 8/2/2017 7:25:00 AM								
Analyses	Result	PQL Qual	Units DF		Date Analyzed	Batch					
EPA METHOD 8260B: VOLATILES					Analyst	: DJF					
Acetone	ND	10	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Bromobenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Bromodichloromethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Bromoform	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Bromomethane	ND	3.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
2-Butanone	ND	10	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Carbon disulfide	ND	10	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Carbon Tetrachloride	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Chlorobenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Chloroethane	ND	2.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Chloroform	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Chloromethane	ND	3.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
2-Chiorotoluene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
4-Chlorotoluene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
cis-1,2-DCE	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
cis-1,3-Dichloropropene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,2-Dibromo-3-chloropropane	ND	2.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Dibromochloromethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Dibromomethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,2-Dichlorobenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,3-Dichlorobenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,4-Dichlorobenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Dichlorodifluoromethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,1-Dichloroethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,1-Dichloroethene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,2-Dichloropropane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,3-Dichloropropane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
2,2-Dichloropropane	ND	2.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
1,1-Dichloropropene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Hexachlorobutadiene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
2-Hexanone	ND	10	µg/L	1.	8/2/2017 10:32:17 AM	W4466					
Isopropylbenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
4-Isopropyitoluene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
4-Methyl-2-pentanone	ND	10	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Methylene Chloride	ND	3.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
n-Butylbenzene	ND	3.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
n-Propylbenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
sec-Butylbenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					
Styrene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W4466					

Hall Environmental Analysis Laboratory, Inc.

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

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708109

Date Reported: 8/16/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering	Client Sample ID: Stock Pond							
Project: JACQUEZ COM 5			Collection	Date: 8 /1	/2017 9:05:00 AM			
Lab ID: 1708109-001	Matrix:	Received						
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 8260B: VOLATILES					Analyst	DJF		
tert-Butylbenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
Tetrachloroethene (PCE)	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
trans-1,2-DCE	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
trans-1,3-Dichloropropene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
1,2,3-Trichlorobenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
1,1,1-Trichloroethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
1,1,2-Trichloroethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
Trichloroethene (TCE)	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
Trichlorofluoromethane	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
1,2,3-Trichloropropane	ND	2.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
Vinyl chloride	ND	1.0	µg/L	1	8/2/2017 10:32:17 AM	W44667		
Xylenes, Total	18	1.5	µg/L	1	8/2/2017 10:32:17 AM	W44667		
Surr: 1,2-Dichloroethane-d4	106	70-130	%Rec	1	8/2/2017 10:32:17 AM	W44667		
Surr: 4-Bromofluorobenzene	87.7	70-130	%Rec	1	8/2/2017 10:32:17 AM	W44667		
Surr: Dibromofluoromethane	101	70-130	%Rec	1	8/2/2017 10:32:17 AM	W44667		
Surr: Toluene-d8	102	70-130	%Rec	1	8/2/2017 10:32:17 AM	W44667		

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

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified
	0	A recovery outside of hange due to difficient of matrix	••	Sample container temperature is out of mint as specified

QC SUMMARY REPORT

Hall Environmental Analys	sis Laboratory	, Inc.
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WO#: 1708109

16-Aug-17

Client:Blagg EngineeringProject:JACQUEZ COM 5

Sample ID MB	SampT	BLK	Tes							
Client ID: PBW	Batch	n ID: R4	4708	F	RunNo: 44	1708				
Prep Date:	Analysis D	ate: 8/	2/2017	S	SeqNo: 14	13863	Units: mg/L			
Anatyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
0	ND	0.50								
Sunate	ND	0.50								
Sample ID LCS		0.50 ype: LC	:5	Tes	tCode: El	PA Method	300.0: Anions	<u>. </u>		
	SampT	· · · · · · · · · ·			tCode: EF RunNo: 44		300.0: Anions	<u>. </u>		
Sample ID LCS Client ID: LCSW	SampT	ype: LC	4708	F		1708	300.0: Anions Units: mg/L	<u>, </u>		
Sample ID LCS Client ID: LCSW	SampT Batch	ype: LC	4708 2/2017	F	RunNo: 44	1708		%RPD	RPDLimit	Qual
Client ID: LCSW Prep Date:	SampT Batch Analysis D	ype: LC n ID: R4 Pate: 8/	4708 2/2017	F	RunNo: 44 SeqNo: 14	1708 113864	Units: mg/L		RPDLimit	Qual

Qualifiers:

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

Page 4 of 10

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering

Project:

JACQUEZ COM 5

Sample ID rb	TestCode: EPA Method 8260B: VOLATILES									
Client ID: PBW	RunNo: 44867									
Prep Date:	Analysis Date: 8/2/2017		SeqNo: 1412441			Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0			•					
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cls-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
,3-Dichlorobenzene	ND	1.0								
,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
· · · · · · · · · · · · · · · · · · ·										

Qualifiers:

2,2-Dichloropropane

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

ND

2.0

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

Page 5 of 10

WO#: 1708109

16-Aug-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:

Blagg Engineering JACQUEZ COM 5

Sample ID rb	SampT	ype: ME	BLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch	n ID: ₩4	14667	F	RunNo: 4					
Prep Date:	Analysis D)ate: 8/	2/2017	5	SeqNo: 1	412441	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.5	70	130			
Sur: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			
Sample ID 100ng Ics	SampT	ype: LC	S	Tes	tCode: E	PA Method	8260B: VOL	ATILES		
Client ID: LCSW	Batch	1D: W4	14667	F	RunNo: 4	4667				
Prep Date:	Analysis D			5	SeqNo: 1	412442	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			······································
Toluene	19	1.0	20.00	0	96.6	70	130			
Chiorobenzene	20	1.0	20.00	0	99.9	70	130			

Qualifiers:

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

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WO#: 1708109

16-Aug-17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:JACQUEZ COM 5

Sample ID 100ng Ics	SampT	ype: LC	S	TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batc	h ID: W	44667	F	RunNo: 4	4667					
Prep Date:	Analysis Date: 8/2/2017 SeqNo:					No: 1412442 Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130		-		
Trichloroethene (TCE)	19	1.0	20.00	0	92.8	70	130				
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130				
Surr: 4-Bromofluorobenzene	9.1		10.00		91.0	70	130				
Surr: Dibromofluoromethane	10		10.00		100	70	130				
Surr: Toluene-d8	10		10.00		101	70	130				

Qualifiers:

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

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1708109

WO#:

16-Aug-17

Client: Blagg E Project: JACQU

Blagg Engineering JACQUEZ COM 5

Sample ID MB-A	Samp	ype: Mi	BLK	Tes	Code: El	PA Method	6010B: Disso	ived Meta	uls	
Client ID: PBW	Batc	h ID: A4	4916	F	lunNo: 4	4916				
Prep Date:	Analysis [Date: 8/	12/2017	5	eqNo: 1	420300	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0					-			
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	10								
Soulain	ND	1.0								
Sample ID LCS-A	<u></u>	1.0 [ype: LC	:\$	Tes	Code: El	PA Method	6010B: Disso	lved Metz	118	
·····	Samp1				Code: El tunNo: 4		6010B: Disso	lved Metz	ls	
Sample ID LCS-A	Samp1	fype: LC h ID: A4	4916	F		4916	6010B: Disso Units: mg/L	lved Metz	18	
Sample ID LCS-A Client ID: LCSW	Samp1 Batc	fype: LC h ID: A4	4916 12/2017	F	tunNo: 4	4916		ived Metz %RPD	n is RPDLimit	Qual
Sample ID LCS-A Client ID: LCSW Prep Date:	Samp Batc Analysis I	Type: LC h ID: A4 Date: 8/	4916 12/2017	F	tunNo: 4 GegNo: 14	4916 420301	Units: mg/L			Qual
Sample ID LCS-A Client ID: LCSW Prep Date: Analyte	Samp1 Batci Analysis I Result	Type: LC h ID: A4 Date: 8/ PQL	4916 12/2017 SPK value	F S SPK Ref Val	tunNo: 4 SeqNo: 1 %REC	4916 420301 LowLimit	Units: mg/L HighLimit			Qual
Sample ID LCS-A Client ID: LCSW Prep Date: Analyte Caldum ron	Samp1 Batcl Analysis I Result 49	Fype: LC h ID: A4 Date: 8/ PQL 1.0	4916 12/2017 SPK value 50.00	F S SPK Ref Val 0	tunNo: 4 GeqNo: 14 %REC 99.0	4916 420301 LowLimit 80	Units: mg/L HighLimit 120			Qual
Sample ID LCS-A Client ID: LCSW Prep Date: Analyte Caldum	SampT Batcl Analysis D Result 49 0.48	Fype: LC h ID: A4 Date: 8/ PQL 1.0 0.020	4916 12/2017 SPK value 50.00 0.5000	F S SPK Ref Val 0 0	tunNo: 4 keqNo: 1 %REC 99.0 96.4	4916 420301 LowLimit 80 80	Units: mg/L HighLimit 120 120			Qual

Qualifiers:

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

WO#: 1708109

16-Aug-17

Page 8 of 10

QC SUMMARY REPORT

WO#: 1708109

16-Aug-17

Hall Environmental Analysis Laboratory, Inc.

Client:	Blagg Engineering		
Project:	JACQUEZ COM 5		
Sample ID ml	b-1 SampType: mblk	TestCode: SM2320B: Alkalinity	
Client ID: PE	BW Batch ID: R44694	RunNo: 44694	
Prep Date:	Analysis Date: 8/2/2017	SeqNo: 1413314 Units: mg/L CaCO3	
Analyte Total Alkalinity (as		e SPK Ref Val %REC LowLimit HighLimit %RPD	RPDLimit Qual
Total Askalutity (as			
Sample ID Ics	3-1 SampType: Ics	TestCode: SM2320B: Alkalinity	
Client ID: LC	SW Batch ID: R44694	RunNo: 44694	
Prep Date:	Analysis Date: 8/2/2017	SeqNo: 1413315 Units: mg/L CaCO3	
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit HighLimit %RPD	RPDLimit Qual
Total Alkalinity (as	CaCO3) 77.96 20.00 80.0	0 0 97.4 90 110	
Sample ID ml	b-2 SampType: mblk	TestCode: SM2320B: Alkalinity	
Client ID: PE	BW Batch ID: R44694	RunNo: 44694	
Prep Date:	Analysis Date: 8/2/2017	SeqNo: 1413338 Units: mg/L CaCO3	
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit HighLimit %RPD	RPDLimit Qual
Total Alkalinity (as	CaCO3) ND 20.00		
Sample ID Ice	3-2 SampType: Ics	TestCode: SM2320B: Alkalinity	
Client ID: LC	SW Batch ID: R44694	RunNo: 44694	
Prep Date:	Analysis Date: 8/2/2017	SeqNo: 1413340 Units: mg/L CaCO3	
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit HighLimit %RPD	RPDLimit Qual
Total Alkalinity (as	CaCO3) 78.52 20.00 80.0	0 0 98.1 90 110	

Qualifiers:

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

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QC SUMMARY REPORT

WO#: 1708109

16-Aug-17

Hall Environmenta	l Ana	lysis 🛛	Lab	orato	ry, I	nc.
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•••	Engineering UEZ COM 5	
Sample ID MB-33162	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids
Client ID: PBW	Batch ID: 33162	RunNo: 44736
Prep Date: 8/3/2017	Analysis Date: 8/4/2017	SeqNo: 1414683 Units: mg/L
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids	ND 20.0	
Sample ID LCS-33162	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids
Client ID: LCSW	Batch ID: 33162	RunNo: 44736
Prep Date: 8/3/2017	Analysis Date: 8/4/2017	SeqNo: 1414684 Units: mg/L
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Dissolved Solids	1010 20.0 1000	0 101 80 120

Qualifiers:

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

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HALL Environmental Analysis Laboratory	Hall Environmental Albu TEL: 505-345-3975 Website: www.ha	4901 Hawkins querque, NM 87 FAX: 505-345-4.	NE 109 Sam 107	ple Log-In Check List
Client Name: BLAGG	Work Order Number:	1708109		ReptNo: 1
Received By: Anne Thome	8/2/2017 7:25:00 AM		Arm II-	
Completed By: Anne Thome Reviewed By:	8/2/2017 7:51:40 AM 8(2 7		Arre II-	
Chain of Custody			,	
1. Custody seals intact on sample bottle	s?	Yes 🗆	No 🗆	Not Present 🗹
2. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present
3. How was the sample delivered?		<u>Courier</u>		
Log In				
4. Was an attempt made to cool the sar	nples?	Yes 🗹	No 🗆	
5. Were all samples received at a tempe	erature of >0° C to 6.0°C	Yes 🗹	No 🗆	NA 🗆
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌	
7. Sufficient sample volume for indicated	l test(s)?	Yes 🗹	No 🗌	
8. Are samples (except VOA and ONG)	properly preserved?	Yes 🗌	No 🗹	_
9. Was preservative added to bottles?		Yes 🗹	No 🗌	NA 🗌
			No 🗆	HNO3 No VOA Vials 🗌
10.VOA viais have zero headspace?	4 h h A	Yes 🗹	No 🗹	
11. Were any sample containers received		Yes 🗀		# of preserved
12. Does paperwork match bottle tabels?	4 0	Yes 🖌	No 🗆	bottles checked for pH: (<2 or >12 unless noted)
(Note discrepancies on chain of custo 13, Are matrices correctly identified on Cl	•••	Yes 🗹	No 🗆	Adjusted?
14, is it clear what analyses were request	-	Yes 🗹	No 🗌	
15. Were all holding times able to be met (If no, notify customer for authorization	? [.]	Yes 🗹	No 🗌	Checked by:
<u>Special Handling (if applicable)</u>				
		-	-	G

16.1	Nas client notified of all d	iscrepancies with this order?	Ye	es 🗆) No 🗆	na 🗹
	Person Notified:		Date			*
	By Whom:		Via: 🗌 e	Mail	Phone E	K 🔲 In Person
	Regarding:		يريب ويحتمد والمتحد والمحتال المتح			<u>In an an</u>
	Client Instructions:					n an

17. Additional remarks:

SAMPLE POURED OFF, FILTERED & PRESERVED IN LAB w/.25 mL HN03 FOR ACCEPTALBE pH FOR DISSOLVED METALS/at 8/2/17

18. Cooler Information

Page 1 of 2



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 C	Order Numb		ReptNo: 1	
Cooler N	o Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By	
1	3.6	Good	Yes				

Client: BP BL Mailing Add	<u>Avne</u> 466 E ress:	Nca	eery Inc	Tum-Around Standard Project Name JACC Project #:	Rush	Same Biex Dar <u>Asap</u> Com 5		HALL ENVIRONME ANALYSIS LABORA www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request												
Phone #: email or Fax QA/QC Packa Standard Accreditation	c#: 2ge:		20 - 1\83	Project Mana STE Sampler: J	VE MOSF		TMB's (8021)	PH (Gas only)	/ DRO / MRO)	-	-			_		#T 08/AZH7		ĘŔ		
NELAP EDD (Type Date Tire	pe)	Other	Sample Request ID	Cinice	X Yes	EINO - U- 410=3.6	EX + MTBE +	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 ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA) FL	8270 (Semi-VOA)	API WATER		Air Bubbles (Y or N)
<u>3/1/2017</u> 09	105 W	ATER	STOCK POND	3 VOA 9 Liter	HCL ODE	-201			· · ·							X		X		
						· · · · · · · · · · · · · · · · · · ·														
Date: 72017 10 Date: Time 8/1/17 18/	30		Blogy	Received by		$\frac{B}{100000000000000000000000000000000000$		V ()	5: B	VM	05	6H			,				 Most	

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

Laboratory Analytical Data Reports Wellpad Remediation and Historic Pit



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

August 27, 2017

Steve Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: Jacquez Com 5

OrderNo.: 1708D72

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/24/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 1708D72
Date Reported: 8/27/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: 95 BGT Area 7-pt (2'-5.5') Project: Jacquez Com 5 Collection Date: 8/23/2017 2:15:00 PM Lab ID: 1708D72-001 Matrix: MEOH (SOIL) Received Date: 8/24/2017 6:15:00 AM Analyses Result POL Qual Units DF Date Analyzed Batch

Analyses	Result		IAI UDITS	Dr	Date Analyzed	Daten
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	8/24/2017 12:24:45 PM	33539
EPA METHOD 8015M/D: DIESEL RANGI	E ORGANIC	S			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/24/2017 10:43:43 AM	33533
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/24/2017 10:43:43 AM	33533
Sur: DNOP	96.8	70-130	%Rec	1	8/24/2017 10:43:43 AM	33533
EPA METHOD 8015D: GASOLINE RANG)E				Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	8/24/2017 10:27:11 AM	33513
Sur: BFB	90.3	54-150	%Rec	1	8/24/2017 10:27:11 AM	33513
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.018	mg/Kg	1	8/24/2017 10:27:11 AM	33513
Toluene	ND	0.036	mg/Kg	1	8/24/2017 10:27:11 AM	33513
Ethylbenzene	ND	0.036	mg/Kg	1	8/24/2017 10:27:11 AM	33513
Xylenes, Total	ND	0.072	mg/Kg	1	8/24/2017 10:27:11 AM	33513
Surr: 4-Bromofluorobenzene	99.9	66.6-132	%Rec	1	8/24/2017 10:27:11 AM	33513

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 6
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report
Lab Order 1708D72
Date Reported: 8/27/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: West Area 7-pt (6"-3') Project: Jacquez Com 5 Collection Date: 8/23/2017 2:24:00 PM Lab ID: 1708D72-002 Matrix: MEOH (SOIL) Received Date: 8/24/2017 6:15:00 AM Analyses Result PQL Qual Units DF Date Analyzed Batch

EPA METHOD 300.0: ANIONS					Analyst: MRA
Chloride	ND	30	mg/Kg	20	8/24/2017 12:37:10 PM 33539
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S			Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/24/2017 11:11:46 AM 33533
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/24/2017 11:11:46 AM 33533
Sur: DNOP	98.5	70-130	%Rec	1	8/24/2017 11:11:46 AM 33533
EPA METHOD 8015D: GASOLINE RANG	ЭE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	8/24/2017 10:50:57 AM 33513
Surr: BFB	89.0	54-150	%Rec	1	8/24/2017 10:50:57 AM 33513
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	0.019	mg/Kg	1	8/24/2017 10:50:57 AM 33513
Toluene	ND	0.038	mg/Kg	1	8/24/2017 10:50:57 AM 33513
Ethylbenzene	ND	0.038	mg/Kg	1	8/24/2017 10:50:57 AM 33513
Xylenes, Total	ND	0.076	mg/Kg	1	8/24/2017 10:50:57 AM 33513
Surr: 4-Bromofluorobenzene	97.8	66.6-132	%Rec	1	8/24/2017 10:50:57 AM 33513

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 6
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Client:Blagg EngineeringProject:Jacquez Com 5

Sample ID MB-33539	SampType: mblk	TestCode: EPA Method	1 300.0: Aniona	3		
Client ID: PBS	Batch ID: 33539	RunNo: 45189				
Prep Date: 8/24/2017	Analysis Date: 8/24/2017	SeqNo: 1432108	Units: mg/K	9		
Analyte	Result PQL SPK va	lue SPK Ref Val %REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND 1.5					
	ND 1.5 SampType: Ics	TestCode: EPA Method	1 300.0: Anions		<u></u>	
Chloride Sample ID LCS-33539 Client ID: LCSS		TestCode: EPA Methoo RunNo: 45189	1 300.0: Anions	 }		
Sample ID LCS-33539 Client ID: LCSS	SampType: Ics		I 300.0: Anions Units: mg/K g	-		
Sample ID LCS-33539 Client ID: LCSS	SampType: Ics Batch ID: 33539 Analysis Date: 8/24/2017	RunNo: 45189	Units: mg/K (-	RPDLimit	Qual

Qualifiers:

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

Page 3 of 6

WO#: 1708D72

27-Aug-17

WO#: 1708D72

27-Aug-17

Client: Blagg E Project: Jacquez	Engineering Com 5									
Sample ID LCS-33533	SampT	ype: LC	;S	Tes	tCode: E	PA Method	8015M/D: DI	esel Rang	e Organics	
Client ID: LCSS	Batch	n ID: 33	533	F	RunNo: 4	5181				
Prep Date: 8/24/2017	Analysis D	ate: 8/	24/2017	5	SeqNo: 1	430495	Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.1	73.2	114			
Sur: DNOP	4.6		5.000		93.0	70	130			
Sample ID MB-33533	SampT	ype: Mi	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organice	<u></u>
Client ID: PBS	Batch	ID: 33	533	F	RunNo: 4	5181				
Prep Date: 8/24/2017	Analysis D	ate: 8/	24/2017	5	SeqNo: 1	430496	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Sur: DNOP	9.9		10.00		99 .1	70	130			

Qualifiers:

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

Page 4 of 6

QC SUMMARY REPORT

WO#: 1708D72

27-Aug-17

	Engineering z Com 5									
Sample ID MB-33513 Client ID: PBS	•	ype: ME			tCode: E RunNo: 4		8015D: Gasc	oline Rang	9	
Prep Date: 8/23/2017	Analysis D	ate: 8 /	24/2017	ę	SeqNo: 1	431549	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 900	5.0	1000		89.5	54	150			
Sample ID LCS-33513	SampT	ype: LC	:S	Tes	tCode: E	PA Method	8015D: Gasc	line Rang	je	
Client ID: LCSS	Batch	ID: 33	513	F	RunNo: 4	5186				
Prep Date: 8/23/2017	Analysis D	ate: 8/	24/2017	5	SeqNo: 1	431550	Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.8	76.4	125			
Sur: BFB	970		1000		97.0	54	150			

Qualifiers:

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

Page 5 of 6

WO#:

1708D72 27-Aug-17

	Engineering z Com 5									
Sample ID MB-33513	Samp	Type: Mi	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 33	513	F	RunNo: 4	5186				
Prep Date: 8/23/2017	Analysis (Date: 8	/24/2017	8	eqNo: 1	431581	Units: mg/k	(g		
Ånalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		100	66.6	132			
Sample ID LCS-33513	Samp	Гуре: LC	:5	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: 33	513	F	RunNo: 4	5186				
Pren Date: 8/23/2017	Analysis [Date: 8	124/2017	ç	SeaNo 1	424592	Units: ma/k	(n		

Fiep Date. 0/23/2017	Allaysis Date. 0/24/2011			c	equivo. 1	43 1302	Units. Ing/r			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.4	80	120			
Toluene	0.91	0.050	1.000	0	91.4	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.1	80	120			
Surr. 4-Bromofluorobenzene	1.0		1.000		103	66.6	132			

Qualifiers:

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

HALL ENVIRON ANALYSI LABORAT	8	Hall Environmental A Albud TEL: 505-345-3975 I Website: www.hal	4901 juerque FAX: 50	Hawkins NE 2, NM 87109 05-345-4107	San	nple Log-In Check Lis	t
Client Name: BL	AGG	Work Order Number:	1708)72		RcptNo: 1	
Received By: A	shiey Gallegos	8/24/2017 6:15:00 AM		÷	₽₹		
Completed By: A Reviewed By:	ahley Gailegos NM	8/24/2017 6:53:11 AM 8/24/17		÷	F7		
Chain of Custor	<u>tr</u>						
1. Custody seats in	ntact on sample bottles?		Yes		No 🗌	Not Present	
2. Is Chain of Cust	tody complete?		Yes		No 🗖	Not Present	
3. How was the sa	mple delivered?		Cour	ier			
Log In							
4. Was an attemp	t made to cool the samples	?	Yes		No 🗆		
5. Were all sample	es received at a temperatur	e of ≥0° C to 6.0°C	Yes		No 🗌	na 🗋	
6. Sample(s) in pr	oper container(s)?		Yes		No 🗌		
7. Sufficient sampl	e volume for indicated test	s)?	Yes		No 🗆		
8. Are samples (ex	ccept VOA and ONG) prope	rly preserved?	Yes		No 🗆		
9. Was preservativ	re added to bottles?		Yes		No 🗹	NA 🗋	
10.VOA vials have	zero headspace?		Yes		No 🗆	No VOA Viais 🗹	
11. Were any samp	e containers received brok	en?	Yes		No 🗹	A of our owned	
12. Does paperwork	c match bottle labels?		Yes		No 🗆	# of preserved bottles checked for pH:	
• •	cies on chain of custody)			_	_	(<2 or >12 unless n	oted)
	rrectly Identified on Chain of	f Custody?	Yes	_		Adjusted?	
	inalyses were requested?				No 🗌	Chocked by	:
-	times able to be met? tomer for authorization.)		Yes		No 🗌	Checked by:	:
<u>Special Handlin</u>	a (if applicable)						
	ed of all discrepancies with	this order?	Yes	П	No 🗆	NA 🗹	
Person No		Date			— -		
By Whom Regarding		Via: [eMa		e [] Fax		
Client Inst							
17. Additional rema	,,					···· · / ····· · ······	
18. <u>Cooler Informa</u> Cooler No	Temp °C Condition S		ieai Da	ite Sig	ned By	4	
<u> 1i1</u>	1.1 Good Ye	<u>×</u>				1	
Page 1 of 1		- 		*			

Client: 7	SP A	of-Cl Merica Eache	istody Record ক্রিপ্যু	Turn-Around Standard Project Name JACQC Project #:	Rush	SAME DAT	HALL ENVIRONMENTA ANALYSIS LABORATO www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax: 505-345-4107						ŗ							
Phone #	t: <i>S</i>	5 -32	0-1187					Analysis Request												
email or QA/QC F	Fax#: Package:		Level 4 (Full Validation)		ie Mosle		*s (8021)	+ TPH (Gas only)	RO / MRO)		CIMACI	6	PO4.SO4)	2 PCB's						
		🗔 Othe	er	Sampler: On loe:	Teff Blo OCYOS	9 <u>9</u> D No		TPH		8.1)	A.1)		3.NO3	/ 808		2	~			Î
	(Туре)			Sample Tem	and the second secon	EI .	111	- 38	E) R	44	2 20	lais	N.	des	2) N	P			N N
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MHOE + TEMP's (8021)	BTEX + MTBE	TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method 504.1) PAH's /8310 Ar 8270 SIMS)	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	ch bride			Air Bubbles (Y or N)
\$23/17	1415	Soil	4= BET Arra	400+1	LOX	-001	X		×			ŀ	Γ				X		Τ	\Box
<u> </u>	1424		(1920 West Anda 7-96 (6"-3')) <u>)</u>	~	-002	×		X	-							X T			
																			+	
Date: 9/3/7 Date:	Time: 1604 Time:	Resinguish Resinguish	4 Blogg	Received by:	. Walt	Dato Timo 923/7 1604 Date Time 08/24/11	-	41	s: B) V()		3P /HIX	ONE	EVR	Lo M	~Yec	ך קייני קייני	Ste	ne l	Hast	Ţ
9/23/17	1930 necessary.		mitted to Hall Environmental may to subc	Canto of being a	en m	Jalliego	Lel'		Any su	b-cont:	acted de	ta wDI	te des	rly not	ated G	n the a	nalytic	al report.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 01, 2017 Steve Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: Jacquez Com 5

OrderNo.: 1708F18

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/26/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

and

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 1708F18
Date Reported: 9/1/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT, Disco Engineering			Cli - 4 C	- 10- 11:		1.00			
CLIENT: Blagg Engineering	Client Sample ID: Historic Pit 10-Pt (11'-18') Collection Date: 8/25/2017 12:30:00 PM								
Project: Jacquez Com 5									
Lab ID: 1708F18-001	Matrix: MEOH (SOIL) Received Date: 8/26/2017 10:00:00 AM								
Analyses	Result	PQL Qua	Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS			·		Analy	/st: MRA			
Chloride	ND	30	mg/Kg	20	8/28/2017 2:18:31 P	M 33585			
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	3			Analy	st: TOM			
Dissol Banas Organias (DBO)	44	0.2	malla		9/20/2017 11.42.22	NA 33677			

Diesel Range Organics (DRO)	44	9.2	mg/Kg	1	8/28/2017 11:42:23 AM	33577
Motor Oil Range Organics (MRO)	470	46	mg/Kg	1	8/28/2017 11:42:23 AM	33577
Sur: DNOP	102	70-130	%Rec	1	8/28/2017 11:42:23 AM	33577
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	16	mg/Kg	5	8/28/2017 1:00:17 PM	G45253
Sun: BFB	78.5	54-150	%Rec	5	8/28/2017 1:00:17 PM	G45253
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.079	mg/Kg	5	8/28/2017 1:00:17 PM	B45253
Toluene	ND	0.16	mg/Kg	5	8/28/2017 1:00:17 PM	B45253
Ethylbenzene	ND	0.16	mg/Kg	5	8/28/2017 1:00:17 PM	B45253
Xylenes, Total	ND	0.31	mg/Kg	5	8/28/2017 1:00:17 PM	B45253
Surr: 4-Bromofluorobenzene	115	66.6-132	%Rec	5	8/28/2017 1:00:17 PM	B45253

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 5
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL.	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

WO#: 1708F18

01-Sep-17

Client: Project:		Engineering z Com 5	
Sample ID M	B-33585	SampType: mblk	TestCode: EPA Method 300.0: Anlons

Client ID: PBS	Batch ID: 33585	RunNo: 45254		
Prep Date: 8/28/2017	Analysis Date: 8/28/2017	SeqNo: 1434156	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID LCS-33585	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 33585	RunNo: 45254		
Prep Date: 8/28/2017	Analysis Date: 8/28/2017	SeqNo: 1434157	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5 15.00	0 90.3 90	110	

Qualifiers:

- Value exceeds Maximum Contaminant Level. ۰
- 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 S
- В Analyte detected in the associated Method Blank
- Ε Value above quantitation range
- j Analyte detected below quantitation limits
- Ρ Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified
- Page 2 of 5

WO#: 1708F18

01-Sep-17

Client: Blagg E Project: Jacquez	ngineering Com 5									
Sample ID LCS-33577	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	1D: 33	577	F	RunNo: 4	5248				
Prep Date: 8/28/2017	Analysis D	ate: 8/	28/2017	9	SeqNo: 1	432929	Units: mg/l	(9		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.9	73.2	114		•	
Sur: DNOP	4.0		5.000		80.9	70	130			
Sample ID MB-33577	SampT	ype: Mi	BLK	Tes	tCode: E	PA Method	8015M/D: DI	esel Rang	e Organics	
Client ID: PBS	Batch	1D: 33	577	F	RunNo: 4	5248				
Prep Date: 8/28/2017	Analysis D	ate: 8/	28/2017	5	SeqNo: 1	432930	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10							-	
Motor Oil Range Organics (MRO)	ND	50								
Sur: DNOP	9.0		10.00		89.6	70	130			

Qualifiers:

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

Page 3 of 5

WO#: 1708F18

01-Sep-17

Client: Blagg En Project: Jacquez (igineering Com 5									
Sample ID RB	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	9	
Client ID: PBS	Batch	ID: G4	5253	F	RunNo: 4	5253				
Prep Date:	Analysis D	ate: 8/	28/2017	5	SeqNo: 1	433360	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Sun: BFB	830		1000	<u> </u>	82.6	54	150			
Sample ID 2.5UG GRO LCS	SampT	ype: LC	:5	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	0	<u>.</u>
Client ID: LCSS	Batch	ID: G 4	5253	F	RunNo: 4	5253				
Prep Date:	Analysis D	ate: 8/	28/2017	5	SeqNo: 14	433361	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.6	76.4	125			
Surr: BFB	920		1000		91.9	54	150			

Qualifiers:

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

Page 4 of 5

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

0.10

3.000

1.000

3.1

1.2

Client: Project:	Blagg Engineer Jacquez Com 5	ing			·					
Sample ID RB	Sa	mpType:	MBLK	Tes	tCode: El	PA Method	8021B: Vola	diles		
Client ID: PBS	l	Batch ID:	B45253	F	RunNo: 4	5253				
Prep Date:	Analy	sis Date:	8/28/2017	٤	SeqNo: 1	433381	Units: mg/H	g		
Analyte	Res	ult PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	N	ID 0.0	25			· · · · ·				
Toluene	N	D 0.0	50							
Ethylbenzene	N	D 0.0	50							
Kylenes, Total	N	ID 0.1	10							
Surr: 4-Bromofluoro	benzene 1	.2	1.000		120	66.6	132			
Sample ID 100N	G BTEX LCS Sa	mpType:	LCS	Tes	tCode: Ef	PA Method	8021B: Volat	iles		
Client ID: LCSS	; E	Batch ID:	B45253	F	RunNo: 4	5253				
Prep Date:	Analy	sis Date:	8/28/2017	8	SeqNo: 14	433382	Units: mg/M	g		
Analyte	Res	ult PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1	.0 0.0	25 1.000	0	104	80	120			
Foluene	1	.0 0.0	50 1.000	0	102	80	120			
Ethylbenzene	1	.0 0.0	50 1.000	0	100	80	120			

0

103

124

80

66.6

120

132

Qualifiers:

Xylenes, Total

Sur: 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
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

1708F18 *01-Sep-17*

WO#:

Page 5 of 5

ANALY	ONMENTA /SIS &ATORY	L	TEL	Environmei 505-345-3 Tebsite: www	4901 Albuquerqu 975 FAX: 5	Hawkins e, NM 87 05-345-4	NE 109 Sa 107	mp	ble Log-In C i	heck List
Client Name:	BLAGG		Work (Order Numi	ber: 1708	-18		_	RcptNo:	1
Received By:	Andy Freen	ายก	8/26/201	7 10:00:00	AM		ALL	_		
Completed By:	Erin Melen	drez	8/28/201	7 8:31:23	AM		all a	1-		
Reviewed By:	50		8-18-	ι7			•			
Chain of Cus	<u>tody</u>									
1. Custody seal	Is intact on sa	mple bottles?			Yes		No []	Not Present 🗹	
2. Is Chain of C	ustody compl	ete?			Yes		No []	Not Present	
3. How was the	sample deliv	ared?		·	<u>Cour</u>	ier				
<u>Log in</u>										
4. Was an atte	mpt made to o	col the samples	?		Yes		No [NA 🗆	
5. Were all sam	nples received	at a temperatur	e of >0° C	to 6.0°C	Yes		No [נ	na 🗆	
6. Sample(s) in	n proper conta	iner(s)?	· .		· Yes		No [
7. Sufficient sa	mple volume f	or indicated test	(8)?		Yes		No 🗌]		
8. Are samples	(except VOA	and ONG) prope	rty preserv	ed?	Yes		No []		
9. Was preserv	ative added to	bottles?			Yes		No 🗹		NA 🗌	
10.VOA vials ha	ive zero head:	space?			Yes		No []	No VOA Vials 🗹	
11 Were any sa	ample containe	ers received brok	en?		Yes	Ē	No a		# of preserved	
12.Does paperw (Note discrep		ttle labels? ain of custody)			Yes		No [ן כ	bottles checked for pH: (<2 o	r >12 unless noted)
13. Are matrices			f Custody?		Yes		No 🗆	ן כ	Adjusted?	······································
14, is it clear what	at analyses w	ere requested?			Yes		No [ן נ		
15. Were all hold (If no, notify (ling times able customer for a				Yes		No []	Checked by:	
<u>Special Hand</u>	ling (if ann	licahle)				÷.				
16. Was client no			this order?	•	Yes		No E	3	NA 🗹	
Person	Notified:			Date	e:	,		-]
By Wh	om:			Via:	P		hone 🔲 F	ax	🔄 In Person	
Regard	ling:									
Client I	Instructions:	·····	<u></u> .	<u> </u>	<u></u>				· · · · · · · · · · · · · · · · · · ·	
17. Additional re	marks:									
18. <u>Cooler Info</u>					• • •	•				
Cooler No			ieal Intact	Seal No	Seal D	ite 🛛	Signed By			
L	4.8	Good Ye	10	L	<u> </u>			_		
Page 1 of	f 1									<u> </u>

C	hain	-of-Cı	ustody Record	Tum-Around	Time:	SAME Dat															
Client:	BP A	MERICA	A	☐ □ Standard	Rush	-													INT ATC		
	R. H.C	FUELD	EERING	Project Name														R <i>P</i>		JK	T
	Address			JACQUE	z Com	5		40	01 Ha			/.hall						/100			
			*****	Project #:	······		1		el. 50					-	-		-410				
Phone	#: 50	5-32	20 - 1183	1					31, 50	<u> </u>	5-55					ues					
email o				Project Mana	iger:			(yl	Ô		Τ										
QA/QC	Package:			STEN	E MOSKA	-	3021	as or	/ MF			6		4'SC	PCB's						ł
Stan			Level 4 (Full Validation)				3) 92	ß	8 B			(SIMS)		PO	2 PC						
Accredi		Othe		Sampler: J	eff Blag	G	TMB (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	Ē	<u>-</u> -	8270		Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082						ź
			,	On Ice	peralure: 4, 9	□ Nõ 2 °C		+ ឃ្ល	GR	TPH (Method 418.1)	EDB (Method 504.1)	8 8	als	NO.	les /		8270 (Semi-VOA)	Jul Jul			Air Ruhhles (Y or N)
	(.),,,,,						+ MEDE	MTB	5B (t a	fo	33	Met	บี่	sticic	(V)	-in	41) sa
Date	Time	Matrix	Sample Request ID	Container	Preservative	NO.	Ŧ ×	+ X	801	ŝ	Ň,	PAH's (8310 or	RCRA 8 Metals	ns (I	Pe	8260B (VOA)) (Se	ZALIOLA			L H H
,				Type and #	Туре	TASENS.	втех	BTE	H	티		Ψ	RCR	Anio	8081	8260	8270	U			Air P
3/05/17	1230	SOIL	Historic Pit 10-pt (11-18)	402×1	Carl	-001	X		X				-					X			+
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12017	1425		Dogg	All	1p	8/26/17 1000			٧ß):	VH	XON	EVI	RM	1						
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Laboratory Analytical Data Reports

Off Wellpad Soil Remediation



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

September 06, 2017 Steve Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413

FAX

TEL:

RE: Jacquez Com 5

OrderNo.: 1708F68

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/29/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1708F68

Date Reported: 9/6/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: Zone 0'-100' Jacquez Com 5 Project: Collection Date: 8/28/2017 2:24:00 PM Lab ID: 1708F68-001 Matrix: SOIL Received Date: 8/29/2017 8:00:00 AM Analyses Result **PQL Qual Units DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA

Chloride	ND	30	mg/Kg	20	8/31/2017 10:59:43 AM	33647
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	6			Analyst:	TOM
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	8/31/2017 10:23:54 AM	33625
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/31/2017 10:23:54 AM	33625
Sur: DNOP	94.8	70-130	%Rec	1	8/31/2017 10:23:54 AM	33625
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/30/2017 9:28:32 AM	33607
Sun: BFB	80.2	54-150	%Rec	1	8/30/2017 9:28:32 AM	33607
EPA METHOD 8260B: VOLATILES SHO	ORT LIST				Analyst:	DJF
EPA METHOD 8260B: VOLATILES SHO Benzene	ND	0.024	mg/Kg	1	Analyst: 8/30/2017 1:33:42 PM	DJF 33607
		0.024 0.048	mg/Kg mg/Kg	1 1		
Benzene	ND		•••	1 1 1	8/30/2017 1:33:42 PM	33607
Benzena Toluene	ND ND	0.048	mg/Kg	1 1 1 1	8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM	33607 33607
Benzena Toluene Ethylbenzene	ND ND ND	0.048 0.048	mg/Kg mg/Kg	1 1 1 1	8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM	33607 33607 33607
Benzene Toluene Ethylbenzene Xylenes, Total	ND ND ND ND	0.048 0.048 0.095	mg/Kg mg/Kg mg/Kg	1 1 1 1 1	8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM	33607 33607 33607 33607
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4	ND ND ND ND 113	0.048 0.048 0.095 70-130	mg/Kg mg/Kg mg/Kg %Rec	1 1 1 1 1 1	8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM 8/30/2017 1:33:42 PM	33607 33607 33607 33607 33607

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report
Lab Order 1708F68

Date Reported: 9)/6/20 17
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Client Sample ID: Zone 100'-200' Jacquez Com 5 **Project:** Collection Date: 8/28/2017 2:29:00 PM 1708F68-002 Lab ID: Matrix: SOIL Received Date: 8/29/2017 8:00:00 AM **DF** Date Analyzed Analyses **PQL** Qual Units Result Batch -.

EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	ND	30	mg/Kg	20	8/31/2017 11:12:08 AM	33647
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	6			Analyst:	TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	8/31/2017 10:48:26 AM	33625
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/31/2017 10:48:26 AM	33625
Surr: DNOP	94.8	70-130	%Rec	1	8/31/2017 10:48:26 AM	33625
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/30/2017 9:52:35 AM	33607
Sur: BFB	81.0	54-150	%Rec	1	8/30/2017 9:52:35 AM	33607
EPA METHOD 8260B: VOLATILES SH	IORT LIST				Analyst:	DJF
Benzene	ND	0.023	mg/Kg	1	8/30/2017 3:00:46 PM	33607
Toluene	ND	0.047	mg/Kg	1	8/30/2017 3:00:46 PM	33607
Ethylbenzene	ND	0.047	mg/Kg	1	8/30/2017 3:00:46 PM	33607
Xylenes, Total	ND	0.094	mg/Kg	1	8/30/2017 3:00:46 PM	33607
Surr: 1,2-Dichloroethane-d4	113	70-130	%Rec	1	8/30/2017 3:00:46 PM	33607
Sur: 4-Bromofluorobenzene	90.4	70-130	%Rec	1	8/30/2017 3:00:46 PM	33607
Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane	90.4 111	70-130 70-130	%Rec %Rec	1	8/30/2017 3:00:46 PM 8/30/2017 3:00:46 PM	33607 33607
				1 1 1		

Qualifiers:	+	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1708F68

Date Reported: 9/6/2017

8/30/2017 3:29:51 PM

33607

33607

33607

33607

33607

33607

33607

33607

Hall Environmental Analysis Laboratory, Inc.

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr. Dibromofluoromethane

Surr: Toluene-d8

CLIENT:	Blagg Engineering			Client Samp	le ID: Zo	ne 200'-300'	
Project:	Jacquez Com 5			Collection	Date: 8/2	28/2017 2:34:00 PM	
Lab ID:	1708F68-003	Matrix:	SOIL	Received	Date: 8/2	29/2017 8:00:00 AM	
Analyses		Result	PQL Qual	Units	DF	Date Analyzed	Batch
	HOD 300.0: ANIONS					Analyst	MRA
Chloride		ND	30	mg/Kg	20	8/31/2017 11:24:33 AM	33647
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS	6			Analyst	: TOM
Diesel Ra	ange Organics (DRO)	ND	9.7	mg/Kg	1	8/31/2017 11:13:04 AM	33625
Motor Oil	Range Organics (MRO)	ND	48	mg/Kg	1	8/31/2017 11:13:04 AM	33625
Sur: D	NOP	106	70-130	%Rec	1	8/31/2017 11:13:04 AM	33625
EPA MET	HOD 8015D: GASOLINE RA	ANGE				Analyst	: NSB
Gasoline	Range Organics (GRO)	ND	4.9	mg/Kg	1	8/30/2017 10:16:41 AM	33607
Sur: B	IFB	78.0	54-150	%Rec	1	8/30/2017 10:16:41 AM	33607
EPA MET	HOD 8260B: VOLATILES S	HORTLIST				Analyst	DJF

0.024

0.049

0.049

0.097

70-130

70-130

70-130

70-130

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

%Rec

%Rec

1

1

1

1

1

1

1

1

ND

ND

ND

ND

112

88.6

112

94.0

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not in Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1708F68

Date Reported: 9/6/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering Project: Jacquez Com 5			•	e ID: Zone 30 Date: 8/28/201	0'-400' 17 2:40:00 PM	
Lab ID: 1708F68-004	Matrix: SOIL Received Date: 8/29/2017 8:00:00 AN					
Analyses	Result	PQL Qua	l Units	DF Date	Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	yst: MRA
Chloride	ND	30	mg/Kg	20 8/31	/2017 12:01:47 F	PM 33647
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	5			Analy	yst: TOM

					raidiyot	
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/31/2017 11:37:40 AM	33625
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/31/2017 11:37:40 AM	33625
Sur: DNOP	106	70-130	%Rec	1	8/31/2017 11:37:40 AM	33625
EPA METHOD 8015D: GASOLINE RANGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/30/2017 10:40:40 AM	33607
Surr. BFB	78.0	54-150	%Rec	1	8/30/2017 10:40:40 AM	33607
EPA METHOD 8260B: VOLATILES SHORT	LIST				Analyst	DJF
Benzene	ND	0.024	mg/Kg	1	8/30/2017 3:58:55 PM	33607
Toluene	ND	0.048	mg/Kg	1	8/30/2017 3:58:55 PM	33607
Ethylbenzene	ND	0.048	mg/Kg	1	8/30/2017 3:58:55 PM	33607
Xylenes, Total	ND	0.097	mg/Kg	1	8/30/2017 3:58:55 PM	33607
Surr: 1,2-Dichloroethane-d4	115	70-130	%Rec	1	8/30/2017 3:58:55 PM	33607
Surr: 4-Bromofluorobenzene	89 .1	70-130	%Rec	1	8/30/2017 3:58:55 PM	33607
Surr: Dibromofluoromethane	112	70-130	%Rec	1	8/30/2017 3:58:55 PM	33607
Surr: Toluene-d8	92.8	70-130	%Rec	1	8/30/2017 3:58:55 PM	33607

Qualifiers:		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 10
1	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
F	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708F68

Date Reported: 9/6/2017

33607

8/30/2017 4:27:54 PM

1

Hall Environmental Analysis Laboratory, Inc.

Surr: Toluene-d8

CLIENT: Blagg Engineering	Client Sample ID: Zone 400'-500'									
Project: Jacquez Com 5	Collection Date: 8/28/2017 2:47:00 PM									
Lab ID: 1708F68-005	Matrix:	SOIL	Received 1	Date: 8/2	9/2017 8:00:00 AM					
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst:	MRA				
Chloride	ND	30	mg/Kg	20	8/31/2017 12:14:12 PM	33647				
EPA METHOD 8015M/D: DIESEL R/	ANGE ORGÁNICS	5			Analyst:	TOM				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/31/2017 12:02:29 PM	33625				
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	8/31/2017 12:02:29 PM	33625				
Sur: DNOP	95.1	70-130	%Rec	1	8/31/2017 12:02:29 PM	33625				
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst:	NSB				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/30/2017 11:04:43 AM	33607				
Sur: BFB	76.4	54-150	%Rec	1	8/30/2017 11:04:43 AM	33607				
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst:	DJF				
Benzene	ND	0.025	mg/Kg	1.	8/30/2017 4:27:54 PM	33607				
Toluene	ND	0.049	mg/Kg	1	8/30/2017 4:27:54 PM	33607				
Ethylbenzene	ND	0.049	mg/Kg	1	8/30/2017 4:27:54 PM	33607				
Xylenes, Total	ND	0.099	mg/Kg	1	8/30/2017 4:27:54 PM	33607				
Surr: 1,2-Dichloroethane-d4	115	70-130	%Rec	1	8/30/2017 4:27:54 PM	33607				
Sun: 4-Bromofluorobenzene	88.4	70-130	%Rec	1	8/30/2017 4:27:54 PM	33607				
Surr: Dibromofluoromethane	113	70-130	%Rec	1	8/30/2017 4:27:54 PM	33607				

70-130

%Rec

92.8

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: 1708F68

06-Sep-17

Hall E	Environmental	Analysis	Laboratory, Inc.
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Client: Project:		Engineering ez Com 5									
Sample ID	MB-33647	SampTy	pe: mt	olk	Tes	tCode: El	PA Method	300.0: Anion	8	<u> </u>	
Client ID:	PBS	Batch	ID: 33	647	F	lunNo: 4	5341				
Prep Date:	8/31/2017	Analysis Da	ite: 8/	31/2017	S	ieqNo: 1	437822	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLImit	Qual
Chloride		ND	1.5								
Sample ID	LCS-33647	SampTy	pe: Ics		Tes	tCode: El	PA Method	300.0: Anion	8		
Client ID:	LCSS	Batch	ID: 33	647	F	lunNo: 4	5341				
Prep Date:	8/31/2017	Analysis Da	ite: 8/	31/2017	S	eqNo: 1	437823	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	91.4	90	110			

Qualifiers:

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

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WO#: 1708F68

06-Sep-17

Client: Project:	Blagg Er Jacquez	ngineering Com 5											
Sample ID	MB-33625	SampT	vde: MI	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics			
Client ID:	PBS					TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 45328							
Prep Date:	8/30/2017	Analysis D				SegNo: 1		Units: mg/i	(a				
•	013012011	•				•		-	-				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
-	Drganics (DRO)	ND	10										
•	e Organics (MRO)	ND	50										
Sur: DNOP		9.9		10.00		98.8	70	130					
Sample ID	LCS-33625	SampT	ype: LC	;s	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID:	LCSS	Batch	ID: 33	625	RunNo: 45328								
Prep Date:	8/30/2017	Analysis D	ate: 8/	31/2017	SeqNo: 1436348			Units: mg/ł	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range (Organics (DRO)	51	10	50.00	0	102	73.2	114					
Surr: DNOP		4.9		5.000		98.9	70	130					
Sample ID	1708F68-001AMS	SampT	ype: MS	s S	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics			
Client ID:	Zone 0'-100'	Batch	ID: 33	625	RunNo: 45328								
Prep Date:	8/30/2017	Analysis D	ate: 8/	31/2017	5	SeqNo: 1	437055	Units: mg/i	٢g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range (Organics (DRO)	44	9.2	45.91	5.798	83.4	55.8	122					
Sur: DNOP		4.0		4.591		86.7	70	130					
Sample ID	1708F68-001AMS	D SampT	ype: MS	SD	Tes	tCode: E	PA Method	8015M/D: DI	esel Rang	e Organics			
Client ID:	· · · ·				RunNo: 45328								
Prep Date:	8/30/2017 Analysis Date: 8/31/2017				SeqNo: 1437056			Units: mg/Kg					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range (Organics (DRO)	50	10	50.40	5.798	88.6	55.8	122	13.5	20			
5.00011.00.90	• • •												

Qualifiers:

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

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WO#: 1708F68

06**-Sep-1**7

Client:	Blagg Engineering	
Project:	Jacquez Com 5	

Sample ID MB-33607	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	n ID: 33	607	RunNo: 45303						
Prep Date: 8/29/2017	Analysis Date: 8/30/2017			SeqNo: 1435534			Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quai
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	790		1000		78.6		150			
Surr: BFB Sample ID LCS-33607		ype: LC		Tes		<u>.</u>	150 8015D: Gasc	oline Rang	9	
······	SampT	ype: LC	\$			PA Method		oline Rang	9	
Sample ID LCS-33607	SampT	n ID: 33	:S 607	F	tCode: El	PA Method 5303		•	9	
Sample ID LCS-33607 Client ID: LCSS	SampT Batch	n ID: 33	S 607 30/2017	F	tCode: El RunNo: 4	PA Method 5303	8015D: Gasc	•	e RPDLimit	Qual
Sample ID LCS-33607 Client ID: LCSS Prep Date: 8/29/2017	SampT Batch Analysis D	n ID: 33 Date: 8/	S 607 30/2017	F	tCode: El RunNo: 4 SeqNo: 14	PA Method 5303 435535	8015D: Gasc Units: mg/M	(g		Qual

Qualifiers:

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

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WO#: 1708F68

06-Sep-17

Client: Blagg E Project: Jacquez	ngineering Com 5										
Sample ID mb-33607	Samp1	ype: MI	BLK	TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batc	h ID: 33	607	RunNo: 45322							
Prep Date: 8/29/2017	Analysis E)ate: 8 /	30/2017	8	SeqNo: 1	435743	Units: mg/l	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.025									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 1,2-Dichloroethane-d4	0.58		0.5000		116	70	130				
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.6	70	130				
Surr: Dibromofluoromethane	0.57		0.5000		115	70	130				
Surr: Toluene-d8	0.47		0.5000		93.1	70	130				
Sample ID Ics-33607	Samp1	SampType: LCS			TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: LCSS	Batch	Batch ID: 33607			RunNo: 45322						
Prep Date: 8/29/2017	Analysis Date: 8/30/2017		SeqNo: 1435744			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.2	0.025	1.000	0	118	70	130				
Toluene	0.95	0.050	1.000	0	94.8	70	130				
Surr: 1,2-Dichloroethane-d4	0.58		0.5000		116	70	130				
Surr: 4-Bromofluorobenzene	0.46		0.5000		91.3	70	130				
Surr: Dibromofluoromethane	0.55		0.5000		109	70	130				
Surr: Toluene-d8	0.48		0.5000		96.1	70	130				
Sample ID 1708f68-001ams	Samp1	ype: MS	3	TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: Zone 0'-100'	Batch ID: 33607			RunNo: 45322							
Prep Date: 8/29/2017	Analysis D)ate: 8/	30/2017	5	SeqNo: 1	435746	Units: mg/l	(g			
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.2	0.024	0.9407	0	123	61.9	146				
Toluene	0.95	0.047	0.9407	0	101	70	130				
Surr: 1,2-Dichloroethane-d4	0.54		0.4704		114	70	130				
Surr: 4-Bromofluorobenzene	0.44		0.4704		92.7	70	130				
Surr: Dibromofluoromethane	0.51		0.4704		108	70	130				
Surr: Toluene-d8	0.45		0.4704		96.2	70	130				
Sample ID 1708f68-001ams	samp1	ype: MS	SD	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List		
Client ID: Zone 0'-100'	Batcl	h ID: 33	607	F	RunNo: 4	5322					
Prep Date: 8/29/2017	Analysis D)ate: 8 /	30/2017	5	SeqNo: 1	435747	Units: mg/l	(g			
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.2	0.024	0.9506	0	121	61.9	146	0.843	20		
	0.91	0.048	0.9506		96.0	70	130	4.02	20		

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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 10
- P Sample pH Not In RangeRL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Blagg Engineering

Project: Jacquez Com 5

Sample ID 1708f68-001amsd Sa		SampType: MSD		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: Zone 0'-100'	Batch ID: 33607			RunNo: 45322						
Prep Date: 8/29/2017 Analysis Date		ate: 8/	e: 8/30/2017		SeqNo: 1435747			(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.55		0.4753		116	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.43		0.4753		89.7	70	130	0	0	
Surr: Dibromofluoromethane	0.50		0.4753		105	70	130	0	0	
Surr: Toluene-d8	0.44		0.4753		92.5	70	130	0	0	

Qualifiers:

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

Page 10 of 10

1708F68 06-Sep-17

WO#:

ANALY	ONMENTAL (SI8 RATORY	Hall Environmental A Albua TEL: 505-345-3975 I Website: www.hal	4901 querqu FAX: 5	Hawkins N e, NM 8710 05-345-410	^E 9 Sam	iple Log-in Ch	eck List
Client Name:	BLAGG	Work Order Number:	1708	F68		RcptNo: 1	
Received By: Completed By: Reviewed By:	Isalah Ortiz Erin Melendrez M ///	8/29/2017 8:00:00 AM 8/29/2017 8:58:02 AM 8/29/17		4	ICA	-	
·	/						
<u>Chain of Cus</u>	<u>todv</u>			_	_	-	
	Is intact on sample bottk	98?	Yes		No 🗌	Not Present	
2. Is Chain of C	Sustody complete?		Yes		No 🗋	Not Present	
3. How was the	sample delivered?		Cour	<u>191</u>			
<u>Log In</u>							
4. Was an atte	mpt made to cool the sa	mples?	Yes		No 🗖	na 🗖	
5. Were all san	nples received at a temp	erature of >0° C to 6.0°C	Yes		No 🗖	NA 🗍	
6. Sample(s) in	n proper container(s)?		Yes		No 🗖		
7. Sufficient sa	mple volume for indicate	d test(s)?	Yes		No 🗆		
8. Are samples	(except VOA and ONG)	properly preserved?	Yes		No 🗖		
9. Was preserv	ative added to bottles?		Yes		No 🗹	NA 🗌	
10.VOA viais ha	ive zero headspace?		Yes		No 🗆	No VOA Vials 🗹	
11. Were any sa	ample containers receive	d broken?	Yes		No 🗹	# of preserved	
	vork match bottle labels? pancies on chain of custo		Yes		No 🗆	bottles checked for pH:	>12 unless noted)
	correctly identified on C	•	Yes		No 🗆	Adjusted?	
	at analyses were reques	-	Yes		No 🗋		
	ding times able to be met customer for authorization		Yes		No 🗖	Checked by:	
<u>Special Hand</u>	ling (if applicable)						
16. Was client n	otified of all discrepancie	s with this order?	Yes		No 🗌	NA 🗹	
Person	Notified:	Date:					
By Wh	om:	Via: [] eM	ail 🗌 Ph	one 🗌 Fax	🗌 In Person	
Regard	ling:						
Client	Instructions:						
17. Additional re	emarks:		- • •				
18. <u>Cooler Into</u> Cooler No	Temp °C Conditio	weather and a second	ieal D	ste S	ligned By	4	
[1	1.0 Good	Yes		!		1	
Page 1 of	f 1	<u> 20., 00. 17. 17. 00. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19</u>	·	<u></u>	<u> </u>		- <u></u>

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	Chain	of-Cu	istody Record	Turn-Around	Time:	By Thursdat 8/31/2017			Ę.			E							
Client:	BP A	MERICA		Standard	Rust	8/31/2017		┢╍┟╌											AL RY
	Praci 1	NLINEE	line Inc	Project Name			1 km				v.ha						PK. P		
Mailing	Address			JACQU	ez Com	5		1001	Hawl								100		
<u> </u>			······································	Project #;			1		505-3							-4107			
Phone	#: (50	s) 320)-1183	1				1 61.	500-5				/sis						
	or Fax#:	<u> </u>		Project Mana	iger.			2	5										
QA/QC	Package:				/E Moskal	_	8	0 2			ଚ		S.	PCB's					
🗶 Sta	ndard		Level 4 (Full Validation)				TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH (Method 418.1)		PAH's (8310 or 8270 SIMS)		Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	ă			シ		
	litation		-	Sampler: J	and the second		TMB	H	E ÷	ç	270		N	8081 Pesticides / 8082			(רואס		
			er	On loe:	8 Yes		- :	+		5	or 8,	s	ĝ	8		8			
	<u>) (Туре) _</u> Т		<u> </u>	Sample Tem	perature: (. <i>0</i>	MTBE		의 원 이 원	poq	10	Aeta	ธิ	ticid	OA)	之	2	*	
Date	Time	Matrix	Sample Request ID	Container	Preservative	HEAL No.	+	+	TPH (Method 418.1)	EDB (Method 504.1)	s (8:	RCRA 8 Metals	IS (F	Pes	8260B (VOA)	8270 (Semi-VOA)	8260 (BTEX	CHLORIDE	Air Buthhlee (V or N)
				Type and #	Туре	1708F68	втех	Ê	ĒĒ	80	Ă	CR	nior	8	260	270	326	न	d
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+	1434		Zone 200'-300'			-003	┿╍╌┞										┍╋╋	╉	┽┼
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Dato:	Time:	Reinquish	ed by:	Received by:	l _t	Date Time				20								- Mar	
Date: 8/28/	1642	A I	I Blegg	AL LI	lail-	She was	Irkem		Bill VID:			EVRI	M	6	ATA	ст :	JTEV	e Mos	#AC
Date:	7 Time:	Relicquish		Received by:	mas	772017 (1997) Date Time	-			4 - 114									
128	nai	$ \mathcal{M} $	rWall	VTA		8/29/17 08:00													

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



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

September 06, 2017 Steve Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199

RE: Jacquez Com 5

FAX (505) 632-3903

OrderNo.: 1708G47

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/30/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1708G47

Date Reported: 9/6/2017

8/31/2017 12:51:27 PM 33647

8/31/2017 10:37:57 AM 33625

8/31/2017 10:37:57 AM 33625

8/31/2017 10:37:57 AM 33625

8/31/2017 11:35:12 AM 33627

8/31/2017 11:35:12 AM 33627

8/31/2017 1:23:02 PM

8/31/2017 1:23:02 PM

Analyst: TOM

Analyst: NSB

Analyst: DJF

33627

33627

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

Chloride

Surr: DNOP

Surr: BFB

Benzene

Toluene

Diesel Range Organics (DRO)

Motor Oil Range Organics (MRO)

Gasoline Range Organics (GRO)

EPA METHOD 8015D: GASOLINE RANGE

EPA METHOD 8260B: VOLATILES SHORT LIST

	HOD 300.0: ANIONS					Analys	st: MRA
Analyses		Result	PQL	Qual	Units	DF Date Analyzed	Batch
Lab ID:	1708G47-001	Matrix: S	SOIL		Received	Date: 8/30/2017 7:10:00 AM	
Project:	Jacquez Com 5				Collection	Date: 8/29/2017 2:34:00 PM	
CLIENT:	Blagg Engineering			C	lient Samp	le ID: Zone 500'-600'	

30

9.5

47

4.9

54-150

0.025

0.049

70-130

mg/Kg

mg/Kg

mg/Kg

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

20

1

1

1

1

1

1

1

ND

ND

ND

90.8

ND

77.3

ND

ND

Ethylbenzene	ND	0.049	mg/Kg	1	8/31/2017 11:35:12 AM	33627
Xylenes, Total	ND	0.098	mg/Kg	1	8/31/2017 11:35:12 AM	33627
Surr: 1,2-Dichloroethane-d4	116	70-130	%Rec	1	8/31/2017 11:35:12 AM	33627
Surr: 4-Bromofluorobenzene	88.9	70-130	%Rec	1	8/31/2017 11:35:12 AM	33627
Surr: Dibromofluoromethane	114	70-130	%Rec	1	8/31/2017 11:35:12 AM	33627
Surr: Toluene-d8	96.4	70-130	%Rec	1	8/31/2017 11:35:12 AM	33627

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 11
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708G47

Date Reported: 9/6/2017

8/31/2017 11:05:49 AM 33625

8/31/2017 11:05:49 AM 33625

8/31/2017 11:05:49 AM 33625

8/31/2017 1:46:57 PM

8/31/2017 1:46:57 PM

8/31/2017 1:01:29 PM

Analyst: NSB

Analyst: DJF

33627

33627

33627

33627

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33627

33627

33627

33627

33627

Hall Environmental Analysis Laboratory, Inc.

Diesel Range Organics (DRO)

Sur: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Motor Oil Range Organics (MRO)

Gasoline Range Organics (GRO)

Sur: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

EPA METHOD 8015D: GASOLINE RANGE

EPA METHOD 8260B: VOLATILES SHORT LIST

CLIENT: Blagg Engineering			Client Samp	e ID: Zone 600'-700'						
Project: Jacquez Com 5		Collection Date: 8/29/2017 2:39:00 PM								
Lab ID: 1708G47-002	Matrix: S	SOIL	Received Date: 8/30/2017 7:10:00 AM							
Analyses	Result	PQL Qua	al Units	DF Date Analyzed	Batch					
EPA METHOD 300.0: ANIONS		·		Analy	/st: MRA					
Chloride	ND	30	mg/Kg	20 8/31/2017 1:28:40 Pi	M 33647					
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	•		Analy	yst: TOM					

ND

ND

92.4

ND

79.1

ND

ND

ND

ND

119

90.7

116

93.9

9.6

48

4.7

70-130

54-150

0.024

0.047

0.047

0.095

70-130

70-130

70-130

70-130

mg/Kg

mg/Kg

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

%Rec

%Rec

1

1

1

1

1

1

1

1

1

1

1

1

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 11
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708G47 Date Reported: 9/6/2017

CLIENT: Blagg Engineering			Client Sampl	e ID: Zo	ne 700'-800'				
Project: Jacquez Com 5			Collection	Date: 8/2	29/2017 2:45:00 PM				
Lab ID: 1708G47-003	Matrix:	SOIL	Received Date: 8/30/2017 7:10:00 AM						
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analyst	MRA			
Chloride	ND	30	mg/Kg	20	8/31/2017 1:41:04 PM	33647			
EPA METHOD 8015M/D: DIESEL RA		5			Analyst	: TOM			
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/31/2017 11:33:46 AM	33625			
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	8/31/2017 11:33:46 AM	33625			
Sur: DNOP	92.6	70-130	%Rec	1	8/31/2017 11:33:46 AM	33625			
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/31/2017 2:58:51 PM	33627			
Surr: BFB	79.1	54-150	%Rec	1	8/31/2017 2:58:51 PM	33627			
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF			
Benzene	ND	0.023	mg/Kg	1	8/31/2017 1:30:23 PM	33627			
Toluene	ND	0.046	mg/Kg	1	8/31/2017 1:30:23 PM	33627			
Ethylbenzene	ND	0.046	mg/Kg	1	8/31/2017 1:30:23 PM	33627			
Xylenes, Total	ND	0.093	mg/Kg	1	8/31/2017 1:30:23 PM	33627			
Surr: 1,2-Dichloroethane-d4	113	70-130	%Rec	1	8/31/2017 1:30:23 PM	33627			
Surr: 4-Bromofluorobenzene	91.8	70-130	%Rec	1	8/31/2017 1:30:23 PM	33627			
Surr: Dibromofluoromethane	111	70-130	%Rec	1	8/31/2017 1:30:23 PM	33627			
Surr: Toluene-d8	93.9	70-130	%Rec	1	8/31/2017 1:30:23 PM	33627			

Hall Environmental Analysis Laboratory, Inc.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 1
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL.	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708G47

Date Reported: 9/6/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Blagg Engineering			Client Sampl	e ID: Zo	ne 800'-900'			
Project:	Jacquez Com 5			Collection	Date: 8/2	29/2017 2:51:00 PM			
Lab ID:	1708G47-004	Matrix: SOIL Received			red Date: 8/30/2017 7:10:00 AM				
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA MET	HOD 300.0: ANIONS					Analys	t MRA		
Chloride		ND	30	mg/Kg	20	8/31/2017 1:53:29 PM	33647		
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS	5			Analys	t: TOM		
Diesel Ra	ange Organics (DRO)	ND	9.5	mg/Kg	1	8/31/2017 12:01:50 PM	33625		
Motor Oil	Range Organics (MRO)	ND	47	mg/Kg	1	8/31/2017 12:01:50 PM	33625		
Sur: D	DNOP	93.0	70-130	%Rec	1	8/31/2017 12:01:50 PM	33625		
EPA MET	HOD 8015D: GASOLINE R	ANGE				Analys	t: NSB		
Gasoline	Range Organics (GRO)	ND	4.7	mg/Kg	1	8/31/2017 3:22:51 PM	33627		

Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/31/2017 3:22:51 PM	33627
Sur: BFB	78.3	54-150	%Rec	1	8/31/2017 3:22:51 PM	33627
EPA METHOD 8260B: VOLATILES SH	IORT LIST				Analyst	DJF
Benzene	ND	0.024	mg/Kg	1	8/31/2017 1:59:11 PM	33627
Toluene	ND	0.047	mg/Kg	1	8/31/2017 1:59:11 PM	33627
Ethyibenzene	ND	0.047	mg/Kg	1	8/31/2017 1:59:11 PM	33627
Xylenes, Total	ND	0.095	mg/Kg	1	8/31/2017 1:59:11 PM	33627
Surr: 1,2-Dichloroethane-d4	115	70-130	%Rec	1	8/31/2017 1:59:11 PM	33627
Surr: 4-Bromofluorobenzene	90.3	70-130	%Rec	1	8/31/2017 1:59:11 PM	33627
Surr: Dibromofluoromethane	113	70-130	%Rec	1	8/31/2017 1:59:11 PM	33627
Sur: Toluene-d8	92.2	70-130	%Rec	1	8/31/2017 1:59:11 PM	33627

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 11
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	s	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708G47 Date Reported: 9/6/2017

Analyst: TOM

Analyst: NSB

Analyst: DJF

33627

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33627

33627

33627

33627

33627

8/31/2017 12:30:02 PM 33625

8/31/2017 12:30:02 PM 33625

8/31/2017 12:30:02 PM 33625

8/31/2017 3:46:52 PM

8/31/2017 3:46:52 PM

8/31/2017 2:28:03 PM

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS

Diesel Range Organics (DRO)

Surr: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Motor Oil Range Organics (MRO)

Gasoline Range Organics (GRO)

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

EPA METHOD 8015D: GASOLINE RANGE

EPA METHOD 8260B: VOLATILES SHORT LIST

CLIENT:	Blagg Engineering			Client Samp	le ID: Zo	one 900'-1000'	
Project:	Jacquez Com 5			Collection	Date: 8/2	29/2017 2:56:00 PM	
Lab ID:	1708G47-005	Matrix:	SOIL	Received	Date: 8 /3	30/2017 7:10:00 AM	
Analyses		Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA MET	HOD 300.0: ANIONS					Analy	st: MRA
Chloride		ND	30	mg/Kg	20	8/31/2017 2:30:42 PN	1 33647

9.8

49

4.6

70-130

54-150

0.023

0.046

0.046

0.092

70-130

70-130

70-130

70-130

mg/Kg

mg/Kg

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

%Rec

%Rec

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1

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1

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1

1

1

1

ND

ND

87.6

ND

80.0

ND

ND

ND

ND

113

91.1

114

94.4

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 5 of 11
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708G47

Date Reported: 9/6/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering			Client Samp	le ID: Zo	ne 1000'-1100'	
Project: Jacquez Com 5			Collection	Date: 8/2	29/2017 3:01:00 PM	
Lab ID: 1708G47-006	Matrix:	Received	Date: 8/3	0/2017 7:10:00 AM		
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: MRA
Chloride	ND	30	mg/Kg	20	8/31/2017 2:43:06 PM	33647
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	6			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	8/31/2017 12:58:03 PM	1 33625
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	8/31/2017 12:58:03 PM	1 33625
Surr: DNOP	96.6	70-130	%Rec	1	8/31/2017 12:58:03 PM	33625
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/31/2017 4:10:54 PM	33627
Sur: BFB	80.2	54-150	%Rec	1	8/31/2017 4:10:54 PM	33627

Sur: BFB	80.2	54-150	%Rec	1	8/31/2017 4:10:54 PM	33627
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.024	mg/Kg	1	8/31/2017 2:57:00 PM	33627
Toluene	ND	0.049	mg/Kg	1	8/31/2017 2:57:00 PM	33627
Ethylbenzene	ND	0.049	mg/Kg	1	8/31/2017 2:57:00 PM	33627
Xylenes, Total	ND	0.098	mg/Kg	1	8/31/2017 2:57:00 PM	33627
Surr: 1,2-Dichloroethane-d4	116	70-130	%Rec	1	8/31/2017 2:57:00 PM	33627
Surr: 4-Bromofluorobenzene	90.7	70-130	%Rec	1	8/31/2017 2:57:00 PM	33627
Surr: Dibromofluoromethane	112	70-130	%Rec	1	8/31/2017 2:57:00 PM	33627
Surr: Toluene-d8	95.3	70-130	%Rec	1	8/31/2017 2:57:00 PM	33627

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 11
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708G47

Date Reported: 9/6/2017

8/31/2017 3:25:57 PM

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33627

33627

33627

33627

Hall Environmental Analysis Laboratory, Inc.

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Sur: Toluene-d8

CLIENT: Blagg Engineering Project: Jacquez Com 5 Lab ID: 1708G47-007	Matrix:	SOIL	Client Sample ID: Zone 1100'-1200' Collection Date: 8/29/2017 3:06:00 PM Received Date: 8/30/2017 7:10:00 AM					
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	MRA		
Chloride	ND	30	mg/Kg	20	8/31/2017 2:55:31 PM	33647		
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	3			Analyst	TOM		
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	8/31/2017 1:26:05 PM	33625		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	8/31/2017 1:26:05 PM	33625		
Sur: DNOP	93.0	70-130	%Rec	1	8/31/2017 1:26:05 PM	33625		
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/31/2017 4:34:56 PM	33627		
Sur: BFB	78.4	54-150	%Rec	1	8/31/2017 4:34:56 PM	33627		
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	: DJF		

0.023

0.047

0.047

0.094

70-130

70-130

70-130

70-130

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

%Rec

%Rec

%Rec

ND

ND

ND

ND

112

90.0

112

92.9

Qualifiers:	•	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 7 of 11
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: 1708G47

06-Sep-17

Hall Environmental Analysis Laboratory, Inc.

Client: Project:		Engineering ez Com 5					-				
Sample ID	MB-33647	SampTyp	e: mt	olk	Tes	Code: El	PA Method	300.0: Anion	\$		
Client ID:	PBS	Batch II): 33 (647	F	tunNo: 4	5341				
Prep Date:	8/31/2017	Analysis Date	e: 8/	31/2017	5	eqNo: 1	437822	Units: mg/M	ģ		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-33647	SampTyp	e: Ics	5	Tes	Code: El	PA Method	300.0: Anion	8		
Client ID:	LCSS	Batch II): 33	647	F	tunNo: 4	5341				
Prep Date:	8/31/2017	Analysis Date	e: 8 /	31/2017	5	eqNo: 1	437823	Units: mg/K	ģ		
Anatyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	91.4	90	110	·		

Qualifiers:

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

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WO#: 1708G47

06-Sep-17

Client: Blagg E Project: Jacquez	ngineering Com 5										
Sample iD MB-33625	SampT	ype: MI	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch	ID: 33	625	RunNo: 45328							
Prep Date: 8/30/2017	Analysis D	ate: 8/	31/2017	S	SegNo: 1	436167	Units: mg/l	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Sur: DNOP	9.9		10.00		98.8	70	130				
Sample ID LCS-33625	SampT	ype: LC	:9	Tes	tCode: El	PA Method	8015M/D: DI	esel Rang	e Organics	`·	
Client ID: LCSS	Batch	ID: 33	625	F	RunNo: 4	5328					
Prep Date: 8/30/2017	Analysis D	ate: 8/	31/2017	5	SegNo: 1	436348	Units: mg/l	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	51	10	50.00	0	102	73.2	114				
Surt. DNOP	4.9		5.000		98.9	70	130				

Qualifiers:

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

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QC SUMMARY REPORT

WO#: 1708G47

06-Sep-17

Hall Environmenta	l Analysis	Laboratory	, Inc.
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	Engineering z Com 5										
Sample ID MB-33627	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch	n ID: 33	627	F	RunNo: 45344						
Prep Date: 8/30/2017 Analysis Da			e: 8/31/2017 SeqNo: 14				1437225 Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quai	
Gasoline Range Organics (GRO)	ND	5.0									
Sur: BFB	810		1000		80.8	54	150				
Sample ID LCS-33627	SampT	ype: LC	:S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang			
Client ID: LCSS	Batch	n ID: 33	627	F	RunNo: 4	5344					
Prep Date: 8/30/2017	Analysis D)ate: 8/	31/2017	8	SeqNo: 1	437226	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.3	76.4	125				
Surr. BFB	890		1000		88.5	54	150				

Qualifiers:

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

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WO#: 1708G47

06-Sep-17

	Engineering z Com 5										
Sample ID mb-33627	SampT	'ype: Mi	BLK	TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batch	1 ID: 33	627	F	RunNo: 45355						
Prep Date: 8/30/2017	Analysis D)ate: 8/	31/2017	5	SeqNo: 1437307 Units:			g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.025									
Foluene	ND	0.050									
Ethylbenzene	ND	0.050									
Kylenes, Total	ND	0.10									
Surr: 1,2-Dichloroethane-d4	0.58		0.5000		115	70	130				
Surr: 4-Bromofluorobenzene	0.45		0.5000		89.3	70	130				
Surr: Dibromofluoromethane	0.57		0.5000		113	70	130				
Surr: Toluene-d8	0.48		0.5000		95.3	70	130				
Sample ID Ics-33627	Samp1	ype: LC	;s	TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: LCSS	Batcl	n ID: 33	627	F	RunNo: 4	5355					
Prep Date: 8/30/2017	Analysis D)ate: 8/	31/2017	5	SeqNo: 1	437308	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quał	
Benzene	1.1	0.025	1.000	0	109	70	130				
Foluene	0.92	0.050	1.000	0	91.7	70	130				
Surr: 1.2-Dichloroethane-d4	0.56		0.5000		113	70	130				
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.4	70	130				
· · · · · · · · · · · · · · · · · · ·	0.46 0.54		0.5000 0.5000		92.4 107	70 70	130 130				

Qualifiers:

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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental A Albu TEL: S05-345-3975 Website: www.hal	4901 Hawkins I querque, NM 871 FAX: 505-345-41	09 Samj 07	ole Log-In Cł	neck List
Client Name: BLAGG	Work Order Number:	1708G47		ReptNo:	1
Received By: Anne Thome Completed By: Anne Thome Reviewed By: M.L.	8/30/2017 7:10:00 AM 8/30/2017 7:49:50 AM 8/30/17		Arre I Arre I	-	
Chain of Custody					
1. Custody seals intact on sample bottles?		Yes 🗆	No 🗌	Not Present 🗹	
2. Is Chain of Custody complete?		Yes 🗹	No 🗆	Not Present 🗌	
3. How was the sample delivered?		Courier			
Log In					
4. Was an attempt made to cool the samples	7	Yes 🗹	No 🗌	na 🗆	
5. Were all samples received at a temperature	of >0°C to 6.0°C	Yes 🗹	No 🗔		
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(3)?	Yes 🗹	No 🗋		
8. Are samples (except VOA and ONG) prope	ity preserved?	Yes 🗹	No 🗔		
9. Was preservative added to bottles?		Yes 🗋	No 🗹	NA 🗆	
10.VOA vizis have zero headspace?		Yes	No 🗆	No VOA Viais 🗹	
11. Were any sample containers received brok	en?	Yes 🗆	No 🗹 🏻	# of preserved	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗖	bottles checked for pH: (<2 or	>12 unless noted)
13. Are matrices correctly identified on Chain of	Custody?	Yes 🗹	No 🗌	Adjusted?	
14, is it clear what analyses were requested?		Yes 🗹	No 🗌		
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗖	Checked by:	
<u>Special Handling (If applicable)</u> 16. Was client notified of all discrepancies with	this order?	Yes 🗌	No 🗌	na 🗹	1

Person Notified:	Date
By Whom:	Via: eMail Phone Fax I In Person
Regarding:	
Client Instructions:	

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0		Yes			

Page I of 1

Client	Chain BP Av	-of-CL	istody Record	4	Around tandard		∢ Rush	By Fridar 9/1/2017														ral Or	
	Ri Aldo	ENGLIDE	ering Inc.	Proje	ct Name) :											ment					JR	•
Mailin	g Address	:		1.	JACO	UEZ	Com	5		49	01 H								M 87	109			
<u>-</u>	·		· · · · · · · · · · · · · · · · · · ·	Proje	ct #:						∍l. 50						•		-4107				
Phone	#:(505	;) 320	-1183	1					-		1. 00	00					Req						
	or Fax#:			Proje	ct Mana	iger:			(only)	Ô					04)							Τ
QA/QC	Package:				STEN	εN	NOSKAL		(8021)	IS OF	MF/			s)		4,SC	PCB's			\mathfrak{D}			
Sta			Level 4 (Full Validation)						S	9	8 S			SIMS)		٩ Q	2 PC			(JINO			
Accrea					oler: J				TMB'	TPH (Gas	2	(1)	(1)	270		Š	8082						Î
	D (Type)			On IC			S	G NO	+	+	B B	418	504	or 8:	sis	ő	les /		ð	31			۲ ۲
Date	Time	Matrix	Sample Request ID	Соп	ntainer e and #	Prese	ervative ype		BTEX + MTBE	BTEX + MTBE	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides /	8260B (VOA)	8270 (Semi-VOA)	(B240) (BIEX	CHINE		Air Bubbles (Y or N)
3/20/2017	1434	SOL	ZONE 500-600'	40	3×1	a	0L	-001			X									X	×		Τ
	1439	1	ZONE 600'- 700'		1		į	202			i									1	1		
	1445		ZONE 700'- 800'		l.			73												Π	Ш	T	Τ
	1451		ZONE 80- 900'					-204											\square	Π	T		T
	1456		Zone 900'- 1000'		1			TUS															1
	1501		ZONE 1000-1100					telo												\square	\square		T
	150%		20NE 1100 - 1200					707													田	_	\mp
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Date:		Relinquish	J Sloggy	Receiv	Nistr	علماه	ets_	Date Time Date Time	Rer	nark	, c	Bar ∕ID :		lixo		enta VRN		\$	reve	: Me	544	•	
Date:	Time: KBU	Δ.	at DO a ta		<u>A</u> b.	<u> </u>	X	08/30/17 07/0		•• 													

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 06, 2017

Steve Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: JACQUEZ COM 5

OrderNo.: 1708H29

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/31/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1708H29 Date Reported: 9/6/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Blagg Engineering			Client Sampl	e ID: Zo	ne 1200'-1493'	
Project:	JACQUEZ COM 5			Collection	Date: 8/3	0/2017 2:02:00 PM	
Lab ID:	1708H29-001	Matrix:	SOIL	Received 1	Date: 8/3	1/2017 7:10:00 AM	
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch
	THOD 300.0: ANIONS					Analys	t: CJS
Chloride	•	ND	30	mg/Kg	20	9/1/2017 12:03:10 PM	33671
EPA ME	THOD 8015M/D: DIESEL RA	ANGE ORGANICS	6			Analys	t: TOM
Diesel R	ange Organics (DRO)	ND	9.4	mg/Kg	1	9/1/2017 11:56:25 AM	33650
Motor O	il Range Organics (MRO)	ND	47	mg/Kg	1	9/1/2017 11:56:25 AM	33650
Sur:	DNOP	98.0	70-130	%Rec	1	9/1/2017 11:56:25 AM	33650

	00.0	10 100	701100	•	0.1/2011 11.00.201 11.	00000
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/1/2017 2:39:26 PM	33653
Sur: BFB	83.1	54-150	%Rec	1	9/1/2017 2:39:26 PM	33653
EPA METHOD 8021B: VOLATILES					Analyst	C NSB
Benzene	ND	0.024	mg/Kg	1	9/1/2017 2:39:26 PM	33653
Toluene	ND	0.048	mg/Kg	1	9/1/2017 2:39:26 PM	33653
Ethylbenzene	ND	0.048	mg/Kg	1	9/1/2017 2:39:26 PM	33653
Xylenes, Total	ND	0.097	mg/Kg	1	9/1/2017 2:39:26 PM	33653
Surr: 4-Bromofluorobenzene	120	66.6-132	%Rec	1	9/1/2017 2:39:26 PM	33653

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits Page 1 of 6
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1708H29

Date Reported: 9/6/2017

9/1/2017 3:51:22 PM

1

33653

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Hall Environmental Analysis Laboratory, Inc.

-

Surr: 4-Bromofluorobenzene

CLIENT: Blagg Engineering			Client Samp	le ID: Zo	ne 1493'-1855'	
Project: JACQUEZ COM 5			Collection	Date: 8 /3	0/2017 1:56:00 PM	
Lab ID: 1708H29-002	Matrix:	SOIL	Received	Date: 8 /3	1/2017 7:10:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				-	Analyst	CJS
Chloride	ND	30	mg/Kg	20	9/1/2017 12:40:24 PM	33671
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	5			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	9/1/2017 12:21:06 PM	33650
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/1/2017 12:21:06 PM	33650
Surr: DNOP	110	70-130	%Rec	1	9/1/2017 12:21:06 PM	33650
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/1/2017 3:51:22 PM	33653
Surr: BFB	80.1	54-150	%Rec	1	9/1/2017 3:51:22 PM	33653
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.024	mg/Kg	1	9/1/2017 3:51:22 PM	33653
Toluene	ND	0.048	mg/Kg	1	9/1/2017 3:51:22 PM	33653
Ethylbenzene	ND	0.048	mg/Kg	1	9/1/2017 3:51:22 PM	33653
Xylenes, Total	ND	0.096	mg/Kg	1	9/1/2017 3:51:22 PM	33653

66.6-132

%Rec

118

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

WO#: 1708H29

06-Sep-17

	; Engineering QUEZ COM 5		
Sample ID MB-33671	SampType: mblk	TestCode: EPA Method 300.0: A	nions
Client ID: PBS	Batch ID: 33671	RunNo: 45372	
Prep Date: 9/1/2017	Analysis Date: 9/1/2017	SeqNo: 1438456 Units: r	ng/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLir	nit %RPD RPDLimit Qual
Chloride	ND 1.5		
Sample ID LCS-33671	SampType: Ics	TestCode: EPA Method 300.0: A	nions
Client ID: LCSS	Batch ID: 33671	RunNo: 45372	
Prep Date: 9/1/2017	Analysis Date: 9/1/2017	SeqNo: 1438457 Units: r	ng/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLir	nit %RPD RPDLimit Qual
Chloride	14 1.5 15.00	0 93.7 90 1	10

Qualifiers:

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

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QC SUMMARY REPORT Hell Environmental Analysis I aborator

WO#: 1708H29

06-Sep-17

Hall Environmental Analysis Laboratory, Inc.

Client:Blagg EngineeringProject:JACQUEZ COM 5

Sample ID LCS-33650	SampT	ype: LC	:S	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch	ID: 33	650	F	RunNo: 4	5364				
Prep Date: 8/31/2017	Analysis D	ate: 9/	1/2017	5	SeqNo: 1	437547	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.0	73.2	114			
0			C 000		05.4	70	130			
Surr: DNOP	4.8		5.000		95.4	70	130			
Sample ID MB-33650		ype: ME		Tes			8015M/D: Di	esel Range	e Organics	
····	SampT	ype: ME 1D: 33	BLK			PA Method		esel Range	9 Organics	
Sample ID MB-33650	SampT	1D: 33	BLK	F	tCode: El	PA Method 5364		Ū	e Organics	
Sample ID MB-33650 Client ID: PBS	SampT Batch	1D: 33	BLK 650 /1/2017	F	tCode: El RunNo: 4	PA Method 5364	8015M/D: Die	Ū	o Organics RPDLimit	Qual
Sample ID MB-33650 Client ID: PBS Prep Date: 8/31/2017 Analyte	SampT Batch Analysis D	ate: 9/	BLK 650 /1/2017	F S	tCode: El RunNo: 4 SeqNo: 14	PA Method 5364 437548	8015M/D: Die Units: mg/N	(g	•	Qual
Sample ID MB-33650 Client ID: PBS Prep Date: 8/31/2017	SampT Batch Analysis D Result	n ID: 33 ate: 9/	BLK 650 /1/2017	F S	tCode: El RunNo: 4 SeqNo: 14	PA Method 5364 437548	8015M/D: Die Units: mg/N	(g	•	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- **RL** Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 4 of 6

Client:Blagg EngineeringProject:JACQUEZ COM 5

Sample ID MB-33653	Samp	ype: MI	3LK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	0	
Client ID: PBS	Batch	h ID: 33	653	F	RunNo: 4	5374				
Prep Date: 8/31/2017	Anatysis D	Date: 9/	1/2017	5	SeqNo: 1	438048	Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 810	5.0	1000		80.6	54	150			
Sample ID LCS-33653	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gase	line Rang	Ð	
Client ID: LCSS	Batch	h ID: 33	653	F	RunNo: 4	5374				
Prep Date: 8/31/2017	Analysis D)ate: 9/	1/2017	5	SeqNo: 1	438049	Units: mg/H	(g		
				SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte	Result	PQL	SPR value		701120					duu
Analyte Gasoline Range Organics (GRO)	Result 24	PQL 5.0	25.00	011(1(e) Val	96.1	76.4	125			

Qualifiers:

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

1708H29

WO#:

06-Sep-17

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Client: Blagg Engineering

Project: JACQUEZ COM 5

Sample ID MB-33653	SampT	'ype: ME	BLK	Tes	tCode: El	PA Method	tiles						
Client ID: PBS	Batch	n ID: 33	653	F	RunNo: 45374								
Prep Date: 8/31/2017	Analysis D)ate: 9/	1/2017	5	SeqNo: 1438062 Units:				nits: mg/Kg				
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											
	=												
Sur: 4-Bromofluorobenzene	1.2		1.000		122	66.6	132		=				
•	1.2	ype: LC					132 8021B: Volat	dies	<u> </u>				
Surr: 4-Bromofluorobenzene	1.2 Samp1	'ype: LC n ID: 33	S	Tes		PA Method		Liles		<u></u>			
Sur: 4-Bromofluorobenzene Sample ID LCS-33653	1.2 Samp1	n ID: 33	:S 653	Tes F	tCode: El	PA Method 5374				<u></u>			
Sur: 4-Bromofluorobenzene Sample ID LCS-33653 Client ID: LCSS	1.2 SampT Batcl	n ID: 33	:S 653 1/2017	Tes F	tCode: El RunNo: 4	PA Method 5374	8021B: Volat		RPDLimit	Qual			
Surr: 4-Bromofluorobenzene Sample ID LCS-33653 Client ID: LCSS Prep Date: 8/31/2017	1.2 Samp1 Batcl Analysis [n ID: 33 Date: 9/	:S 653 1/2017	Tes F	tCode: El RunNo: 4 SeqNo: 1/	PA Method 5374 138063	8021B: Volat Units: mg/K	(g	RPDLimit	Qual			
Surr: 4-Bromofluorobenzene Sample ID LCS-33653 Client ID: LCSS Prep Date: 8/31/2017 Analyte	1.2 SampT Batc Analysis D Result	n ID: 33 Date: 9/	:S 653 1/2017 SPK value	Tes F S SPK Ref Val 0	tCode: El RunNo: 4 SeqNo: 14 %REC	PA Method 5374 138063 LowLimit	8021B: Volat Units: mg/K HighLimit	(g	RPDLimit	Qual			
Surr: 4-Bromofluorobenzene Sample ID LCS-33653 Client ID: LCSS Prep Date: 8/31/2017 Analyte Benzene Toluene	1.2 Samp1 Batcl Analysis I Result 1.1	n ID: 33 Date: 9/ PQL 0.025	S 653 1/2017 SPK value 1.000	Tes F SPK Ref Val 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 114	PA Method 5374 138063 LowLimit 80	8021B: Volat Units: mg/K HighLimit 120	(g	RPDLimit	Qual			
Sur: 4-Bromofluorobenzene Sample ID LCS-33653 Client ID: LCSS Prep Date: 8/31/2017 Analyte Benzene	1.2 Samp1 Batcl Analysis [<u>Result</u> 1.1 1.1	n ID: 33 Date: 9/ PQL 0.025 0.050	55 653 1/2017 SPK value 1.000 1.000	Tes F SPK Ref Val 0 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 114 113	PA Method 5374 138063 LowLimit 80 80	8021B: Volat Units: mg/M HighLimit 120 120	(g	RPDLimit	Qual			

Qualifiers:

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

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06-Sep-17

1708H29

HALL ENVIRONMENTAL ANALYSIS LABORATORY	TEL: 505-345-3975	4901 Hawkins N guergue, NM 8710	⁷⁵ ⁷⁹ Sam	pie Log-In Cl	heck List
Client Name: BLAGG	Work Order Number:	1708H29		RcptNo:	1
Received By: Anne Thome I	8/31/2017 7:10:00 AM		Arre II-	-	
Completed By: Anne Thoma	B/31/2017 8:14:11 AM		am Im	-	
Reviewed By: IMD (9-31-2017				
Chain of Custody					
1. Custody seals intact on sample bottles?		Yes 🗌	No 🗌	Not Present 🗹	
2. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?		Courier			
Log In					
4. Was an attempt made to cool the samples?		Yea 🗹	No 🗌	na 🗆	
5. Were all samples received at a temperature of	of >0°C to 6.0°C	Yes 🗹	No 🗆	NA 🗖	
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)	?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) property	preserved?	Yes 🗹	No 🗆	_	
9. Was preservative added to bottles?		Yes, 🗔	No 🗹	NA 🗖	
10.VOA vials have zero headspace?		Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broker	1?	Yes 🗖	No 🗹	# of preserved	
		-		bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗆	for pH: (<2 or	r >12 unless noted
13. Are matrices correctly identified on Chain of C	Sustody?	Yes 🗹	No 🗆	Adjusted?	
4. Is it clear what analyses were requested?		Yes 🗹	No 🗆		
 Were all holding times able to be met? (If no, notify customer for authorization.) 		Yes 🗹	No 🗌	Checked by:	
Special Handling (if applicable)					
16. Was client notified of all discrepancies with th	is order?	Yes 🗆	No 🗖	NA 🗹	
Person Notified:	Date]
By Whorn:	Via: (🗌 eMail 📋 Ph	one 门 Fax	📋 in Person	-
Regarding:					
Client Instructions:					
17. Additional remarks:					
18. <u>Cooler Information</u> Cooler No Temp °C Condition Sea	I Intact Seal No 5	Seal Date	Sinnert By I		
1 1.8 Good Yes			Signed By		
					<u> </u>
Page 1 of 1					

.

Client:	BP Ame BLACC E Address	RICA AGADEE :	Istody Record	Turn-Around Standard Project Name JACQU Project #:	KRush		Monday 9-4-2017 508/31/17			01 H al. 50	awki	NN www ins P	AL w.hal NE - 975	.YS lienv Alb F	iron uque	SL ment erqu 505-	Allal.co	30 om M 87 -410	R /	NT		
email o	Package: Idard	<u>,) 320 ·</u>	Level 4 (Full Validation)		ger: E Moskal SPF BLAGG			EMB's (8021)	H (Gas only)	DRO / MRO)		(SIMS)			S	ues					
Date	AP) (Type)_ Time	Matrix	Sample Request ID	On ice: A Standard Samuel Com	Preservative Type	EI.No 7/8		BTEX + MORE + Th	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB	8260B (VOA)	8270 (Semi-VOA)	CHLOCIDE			Air Bubbles (Y or N)
9 <u>/30/17</u> 	1402 1356	<u>5016</u> 11	Zone 1200'-1493' Zone 1493'-1855'	4 02 × 1 n	COOL N		702	XX		××									X			
Date: 8/36/17	1552	Relinquish	H Blegg	Received by:	. Wall	Di Bi	ate Time 36 / 17 155 Z_ ate Time	Ren		s: B.			EVR	M		-	(chin	ACT 2	STE	re M	10580	
8/30/17	1 /		ht Walst	UQ.	wh	18/3	117 07/0															

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

September 14, 2017 Steve Moskal Blagg Engineering P. O. Box 87 Bloomfield, NM 87413 TEL: (505) 632-1199 FAX (505) 632-3903

RE: Jacquez COM 5

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

OrderNo.: 1709295

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/7/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1709295

Date Reported: 9/14/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Jacquez COM 5

1709295-001

Project:

Lab ID:

Client Sample ID: Historic Pit Spoils Pile 5-ptCollection Date: 9/6/2017 12:05:00 PMMatrix: SOILReceived Date: 9/7/2017 7:15:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	9/11/2017 10:18:12 AM	33778
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/8/2017 11:31:41 AM	33745
Sur: BFB	82.5	70-130	%Rec	1	9/8/2017 11:31:41 AM	33745
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	;			Analyst	TOM
Diesel Range Organics (DRO)	70	9.2	mg/Kg	1	9/8/2017 11:27:05 AM	33747
Motor Oil Range Organics (MRO)	410	46	mg/Kg	1	9/8/2017 11:27:05 AM	33747
Sur. DNOP	91.3	70-130	%Rec	1	9/8/2017 11:27:05 AM	33747
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.024	mg/Kg	1	9/8/2017 11:31:41 AM	33745
Toluene	ND	0.049	mg/Kg	1	9/8/2017 11:31:41 AM	33745
Ethylbenzene	ND	0.049	mg/Kg	1	9/8/2017 11:31:41 AM	33745
Xylenes, Total	ND	0.097	mg/Kg	1	9/8/2017 11:31:41 AM	33745
Surr: 1,2-Dichloroethane-d4	124	70-130	%Rec	1	9/8/2017 11:31:41 AM	33745
Surr: 4-Bromofluorobenzene	83.0	70-130	%Rec	1	9/8/2017 11:31:41 AM	33745
Surr: Dibromofluoromethane	123	70-130	%Rec	1	9/8/2017 11:31:41 AM	33745
Surr: Toluene-d8	94.7	70-130	%Rec	1	9/8/2017 11:31:41 AM	33745

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 6
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Analytical Report Lab Order 1709295

Date Reported: 9/14/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses	Result	PQL Qual Units	DF Date Analyzed	Batch
Lab ID: 1709295-002	Matrix:	SOIL Received	l Date: 9/7/2017 7:15:00 AM	
Project: Jacquez COM 5		Collection	Date: 9/6/2017 12:12:00 PM	
CLIENT: Blagg Engineering		Client Sam	ple ID: East Pad Surface 5-pt	

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: MRA
Chloride	ND	30	mg/Kg	20	9/11/2017 10:30:36 AM	33778
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/8/2017 12:00:30 PM	33745
Sur: BFB	84.9	70-130	%Rec	1	9/8/2017 12:00:30 PM	33745
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	5			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	9/8/2017 10:59:04 AM	33747
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	9/8/2017 10:59:04 AM	33747
Sur: DNOP	85.0	70-130	%Rec	1	9/8/2017 10:59:04 AM	33747
EPA METHOD 8260B: VOLATILES	SHORT LIST	•			Analys	t DJF
Benzene	ND	0.024	mg/Kg	1	9/8/2017 12:00:30 PM	33745
Toluene	ND	0.049	mg/Kg	1	9/8/2017 12:00:30 PM	33745
Ethylbenzene	ND	0.049	mg/Kg	1	9/8/2017 12:00:30 PM	33745
Xylenes, Total	ND	0.098	mg/Kg	1	9/8/2017 12:00:30 PM	33745
Surr: 1,2-Dichloroethane-d4	124	70-130	%Rec	1	9/8/2017 12:00:30 PM	33745
Surr: 4-Bromofluorobenzene	85.4	70-130	%Rec	1	9/8/2017 12:00:30 PM	33745
Surr: Dibromofluoromethane	120	70-130	%Rec	1	9/8/2017 12:00:30 PM	33745
Surr: Toluene-d8	93.9	70-130	%Rec	1	9/8/2017 12:00:30 PM	33745

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 6
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	w	Sample container temperature is out of limit as specified

Result

14

PQL

1.5

Client: Project:		agg Engineering Equez COM 5							
Sample ID	MB-33778	SampType	: mbik	Tes	tCode: EPA Metho	d 300.0: Anions	3		
Client ID:	PBS	Batch ID	33778	F	RunNo: 45542				
Prep Date:	9/8/2017	Analysis Date	9/11/2017	8	SeqNo: 1443846	Units: mg/K g	9		
Analyte		Result P	QL SPK value	SPK Ref Val	%REC LowLimit	t HighLimit	%RPD	RPDLimit	Quat
Chloride		ND	1.5						
Sample ID	LCS-33778	SampType	: Ics	Tes	tCode: EPA Metho	d 300.0: Anlons	3		
Client ID: I	LCSS	Batch ID	33778	F	RunNo: 45542				
Prep Date:	9/8/2017	Analysis Date	9/11/2017	5	SeqNo: 1443847	Units: mg/K	g		

SPK value SPK Ref Val %REC

0

15.00

LowLimit

90

91.1

HighLimit

110

Qualifiers:

Analyte

Chioride

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

WO#: 1709295

%RPD

RPDLimit

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Qual

14-Sep-17

	Engineering COM 5									
Sample ID MB-33747	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch	n ID: 33	747	RunNo: 45495						
Prep Date: 9/7/2017	Analysis D	ate: 9/	8/2017	٤	SeqNo: 1	442120	Units: mg/h	۲g		
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								
Sur: DNOP	9.8		10.00		98.3	70	130			
Sample ID LCS-33747	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: DI	esel Range	e Organics	
Client ID: LCSS	Batch	n ID: 33	747	F	RunNo: 4	5495				
Prep Date: 9/7/2017	Analysis D	ate: 9/	8/2017	5	SeqNo: 1	442271	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.6	73.2	114			
Surr: DNOP	4.5		5.000		89.7	70	130			

Qualifiers:

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

Page 4 of 6

14-Sep-17

QC SUMMARY REPORT

Blagg Engineering

Client:

Hall Environmental Analysis Laboratory, Inc.

Project: Jacquez	COM 5											
Sample ID mb-33745	SampT	ype: ME	BLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch	n ID: 33	745	RunNo: 45532								
Prep Date: 9/7/2017	Analysis Date: 9/8/2017			5	eqNo: 1	443300	Units: mg/H					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quat		
Benzene	ND	0.025										
Toluene	ND	0.050										
Ethylbenzene	ND	0.050										
Kylenes, Total	ND	0.10										
Surr: 1,2-Dichloroethane-d4	0.65		0.5000		130	70	130					
Surr: 4-Bromofluorobenzene	0.42		0.5000		84.4	70	130					
Surr: Dibromofluoromethane	0.62		0.5000		124	70	130					
Surr: Toluene-d8	0.49		0.5000		97.2	70	130					
Sample ID Ics-33745	SampT	ype: LC	:5	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List			
Client ID: LCSS	Batch	n ID: 33	745	F	RunNo: 4	5532						
Prep Date: 9/7/2017	Analysis D)ate: 9/	8/2017	5	SeqNo: 1	443301	Units: mg/M	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	1.2	0.025	1.000	0	117	70	130					
Toluene	0.8 9	0.050	1.000	0	89.2	70	130					
Surr: 1,2-Dichloroethane-d4	0.62		0.5000		124	70	130					
Surr: 4-Bromofluorobenzene	0.44		0.5000		88.4	70	130					
Sur: Dibromofluoromethane	0.56		0.5000		112	70	130					
Surr: Toluene-d8	0.48		0.5000		95.2	70	130					

Qualifiers:

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

Page 5 of 6

1709295 14-Sep-17

	Engineering z COM 5								
Sample ID mb-33745	SampType: M	BLK	TestCode: EPA Method 8015D Mod: Gasoline Range						
Client ID: PBS	Batch ID: 33	745	RunNo: 45532						
Prep Date: 9/7/2017	Analysis Date: 9	8/2017	S	eqNo: 1	443325	Units: mg/M	ζg		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND 5.0			· · · · · · · · · · · · · · · · · · ·					
Surr. BFB	430	500.0		86.2	70	130			
Sample ID Ics-33745	SampType: LO	S	Tes	Code: E	PA Method	8015D Mod:	Gasoline	Rалде	
Client ID: LCSS	Batch ID: 33	745	R	lunNo: 4	5532				
Prep Date: 9/7/2017	Analysis Date: 9	8/2017	S	ieqNo: 1	443326	Units: mg/M	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sasoline Range Organics (GRO)	24 5.0	25.00	0	97.5	70	130			
Surr. BFB	450	500.0		90.0	70	130			

Qualifiers:

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

Page 6 of 6

14-Sep-17

HALL ENVIRONMENTAL ANALYSIS LABORATORY	riau Environmeniai Albu Albu TEL: 505-345-3975 i Website: www.hal	4901 querqui FAX; 5	Hawkins e, NM 87 05-345-4	NE 109 Sam 107								
Client Name: BLAGG	Work Order Number:	17092	295		ReptNo: 1							
Received By: Anne Thorne	9/7/2017 7:15:00 AM			are Am	_							
Completed By: Anne Thome Reviewed By:	977/2017 8:56:13 AM 091/07/17			Aone II- Aone II-	-							
Chain of Custody												
1. Custody seals intact on sample bottles?		Yes		No 🗆	Not Present 🗹							
2. Is Chain of Custody complete?		Yes		No 🗆	Not Present							
3. How was the sample delivered?		Cour	ier									
Log In												
4. Was an attempt made to cool the samples	?	Yes		No 🗆	NA 🗆							
5. Were all samples received at a temperatur	e of >0° C to 6.0°C	Yes		No 🗌	NA 🗌							
6. Sample(s) in proper container(s)?		Yes		No 🗆								
7. Sufficient sample volume for indicated test	(s)?	Yes		No 🗆								
8. Are samples (except VOA and ONG) prope	nty preserved?	Yes		No 🗆								
9. Was preservative added to bottles?		Yes		No 🗹	NA 🗖							
10. VOA vials have zero headspace?		Yes		No 🗆	No VOA Viais 🗹							
11. Were any sample containers received brok	en?	Yes		No 🗹 🖞	# of preserved							
12. Does paperwork match bottle labels?		Yes		No 🗆	bottles checked for pH:							
(Note discrepancies on chain of custody)	1 Curtado	Vaa			(<2 or >12 unl Adjusted?	ess noteo,						
13. Are matrices correctly identified on Chain o 14, is it clear what analyses were requested?	Custody	Yes Yes										
15. Were all holding times able to be met?					Checked by:							
(If no, notify customer for authorization.)		100										
Special Handling (if applicable)												
16. Was client notified of all discrepancies with	this order?	Yes		No 🗌	NA 🗹							
Person Notified:	Date				·							
By Whom:	Via:] eMa	il 🗌 P	hone 🗌 Fax	In Person							
Regarding:												
Client Instructions:	<u> </u>				in the second state of the second state							
17. Additional remarks:												
	eal Intact Seal No S	ieal Da	te j	Signed By								
1 1.0 Good Ye	S											
Page 1 of 1	2°	• • _+				· • •						

Client:	Client: BP America Blagg Engineering, Inc.			□ Standard	Rush	HALL ENVIRONMENTAL											
				Project Name:													
Mailing Address:		JACQUEZ COM 5 Project #:				400				enviro							
					4901 Hawkins NE - Albuquerque, NM 87109												
2 /E0E\220 4402							Tel. 505-345-3975 Fax 505-345-4107 Analysis Request										
Phone #: (505)320-1183 email or Fax#:			Designed Manag						- I Í	Anary	515 14	ques			-		
QA/QC Pac	and the second			Project Mana	Steve Moska				2								
Standar			Level 4 (Full Validation	1	Steve WOSKa	6			5								
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	VDe)			Sampler: On Ice:	Jeff Blagg	D No			0								Z
EDD (Type)			Sample Temperature: //O					GR								ž	
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		BTEX (8021)		TPH 8015B (GRO / DRO/ MRO)	Chloride							Air Ruhhlas (Y or N)
16/2017	1205	SOIL	Historic Mt Spoils Pile 5-Pt EAST PAD SURFACE	HOZXI	COUL	201	X		x	X						T	T
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.