District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

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

NMOCD

FEB 2 6 2018

Form C-141 Revised August 8, 2011

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

1220 S. St. Fran	cis Dr., Santa	a Fe, NM 87505	5	Sa	inta F	e, NM 875	05					
			Rele	ease Notific	atio	n and Co	orrective A	ction	1			
						OPERA	ΓOR		🗌 Initia	l Report	\boxtimes	Final Repo
Name of Co	mpany Hi	lcorp Energy	y Compar	ny		Contact Li	nday Dumas			1		
Address 11	11 Travis,	Houston, T	X 77002			Telephone 1	No. 832-839-45	585				
Facility Nar	ne San Ju	an 27-5 Uni	tI			Facility Typ	e Gas				n	
Surface Ow	ner Feder	ral		Mineral C)wner	SF-079393			API No.	. 30-039-0	7154	
				LOCA	TIO	N OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North	h/South Line	Feet from the	East/	West Line		Count	у
Р	4	27N	5W	660		South	660	1	East	1	Rio Arr	iba
			I	Latitude 3	6 5972	5 Longitud	e 107 35659	1				
				Datitude <u>5</u>	0.5772		C <u>107.55057</u>					
Type of Pele	ace Hydro	carbon		NAT	URE	Volume of	EASE	vn	Volume P	ecovered N	Ione	
Source of Re	lease Unkn	own				Date and H	Iour of Occurrence	ce	Date and I	Hour of Dis	scovery	
						Unknown			Novembe	r 30, 2015	,	
Was Immedia	ate Notice (Given?	Yes 🛛	No 🗌 Not Ro	equired	If YES, To	Whom?					
By Whom?						Date and H	Iour					
Was a Water	course Read	ched?		1.57		If YES, Vo	olume Impacting t	the Wate	ercourse.			
			Yes 🗵	No								
If a Watercou	irse was Im	pacted, Descr	ibe Fully.*	•								
sq feet to a de derive the mod Describe Are yds. of soil w were below r returned to ey <u>backfill</u> – no I hereby certi regulations al public health should their c or the environ federal, state,	epth of 24 f post cost effe ea Affected as excavato egulatory si cavation as <u>further acti</u> fy that the il operators or the envi operations h mment. In a or focal law	eet below exis ctive remedia and Cleanu and and treated andards. Son s backfill either on required. information gi are required t ronment. The lave failed to a ddition, NMC ws and/or regu	Action T on-site us p Action T on-site us the soils that er were be The closur ven above o report ar acceptance adequately DCD accept ilations.	rade (see attached an. Caken.* An exca ing soil shredding at were just above low regulatory sta e report and labor is true and comp id/or file certain r e of a C-141 repo investigate and r tance of a C-141	vation v vation v vation v vation v vation v v vation v v v vation v v v vation v v v vation v v v v v v v v v v v v v v v v v v v	Collection of with approx o hydrogen per- rds were allow , or were grant <u>nalyses report</u> the best of my notifications a ne NMOCD m te contaminati does not reliev	limensions 60' x oxide solution. Tr ved to be mixed w ted variance by N s are attached for knowledge and u nd perform correc arked as "Final R on that pose a thr e the operator of OIL CON	55' x 15 55' x 15 reated sc vith clea MOCD review. Inderstar ctive act leport" d reat to gr responsi	' deep was bils were ret n soils for u to be mixed nd that purst ions for rele loes not reliv ound water, ibility for co ATION	excavated. reated until se as backf l with clean uant to NM ases which eve the oper , surface wa ompliance v	Approx analytic ill. All s soils an OCD ru may en- rator of ater, hun vith any	in order to 5 in order to cal results soils id placed as les and danger liability nan health other
Signature:	. Ling	Lau I	VIMO	2	-	Approved by	Environmental S	pecialis	t: Can	M	T	1-J
Title: ENL	liman	rental	Speci	alist		Approval Dat	te: 2/28/1	8	Expiration I	Sate:		~
E-mail Addre	ess: LDU	Maschi	corp.	com		Conditions of	Approval:					
Date: Phone	: 2/20	118 8	32-8	39-4585	-					Attached		
Attach Addi	tional She	ets If Necess	ary 20	28-10112								
			#INC.	5 162433	374	37				(14	$\hat{\mathbf{D}}$



August 10, 2017

Reference No. 111145906

Ms. Lindsay Dumas Hilcorp Energy Company 1111 Travis Houston, TX 77002

Dear Ms. Dumas:

Re: Remediation Report and Closure Request San Juan 27-5 No. 1 San Juan County, New Mexico

GHD Services Inc. (GHD) is pleased to provide this summary of remediation activities and request for closure for the San Juan 27-5 No. 1 site (hereafter referred to as the "Site"). The Site is located on land controlled by Bureau of Land Management (BLM) within Section 4, Township 27 North, and Range 5 West, in Rio Arriba County, New Mexico (Figure 1). Geographical coordinates for the Site are 36.59725° North, 107.35659° West (Figure 1). The Site consists of an active gas well and associated production equipment (Figure 2). Hilcorp Energy Company purchased ConocoPhillip's San Juan basin assets and assumed Site operations on August 1, 2017.

1. Site History

Hydrocarbon impacted soil was discovered while trenching for an equipment upgrade on November 30, 2015. ConocoPhillips Company (ConocoPhillips) conducted Site assessments in April and September 2016 to assess the horizontal and vertical extent of hydrocarbon impacted soils. A Human Health and Ecological risk assessment was also conducted in May 2017 utilizing data collected during Site assessment subsurface explorations. The New Mexico Oil Conservation Division (NMOCD) on March 29, 2017, issued a conditional approval of the GHD November 18, 2016 Site Assessment Report. The NMOCD approval correspondence specifically required submittal and implementation of a remediation plan for the highly impacted shallow zones at the Site. Subsequent correspondence defined this zone as from 0-10 feet below ground surface (ft bgs). ConocoPhillips submitted a workplan to NMOCD and the BLM Farmington Field Office on June 8, 2017 to remediate this zone; an area of approximately 60 ft by 50 ft, or 1,100 cubic yards (cy) at 10 ft deep. The GHD work plan was approved by BLM and NMOCD with the condition that additional remediation beyond 10 ft bgs may be required depending upon confirmation laboratory soil sample results.

The remediation scope of work included excavating impacted soil, mechanically shredding the soil to achieve a uniform particle size, and treating it through chemical oxidation on Site with hydrogen peroxide. The treated soil would then be used to backfill the excavation. The NMOCD Recommended Remediation Action Levels (RRAL) assigned to the Site were based on a Site ranking using the NMOCD 1993



Guidelines for Remediation of Leaks, Spills and Releases. The action levels thus derived are 100 ppm for total petroleum hydrocarbons (TPH); 50 ppm for BTEX (benzene, toluene, ethylbenzene and xylenes) and 10 ppm for benzene.

2. Excavation Sampling and Results

GHD and remediation contractor Unlimited Construction mobilized to the site and began excavation on June 27, 2016. A previously undiscovered underground tank-the likely source of contamination-was encountered during excavation. The limits of horizontal excavation were guided by the on-Site geologist from observed visual staining and field screening using a calibrated photo-ionization detector and PetroFlag hydrocarbon test kit. Confirmation soil samples were collected from the sidewalls and floor of excavation in the presence of, and as directed by, a NMOCD field Environmental Specialist. Sample locations are depicted on Figure 2. Laboratory confirmation samples were collected and submitted to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, NM, for analyses of TPH-gasoline, diesel and motor oil range organics (GRO/DRO/ORO) by EPA Method 8015 and for BTEX constituents by EPA Method 8021. Laboratory analytical reports are included as Attachment 1 and results are summarized on Table 1. Risk-based closure of the South Wall-West and the East Wall was requested and granted by NMOCD due to encroachment of the excavation on existing Site structures. A risk based closure was also granted for closure of the floor of the excavation at a final depth of 15 ft bgs. The extent of the final excavation was approximately 60 ft by 55 ft by 15 ft deep (Figure 2). A total of 1,800 cy was excavated and treated. Variance request and approval communications are included as Attachment 2.

3. Soil Treatment

Impacted soils removed from the excavation were processed through a backhoe shredding bucket to both aerate the soils and break them down to a smaller, uniform particle size. Soils were deposited from the shredding bucket into a hopper/conveyor belt system where they were sprayed with a hydrogen peroxide solution with a concentration generally between 1 to 7 percent by weight in water. Treated soils were stockpiled in 100 cy piles and allowed to oxidize the soils for a period of not less than 24 hours before sampling. GHD collected one 5-point composite sample from every 100 cy treated stockpile. Laboratory confirmation samples of treated stockpile soils were collected and submitted to HEAL for analyses of TPH GRO/DRO/ORO.Pace Laboratory of Lenexa, KS, was also used as an analytical laboratory resource. Treated stockpile samples were analyzed by Pace for the same constituents (TPH,BTEX) as HEAL.

Treated soils that did not meet RRALs established for the Site were either retreated or allowed additional time to oxidize before resampling. Multiple passes through the mechanical shredding and chemical treatment process were required for impacted soils at the Site. Repeated shredding and aeration and the addition of hydrogen peroxide in concentrations well in excess of typical amounts used for similarly impacted sites in the San Juan basin were necessary to reduce hydrocarbon concentrations. On August 1, 2017, final laboratory results indicated most retreated stockpiles were below RRALs and a variance was granted to mix those stockpiles with TPH concentrations above the RRAL (164 parts per



million (ppm) or less) with stockpile soils testing below 100 ppm. These blended soils were then used first for backfilling, in the bottom of the excavation. All remaining treated stockpile soils testing below the RRAL were then used as subsequent backfill. The email communication requesting this variance on final laboratory results and NMOCD approval with backfilling requirements is included as Attachment 2. Backfilling of the excavation was completed on August 2, 2017.

4. Conclusions

ConocoPhillips removed and treated approximately 1,800 cy of petroleum impacted soils from the Site. Excavated soils were shredded and treated with hydrogen peroxide to oxidize contaminants and reduce concentrations of hydrocarbons to levels below RRALs established for the Site. Impacted soils at the Site were inordinately difficult to treat using the standard concentrations of oxidant, based on anecdotal information from other similar projects in the San Juan basin. Site impacted soils required multiple treatments including repeated shredding/aeration and heavy application of hydrogen peroxide. All treated soil stockpiles eventually achieved TPH concentrations below RRALs or, by approved variance, were mixed with soils that had achieved the RRAL threshold. The excavation was backfilled to existing grade using the remediated soils. Based on the results presented in this report, GHD recommends ConocoPhillips request no further action at the Site and final closure status from the NMOCD and BLM.

If you have any questions or comments with regards to this report, please do not hesitate to contact GHD's Albuquerque office at (505) 884-0672.

Sincerely,

GHD

Jon Waller

Jeff Walker, CPG, PMP Senior Project Manager

JW/mc/01

Enclosures:

- Figure 1 Site Location Map
- Figure 2 Area of Excavation/Confirmation Sample Locations
- Table 1 Soil Analytical Results Summary
- Attachment 1 Laboratory Analytical Results
- Attachment 2 NMOCD email variance requests and approvals

Bernard Bockisch, PMP New Mexico Area Manager



GHD | Remediation and Closure Report | 11145906 (1)





GHD RIO ARRIBA COUNTY, NEW SAN JUAN 27-5 No. 1 SITE LOCATION MAP

FIGURE 1

CAD File: I:\CAD\Files\Eight Digit Job Numbers\1112----\11124687-CoP-San Juan 27-5 No. 1\11124687-AS00\11124687-AS00(000)GN-DL003.dwg





GHD | Remediation and Closure Report | 11145906 (1)

Table 1

GHD Soil Analytical Results Summary Hilcorp San Juan 27-5 No. 1 Confirmation Soil Samples

	Sample ID	Date	Sample Type ore = 50)	Benzene (mg/kg) 10	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg) 50	TPH- GRO (mg/kg)	TPH-DRO (mg/kg)	TPH- MRO (mg/kg)	Total TPH (mg/kg) 100
	West Wall	6/29/2017	Comp	<0.020	< 0.041	< 0.041	<0.082	<0.184	< 4.1	12	< 47	12
+	South Wall-West	6/29/2017	Comp	< 0.089	< 0.18	< 0.18	1.1	1.549	74	530	< 50	604 -
	South Wall-East	6/29/2017	Comp	<0.020	< 0.039	< 0.039	<0.078	<0.176	<3.9	<10	< 50	<63.9
	East Wall	6/29/2017	Comp	< 0.093	< 0.19	< 0.19	0.56	1.033	83	140	< 50	223
	North Wall-East	6/29/2017	Comp	< 0.019	< 0.038	< 0.038	0.075	0.170	5.1	34	<47	39.1
	North Wall-West	6/29/2017	Comp	< 0.39	<0.77	<0.77	20	21.93	510	190	<50	700
	Floor @ 12 ft	6/29/2017	Comp	<0.90	4.4	<1.8	50	57.10	1300	1800	<470	3100
	TSP-1*	6/29/2017	Comp	< 0.081	0.23	<0.16	12	12.47	260	1100	<490	1360
	TSP-2*	6/29/2017	Comp	< 0.070	0.37	<0.14	14	14.58	310	740	<50	1050
ľ	TSP-3*	6/29/2017	Comp	< 0.071	0.50	<0.14	19	19.71	390	920	<50	1310
	TSP-4*	6/29/2017	Comp	<0.12	0.28	1.2	14	15.60	310	760	<50	1070
ľ	TSP-5*	6/29/2017	Comp	< 0.060	<0.12	<0.12	8.6	8.90	200	230	<46	430
+	Floor @ 15 ft.	7/7/2017	Comp	< 0.092	1.1	<0.18	10.0	11.21	390	920	<47	1310
1	North Wall-West	7/7/2017	Comp	< 0.019	< 0.039	< 0.039	<0.077	<0.17	<3.9	40	<47	40
	TSP-6	7/7/2017	Comp	< 0.016	< 0.032	< 0.032	1.8	1.88	170	520	<48	690
	TSP-7	7/7/2017	Comp	< 0.020	< 0.040	< 0.040	0.99	1.09	170	460	<48	630
	TSP-8	7/7/2017	Comp	< 0.017	< 0.034	< 0.034	0.83	0.92	130	430	<48	560
ľ	TSP-9	7/7/2017	Comp	< 0.017	< 0.034	< 0.034	0.65	0.890	100	440	<48	540
Ì	TSP-10	7/10/2017	Comp	< 0.017	< 0.034	< 0.034	0.30	0.390	94	510	<50	604
ľ	TSP-11	7/10/2017	Comp	<0.017	< 0.034	< 0.034	0.30	0.390	62	77	<46	139
	TSP-12	7/10/2017	Comp	<0.080	<0.16	<0.16	<0.32	<0.72	89	390	<46	479
	TSP-13	7/10/2017	Comp	<0.077	<0.15	<0.15	< 0.31	<0.69	130	430	<48	560
	TSP-14	7/10/2017	Comp	<0.083	<0.17	<0.17	< 0.33	<0.75	100	440	<47	540
	TSP-15**	7/13/2017	Comp	< 0.0057	<0.0057	<0.0057	<0.0115	<0.28	4.3	1030	<109	1034
	TSP-16**	7/13/2017	Comp	<0.0056	<0.0056	<0.0056	< 0.0113	<0.28	2.4	1460	114	1576
	TSP-17**	7/13/2017	Comp	<0.0058	<0.0058	<0.0058	<0.0115	<0.29	1.6	810	67.2	879
	TSP-18**	7/13/2017	Comp	< 0.0056	< 0.0056	< 0.0056	26.90	26.92	5.7	1210	<107	1216
	TSP-19**	7/13/2017	Comp	< 0.0057	<0.0057	<0.0057	< 0.0113	<0.28	2.4	1750	111	1863
	TSP-20**	7/13/2017	Comp	< 0.0056	<0.0056	<0.0056	<0.112	<0.28	4.4	1430	<112	1434
	TSP-21**	7/13/2017	Comp	<0.0056	<0.0056	< 0.0056	22.80	22.82	5.2	1160	<108	1165
ľ	TSP-22**	7/13/2017	Comp	< 0.0056	<0.0056	<0.0056	16.50	16.52	2.8	1070	151	1224
	TSP-23**	7/13/2017	Comp	< 0.0056	< 0.0056	< 0.0056	12.60	12.620	3	1080	115	1198

GHD 111145906 (1)

Table 1

GHD Soil Analytical Results Summary Hilcorp San Juan 27-5 No. 1 Confirmation Soil Samples

Sample ID	Date	Sample	Benzene (ma/ka)	Toluene (ma/ka)	Ethyl- benzene (ma/ka)	Xylenes (ma/ka)	Total BTEX (mg/kg)	TPH- GRO (ma/ka)	TPH-DRO (ma/ka)	TPH- MRO (ma/ka)	Total TPH (mg/kg)
NMOCD RRA	Ls (Ranking Sc	ore = 50)	10				50				100
TSP-24	7/19/2017	Comp	< 0.016	< 0.031	< 0.031	< 0.063	<0.141	17	150	<49	167
TSP-25	7/19/2017	Comp	< 0.015	< 0.031	< 0.031	<0.062	<0.139	18	140	<50	158
TSP-26	7/19/2017	Comp	< 0.015	<0.029	< 0.029	<0.058	<0.131	18	120	<50	138
TSP-27	7/19/2017	Comp	< 0.015	< 0.031	< 0.031	<0.061	<0.138	30	120	<46	150
TSP-28	7/19/2017	Comp	< 0.015	< 0.030	< 0.030	<0.061	<0.136	27	160	<47	187
TSP-24R	7/24/2017	Comp	<0.018	< 0.034	< 0.034	<0.068	<0.154	11	86	<48	97
TSP-26R	7/24/2017	Comp	<0.018	< 0.035	< 0.035	<0.071	<0.159	23	73	<46	96
TSP-27R	7/24/2017	Comp	< 0.016	< 0.033	< 0.033	<0.066	<0.148	6.3	84	<50	90
TSP-28R	7/24/2017	Comp	< 0.016	< 0.033	< 0.033	<0.066	<0.148	8.4	130	<50	138
TSP-29	7/24/2017	Comp	< 0.015	< 0.030	< 0.030	< 0.061	<0.136	11	110	<48	121
TSP-30	7/24/2017	Comp	< 0.017	< 0.034	< 0.034	<0.068	<0.153	42	120	<47	162
TSP-31	7/24/2017	Comp	< 0.018	< 0.036	< 0.036	<0.072	<0.162	6.2	89	<47	95
TSP-32	7/24/2017	Comp	< 0.017	< 0.033	< 0.033	<0.067	<0.150	18	100	<48	118
TSP-33	7/28/2017	Comp	< 0.016	< 0.031	< 0.031	<0.062	<0.140	21	88	<48	109
TSP-34	7/28/2017	Comp	< 0.017	< 0.034	< 0.034	<0.068	<0.153	29	77	<47	106
TSP-35	7/28/2017	Comp	< 0.016	< 0.033	< 0.033	<0.066	<0.148	15	100	<46	115
TSP-36	7/28/2017	Comp	< 0.016	< 0.032	< 0.032	< 0.064	<0.144	12	63	<50	75
TSP-37	7/28/2017	Comp	< 0.018	< 0.035	< 0.035	<0.070	<0.158	4.5	17	<45	22
TSP-38	7/28/2017	Comp	< 0.015	< 0.031	< 0.031	<0.062	<0.139	9.6	62	<47	72
TSP-39	7/28/2017	Comp	< 0.017	< 0.033	< 0.033	<0.066	<0.149	6.8	98	<50	105
TSP-40	7/28/2017	Comp	< 0.016	< 0.031	< 0.031	<0.062	<0.140	13	150	<48	163
TSP-41	7/28/2017	Comp	< 0.016	< 0.032	< 0.032	<0.064	<0.144	34	130	<47	164
TSP-28-RR	7/28/2017	Comp	<0.018	< 0.036	< 0.036	<0.072	<0.162	5.4	17	<49	22
TSP-30-RR	7/28/2017	Comp	<0.021	< 0.042	< 0.042	< 0.084	<0.189	19	62	<49	81
mg/kg = milligram mg/kg = milligram BTEX = benzene TPH = total petro GRO/DRO/MRO NMOCD = New N RRALs = Recom TSP = Treated SI < x = below labor *Stockpiles reincc ** Analyses by Pa RR = retest of a p	ns per kilogram , toluene, ethylbe leum hydrocarbo = gasoline/diesel Aexico Oil Conse mended Remedia tockpile atory detection lii orporated into ad ace Laboratories: previously reteste	enzene, and s ns by EPA 80 //motor oil-ran rvation Divisi ation Action L mit of x ditional untre BTEX/GRO d sample	cylene by EP 015B (DRO/0 nge organics on .evels ated soils an by EPA 826	A 8021 (Hall DRO) by EPA 801 d retreated 0; TPH DRO	Laboratory) 5 (Hall Labo /ORO by EP	ratory) A 8015					

GHD 111145906 (1)



GHD | Remediation and Closure Report | 11145906 (1)

Attachment 1 Laboratory Analytical Reports

GHD | Remediation and Closure Report | 11145906 (1)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 03, 2017

Jeff Walker GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

RE: San Juan 27-5 No 1

OrderNo.: 1706F76

Dear Jeff Walker:

Hall Environmental Analysis Laboratory received 12 sample(s) on 6/29/2017 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 1706F76

Date Reported: 7/3/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Desult	POL Qual	Unite	DE Data Analyzad	Datah
Lab ID:	1706F76-001	Matrix:	MEOH (SOIL)	Received	Date: 6/29/2017 3:00:00 PM	
Project:	San Juan 27-5 No 1			Collection	Date: 6/29/2017 9:30:00 AM	
CLIENT:	GHD		(lient Sam	ple ID: West Wall	

	Result	TAT An	ai Onits	DI	Date Analyzeu	Datti
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	S			Analyst	JME
Diesel Range Organics (DRO)	12	9.4	mg/Kg	1	6/30/2017 8:06:23 AM	32573
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	6/30/2017 8:06:23 AM	32573
Surr: DNOP	108	70-130	%Rec	1	6/30/2017 8:06:23 AM	32573
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	6/30/2017 9:43:39 AM	G43929
Surr: BFB	88.8	54-150	%Rec	1	6/30/2017 9:43:39 AM	G43929
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.020	mg/Kg	1	6/30/2017 9:43:39 AM	B43929
Toluene	ND	0.041	mg/Kg	1	6/30/2017 9:43:39 AM	B43929
Ethylbenzene	ND	0.041	mg/Kg	1	6/30/2017 9:43:39 AM	B43929
Xylenes, Total	ND	0.082	mg/Kg	1	6/30/2017 9:43:39 AM	B43929
Surr: 4-Bromofluorobenzene	<mark>115</mark>	66.6-132	%Rec	1	6/30/2017 9:43:39 AM	B43929

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

Qualifiers:	Q	ua	lifi	ers	:
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*

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit
 - W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1706F76

Date Reported: 7/3/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch
Lab ID:	1706F76-002	Matrix:	MEOH (SOIL)	Received	Date: 6/29/2017 3:00:00 PM	
Project:	San Juan 27-5 No 1			Collection	Date: 6/29/2017 9:40:00 AM	
CLIENT:	GHD		C	lient Samp	le ID: South Wall-W	

	the second s	and the second se	-					
EPA METHOD 8015M/D: DIESEL RANGE OI	RGANI	CS					Analyst:	JME
Diesel Range Organics (DRO)	530	10		mg/Kg	1	6/30/2017	8:28:28 AM	32573
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/30/2017	8:28:28 AM	32573
Surr: DNOP	102	70-130		%Rec	1	6/30/2017	8:28:28 AM	32573
EPA METHOD 8015D: GASOLINE RANGE							Analyst:	NSB
Gasoline Range Organics (GRO)	74	18		mg/Kg	5	6/30/2017	10:07:52 AM	G43929
Surr: BFB	270	54-150	S	%Rec	5	6/30/2017	10:07:52 AM	G43929
EPA METHOD 8021B: VOLATILES							Analyst:	NSB
Benzene	ND	0.089		mg/Kg	5	6/30/2017	10:07:52 AM	B43929
Toluene	ND	0.18		mg/Kg	5	6/30/2017	10:07:52 AM	B43929
Ethylbenzene	ND	0.18		mg/Kg	5	6/30/2017	10:07:52 AM	B43929
Xylenes, Total	1.1	0.36		mg/Kg	5	6/30/2017	10:07:52 AM	B43929
Surr: 4-Bromofluorobenzene	129	66.6-132		%Rec	5	6/30/2017	10:07:52 AM	B43929

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

Q	ual	ifi	ers	:
-				

*

- 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
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 17 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1706F76

Date Reported: 7/3/2017

Hall Environmental Analysis Laboratory, Inc.

1 1 A.L.					and we want to see the second state of the sec	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch
Lab ID:	1706F76-003	Matrix:	MEOH (SOIL)	Received	Date: 6/29/2017 3:00:00 PM	
Project:	San Juan 27-5 No 1			Collection	Date: 6/29/2017 9:45:00 AM	
CLIENT:	GHD	~	C	lient Sam	ple ID: South Wall-E	

EPA METHOD 8015M/D: DIESEL RANGE OF	RGANIC	S			Analyst:	JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/30/2017 8:50:43 AM	32573
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/30/2017 8:50:43 AM	32573
Surr: DNOP	107	70-130	%Rec	1	6/30/2017 8:50:43 AM	32573
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	6/30/2017 10:31:43 AM	G43929
Surr: BFB	92.6	54-150	%Rec	1	6/30/2017 10:31:43 AM	G43929
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.020	mg/Kg	1	6/30/2017 10:31:43 AM	B43929
Toluene	ND	0.039	mg/Kg	1	6/30/2017 10:31:43 AM	B43929
Ethylbenzene	ND	0.039	mg/Kg	1	6/30/2017 10:31:43 AM	B43929
Xylenes, Total	ND	0.078	mg/Kg	1	6/30/2017 10:31:43 AM	B43929
Surr: 4-Bromofluorobenzene	121	66.6-132	%Rec	1	6/30/2017 10:31:43 AM	B43929

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 associ
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quant
	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
- iated Method Blank
- ge
- titation limits Page 3 of 17

W Sample container temperature is out of limit as specified

Lab Order 1706F76

Date Reported: 7/3/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch
Lab ID:	1706F76-004	Matrix:	MEOH (SOIL)	Received	Date: 6/29/2017 3:00:00 PM	
Project:	San Juan 27-5 No 1			Collection	Date: 6/29/2017 9:50:00 AM	
CLIENT:	GHD		C	lient Sam	ole ID: East Wall	

EPA METHOD 8015M/D: DIESEL RANGE O	RGANIC	s				Analyst	JME
Diesel Range Organics (DRO)	140	10		mg/Kg	1	6/30/2017 8:11:56 AM	32573
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/30/2017 8:11:56 AM	32573
Surr: DNOP	89.2	70-130		%Rec	1	6/30/2017 8:11:56 AM	32573
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	83	19		mg/Kg	5	6/30/2017 10:55:53 AM	G43929
Surr: BFB	324	54-150	S	%Rec	5	6/30/2017 10:55:53 AM	G43929
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.093		mg/Kg	5	6/30/2017 10:55:53 AM	B43929
Toluene	ND	0.19		mg/Kg	5	6/30/2017 10:55:53 AM	B43929
Ethylbenzene	ND	0.19		mg/Kg	5	6/30/2017 10:55:53 AM	B43929
Xylenes, Total	0.56	0.37		mg/Kg	5	6/30/2017 10:55:53 AM	B43929
Surr: 4-Bromofluorobenzene	132	66.6-132	S	%Rec	5	6/30/2017 10:55:53 AM	B43929

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 17
	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

Lab Order 1706F76

Date Reported: 7/3/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	POL Qual	Units	DF Date Analyzed	1		
Lab ID:	1706F76-005	Matrix:	MEOH (SOIL)	Received	Date: 6/29/2017 3:00:00 PM			
Project:	San Juan 27-5 No 1			Collection	Date: 6/29/2017 10:00:00 AM			
CLIENT:	GHD	Client Sample ID: North Wall-E						

Analyses	Result	PQL Q	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE	S				Analyst	JME	
Diesel Range Organics (DRO)	34	9.5		mg/Kg	1	6/30/2017 8:39:44 AM	32573
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/30/2017 8:39:44 AM	32573
Surr: DNOP	88.6	70-130		%Rec	1	6/30/2017 8:39:44 AM	32573
EPA METHOD 8015D: GASOLINE RANGI	Ξ					Analyst:	NSB
Gasoline Range Organics (GRO)	5.1	3.8		mg/Kg	1	6/30/2017 11:19:53 AM	G43929
Surr: BFB	175	54-150	S	%Rec	1	6/30/2017 11:19:53 AM	G43929
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.019		mg/Kg	1	6/30/2017 11:19:53 AM	B43929
Toluene	ND	0.038		mg/Kg	1	6/30/2017 11:19:53 AM	B43929
Ethylbenzene	ND	0.038		mg/Kg	1	6/30/2017 11:19:53 AM	B43929
Xylenes, Total	ND	0.075		mg/Kg	1	6/30/2017 11:19:53 AM	B43929
Surr: 4-Bromofluorobenzene	127	66.6-132		%Rec	1	6/30/2017 11:19:53 AM	B43929

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 5 of 17
	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

Lab Order 1706F76

Date Reported: 7/3/2017

6/30/2017 9:07:13 AM

6/30/2017 11:58:35 AM G43929

6/30/2017 11:58:35 AM G43929

6/30/2017 11:58:35 AM B43929

6/30/2017 11:58:35 AM B43929

6/30/2017 11:58:35 AM B43929

6/30/2017 11:58:35 AM B43929

20 6/30/2017 11:58:35 AM B43929

32573

Analyst: NSB

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

Surr: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

CLIENT:	GHD	Client Sample ID: North Wall-W							
Project:	San Juan 27-5 No 1	Collection Date: 6/29/2017 10:05:00 AM							
Lab ID: 1706F76-006		Matrix:	Matrix: MEOH (SOIL) Received Date: 6/29/2017 3:00:00 PM						
Analyses		Result	PQL Qual	Units	DF	Date Analyzed	Batch		
EPA MET	HOD 8015M/D: DIESEL RAM	IGE ORGANIC	S			Analys	t: JME		
Diesel Ra	ange Organics (DRO)	190	10	mg/Kg	1	6/30/2017 9:07:13 AM	32573		
Motor Oil Range Organics (MRO)		ND	50	mg/Kg	1	6/30/2017 9:07:13 AM	32573		

70-130

54-150

0.39

0.77

0.77

66.6-132

1.5

77

S

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

20

20

20

20

20

20

89.3

510

248

ND

ND

ND

20

128

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 17
	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

Lab Order 1706F76

Date Reported: 7/3/2017

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015D: GASOLINE RANGE

CLIENT:	GHD	Client Sample ID: Floor											
Project:	San Juan 27-5 No 1		Collection Date: 6/29/2017 10:15:00 AM										
Lab ID:	1706F76-007	Matrix: N	AEOH (SO	IL)	Received	Date: 6/2	9/2017 3:00:00 PM	PM					
Analyses		Result	PQL Q	Qual	Units	DF	Date Analyzed	Batch					
EPA MET	HOD 8015M/D: DIESEL R	ANGE ORGANICS					Analyst	JME					
Diesel Ra	ange Organics (DRO)	1800	95		mg/Kg	10	6/30/2017 10:31:11 AM	32573					
Motor Oil Range Organics (MRO)		ND	470		mg/Kg	10	6/30/2017 10:31:11 AM	32573					
Surr: E	DNOP	0	70-130	S	%Rec	10	6/30/2017 10:31:11 AM	32573					

Analyst: NSB

Gasoline Range Organics (GRO)	1300	180		mg/Kg	50	6/30/2017 12:22:33 PM	G43929
Surr: BFB	321	54-150	S	%Rec	50	6/30/2017 12:22:33 PM	G43929
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.90		mg/Kg	50	6/30/2017 12:22:33 PM	B43929
Toluene	4.4	1.8		mg/Kg	50	6/30/2017 12:22:33 PM	B43929
Ethylbenzene	ND	1.8		mg/Kg	50	6/30/2017 12:22:33 PM	B43929
Xylenes, Total	50	3.6		mg/Kg	50	6/30/2017 12:22:33 PM	B43929
Surr: 4-Bromofluorobenzene	136	66.6-132	S	%Rec	50	6/30/2017 12:22:33 PM	B43929

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit

- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Lab Order 1706F76

Date Reported: 7/3/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD	Client Sample ID: TSP-1								
Project:	San Juan 27-5 No 1	Collection Date: 6/29/2017 10:30:00 AM								
Lab ID:	1706F76-008	Matrix: MEOH (SOIL)			Received Date: 6/29/2017 3:00:00 PM					
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	HOD 8015M/D: DIESEL RAN	GE ORGANICS	S				Analyst	JME		
Diesel R	ange Organics (DRO)	1100	97		mg/Kg	10	6/30/2017 10:57:01 AM	32573		
Motor Oi	Range Organics (MRO)	ND	490		mg/Kg	10	6/30/2017 10:57:01 AM	32573		
Surr: [ONOP	0	70-130	S	%Rec	10	6/30/2017 10:57:01 AM	32573		
EPA MET	HOD 8015D: GASOLINE RAM	IGE					Analyst:	NSB		
Gasoline	Range Organics (GRO)	260	16		mg/Kg	5	6/30/2017 12:46:36 PM	G43929		
Surr: E	BFB	626	54-150	S	%Rec	5	6/30/2017 12:46:36 PM	G43929		
EPA MET	HOD 8021B: VOLATILES						Analyst:	NSB		
Benzene		ND	0.081		mg/Kg	5	6/30/2017 12:46:36 PM	B43929		
Toluene		0.23	0.16		mg/Kg	5	6/30/2017 12:46:36 PM	B43929		
Ethylben	zene	ND	0.16		mg/Kg	5	6/30/2017 12:46:36 PM	B43929		
Xylenes,	Total	12	0.32		mg/Kg	5	6/30/2017 12:46:36 PM	B43929		
Surr: 4	4-Bromofluorobenzene	146	66.6-132	S	%Rec	5	6/30/2017 12:46:36 PM	B43929		

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

Q	ua	lifi	er	's:	
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- 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
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits Page 8 of 17 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1706F76

Date Reported: 7/3/2017

6/30/2017 1:10:41 PM B43929

Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

CLIENT:	GHD			С	lient Sampl	e ID: TS	SP-2				
Project:	San Juan 27-5 No 1	Collection Date: 6/29/2017 10:35:00 AM									
Lab ID:	1706F76-009	Matrix: N	AEOH (SO	IL)	Received I	Date: 6/2	29/2017 3:00:00 PM				
Analyses		Result	PQL Q)ual	Units	DF	Date Analyzed	Batch			
EPA MET	THOD 8015M/D: DIESEL RAN	GE ORGANICS					Analyst:	JME			
Diesel R	ange Organics (DRO)	740	10		mg/Kg	1	6/30/2017 9:41:53 AM	32573			
Motor Oi	I Range Organics (MRO)	ND	50		mg/Kg	1	6/30/2017 9:41:53 AM	32573			
Surr: I	DNOP	105	70-130		%Rec	1	6/30/2017 9:41:53 AM	32573			
EPA MET	THOD 8015D: GASOLINE RAM	IGE					Analyst:	NSB			
Gasoline	e Range Organics (GRO)	310	14		mg/Kg	5	6/30/2017 1:10:41 PM	G43929			
Surr: I	BFB	820	54-150	S	%Rec	5	6/30/2017 1:10:41 PM	G43929			
EPA MET	THOD 8021B: VOLATILES						Analyst:	NSB			
Benzene		ND	0.070		mg/Kg	5	6/30/2017 1:10:41 PM	B43929			
Toluene		0.37	0.14		mg/Kg	5	6/30/2017 1:10:41 PM	B43929			
Ethylben	izene	ND	0.14		mg/Kg	5	6/30/2017 1:10:41 PM	B43929			
Xylenes,	Total	14	0.28		mg/Kg	5	6/30/2017 1:10:41 PM	B43929			

66.6-132 S

%Rec

5

160

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 9 of 17
	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

Lab Order 1706F76

Date Reported: 7/3/2017

6/30/2017 1:34:49 PM

6/30/2017 1:34:49 PM

B43929

B43929

Hall Environmental Analysis Laboratory, Inc.

Xylenes, Total

Surr: 4-Bromofluorobenzene

CLIENT: GHD			Client	Sample I	D: TS	P-3			
Project: San Juan 27-5 No 1	Collection Date: 6/29/2017 10:40:00 AM								
Lab ID: 1706F76-010	Matrix:	MEOH (SOI	L) Red	eived Dat	te: 6/2	29/2017 3:0	0:00 PM		
Analyses	Result	PQL Q	ual Uni	ts	DF	Date Ana	lyzed	Batch	
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S					Analyst:	JME	
Diesel Range Organics (DRO)	920	10	mg	ΊKg	1	6/30/2017	10:06:31 AM	32573	
Motor Oil Range Organics (MRO)	ND	50	mg	′Kg	1	6/30/2017	10:06:31 AM	32573	
Surr: DNOP	99.4	70-130	%R	ec	1	6/30/2017	10:06:31 AM	32573	
EPA METHOD 8015D: GASOLINE RAN	GE						Analyst:	NSB	
Gasoline Range Organics (GRO)	390	14	mg	ΊKg	5	6/30/2017	1:34:49 PM	G43929	
Surr: BFB	983	54-150	S %R	ec	5	6/30/2017	1:34:49 PM	G43929	
EPA METHOD 8021B: VOLATILES							Analyst:	NSB	
Benzene	ND	0.071	mg	ΊKg	5	6/30/2017	1:34:49 PM	B43929	
Toluene	0.50	0.14	mg	ΊKg	5	6/30/2017	1:34:49 PM	B43929	
Ethylbenzene	ND	0.14	mg	Kg	5	6/30/2017	1:34:49 PM	B43929	

0.28

S

66.6-132

19

171

mg/Kg

%Rec

5

5

Qualifiars	*	Value exceeds Maximum Contaminant Level	В	Analyte detected in the associated Method Blank
Quanners.		value exceeds Maximum Containmant Level.	D	Analyte detected in the associated Method Dialik
	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 10 of 17
	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

Lab Order 1706F76

Date Reported: 7/3/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch
Lab ID:	1706F76-011	Matrix:	MEOH (SOIL)	Received	Date: 6/29/2017 3:00:00 PM	
Project:	San Juan 27-5 No 1			Collection	Date: 6/29/2017 10:45:00 AM	
CLIENT:	GHD		0	lient Samp	ole ID: TSP-4	

2		-	-				
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S				Analyst:	JME
Diesel Range Organics (DRO)	760	10		mg/Kg	1	6/30/2017 9:35:02 AM	32573
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/30/2017 9:35:02 AM	32573
Surr: DNOP	92.6	70-130		%Rec	1	6/30/2017 9:35:02 AM	32573
EPA METHOD 8015D: GASOLINE RANG	θE					Analyst:	NSB
Gasoline Range Organics (GRO)	310	25		mg/Kg	10	6/30/2017 12:59:00 PM	G43930
Surr: BFB	494	54-150	S	%Rec	10	6/30/2017 12:59:00 PM	G43930
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.12		mg/Kg	10	6/30/2017 12:59:00 PM	B43930
Toluene	0.28	0.25		mg/Kg	10	6/30/2017 12:59:00 PM	B43930
Ethylbenzene	1.2	0.25		mg/Kg	10	6/30/2017 12:59:00 PM	B43930
Xylenes, Total	14	0.49		mg/Kg	10	6/30/2017 12:59:00 PM	B43930
Surr: 4-Bromofluorobenzene	115	66.6-132		%Rec	10	6/30/2017 12:59:00 PM	B43930

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 limitspace 11 of 17
	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

Lab Order 1706F76

Date Reported: 7/3/2017

6/30/2017 1:22:44 PM

6/30/2017 1:22:44 PM B43930

G43930

B43930

B43930

B43930

B43930

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

CLIENT:	GHD			С	lient Sampl	e ID: TS	P-5				
Project:	San Juan 27-5 No 1	Collection Date: 6/29/2017 10:50:00 AM									
Lab ID:	1706F76-012	Matrix: MEOH (SOIL) Received I					Date: 6/29/2017 3:00:00 PM				
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch			
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANIC	S				Analyst	JME			
Diesel Ra	ange Organics (DRO)	230	9.2		mg/Kg	1	6/30/2017 10:02:48 AM	32573			
Motor Oil	Range Organics (MRO)	ND	46		mg/Kg	1	6/30/2017 10:02:48 AM	32573			
Surr: D	DNOP	93.0	70-130		%Rec	1	6/30/2017 10:02:48 AM	32573			
EPA MET	HOD 8015D: GASOLINE RANGE						Analyst	NSB			
Gasoline	Range Organics (GRO)	200	12		mg/Kg	5	6/30/2017 1:22:44 PM	G43930			

54-150

0.060

0.12

0.12

0.24

66.6-132

S

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

5

5

5

5

5

5

669

ND

ND

ND

8.6

126

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limitspage 12 of 12
	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#: 1706F76

03-Jul-17

Client:	GHD										
Project:	San Juan	27-5 No 1									
Sample ID	MB-32573	SampT	Гуре: МІ	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	PBS	Batch	h ID: 32	573	F	RunNo: 4	3910				
Prep Date:	6/30/2017	Analysis D	Date: 6/	30/2017	5	SeqNo: 1	384022	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 Rang	ge Organics (MRO)	ND	50								
Surr: DNOP)	9.8		10.00		97.8	70	130		1	
Sample ID	LCS-32573	SampT	Type: LC	s	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	LCSS	Batch	h ID: 32	573	F	RunNo: 4	3910				
Prep Date:	6/30/2017	Analysis D	Date: 6/	30/2017	\$	SeqNo: 1	384023	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	47	10	50.00	0	94.7	73.2	114			
Surr: DNOP		4.6		5.000		91.7	70	130		the left was	
Sample ID	1706F76-001AMS	SampT	Type: MS	6	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	West Wall	Batch	n ID: 32	573	F	RunNo: 4	3908				
Prep Date:	6/30/2017	Analysis D)ate: 6/	30/2017	S	SeqNo: 1	384947	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	56	9.2	45.96	11.75	95.7	55.8	122	1		
Surr: DNOP	• · · · · · · · · · · · · · · · · · · ·	4.9		4.596		106	70	130			
Sample ID	1706F76-001AMS	D SampT	ype: MS	SD	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	West Wall	Batch	n ID: 32	573	F	RunNo: 4	3908				
Prep Date:	6/30/2017	Analysis D)ate: 6/	30/2017	S	SeqNo: 1	384954	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	60	9.9	49.36	11.75	98.1	55.8	122	7.69	20	
Surr: DNOP		5.2		4.936		106	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit

Practical Quanitative Limit PQL

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

Page 13 of 17

- W

WO#: 1706F76

03-Jul-17

Project: San Juan 27-5 No 1 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 643930 RunNo: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385181 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLinit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GR0) ND 5.0 TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G49330 RunNo: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385182 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLinit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GR0) 23 5.0 25.00 91.3 76.4 150 TestCode: EPA Method 8015D: Gasoline Range <t< th=""><th>Client:</th><th>GHD</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	Client:	GHD										
Sample ID R8 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G43930 RunNo: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385181 Units: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) ND 5.0 TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43930 RunNo: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1388182 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit MighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 23 5.0 25.00 0 91.3 76.4 125 Sum: BFB Batch ID: G43929 RunNo	Project:	San Juan	27-5 No 1									
Sample ID RB TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 643930 Runkiv: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385181 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) ND 5.0 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43930 Runko: 43930 Units: mg/Kg Analysis Date: Analysis Date: 6/30/2017 SeqNo: 1385182 Units: mg/Kg Analysis Result POL SPK value SPK Ref Val %REC LowLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 213 7.64 125 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Sample ID <td< td=""><td>Completio</td><td></td><td>Comet</td><td></td><td></td><td>Tee</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Completio		Comet			Tee						
Clieft ID: PPS Bitt ID: G43393 RUNNO: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385181 Units: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gesoline Range Organics (GR0) ND 5.0 1000 101 54 150 Sample ID 2.60G GR0 LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43330 RunNo: 43930 Analyte Result POL SPK Net Value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GR0) 23 5.0 25.00 0 91.3 76.4 125 Sum BFB 1100 1000 111 54 150 150 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range	Sample ID	RB	Sampi	ype: MI	BLK	Tes		PA Method	8015D: Gas	oline Rang	e	
Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385181 Units: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gesinine Range Organics (GRO) ND 5.0 TestCode: EPA Method 8015D: Gesoline Range Client ID: LCSS Batch ID: G43330 RunNo: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1386182 Units: mg/Kg Analyste Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gesoline Range Client ID: PEB 1100 1000 111 54 150 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385226 Units: <td< td=""><td>Client ID:</td><td>PBS</td><td>Batcr</td><td>TID: G</td><td>43930</td><td></td><td>Runno: 4</td><td>3930</td><td></td><td></td><td></td><td></td></td<>	Client ID:	PBS	Batcr	TID: G	43930		Runno: 4	3930				
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) ND 5.0 1000 101 54 150 Sample ID 2.50G GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43930 RunNo: 43930 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 23 5.0 25.0 0 913 76.4 125 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G43929 RunNo: 43929 Units: mg/Kg Analyte Result PQL SPK Ref Val %REC LowLimit HighLimit %RPD	Prep Date:		Analysis D)ate: 6	/30/2017		SeqNo: 1	385181	Units: mg/l	Kg		
Gasoline Range Organics (GRO) ND 5.0 Sur: BFB 1000 1000 101 54 150 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 643930 RunNo: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385142 Units: mg/Kg Analyte Result POL SPK Kef Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 23 5.0 25.00 0 91.3 76.4 125 Surr. BFB 1100 1000 111 54 150 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G43929 RunNo: 43929 <td>Analyte</td> <td></td> <td>Result</td> <td>PQL</td> <td>SPK value</td> <td>SPK Ref Val</td> <td>%REC</td> <td>LowLimit</td> <td>HighLimit</td> <td>%RPD</td> <td>RPDLimit</td> <td>Qual</td>	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sum brb 1000 1000 101 54 150 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 643930 RunNo: 43930 Prep Date: Analysis Date: 630/2017 SeqNo: 1385182 Units: mg/Kg Analysis Date: 630/2017 SeqNo: 1385182 Units: mg/Kg Analysis Date: 630/2017 SeqNo: 1385226 Units: mg/Kg Sample ID RB SampType: ND 5.0 SampType: SampType: Qual Gesoline Range Organics (GRO) ND 5.0 SampType: ND 5.0 Sample ID 2.5UG GRO	Gasoline Rang	ge Organics (GRO)	ND	5.0	1000		101		150			
Sample ID 2.5UG GRO LCS SampType: ICS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 643930 RunNo: 43930 Vist: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit %RPD RPD Limit Qual Gasoline Range Organics (GRO) 23 5.0 25.00 0 91.3 76.4 125 Surr: BFB 1100 1000 111 54 150 5.0 25.0 <td>Surr: BFB</td> <td></td> <td>1000</td> <td></td> <td>1000</td> <td></td> <td>101</td> <td>54</td> <td>150</td> <td></td> <td></td> <td></td>	Surr: BFB		1000		1000		101	54	150			
Client ID: LCSS Batch ID: G43930 RunNo: 43930 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385182 Units: mg/Kg Analyte Result POL SPK Ref Value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 23 5.0 25.00 0 91.3 76.4 125 Sum BFB 1100 1000 111 54 150 50 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385226 Units: mg/Kg Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Units: mg/Kg <td>Sample ID</td> <td>2.5UG GRO LCS</td> <td>SampT</td> <td>ype: LC</td> <td>s</td> <td>Tes</td> <td>stCode: E</td> <td>PA Method</td> <td>8015D: Gase</td> <td>oline Rang</td> <td>е</td> <td>а. П</td>	Sample ID	2.5UG GRO LCS	SampT	ype: LC	s	Tes	stCode: E	PA Method	8015D: Gase	oline Rang	е	а. П
Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385182 Units: mg/Kg Analyte Result PQL SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GR0) 23 5.0 25.00 0 91.3 76.4 125 Sum: BFB 1100 1000 111 54 150 150 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385226 Units: mg/Kg Analyte Result POL SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GR0) ND 5.0 SampType: SeqNo: 1385227 Units: mg/Kg Analyte Result POL SPK Ref Val %RE	Client ID:	LCSS	Batch	n ID: G	43930	I	RunNo: 4	3930				
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Gasoline Range Organics (GR0) 23 5.0 25.00 0 91.3 76.4 125 Surr: BFB 1100 1000 111 54 150 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385226 Units: mg/Kg Analyte Result PQL SPK value SPK value SPK value SPK 150 Surr: BFB 880 1000 88.5 54 150 Surr: BFB 880 1000 88.5 54 150 Sample ID 2.5UG GRO LCS SampType: KCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Prep Date: Analyte Result PQL SPK value SPK Ref Val %REC LowLimit	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sur: BFB 1100 1000 111 54 150 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 643929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385226 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) ND 5.0 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 643929 RunNo: 43929 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 125 Sum: BFB 1	Gasoline Ranç	ge Organics (GRO)	23	5.0	25.00	0	91.3	76.4	125			
Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385226 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) ND 5.0 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Prep Date: Analytis Date: 6/30/2017 SeqNo: 1385227 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 0 99.6 76.4 125 Sur:: BFB 1000 1000 1002 54 150 SampLet BAS 150 SampType: Analyte	Surr: BFB		1100		1000		111	54	150			
Client ID: PBS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385226 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 880 1000 88.5 54 150 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385227 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 9.6 76.4 125 Surr: BFB 1000 1000 1000 102 54 150 150	Sample ID	RB	SampT	vpe: MI	BLK	Tes	stCode: E	PA Method	8015D: Gase	oline Rang	e	
Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385226 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) ND 5.0 sur: BFB 880 1000 88.5 54 150 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 Sur: BFB 1000 1000 1002 54 150 56 150 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929	Client ID:	PBS	Batch	n ID: G4	13929	1	RunNo: 4	3929				
Analyte Result PQL SPK value SPK Ref Val %REC LowLinit HighLinit %RPD RPDLinit Qual Gasoline Range Organics (GRO) ND 5.0 5.0 54 150 150 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Prep Date: Analytis Date: 6/30/2017 SeqNo: 1385227 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 Surr: BFB 1000 1000 1002 54 150 56 150 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date:	Prep Date:		Analysis D	ate: 6	/30/2017		SeaNo: 1	385226	Units: ma/k	(a		
Arlayte Result POL SPK Value S	Anglida		Decult	DOI			0/ DEC	L avril instit		° 0000		Qual
Surr: BFB 880 1000 88.5 54 150 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385227 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 Surr: BFB 1000 1000 102 54 150 150 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range 25 Client ID: West Wall Batch ID: G43929 RunNo: 43929 Units: mg/Kg 4 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 54	Gasoline Ranc	pe Organics (GRO)	ND	PQL 5.0	SPK value	SPK Rei Val	%REC	LowLimit	HighLimit	%RPD	RPDLIMI	Quai
Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385227 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 Surr: BFB 1000 1000 102 54 150 150 150 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Ga	Surr: BFB	je elgamee (elle)	880	0.0	1000		88.5	54	150			
Client ID: LCS Samptype: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385227 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 Surr: BFB 1000 1000 102 54 150 50 50 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 9 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (G	Sample ID	2 5110 680 1 68	SamaT	ino: 10		Tos	+Codo: E	DA Mathad	9045D: Coo	line Denn		
Direction Coss of a batch rib. G43929 Ruinko. 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385227 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 Surr: BFB 1000 1000 102 54 150 50 50 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 Surr: BFB 920	Client ID:	2.500 GRO LCS	Batch		12020	Tes		2020	0015D. Gase	Sime Kang	e	
Analysis Date: 0'30/2017 Seq.N0: 1385227 Offils: mg/kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 Surr: BFB 1000 1000 102 54 150 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 50 50 Surr: BFB 920 815.7 112 54 150 50 50 50 50 <t< td=""><td>Bron Dato:</td><td>2033</td><td></td><td>nto: G</td><td>+3929</td><td>r</td><td>ConNo: 4</td><td>29523</td><td>Lipito: mar/l</td><td>1.</td><td></td><td></td></t<>	Bron Dato:	2033		nto: G	+3929	r	ConNo: 4	29523	Lipito: mar/l	1.		
AnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitQualGasoline Range Organics (GRO)255.025.00099.676.4125Surr: BFB1000100010254150Sample ID1706F76-001AMSSampType:MSTestCode:EPA Method 8015D:Gasoline RangeClient ID:West WallBatch ID:G43929RunNo:43929Prep Date:Analysis Date:6/30/2017SeqNo:1385228Units:mg/KgAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitQualGasoline Range Organics (GRO)214.120.39010477.8128128Surr: BFB920815.711254150150150Sample ID1706F76-001AMSDSampType:MSDTestCode:EPA Method 8015D:Gasoline RangeClient ID:West WallBatch ID:G43929RunNo:43929150Sample ID1706F76-001AMSDSampType:MSDTestCode:EPA Method 8015D:Gasoline RangeClient ID:West WallBatch ID:G43929RunNo:43929Lipits:mg/KgPrep. Date:Analysis Date:6/30/2017SegNo:1385229Lipits:mg/Kg	Flep Dale.		Analysis D	ale. o	30/2017		Sequo: 1	385227	Units: mg/r	٨g		
Gasoline Range Organics (GRO) 25 5.0 25.00 0 99.6 76.4 125 Surr: BFB 1000 1000 102 54 150 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 Surr: BFB 920 815.7 112 54 150 SeqNo: 1385229 Linits: mg/Kg Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 <td>Analyte</td> <td>0</td> <td>Result</td> <td>PQL</td> <td>SPK value</td> <td>SPK Ref Val</td> <td>%REC</td> <td>LowLimit</td> <td>HighLimit</td> <td>%RPD</td> <td>RPDLimit</td> <td>Qual</td>	Analyte	0	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID 1706 1000 102 34 150 Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 Surr: BFB 920 815.7 112 54 150 54 150 Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Malysis Date: 6/30/2017 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385229 Units: mg/Kg	Gasoline Rang	ge Organics (GRO)	1000	5.0	25.00	0	99.6	76.4	125			
Sample ID 1706F76-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 Surr: BFB 920 815.7 112 54 150 150 150 Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385229 Units: mg/Kg	Sun. Dr D	State -	1000		1000	1.2	102	04	150		6.99	8
Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 Sur: BFB 920 815.7 112 54 150 150 Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385229 Units: mg/Kg	Sample ID	1706F76-001AMS	SampT	ype: MS	S	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	е	
Prep Date: Analysis Date: 6/30/2017 SeqNo: 1385228 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 Surr: BFB 920 815.7 112 54 150 150 Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Lipits: mg/Kg	Client ID:	West Wall	Batch	n ID: G4	13929	F	RunNo: 4	3929				
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 Surr: BFB 920 815.7 112 54 150 150 Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: 6/30/2017 SeqNo: 1385229 Linits: mg/Kg	Prep Date:		Analysis D	ate: 6	30/2017		SeqNo: 1	385228	Units: mg/k	٢g		
Gasoline Range Organics (GRO) 21 4.1 20.39 0 104 77.8 128 Surr: BFB 920 815.7 112 54 150 Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Pren Date: Analysis Date: 6/30/2017 SeqNo: 1385229 Units: mg/Kg	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB 920 815.7 112 54 150 Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Pren Date: Analysis Date: 6/30/2017 SeqNo: 1385229 Units: mg/Kg	Gasoline Rang	ge Organics (GRO)	21	4.1	20.39	0	104	77.8	128			
Sample ID 1706F76-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: West Wall Batch ID: G43929 RunNo: 43929 Pren Date: Analysis Date: 6/30/2017 SeqNo: 1385229 Units: mg/Kg	Surr: BFB	Section 2	920		815.7		112	54	150			
Client ID: West Wall Batch ID: G43929 RunNo: 43929 Pren Date: Analysis Date: 6/30/2017 SeqNo: 1385229 Units: mg/Kg	Sample ID	1706F76-001AMS	SampT	ype: MS	SD	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e	1
Pren Date: Analysis Date: 6/30/2017 SegNo: 1385229 Units: mg/Kg	Client ID:	West Wall	Batch	D: G4	3929	F	RunNo: 4	3929				
The ball of the ba	Prep Date:		Analysis D	ate: 6/	30/2017	5	SeqNo: 1	385229	Units: mg/k	٢g		
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual												

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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#: 1706F76 03-Jul-17

Client: GHD **Project:** San Juan 27-5 No 1

Sample ID 1706F76-001AMS	D SampTy	pe: MS	SD	Tes	tCode: E	PA Method	8015D: Gaso	line Rang	e	
Client ID: West Wall	Batch	ID: G4	3929	R	RunNo: 4	3929				
Prep Date:	Analysis Da	ate: 6/	30/2017	S	SeqNo: 1	385229	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.1	20.39	0	99.7	77.8	128	4.40	20	
Surr: BFB	900		815.7		110	54	150	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified
- Page 15 of 17

WO#: 1706F76

03-Jul-17

Client:	GHD										
Project:	San Juan	27-5 No	1								
Sample ID	RB	Samp	Туре: М	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Bato	h ID: B4	3930	F	RunNo: 4	3930				
Prep Date:		Analysis I	Date: 6/	30/2017	S	SeqNo: 1	385187	Units: mg/h	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Bron	nofluorobenzene	0.95		1.000		95.0	66.6	132			
Sample ID	100NG BTEX LCS	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Bato	h ID: B4	3930	F	RunNo: 4	3930				
Prep Date:		Analysis I	Date: 6/	30/2017	S	SeqNo: 1	385188	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.93	0.025	1.000	0	92.9	80	120			
Toluene		0.93	0.050	1.000	0	93.4	80	120			
Ethylbenzene		0.92	0.050	1.000	0	91.8	80	120			
Xylenes, Total		2.7	0.10	3.000	0	91.3	80	120			
Surr: 4-Bron	nofluorobenzene	0.99		1.000		99.2	66.6	132			
Sample ID	RB	Samp	Туре: МЕ	3LK	Tes	tCode: El	PA Method	8021B: Vola	tiles	April 1	
Client ID:	PBS	Batc	h ID: B4	3929	F	RunNo: 4	3929				
Prep Date:		Analysis I	Date: 6/	30/2017	S	SeqNo: 1	385242	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Bron	nofluorobenzene	1.2		1.000		115	66.6	132		1.11.	1.1.1
Sample ID	100NG BTEX LCS	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batc	h ID: B4	3929	F	RunNo: 4	3929				
Prep Date:		Analysis [Date: 6/	30/2017	S	SeqNo: 1	385243	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.025	1.000	0	108	80	120			
Toluene		1.1	0.050	1.000	0	110	80	120			
Ethylbenzene		1.1	0.050	1.000	0	110	80	120			
Xylenes, Total		3.4	0.10	3.000	0	112	80	120			
Surr: 4-Bron	nofluorobenzene	1.2		1.000		121	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

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WO#: 1706F76

03-Jul-17

Client:

Project:

GHD San Juan 27-5 No 1

Sample ID 1	1706F76-002AMS	SampT	ype: MS	6	Tes	Code: El	PA Method	8021B: Volat	iles		
Client ID: S	South Wall-W	Batch	n ID: B4	3929	R	unNo: 4	3929				
Prep Date:		Analysis D	ate: 6/	30/2017	S	eqNo: 1	385253	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		3.8	0.089	3.564	0.03279	106	80.9	132			
Toluene		4.0	0.18	3.564	0.1112	108	79.8	136			
Ethylbenzene		4.2	0.18	3.564	0	116	79.4	140			
Xylenes, Total		13	0.36	10.69	1.145	111	78.5	142			
Surr: 4-Bromot	fluorobenzene	4.9		3 564		137	66.6	132			S
				0.001			00.0	101			0
Sample ID 1	1706F76-002AMSE) SampT	ype: MS	SD	Tes	Code: El	PA Method	8021B: Volat	iles		
Sample ID 1 Client ID: S	1706F76-002AMSE South Wall-W) SampT Batch	ype: MS	3929	Tesi	Code: El	PA Method	8021B: Volat	iles		
Sample ID 1 Client ID: S Prep Date:	1706F76-002AMSE South Wall-W) SampT Batch Analysis D	ype: MS n ID: B4 pate: 6/	SD 3929 30/2017	Tesi R S	Code: El cunNo: 4	PA Method 3929 385254	8021B: Volat	iles g		
Sample ID 1 Client ID: 5 Prep Date: Analyte	1706F76-002AMSE South Wall-W	D SampT Batch Analysis D Result	ype: MS n ID: B4 Pate: 6/ PQL	3929 30/2017 SPK value	Tesi R SPK Ref Val	Code: El cunNo: 4: seqNo: 1: %REC	PA Method 3929 385254 LowLimit	8021B: Volat Units: mg/K HighLimit	iles g %RPD	RPDLimit	Qual
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene	1706F76-002AMSE South Wall-W	D SampT Batch Analysis D Result 3.7	ype: MS n ID: B4 pate: 6/ PQL 0.089	3929 30/2017 SPK value 3.564	Test R S SPK Ref Val 0.03279	Code: El cunNo: 4: ceqNo: 1: <u>%REC</u> 103	PA Method 3929 385254 LowLimit 80.9	8021B: Volat Units: mg/K HighLimit 132	iles g %RPD 3.05	RPDLimit 20	Qual
Sample ID 1 Client ID: 5 Prep Date: Analyte Benzene Toluene	1706F76-002AMSE South Wall-W	D SampT Batch Analysis D Result 3.7 3.9	ype: MS n ID: B4 Date: 6/ PQL 0.089 0.18	3929 30/2017 SPK value 3.564 3.564	Tes R S SPK Ref Val 0.03279 0.1112	Code: El cunNo: 4: ceqNo: 1: %REC 103 105	PA Method 3929 385254 LowLimit 80.9 79.8	8021B: Volat Units: mg/K HighLimit 132 136	iles g %RPD 3.05 2.52	RPDLimit 20 20	Qual
Sample ID 1 Client ID: S Prep Date: Analyte Benzene Toluene Ethylbenzene	1706F76-002AMSE South Wall-W) SampT Batch Analysis D Result 3.7 3.9 4.1	ype: MS n ID: B4 pate: 6/ PQL 0.089 0.18 0.18	3929 30/2017 SPK value 3.564 3.564 3.564	Tesi S SPK Ref Val 0.03279 0.1112 0	Code: EF cunNo: 4: ceqNo: 1: %REC 103 105 114	PA Method 3929 385254 LowLimit 80.9 79.8 79.4	8021B: Volat Units: mg/K HighLimit 132 136 140	iles g %RPD 3.05 2.52 2.27	RPDLimit 20 20 20	Qual
Sample ID 1 Client ID: S Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1706F76-002AMSE South Wall-W	D SampT Batch Analysis D Result 3.7 3.9 4.1 13	ype: MS n ID: B4 Pate: 6/ PQL 0.089 0.18 0.18 0.36	3929 30/2017 SPK value 3.564 3.564 3.564 10.69	Tesi R SPK Ref Val 0.03279 0.1112 0 1.145	Code: El cunNo: 4: seqNo: 1: <u>%REC</u> 103 105 114 108	PA Method 3929 385254 LowLimit 80.9 79.8 79.8 79.4 78.5	8021B: Volat Units: mg/K HighLimit 132 136 140 142	iles 9 %RPD 3.05 2.52 2.27 2.21	RPDLimit 20 20 20 20 20	Qual

Qualifiers:

Value exceeds Maximum Contaminant Level. *

Sample Diluted Due to Matrix D

- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Practical Quanitative Limit PQL

- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Sample pH Not In Range Р
- 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 Albuq TEL: 505-345-3975 I Website: www.hali	nalysis Laboratory 4901 Hawkins NE juerque, NM 87109 FAX: 505-345-4107 lenvironmental.com	Samp	ole Log-In Check List
Client Name: GHD	Work Order Number:	1706F76		RcptNo: 1
Received By: Anne Thorne Completed By: Ashley Gallegos Reviewed By: STLC 06/29	6/29/2017 3:00:00 PM 6/29/2017 3:16:30 PM / [-7]	9	Anne Arm	
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?		Client		
Log In				
4. Was an attempt made to cool the samples?		Yes 🗹	No 🗌	NA 🗔
5. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗌	
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) properl	y 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 broke	n?	Yes	No 🗹	# of preserved
12. Does paperwork match bottle labels?		Yes 🗹	No 🗌	for pH:
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:
Special Handling (if applicable)				
16. Was client notified of all discrepancies with the	nis order?	Yes	No 🗌	NA 🗹
Person Notified:	Date		Medicington and and	
By Whom:	Via:	eMail 🗌 Phor	ne 🗌 Fax	In Person
Regarding:	a de la definidada de la compositiva de	AL D. A. 1997. THOM C. FLAMM, A. P. AND. P. MALLANDA		
Client Instructions:				
17. Additional remarks:				
18. Cooler Information				
Cooler No Temp °C Condition Se	al Intact Seal No S Present	eal Date Sig	aned By	

Page 1 of 1

Client: (hain. 3HC	of-Cu) Seri	nices Anc,	Turn-Around	Time: A Rush San Ju	Same Day	HALL ENVIRONMENTA ANALYSIS LABORATOR www.hallenvironmental.com				RY									
Mailing	Address	6121	Indian Sch. Rd.					490	01 H	awki	ins N	IE -	Alb	uque	erqu	e, NI	M 87	109		
Alba	19. N	m 87	110	Project #: /	112468	77		Те	I. 50)5-34	15-39	975	F	ax	505-	345-	4107			
Phone #	#! '50	75-88	4-0672									A	naly	sis	Req	uest				and the second
email or	Fax#:	jeff.i	Nalker Eghd-com	Project Mana	ger:	11/11.	=	(Alu	02					04)	5					
QA/QC F	Package:		-		JETT	Walker	802	as o	M			(S)		04,S	CB					
Stan	dard	and the second	Level 4 (Full Validation)		1 1		3's (D)T	SRO	11		SIN		2° P(32 P					
Accredi	tation AP	C Othe	r	Sampler:	partes	Neligh	TM	đ	20	E:	4.1)	270		NON	1 806		-			Î
	(Type)			Sample Tem	perature:	50		+ Ш	GR	141	150	or 8	als	NO	les l	_	VOA			Y or
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1706F76	BTEX-MTE	BTEX + MTB	TPH 80158	TPH (Method	EDB (Method	PAH's (8310	RCRA 8 Met	Anions (F,Cl,	8081 Pesticio	8260B (VOA	8270 (Semi-			Air Bubbles (
129/17	0932	Soil	WestWall	Hozal. 1	MEOH	-001	X		X											
1	0940	1	South Wall-W	51	/	-002	X		X											12
	DAUE		South Wall -E			-003	C		V		-									
-	0950		East Wall			-004	X		Y											
-	1000		Nort Wall - E			-005	X		x											
-	1000		Abrah Wall - W			-0010	V		Y									1	-	
-	1015		ELANT	1		-007	X		2										+	
-	1030		T50-1	1		-008	V		$\overline{}$									-	+	
-	1935		758-2			-000	12		Y									-	+	
	1011		110			-010	$\overline{\mathbf{v}}$		N				197 S.		1.55				-	
-	IDHC		-4P-4			0-011	Î		X										-	
+	1000		TYPUE		5	1-012	X		X		in the second									
Date:	Time:	Relinquish	ed by:	Received by: /	*	Date , Time	Rer	narks	s:											1_1_
<i>[24[17</i> Date:	/ 500 (Time:	Relinquish	ed ty:	Received by:	the -	Date Time														

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

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

July 12, 2017 Jeff Walker GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

RE: 27-5 #1

OrderNo.: 1707388

Dear Jeff Walker:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/11/2017 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

Lab Order 1707388

Date Reported: 7/12/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Project:	GHD 27-5 #1			Clie	ent Sampl	e ID: TS Date: 7/1	P-10 0/2017 10:45:00 AM		
Lab ID:	1707388-001	Matrix: SC]	Received Date: 7/11/2017 7:00:00 AM					
Analyses		Result	PQL	Qual U	J nits	DF	Date Analyzed	Batch	
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS					Analys	t: TOM	
Diesel Ra	ange Organics (DRO)	510	10		mg/Kg	1	7/11/2017 9:58:48 AM	32724	
Motor Oil	Range Organics (MRO)	ND	50		mg/Kg	1	7/11/2017 9:58:48 AM	32724	
Surr: [DNOP	94.2	70-130		%Rec	1	7/11/2017 9:58:48 AM	32724	
EPA MET	HOD 8015D: GASOLINE R	ANGE					Analys	t: NSB	

Gasoline Range Organics (GRO)	94	3.4		mg/Kg	1	7/11/2017 9:29:23 AM	32708
Surr: BFB	1350	54-150	S	%Rec	1	7/11/2017 9:29:23 AM	32708
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.017		mg/Kg	1	7/11/2017 9:29:23 AM	32708
Toluene	ND	0.034		mg/Kg	1	7/11/2017 9:29:23 AM	32708
Ethylbenzene	ND	0.034		mg/Kg	1	7/11/2017 9:29:23 AM	32708
Xylenes, Total	0.30	0.067		mg/Kg	1	7/11/2017 9:29:23 AM	32708
Surr: 4-Bromofluorobenzene	214	66.6-132	S	%Rec	1	7/11/2017 9:29:23 AM	32708

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

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- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1707388

Date Reported: 7/12/2017

7/11/2017 9:53:23 AM

7/11/2017 9:53:23 AM

32708

32708

Hall Environmental Analysis Laboratory, Inc.

Xylenes, Total

Surr: 4-Bromofluorobenzene

CLIENT: Project:	GHD 27-5 #1			С	lient Sampl Collection 1	e ID: TS Date: 7/1	5P-11 0/2017 10:50:00 AM					
Lab ID:	1707388-002	Matrix: S	Matrix: SOIL			Received Date: 7/11/2017 7:00:00 AM						
Analyses		Result	PQL (Qual	Units	DF	Date Analyzed	Batch				
EPA MET	HOD 8015M/D: DIESEL RAM	IGE ORGANICS					Analyst	TOM				
Diesel Ra	ange Organics (DRO)	77	9.2		mg/Kg	1	7/11/2017 10:27:19 AM	32724				
Motor Oil	Range Organics (MRO)	ND	46		mg/Kg	1	7/11/2017 10:27:19 AM	32724				
Surr: E	DNOP	83.4	70-130		%Rec	1	7/11/2017 10:27:19 AM	32724				
EPA MET	HOD 8015D: GASOLINE RA	NGE					Analyst	NSB				
Gasoline	Range Organics (GRO)	62	3.4		mg/Kg	1	7/11/2017 9:53:23 AM	32708				
Surr: E	3FB	930	54-150	S	%Rec	1	7/11/2017 9:53:23 AM	32708				
EPA MET	HOD 8021B: VOLATILES						Analyst	NSB				
Benzene		ND	0.017		mg/Kg	1	7/11/2017 9:53:23 AM	32708				
Toluene		ND	0.034		mg/Kg	1	7/11/2017 9:53:23 AM	32708				
Ethylben	zene	ND	0.034		ma/Ka	1	7/11/2017 9:53:23 AM	32708				

0.068

S

66.6-132

mg/Kg

%Rec

1

1

0.11

186

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

Lab Order 1707388

Date Reported: 7/12/2017

7/11/2017 10:55:24 AM 32724

7/11/2017 10:17:24 AM 32708

7/11/2017 10:17:24 AM

Analyst: NSB

Analyst: NSB

32708

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD			C	lient Samp	le ID: TS	P-12	
Project:	27-5 #1				Collection	Date: 7/1	0/2017 10:55:00 AM	
Lab ID:	1707388-003	Matrix: Se	OIL		Received	Date: 7/1	1/2017 7:00:00 AM	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RAI	NGE ORGANICS					Analys	t: TOM
Diesel Ra	ange Organics (DRO)	390	9.2		mg/Kg	1	7/11/2017 10:55:24 AM	/ 32724
Motor Oil	Range Organics (MRO)	ND	46		mg/Kg	1	7/11/2017 10:55:24 AM	1 32724

70-130

54-150

0.080

0.16

0.16

0.32

66.6-132

16

S

S

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

5

5

5

5

5

5

5

91.3

89

366

ND

ND

ND

ND

148

	Refer to the QC Summary re	eport and sample login	checklist for flagged (OC data and	preservation information.
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Qua	lifi	ers:	
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*

Surr: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

Surr: 4-Bromofluorobenzene

EPA METHOD 8021B: VOLATILES

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified
Lab Order 1707388

Date Reported: 7/12/2017

7/11/2017 10:41:25 AM 32708

5 7/11/2017 10:41:25 AM 32708

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD	Client Sample ID: TSP-13										
Project:	27-5 #1		Collection Date: 7/10/2017 11:00:00 AM									
Lab ID:	1707388-004	Matrix: S	Received I	Received Date: 7/11/2017 7:00:00 AM								
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch					
EPA MET	THOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	TOM					
Diesel R	ange Organics (DRO)	430	9.7	mg/Kg	1	7/11/2017 11:23:35 AM	32724					
Motor Oi	I Range Organics (MRO)	ND	48	mg/Kg	1	7/11/2017 11:23:35 AM	32724					
Surr: I	DNOP	92.4	70-130	%Rec	1	7/11/2017 11:23:35 AM	32724					
EPA MET	THOD 8015D: GASOLINE R	ANGE				Analyst	NSB					
Gasoline	e Range Organics (GRO)	130	15	mg/Kg	5	7/11/2017 10:41:25 AM	32708					

54-150

0.077

0.15

0.15

0.31

66.6-132

S

S

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

5

5

5

5

5

564

ND

ND

ND

ND

160

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

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*

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1707388

Date Reported: 7/12/2017

Hall Environmental Analysis Laboratory, Inc.

EPA MET	THOD 8015M/D: DIESEL	RANGE ORGANICS			Analy	st: TOM					
Analyses		Result	PQL Q	ual Units	DF Date Analyzed	Batch					
Lab ID:	1707388-005	Matrix: S	OIL	Received Date: 7/11/2017 7:00:00 AM							
Project:	27-5 #1			Collection	Date: 7/10/2017 11:05:00 AM	Л					
CLIENT:	GHD	Client Sample ID: TSP-14									

EFA WETHOD OUTSWID. DIESEL KANGE O	RGANIC	0				Allalyst.	IOW
Diesel Range Organics (DRO)	440	9.4		mg/Kg	1	7/11/2017 11:52:00 AM	32724
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/11/2017 11:52:00 AM	32724
Surr: DNOP	95.4	70-130		%Rec	1	7/11/2017 11:52:00 AM	32724
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	100	17		mg/Kg	5	7/11/2017 11:05:33 AM	32708
Surr: BFB	418	54-150	S	%Rec	5	7/11/2017 11:05:33 AM	32708
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.083		mg/Kg	5	7/11/2017 11:05:33 AM	32708
Toluene	ND	0.17		mg/Kg	5	7/11/2017 11:05:33 AM	32708
Ethylbenzene	ND	0.17		mg/Kg	5	7/11/2017 11:05:33 AM	32708
Xylenes, Total	ND	0.33		mg/Kg	5	7/11/2017 11:05:33 AM	32708
Surr: 4-Bromofluorobenzene	152	66.6-132	S	%Rec	5	7/11/2017 11:05:33 AM	32708

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

Q	ualifiers:	

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

WO#: 1707388

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12-Jul-17

Client:

Project:

GHD

27-5 #1

Sample ID LCS-32724	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 32724	RunNo: 44111								
Prep Date: 7/11/2017	Analysis Date: 7/11/2017	SeqNo: 1392049	Units: mg/Kg							
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual							
Diesel Range Organics (DRO)	49 10 50.00	0 98.8 73.2	114							
Surr: DNOP	4.4 5.000	89.0 70	130							
Sample ID LCS-32725	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 32725	RunNo: 44111	0							
Prep Date: 7/11/2017	Analysis Date: 7/11/2017	SeqNo: 1392050	Units: %Rec							
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual							
Surr: DNOP	4.3 5.000	86.5 70	130							
Sample ID MB-32724	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 32724	RunNo: 44111								
Prep Date: 7/11/2017	Analysis Date: 7/11/2017	SeqNo: 1392051	Units: mg/Kg							
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual							
Diesel Range Organics (DRO)	ND 10									
Motor Oil Range Organics (MRO)	ND 50									
motor on rungo organico (mito)	ND 50									
Surr: DNOP	9.8 10.00	97.6 70	130							
Surr: DNOP	9.8 10.00 SampType: MBLK	97.6 70 TestCode: EPA Method	130 8015M/D: Diesel Range Organics							
Surr: DNOP Sample ID MB-32725 Client ID: PBS	9.8 10.00 SampType: MBLK Batch ID: 32725	97.6 70 TestCode: EPA Method RunNo: 44111	130 8015M/D: Diesel Range Organics							
Surr: DNOP Sample ID MB-32725 Client ID: PBS Prep Date: 7/11/2017	ND 30 9.8 10.00 SampType: MBLK Batch ID: 32725 Analysis Date: 7/11/2017	97.6 70 TestCode: EPA Method RunNo: 44111 SeqNo: 1392052	130 8015M/D: Diesel Range Organics Units: %Rec							
Surr: DNOP Sample ID MB-32725 Client ID: PBS Prep Date: 7/11/2017 Analyte	9.8 10.00 SampType: MBLK Batch ID: 32725 Analysis Date: 7/11/2017 Result PQL SPK value	97.6 70 TestCode: EPA Method RunNo: 44111 SeqNo: 1392052 SPK Ref Val %REC LowLimit	130 8015M/D: Diesel Range Organics Units: %Rec HighLimit %RPD RPDLimit Qual							

Qualifiers:

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

 Client:
 GHD

 Project:
 27-5 #1

							1	7.9. K				
Sample ID MB-32708	MB-32708 SampType: MBLK					TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	n ID: 32	708	RunNo: 44123								
Prep Date: 7/10/2017	Analysis D	ate: 7/	11/2017	SeqNo: 1392985 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	ND	5.0										
Surr: BFB	1000		1000		104	54	150					
								T 24				
Sample ID LCS-32708	SampT	ype: LC	S	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e			
Sample ID LCS-32708 Client ID: LCSS	SampT Batcl	ype: LC	S 708	Tes F	tCode: El RunNo: 4	PA Method 4123	8015D: Gaso	oline Rang	e			
Sample ID LCS-32708 Client ID: LCSS Prep Date: 7/10/2017	SampT Batcl Analysis D	ype: LC n ID: 32 Date: 7/	S 708 11/2017	Tes F S	tCode: El RunNo: 4 SeqNo: 1	PA Method 4123 392986	8015D: Gaso Units: mg/P	bline Rang	e			
Sample ID LCS-32708 Client ID: LCSS Prep Date: 7/10/2017 Analyte	SampT Batcl Analysis D Result	⁻ ype: LC n ID: 32 Date: 7 / PQL	S 708 11/2017 SPK value	Tes F S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 4123 392986 LowLimit	8015D: Gaso Units: mg/H HighLimit	oline Rang (g %RPD	e RPDLimit	Qual		
Sample ID LCS-32708 Client ID: LCSS Prep Date: 7/10/2017 Analyte Basoline Range Organics (GRO)	SampT Batcl Analysis D Result 24	ype: LC n ID: 32 Date: 7/ PQL 5.0	S 708 11/2017 SPK value 25.00	Tes F S SPK Ref Val 0	tCode: El RunNo: 4 SeqNo: 1 %REC 97.0	PA Method 4123 392986 LowLimit 76.4	8015D: Gaso Units: mg/P HighLimit 125	oline Rang (g %RPD	e 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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1707388 12-Jul-17

WO#:

Client: Project:

GHD 27-5 #1

Sample ID MB-32708	SampT	ype: ME	BLK	Tes						
Client ID: PBS	Batch	n ID: 32	708	F	RunNo: 4	4123				
Prep Date: 7/10/2017	Analysis D	Date: 7/	11/2017	S	SeqNo: 1	393004	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.4		1.000		136	66.6	132			S
Sample ID LCS-32708	SampT	ype: LC	s	Tes						
Client ID: LCSS	Batch	n ID: 32	708	RunNo: 44123						
Prep Date: 7/10/2017	Analysis D	ate: 7/	11/2017	S	eqNo: 1	393005	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	111	80	120		1. I.	
Toluene	1.1	0.050	1.000	0	112	80	120			
Ethylbenzene	1.1	0.050	1.000	0	113	80	120			
Xylenes, Total	3.4	0.10	3.000	0	115	80	120			
Surr: 4-Bromofluorobenzene	1.4		1.000		141	66.6	132			S

Qualifiers:

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

Page 8 of 8

WO#: 1707388

12-Jul-17

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu TEL: 505-345-3975 Website: www.hal	Analysis Laboratory 4901 Hawkins NE querque, NM 87109 FAX: 505-345-4107 Ilenvironmental.com	Sam	ple Log-In Check List
Client Name: GHD	Work Order Number:	1707388		RcptNo: 1
Received By: Anne Thome	7/11/2017 7:00:00 AM		Anne Stra	~
Completed By: Anne Thome Reviewed By:	Hulp		Anne Hom	
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	?	Yes 🗹	No 🗌	. NA 🗆
5. Were all samples received at a temperature	e 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	(s)?	Yes 🗹	No 🗆	
8. Are samples (except VOA and ONG) prope	rly 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 brok	en?	Yes 🗆	No 🗹	# of preserved
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain o	f 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:
Special Handling (if applicable)				
16. Was client notified of all discrepancies with	this order?	Yes	No 🗆	NA 🗹
Person Notified:	Date		anana ana ana ana ana ana ana ana ana a	
By Whom:	Via:	eMail Pho	ne 🗌 Fax	In Person
Regarding:				
Client Instructions:	na na anna an anna ann an ann ann ann a			
17. Additional remarks:				
18. <u>Cooler Information</u>	en Intert Carl Ma C		anad Du	
1 1.0 Good Ye	S S S S S S S S S S S S S S S S S S S		Auen Dà	

Page 1 of 1

С	hain	-of-Cu	stody Record	Turn-Around	Time:	P . Drice V							-			~				
Client:	SHD	Serve		□ Standard □ Rush								AL	Y	SIS	S L	A	INF BO	RA	TC	
1			and the second	Project Name			www.hallenvironmental.com													
Mailing	Address	: 6121 In	dan school Rd NE #200	5	27-5 #	. (49	01 H	awk	ins N	NE -	Alb	ouqu	erau	e. N	M 87	109		
A16.	raundan	u.NM	87110	Project #:	1			Te	el. 50	5-34	15-39	975	F	=ax	505-	345	-4107	7		
Phone #	#: 505	88406	.72	- <i>III</i>	24684							A	naly	ysis	Req	uest	t			
email or	r Fax#:	Jeff.w.	alker Rghd. 100	Project Mana	ger:		(nly)	(0)			125		04)						
QA/QC Package:			J	If wal	Ker	802	o se	/ MF			IS)		04,S(CB's					1	
□ Stan	Standard Level 4 (Full Validation) Accreditation						Sig (U)	R0 R0			SIN		PC PC	32 P					
	tation AP		r	Sampler:	Nuligh			TPF	10	8.1)	4.1)	270		NON.	808					Z
	(Type)			Sample Tem	oenaiture. /	O States		+ E	GR	41	d 50	or 8	als	NO	des /		VOA			7
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + NIT	BTEX + MTE	TPH 8015B (TPH (Method	EDB (Method	PAH's (8310	RCRA 8 Met	Anions (F,CI,	8081 Pesticio	8260B (VOA	8270 (Semi-\			Air Rubbles (
7-10-17	1045	50:1	13P-10	902/1	Mott	-201	X		X											
į	1060	T	TSP-11	1		202	X		X											
	1055		TSP-12			-703	X		X											
	1100		TSP-13			204	X		X					1.1						
V	1105	V	TSP-14	₩ V	¥	705	X		4											
																			+	
								-											_	
-			1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -				2.3												+	
										1	-									
Date:	Time	Relinquish	achby:	Received by:		Date Time	Ror	nark	e.											
7-10-17	1430	du	Na	/ WAL	Jall	7/10/17 1730			5.											
7/10/17	181D	h	ster Walle	Cerved by.	and	0700														

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

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

July 21, 2017 Jeff Walker GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

RE: San Juan 27 5 1

OrderNo.: 1707A21

Dear Jeff Walker:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/20/2017 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

Date Reported: 7/21/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	POL Qual	Units	DF Date Analyzed	Batch
Lab ID:	1707A21-001	Matrix:	MEOH (SOIL)	Received	Date: 7/20/2017 7:30:00 AM	
Project:	San Juan 27 5 1			Collection	Date: 7/19/2017 10:16:00 AM	
CLIENT:	GHD		(lient Sam	ole ID: 11124687-071917-SPTS	P-24

r mary ses	Itesuit	I QL Q	uni onnes	DI	Duce I mary Zeu	Dutti
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S			Analyst	том
Diesel Range Organics (DRO)	150	9.9	mg/Kg	1	7/20/2017 9:37:57 AM	32909
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/20/2017 9:37:57 AM	32909
Surr: DNOP	96.9	70-130	%Rec	1	7/20/2017 9:37:57 AM	32909
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB
Gasoline Range Organics (GRO)	17	3.1	mg/Kg	1	7/20/2017 10:04:16 AM	32884
Surr: BFB	234	54-150	S %Rec	1	7/20/2017 10:04:16 AM	32884
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.016	mg/Kg	1	7/20/2017 10:04:16 AM	32884
Toluene	ND	0.031	mg/Kg	1	7/20/2017 10:04:16 AM	32884
Ethylbenzene	ND	0.031	mg/Kg	1	7/20/2017 10:04:16 AM	32884
Xylenes, Total	ND	0.063	mg/Kg	1	7/20/2017 10:04:16 AM	32884
Surr: 4-Bromofluorobenzene	1 <mark>1</mark> 1	66.6-132	%Rec	1	7/20/2017 10:04:16 AM	32884

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

Qualifiers:	
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*

- Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

- Е Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 9 J
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

Date Reported: 7/21/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	POL Oual	Units	DF Date Analyzed	Batch
Lab ID:	1707A21-002	Matrix:	MEOH (SOIL)	Received	Date: 7/20/2017 7:30:00 AM	
Project:	San Juan 27 5 1			Collection	Date: 7/19/2017 10:36:00 AM	
CLIENT:	GHD		C	lient Samp	ole ID: 11124687-071917-SPTS	SP-25

r mary ses	resure	. 42	Z.m.	CINTO		2 100 121111.9 200	
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS					Analyst	том
Diesel Range Organics (DRO)	140	9.9		mg/Kg	1	7/20/2017 9:59:53 AM	32909
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/20/2017 9:59:53 AM	32909
Surr: DNOP	104	70-130		%Rec	1	7/20/2017 9:59:53 AM	32909
EPA METHOD 8015D: GASOLINE RA	ANGE					Analyst	NSB
Gasoline Range Organics (GRO)	18	3.1		mg/Kg	1	7/20/2017 10:28:16 AM	32884
Surr: BFB	250	54-150	S	%Rec	1	7/20/2017 10:28:16 AM	32884
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.015		mg/Kg	1	7/20/2017 10:28:16 AM	32884
Toluene	ND	0.031		mg/Kg	1	7/20/2017 10:28:16 AM	32884
Ethylbenzene	ND	0.031		mg/Kg	1	7/20/2017 10:28:16 AM	32884
Xylenes, Total	ND	0.062		mg/Kg	1	7/20/2017 10:28:16 AM	32884
Surr: 4-Bromofluorobenzene	121	66.6-132		%Rec	1	7/20/2017 10:28:16 AM	32884

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

Qua	lifiers:	

*

- Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix D
- 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
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 9 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1707A21 Date Reported: 7/21/2017

Analyst: TOM

Analyst: NSB

Analyst: NSB

32884

7/20/2017 10:21:54 AM 32909

7/20/2017 10:21:54 AM 32909

7/20/2017 10:21:54 AM 32909

7/20/2017 10:52:16 AM 32884

7/20/2017 10:52:16 AM

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)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

EPA METHOD 8015D: GASOLINE RANGE

Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch
Lab ID:	1707A21-003	Matrix:	MEOH (SOIL)	Received	Date: 7/20/2017 7:30:00 AM	
Project:	San Juan 27 5 1			Collection	Date: 7/19/2017 11:00:00 AM	[
CLIENT:	: GHD		C	lient Samp	ole ID: 11124687-071917-SPT	SP-26

9.9

50

2.9

S

70-130

54-150

0.015

0.029

0.029

0.058

66.6-132

mg/Kg

mg/Kg

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

1

1

1

120

ND

101

18

266

ND

ND

ND

ND

115

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

Qual	ifiers:
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*

- 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
- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 9 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 7/21/2017 Client Sample ID: 11124687-071917-SPTSP-27

Project: San Juan 27 5 1

1707A21-004

CLIENT: GHD

Lab ID:

Collection Date: 7/19/2017 11:22:00 AM

Matrix: MEOH (SOIL) Received Date: 7/20/2017 7:30:00 AM

Analyses	Result	PQL O	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS	5				Analyst	том
Diesel Range Organics (DRO)	120	9.3		mg/Kg	1	7/20/2017 10:43:53 AM	32909
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/20/2017 10:43:53 AM	32909
Surr: DNOP	102	70-130		%Rec	1	7/20/2017 10:43:53 AM	32909
EPA METHOD 8015D: GASOLINE RANG	E					Analyst	NSB
Gasoline Range Organics (GRO)	30	3.1		mg/Kg	1	7/20/2017 11:16:15 AM	32884
Surr: BFB	310	54-150	S	%Rec	1	7/20/2017 11:16:15 AM	32884
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.015		mg/Kg	1	7/20/2017 11:16:15 AM	32884
Toluene	ND	0.031		mg/Kg	1	7/20/2017 11:16:15 AM	32884
Ethylbenzene	ND	0.031		mg/Kg	1	7/20/2017 11:16:15 AM	32884
Xylenes, Total	ND	0.061		mg/Kg	1	7/20/2017 11:16:15 AM	32884
Surr: 4-Bromofluorobenzene	121	66.6-132		%Rec	1	7/20/2017 11:16:15 AM	32884

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 Bl	lank
	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 0
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	1 age 4 01 9
	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 a	as specified

Date Reported: 7/21/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	POL Qual	Units	DF Date Analyzed	Batch
Lab ID:	1707A21-005	Matrix:	MEOH (SOIL)	Received	Date: 7/20/2017 7:30:00 AM	
Project:	San Juan 27 5 1			Collection	Date: 7/19/2017 11:42:00 AM	1
CLIENT:	GHD		0	lient Samp	ole ID: 11124687-071917-SPT	SP-28

Anaryses	Result	I QL Q	guai Oni	15	DI	Date Analyzeu	Datth
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S				Analyst:	том
Diesel Range Organics (DRO)	160	9.4	mg/	/Kg	1	7/20/2017 11:05:51 AM	32909
Motor Oil Range Organics (MRO)	ND	47	mg/	/Kg	1	7/20/2017 11:05:51 AM	32909
Surr: DNOP	103	70-130	%R	lec	1	7/20/2017 11:05:51 AM	32909
EPA METHOD 8015D: GASOLINE RANGE	E					Analyst:	NSB
Gasoline Range Organics (GRO)	27	3.0	mg/	/Kg	1	7/20/2017 11:40:16 AM	32884
Surr: BFB	416	54-150	S %R	lec	1	7/20/2017 11:40:16 AM	32884
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.015	mg/	/Kg	1	7/20/2017 11:40:16 AM	32884
Toluene	ND	0.030	mg/	/Kg	1	7/20/2017 11:40:16 AM	32884
Ethylbenzene	ND	0.030	mg/	/Kg	1	7/20/2017 11:40:16 AM	32884
Xylenes, Total	ND	0.061	mg/	/Kg	1	7/20/2017 11:40:16 AM	32884
Surr: 4-Bromofluorobenzene	119	66.6-132	%R	lec	1	7/20/2017 11:40:16 AM	32884

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

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 5 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

WO#: 1707A21

21-Jul-17

Client:	GHD										
Project:	San Juan	27 5 1									
0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	07			Tee					Ormaniaa	
Sample ID	LCS-32909	Sampi	ype: LC	5	Tes	Code: El	PA Method	8015W/D: DI	esel Rang	e Organics	
Client ID:	LCSS	Batch	n ID: 32	909	F	Runino: 4	4338				
Prep Date:	7/20/2017	Analysis D	Date: 7/	20/2017	5	SeqNo: 1	401309	Units: mg/M	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Surr: DNOF	Organics (DRO)	51 4.4	10	50.00 5.000	0	102 87.1	73.2 70	114 130		in the second	
Sample ID	MB-32909	SampT	Гуре: МЕ	3LK	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	PBS	Batch	h ID: 32	909	F	RunNo: 4	4338				
Prep Date:	7/20/2017	Analysis D	Date: 7/	20/2017	5	SeqNo: 1	401310	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 Ran	ge Organics (MRO)	ND	50								
Surr: DNOF	5	9.5		10.00		94.9	70	130	1.1	S. Sal	
Sample ID	1707A21-001AMS	SampT	Гуре: МЗ	6	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	11124687-071917	-S Batch	h ID: 32	909	F	RunNo: 4	4338				
Prep Date:	7/20/2017	Analysis D	Date: 7/	20/2017	5	SeqNo: 1	402472	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	170	9.3	46.73	151.1	40.6	55.8	122			S
Surr: DNOF	0	4.4		4.673		94.9	70	130			
Sample ID	1707A21-001AMS	D SampT	Type: MS	SD	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	11124687-071917	-S Batch	h ID: 32	909	F	RunNo: 4	4338		Ū		
Prep Date:	7/20/2017	Analysis D	Date: 7/	20/2017	SeaNo: 1402473 Units: ma/Ka						
Analista		Popult	POI	SPK value	SDK Dof Vol	% DEC	Loud imit	Light imit	0/ DDD	PPDI imit	Qual
Diesel Range	Organics (DRO)	210	9.9	49.41	151.1	117	55.8	122	20.6	20	R
Surr: DNOF	>	5.0		4.941		101	70	130	0	0	
Comple ID	1.00.00070	Comm			Tee		DA Mathad	0045W/D. D.		Ormania	
Sample ID	LCS-32876	Sampi	b ID: 00	.5	Tes		PA Method	8015WI/D: DI	eser kang	e Organics	
Client ID:	LCSS	Batch	n ID: 32	876	F	RunNo: 4	4338				
Prep Date:	7/19/2017	Analysis L	Date: 71	20/2017	5	SeqNo: 1	402474	Units: %Re	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOF	5	4.6		5.000		91.9	70	130			
Sample ID	MB-32876	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	1
Client ID:											
Chefit ID.	PBS	Batch	h ID: 32	876	F	RunNo: 4	4338				
Prep Date:	PBS 7/19/2017	Batch Analysis D	h ID: 32 Date: 7 /	876 20/2017	F	RunNo: 4 SeqNo: 1	4338 402475	Units: %Re	C		

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#: 1707A21 21-Jul-17

Client: GHD San Juan 27 5 1 **Project:**

Sample ID MB-32876	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 32876	RunNo: 44338
Prep Date: 7/19/2017	Analysis Date: 7/20/2017	SeqNo: 1402475 Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	10 10.00	101 70 130

Qualifiers:

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

Page 7 of 9

WO#: **1707A21** 21-Jul-17

Client: GHD Project: San Juan 27 5 1

Sample ID MB-32884	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: PBS	Batch	n ID: 32	884	F	RunNo: 4	4359				
Prep Date: 7/19/2017	Analysis D	Date: 7/	20/2017	5	SeqNo: 1	402387	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	840		1000		83.8	54	150			
	and the second se									
Sample ID LCS-32884	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Sample ID LCS-32884 Client ID: LCSS	SampT Batch	ype: LC	S 884	Tes F	tCode: El RunNo: 4	PA Method 4359	8015D: Gaso	oline Rang	e	
Sample ID LCS-32884 Client ID: LCSS Prep Date: 7/19/2017	SampT Batch Analysis D	ype: LC h ID: 32 Date: 7/	S 884 20/2017	Tes F S	tCode: El RunNo: 4 SeqNo: 1	PA Method 4359 402388	8015D: Gaso Units: mg/F	oline Rang	e	
Sample ID LCS-32884 Client ID: LCSS Prep Date: 7/19/2017 Analyte	SampT Batch Analysis D Result	Type: LC n ID: 32 Date: 7 / PQL	:S 884 20/2017 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 4359 402388 LowLimit	8015D: Gaso Units: mg/P HighLimit	oline Rang (g %RPD	e RPDLimit	Qual
Sample ID LCS-32884 Client ID: LCSS Prep Date: 7/19/2017 Analyte Gasoline Range Organics (GRO)	SampT Batch Analysis D Result 23	Type: LC n ID: 32 Date: 7/ PQL 5.0	S 884 20/2017 SPK value 25.00	Tes F S SPK Ref Val 0	tCode: El RunNo: 4 SeqNo: 1 %REC 91.4	PA Method 4359 402388 LowLimit 76.4	8015D: Gaso Units: mg/k HighLimit 125	oline Rang (g %RPD	e 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 8 of 9

Client: Project:

GHD San Juan 27 5 1

Sample ID MB-32884	Samp	ype: ME	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 32	884	F	RunNo: 4	4359				
Prep Date: 7/19/2017	Analysis E	Date: 7/	20/2017	S	SeqNo: 1	402402	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.7	66.6	132			
Sample ID LCS-32884	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batcl	h ID: 32	884	F	RunNo: 4	4359				
Prep Date: 7/19/2017	Analysis E	Date: 7/	20/2017	S	SeqNo: 1	402403	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.4	80	120			
oluene	0.95	0.050	1.000	0	95.3	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.1	80	120			
ylenes, Total	2.9	0.10	3.000	0	96.8	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
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Value above quantitation range E
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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21-Jul-17

WO#: 1707A21

Olivet Name	CHD	Made Order Number	1707491		PontNo: 1	
Client Name:	GHD	work Order Number:	1/0/A21		Reputo. 1	
Received By:	Ashley Gallegos	7/20/2017 7:30:00 AM		A		
Completed By:	Ashley Gallegos	7/20/2017 7:59:49 AM		AF		
Reviewed By:	as	7/20/17				
Chain of Cus	tody					
1. Custody sea	Is intact on sample bottles?		Yes 🗌	No 🗆	Not Present	
2. Is Chain of C	Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was the	sample delivered?		Courier			
<u>Log In</u>						
4. Was an atte	mpt made to cool the same	les?	Yes 🗹	No	NA	
5. Were all sar	nples received at a tempera	sture of >0° C to 6.0°C	Yes 🗹	No 🗍		
6. Sample(s) in	n proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sa	mple volume for indicated t	est(s)?	Yes 🗹	No 🗆		
8. Are samples	(except VOA and ONG) pr	operty preserved?	Yes 🗹	No 🗌		
9. Was preserv	vative added to bottles?		Yes 🗌	No 🗹		
10.VOA vials ha	ave zero headspace?		Yes	No 🗆	No VOA Vials	
11. Were any s	ample containers received I	oroken?	Yes 🗌	No 🔽	# of preserved	
12. Does paper (Note discre	vork match bottle labels? pancies on chain of custody	0	Yes 🔽	No 🗆	for pH: (<2 or >1)	2 unless n
13, Are matrices	correctly identified on Cha	in of Custody?	Yes 🗹	No 🗌	Adjusted?	
14, Is it clear wh	at analyses were requested	1?	Yes 🗹	No 🗌		
15. Were all hole (If no, notify	ding times able to be met? customer for authorization.)	Yes 🗹	No 🗌	Checked by:	
Special Hand	lling (if applicable)					
16 Was client n	otified of all discrepancies	with this order?	Yes	No 🗌	NA 🔽	
Barra	Notified:	Data				
Rv Wh	iom.	Via: [eMail	Phone Fax	In Person	
Regar	dina:					
Client	Instructions:	n ja jo za zada na kana kana kana na	an a shirir a na a na balan		Adaption and an international sectors of	
17. Additional r	emarks:					
18 Cooler Info	rmation					

Client: Mailing	Address	-of-Cu - Albu :: 612	Ustody Record Agnergne I Judian School Relate JMM, 87110 -0672	Turn-Around Standard Project Name San Project #:	Tipe: Rush e: Juan 27.	<u>SAME-DAY</u> -5 # 1	HALL ENVIRONMER ANALYSIS LABORA www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request				NT	AL									
email o QA/QC I Stan Accredi NEL	r Fax#: Package: dard tation AP	Jeff.	□ Level 4 (Full Validation)	Project Mana 50 Sampler: S On Ice: Sample Tem	ager: Jeff 05-377-39 feve ferez feres perature:	No	iE + TMB's (8021)	iE + TPH (Gas only)	GRO / DRO / MRO)	1418.1)	1504.1)	or 8270 SIMS)	als	NO3,NO2,PO4,SO4)	tes / 8082 PCB's		/OA)	8021			Y or N)
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MTB	BTEX + MTB	TPH 8015B (TPH (Method	EDB (Method	PAH's (8310	RCRA 8 Met	Anions (F,CI,	8081 Pesticic	8260B (VOA	8270 (Semi-V	BTEX .			Air Bubbles (
	1016 1036 1100 1122 1142	50:1	5-11124687-071917-5P-TSP-24 5-11124687-071917-5P-TSP-25 5-11124687-071917-5P-TSP-26 5-11124687-071917-5P-TSP-27 5-11124687-071917-5P-TSP-28	402. glussel, 284	to the	-001 -002 -003 -004 -005			X									X			
Date: 19-[7 Date: 1/19]17	Time: 15.20 Time: 1821	Relinguish Relinguish Relinguish	ed by: M. Aug ed by: tubasta	Received by: Mut Received by:	Uset 2 071	Date Time <u> - 7/19/17/520</u> Date Time 0730 20/17 0730	Rer	nark:	»: 20	%	7	isc	onv.	+ 0	us	per	A	1/10	4		

If necessary samples submitted to Hall Environmental may be subcontracted to other acceptited 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 Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

July 26, 2017 Jeff Walker GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

RE: San Juan 27-5 #1

OrderNo.: 1707C45

Dear Jeff Walker:

Hall Environmental Analysis Laboratory received 9 sample(s) on 7/25/2017 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

Lab Order 1707C45

Date Reported: 7/26/2017

7/25/2017 10:19:03 AM G44477

7/25/2017 10:19:03 AM G44477

7/25/2017 10:19:03 AM B44477

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

Gasoline Range Organics (GRO)

Surr: 4-Bromofluorobenzene

EPA METHOD 8021B: VOLATILES

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

CLIENT: GHD Client Sample ID: TSP-24-R											
Project:	San Juan 27-5 #1		Collection Date: 7/24/2017 1:19:00 PM								
Lab ID:	1707C45-001	Matrix:	SOIL	Received 1	Date: 7/2	25/2017 8:20:00 AM					
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA MET	THOD 8015M/D: DIESEL RA	NGE ORGANICS	3			Analys	t: TOM				
Diesel R	ange Organics (DRO)	79	9.6	mg/Kg	1	7/25/2017 11:15:15 AM	32986				
Motor Oi	il Range Organics (MRO)	ND	48	mg/Kg	1	7/25/2017 11:15:15 AM	32986				
Surr: I	DNOP	96.2	70-130	%Rec	1	7/25/2017 11:15:15 AM	32986				
EPA MET	THOD 8015D: GASOLINE R	ANGE				Analys	t: NSB				

3.7

S

54-150

0.018

0.037

0.037

0.074

66.6-132

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

5.8

174

ND

ND

ND

ND

110

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

Qua	lifi	ers:	
-----	------	------	--

*

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 14
- P Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Lab Order 1707C45

Date Reported: 7/26/2017

Hall Environmental Analysis Laboratory, Inc.

FPA ME		ANGE ORGANIC	s			Analy	st [.] TOM
Analyses		Result	PQL	Qual	Units	DF Date Analyzed	Batch
Lab ID:	1707C45-002	Matrix:	SOIL		Received	Date: 7/25/2017 8:20:00 AM	
Project:	San Juan 27-5 #1				Collection	Date: 7/24/2017 1:25:00 PM	
CLIENT:	GHD			Cl	lient Samp	le ID: TSP-25-R	

RGANIC	S				Analyst:	TOM
86	9.6		mg/Kg	1	7/25/2017 11:43:18 AM	32986
ND	48		mg/Kg	1	7/25/2017 11:43:18 AM	32986
96.1	70-130		%Rec	1	7/25/2017 11:43:18 AM	32986
					Analyst:	NSB
11	3.4		mg/Kg	1	7/25/2017 10:42:53 AM	G44477
241	54-150	S	%Rec	1	7/25/2017 10:42:53 AM	G44477
					Analyst:	NSB
ND	0.017		mg/Kg	1	7/25/2017 10:42:53 AM	B44477
ND	0.034		mg/Kg	1	7/25/2017 10:42:53 AM	B44477
ND	0.034		mg/Kg	1	7/25/2017 10:42:53 AM	B44477
ND	0.068		mg/Kg	1	7/25/2017 10:42:53 AM	B44477
113	66.6-132		%Rec	1	7/25/2017 10:42:53 AM	B44477
	RGANIC 86 ND 96.1 11 241 ND ND ND ND ND 113	RGANICS 86 9.6 ND 48 96.1 70-130 11 3.4 241 54-150 ND 0.017 ND 0.034 ND 0.034 ND 0.068 113 66.6-132	RGANICS 86 9.6 ND 48 96.1 70-130 11 3.4 241 54-150 S ND 0.017 ND 0.034 ND 0.034 ND 0.068 113 66.6-132 66.6-132 66.6-132	RGANICS 86 9.6 mg/Kg ND 48 mg/Kg 96.1 70-130 %Rec 11 3.4 mg/Kg 241 54-150 S %Rec ND 0.017 mg/Kg ND 0.034 mg/Kg ND 0.034 mg/Kg ND 0.068 mg/Kg 113 66.6-132 %Rec	RGANICS 86 9.6 mg/Kg 1 ND 48 mg/Kg 1 96.1 70-130 %Rec 1 11 3.4 mg/Kg 1 241 54-150 S %Rec 1 ND 0.017 mg/Kg 1 ND 0.034 mg/Kg 1 ND 0.034 mg/Kg 1 ND 0.068 mg/Kg 1 113 66.6-132 %Rec 1	RGANICS Analyst: 86 9.6 mg/Kg 1 7/25/2017 11:43:18 AM ND 48 mg/Kg 1 7/25/2017 11:43:18 AM 96.1 70-130 %Rec 1 7/25/2017 11:43:18 AM 96.1 70-130 %Rec 1 7/25/2017 11:43:18 AM 96.1 70-130 %Rec 1 7/25/2017 11:43:18 AM 11 3.4 mg/Kg 1 7/25/2017 11:43:18 AM 241 54-150 S %Rec 1 7/25/2017 10:42:53 AM 241 54-150 S %Rec 1 7/25/2017 10:42:53 AM ND 0.017 mg/Kg 1 7/25/2017 10:42:53 AM ND 0.034 mg/Kg 1 7/25/2017 10:42:53 AM ND 0.034 mg/Kg 1 7/25/2017 10:42:53 AM ND 0.068 mg/Kg 1 7/25/2017 10:42:53 AM ND 0.068 mg/Kg 1 7/25/2017 10:42:53 AM 113 66.6-132 %Rec

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

		(
Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit

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

Date Reported: 7/26/2017

7/25/2017 11:06:44 AM G44477

7/25/2017 11:06:44 AM B44477

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

CLIENT:	GHD			Client Sampl	e ID: TS	P-26-R	
Project:	San Juan 27-5 #1			Collection I	Date: 7/2	24/2017 1:31:00 PM	
Lab ID:	1707C45-003	Matrix: S	25/2017 8:20:00 AM				
Analyses		Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RAM	GE ORGANICS				Analyst:	том
Diesel R	ange Organics (DRO)	73	9.3	mg/Kg	1	7/25/2017 12:11:22 PM	32986
Motor Oi	Range Organics (MRO)	ND	46	mg/Kg	1	7/25/2017 12:11:22 PM	32986
Surr: I	DNOP	89.1	70-130	%Rec	1	7/25/2017 12:11:22 PM	32986
EPA MET	HOD 8015D: GASOLINE RA	NGE				Analyst:	NSB
Gasoline	Range Organics (GRO)	23	3.5	mg/Kg	1	7/25/2017 11:06:44 AM	G4447

S

54-150

0.018

0.035

0.035

0.071

66.6-132

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

364

ND

ND

ND

ND

119

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

				1
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associa
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantit
ж.	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	POL	Practical Quanitative Limit	PI	Penarting Detection Limit

S % Recovery outside of range due to dilution or matrix ated Method Blank

- e
- tation limits Page 3 of 14
- RLReporting Detection Limit

W Sample container temperature is out of limit as specified

Date Reported: 7/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD		Client Sample ID: TSP-27-R							
Project:	San Juan 27-5 #1			Collection 1	Date: 7/2	24/2017 1:36:00 PM				
Lab ID:	1707C45-004	Matrix: S	Matrix: SOIL Receive			d Date: 7/25/2017 8:20:00 AM				
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS	1			Analyst	том			
Diesel R	ange Organics (DRO)	84	10	mg/Kg	1	7/25/2017 1:16:15 PM	32986			
Motor Oi	I Range Organics (MRO)	ND	50	mg/Kg	1	7/25/2017 1:16:15 PM	32986			
Surr: [ONOP	88.1	70-130	%Rec	1	7/25/2017 1:16:15 PM	32986			
	HOD 8015D. GASOLINE P	NGE				Analyst	NSB			

EI A METHOD OUTOD. OAGOLINE NANOI	-					Analyst.	NOD
Gasoline Range Organics (GRO)	6.3	3.3		mg/Kg	1	7/25/2017 11:30:33 AM	G44477
Surr: BFB	182	54-150	S	%Rec	1	7/25/2017 11:30:33 AM	G44477
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.016		mg/Kg	1	7/25/2017 11:30:33 AM	B44477
Toluene	ND	0.033		mg/Kg	1	7/25/2017 11:30:33 AM	B44477
Ethylbenzene	ND	0.033		mg/Kg	1	7/25/2017 11:30:33 AM	B44477
Xylenes, Total	ND	0.066		mg/Kg	1	7/25/2017 11:30:33 AM	B44477
Surr: 4-Bromofluorobenzene	112	66.6-132		%Rec	1	7/25/2017 11:30:33 AM	B44477

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	POL	Practical Quanitative Limit

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

W Sample container temperature is out of limit as specified

7/25/2017 11:54:26 AM G44477

7/25/2017 11:54:26 AM G44477

7/25/2017 11:54:26 AM B44477

Analyst: NSB

Date Reported: 7/26/2017

Hall Environmental Analysis Laboratory, Inc.

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

CLIENT:	GHD			Client Sampl	e ID: TS	8P-28-R		
Project:	San Juan 27-5 #1			Collection I	Date: 7/2	24/2017 1:41:00 PM		
Lab ID:	1707C45-005	Matrix: S	Matrix: SOIL Reco			Received Date: 7/25/2017 8:20:00 AM		
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch	
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS				Analys	t: TOM	
Diesel Ra	ange Organics (DRO)	130	10	mg/Kg	1	7/25/2017 12:53:47 PM	32986	
Motor Oil	Range Organics (MRO)	ND	50	mg/Kg	1	7/25/2017 12:53:47 PM	32986	
Surr: D	ONOP	90.1	70-130	%Rec	1	7/25/2017 12:53:47 PM	32986	
EPA MET	HOD 8015D: GASOLINE R	ANGE				Analys	I: NSB	

3.3

S

54-150

0.016

0.033

0.033

0.066

66.6-132

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

8.4

220

ND

ND

ND

ND

114

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 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 spe

- 5 of 14
- cified

Date Reported: 7/26/2017

Analyst: NSB

Analyst: NSB

7/25/2017 12:18:12 PM G44477

7/25/2017 12:18:12 PM G44477

7/25/2017 12:18:12 PM B44477

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

CLIENT:	GHD		Client Sampl	le ID: TS	SP-29		
Project:	San Juan 27-5 #1			Collection	Date: 7/2	24/2017 1:48:00 PM	
Lab ID:	1707C45-006	Matrix: SOIL Received Date: 7/25/2017 8:20:00				25/2017 8:20:00 AM	
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	TOM
Diesel Ra	ange Organics (DRO)	110	9.6	mg/Kg	1	7/25/2017 12:31:37 PM	32986
Motor Oil	Range Organics (MRO)	ND	48	mg/Kg	1	7/25/2017 12:31:37 PM	32986
Surr: E	DNOP	90.9	70-130	%Rec	1	7/25/2017 12:31:37 PM	32986

3.0

S

54-150

0.015

0.030

0.030

0.061

66.6-132

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

11

256

ND

ND

ND

ND

117

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 associate
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitat
	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

% Recovery outside of range due to dilution or matrix

ed Method Blank

tion limits Page 6 of 14

Sample container temperature is out of limit as specified

Lab Order 1707C45

Date Reported: 7/26/2017

7/25/2017 12:09:25 PM 32986

7/25/2017 11:50:52 AM 32967

Analyst: NSB

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD		(lient Samp	le ID: TS	SP-30		
Project:	San Juan 27-5 #1			Collection	Date: 7/2	24/2017 1:54:00 PM		
Lab ID:	1707C45-007	Matrix: S	SOIL	Received	Received Date: 7/25/2017 8:20:00 AM			
Analyses		Result	PQL Qual	Units	DF	Date Analyzed	Batch	
EPA MET	HOD 8015M/D: DIESEL RAM	GE ORGANICS				Analy	st: TOM	
Diesel Ra	ange Organics (DRO)	120	9.4	mg/Kg	1	7/25/2017 12:09:25 F	M 32986	
Motor Oil	Range Organics (MRO)	ND	47	mg/Kg	1	7/25/2017 12:09:25 F	M 32986	

70-130

54-150

0.017

0.034

0.034

0.068

66.6-132

3.4

S

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

1

92.4

42

525

ND

ND

ND

ND

129

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

Qualifiers:	
-------------	--

*

Surr: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

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

Lab Order 1707C45

Date Reported: 7/26/2017

Hall Environmental Analysis Laboratory, Inc.

						and the second sec	
Analyses		Result	PQL Qua	Units	DF Date Analyzed	Batch	
Lab ID:	1707C45-008	Matrix: S	SOIL	Received Date: 7/25/2017 8:20:00 AM			
Project:	San Juan 27-5 #1	Collection Date: 7/24/2017 2:00:00 PM					
CLIENT:	GHD	Client Sample ID: TSP-31					

EPA METHOD 8015M/D: DIESEL RANGE OF	RGANIC	S			Analyst:	TOM
Diesel Range Organics (DRO)	89	9.5	mg/Kg	1	7/25/2017 11:47:15 AM	32986
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/25/2017 11:47:15 AM	32986
Surr: DNOP	89.8	70-130	%Rec	1	7/25/2017 11:47:15 AM	32986
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	6.2	3.6	mg/Kg	1	7/25/2017 12:14:59 PM	32967
Surr: BFB	138	54-150	%Rec	1	7/25/2017 12:14:59 PM	32967
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.018	mg/Kg	1	7/25/2017 12:14:59 PM	32967
Toluene	ND	0.036	mg/Kg	1	7/25/2017 12:14:59 PM	32967
Ethylbenzene	ND	0.036	mg/Kg	1	7/25/2017 12:14:59 PM	32967
Xylenes, Total	ND	0.072	mg/Kg	1	7/25/2017 12:14:59 PM	32967
Surr: 4-Bromofluorobenzene	107	66.6-132	%Rec	1	7/25/2017 12:14:59 PM	32967

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

Itere	i to th	e Qe Summary report and sample login enceknis	a ioi mag	geu
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Ana
	D	Sample Diluted Due to Matrix	E	Valu
	Н	Holding times for preparation or analysis exceeded	J	Ana
	ND	Not Detected at the Reporting Limit	Р	Sam

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

Lab Order 1707C45

Date Reported: 7/26/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Client Sample ID: TSP-32 Project: San Juan 27-5 #1 Collection Date: 7/24/2017 2:07:00 PM Lab ID: 1707C45-009 Matrix: SOIL Received Date: 7/25/2017 8:20:00 AM Result PQL Qual Units Analyses **DF** Date Analyzed Batch ----------1 ----

ORGANIC	S			Analyst:	IOM
100	9.5	mg/Kg	1	7/25/2017 11:24:51 AM	32986
ND	48	mg/Kg	1	7/25/2017 11:24:51 AM	32986
87.8	70-130	%Rec	1	7/25/2017 11:24:51 AM	32986
				Analyst:	NSB
18	3.3	mg/Kg	1	7/25/2017 12:39:11 PM	32967
364	54-150	S %Rec	1	7/25/2017 12:39:11 PM	32967
				Analyst:	NSB
ND	0.017	mg/Kg	1	7/25/2017 12:39:11 PM	32967
ND	0.033	mg/Kg	1	7/25/2017 12:39:11 PM	32967
ND	0.033	mg/Kg	1	7/25/2017 12:39:11 PM	32967
ND	0.067	mg/Kg	1	7/25/2017 12:39:11 PM	32967
113	66.6-132	%Rec	1	7/25/2017 12:39:11 PM	32967
	100 ND 87.8 18 364 ND ND ND ND ND 113	ND 9.5 ND 48 87.8 70-130 18 3.3 364 54-150 ND 0.017 ND 0.033 ND 0.033 ND 0.067 113 66.6-132	NGANICS 100 9.5 mg/Kg ND 48 mg/Kg 87.8 70-130 %Rec 18 3.3 mg/Kg 364 54-150 S %Rec ND 0.017 mg/Kg ND 0.033 mg/Kg ND 0.033 mg/Kg ND 0.067 mg/Kg 113 66.6-132 %Rec	NGANICS 100 9.5 mg/Kg 1 ND 48 mg/Kg 1 87.8 70-130 %Rec 1 18 3.3 mg/Kg 1 364 54-150 S %Rec 1 ND 0.017 mg/Kg 1 ND 0.033 mg/Kg 1 ND 0.033 mg/Kg 1 ND 0.067 mg/Kg 1 113 66.6-132 %Rec 1	NGANICS Analyst: 100 9.5 mg/Kg 1 7/25/2017 11:24:51 AM ND 48 mg/Kg 1 7/25/2017 11:24:51 AM 87.8 70-130 %Rec 1 7/25/2017 11:24:51 AM 87.8 70-130 %Rec 1 7/25/2017 11:24:51 AM 18 3.3 mg/Kg 1 7/25/2017 11:24:51 AM 364 54-150 S %Rec 1 7/25/2017 12:39:11 PM 364 54-150 S %Rec 1 7/25/2017 12:39:11 PM MD 0.017 mg/Kg 1 7/25/2017 12:39:11 PM ND 0.033 mg/Kg 1 7/25/2017 12:39:11 PM ND 0.033 mg/Kg 1 7/25/2017 12:39:11 PM ND 0.067 mg/Kg 1 7/25/2017 12:39:11 PM ND 0.067 mg/Kg 1 7/25/2017 12:39:11 PM 113 66.6-132 %Rec 1 7/25/2017 12:39:11 PM

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

Qualifiers:	
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*

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

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

WO#: 1707C45

26-Jul-17

Client: GHD **Project:** San Juan 27-5 #1 Sample ID LCS-32986 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 32986 RunNo: 44467 Prep Date: 7/25/2017 Analysis Date: 7/25/2017 SegNo: 1405810 Units: mg/Kg SPK value SPK Ref Val %RPD **RPDLimit** Analyte Result PQL %REC LowLimit HighLimit Qual 53 50.00 0 73.2 Diesel Range Organics (DRO) 10 105 114 Surr: DNOP 5.000 95.0 4.8 70 130 Sample ID MB-32986 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32986 RunNo: 44467 Analysis Date: 7/25/2017 Prep Date: 7/25/2017 SeqNo: 1405811 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 10.00 90.8 70 130 91 Sample ID 1707C45-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-24-R Batch ID: 32986 RunNo: 44467 SeqNo: 1406284 Prep Date: 7/25/2017 Analysis Date: 7/25/2017 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit Qual Diesel Range Organics (DRO) 140 9.3 78.71 S 46.25 125 55.8 122 Surr: DNOP 4.8 4.625 104 70 130 Sample ID 1707C45-001AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-24-R Batch ID: 32986 RunNo: 44467 Prep Date: 7/25/2017 Analysis Date: 7/25/2017 SeqNo: 1406285 Units: mg/Kg PQL SPK value SPK Ref Val %REC %RPD RPDLimit Result LowLimit HighLimit Qual Analyte Diesel Range Organics (DRO) 98 78.71 55.8 20 140 49.12 115 122 0.830 Surr: DNOP 51 4 912 103 70 130 0 0 Sample ID MB-32977 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 32977 RunNo: 44468 Prep Date: 7/24/2017 Analysis Date: 7/25/2017 SeqNo: 1406389 Units: %Rec %RPD RPDLimit Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit Qual Surr: DNOP 10.00 9.8 98.3 70 130 Sample ID LCS-32977 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 32977 RunNo: 44468 Prep Date: 7/24/2017 Analysis Date: 7/25/2017 SeqNo: 1406394 Units: %Rec SPK value SPK Ref Val %REC Analyte Result PQL LowLimit HighLimit %RPD **RPDLimit** Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

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#: 1707C45 26-Jul-17

Client:GHDProject:San Juan 27-5 #1

Sample ID LCS-32977	SampType	LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics										
Client ID: LCSS	Batch ID: 32977 RunNo: 44				4468								
Prep Date: 7/24/2017	Analysis Date:	7/25/2017	5	SeqNo: 1	406394	Units: %Red	;						
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Surr: DNOP	4.2	5.000		83.9	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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WO#: 1707C45

26-Jul-17

Client: GHD **Project:** San Juan 27-5 #1 Sample ID MB-32967 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range PBS Batch ID: 32967 Client ID: RunNo: 44476 Prep Date: 7/24/2017 Analysis Date: 7/25/2017 SegNo: 1406616 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte ND 5.0 Gasoline Range Organics (GRO) Surr: BFB 860 1000 86.4 54 150 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Sample ID LCS-32967 Client ID: LCSS Batch ID: 32967 RunNo: 44476 Prep Date: 7/24/2017 Analysis Date: 7/25/2017 SeqNo: 1406617 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 25 50 25.00 0 102 76.4 125 Surr: BFB 970 97.2 1000 54 150 Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G44477 RunNo: 44477 Prep Date: Analysis Date: 7/25/2017 SeqNo: 1406642 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte ND 5.0 Gasoline Range Organics (GRO) Surr: BFB 960 1000 96.3 54 150 Sample ID 2.5UG GRO LCSB SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G44477 RunNo: 44477 Prep Date: Analysis Date: 7/25/2017 SeqNo: 1406643 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 22 5.0 25.00 0 90.0 76.4 125 Surr: BFB 1000 1000 104 54 150 Sample ID 1707C45-001AMS TestCode: EPA Method 8015D: Gasoline Range SampType: MS Client ID: TSP-24-R Batch ID: G44477 RunNo: 44477 Prep Date: Analysis Date: 7/25/2017 SeqNo: 1406644 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 30 50 25.00 5.846 97.7 77.8 128 Surr: BFB 1600 1000 159 54 150 S Sample ID 1707C45-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: TSP-24-R Batch ID: G44477 RunNo: 44477 Prep Date: Analysis Date: 7/25/2017 SeqNo: 1406645 Units: mg/Kg SPK value SPK Ref Val %REC %RPD Analyte Result PQL LowLimit HighLimit **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 12 of 14

Client:

Project: San Juan 27-5 #1

GHD

Sample ID 17	07C45-001AMSD	MSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range									
Client ID: TS	SP-24-R	Batch ID	G44477	477 RunNo: 44477							
Prep Date: Analysis Date			7/25/201	17	S	eqNo: 1	406645	Units: mg/k	(g		
Analyte		Result P	QL SPK	value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Or	rganics (GRO)	32	5.0	25.00	5.846	103	77.8	128	4.68	20	
Surr: BFB		1700		1000		173	54	150	0	0	S

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 13 of 14

WO#: 1707C45

26-Jul-17

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, In	c.

WO#: 1707C45

26-Jul-17

Client:	GHD										
Project:	San Juan	27-5 #1									
Sample ID	MB-32967	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	PBS	Batch	1D: 32	967	F	RunNo: 4	4476				
Prep Date:	7/24/2017	Analysis D	ate: 7/	25/2017	5	SeqNo: 1	406632	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Brom	nofluorobenzene	1.0		1.000		103	66.6	132		100	
Sample ID	Sample ID LCS-32967 SampType: LCS TestCode: EPA Method 8021B: Volatiles										
Client ID:	LCSS	Batch	ID: 32	967	F	RunNo: 4	4476				
Prep Date:	7/24/2017	Analysis D	ate: 7/	25/2017	5	SeqNo: 1	406633	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.95	0.025	1.000	0	95.5	80	120			
Toluene		0.97	0.050	1.000	0	96.7	80	120			
Ethylbenzene		0.97	0.050	1.000	0	96.7	80	120			
Xylenes, Total		3.0	0.10	3.000	0	99.1	80	120			
Surr: 4-Brom	nofluorobenzene	1.1		1.000		107	66.6	132			
Sample ID	RB	SampT	уре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID:	PBS	Batch	ID: B4	4477	F	RunNo: 4					
Prep Date:		Analysis D	ate: 7/	25/2017	S	SeqNo: 1	406650	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Bron	nofluorobenzene	1.1		1.000		109	66.6	132		i dina	2
Sample ID	100NG BTEX LCS	SampT	ype: LC	S	Tes	tCode: E	PA Method	8021B: Volat	iles	The P	
Client ID:	LCSS	Batch	ID: B4	4477	F	RunNo: 4	4477				
Prep Date:		Analysis D	ate: 7/	25/2017	5	SeqNo: 1	406651	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.87	0.025	1.000	0	86.7	80	120		1 × 1	
Toluene		0.88	0.050	1.000	0	87.9	80	120			
Ethylbenzene		0.90	0.050	1.000	0	89.6	80	120			
Xylenes, Total		2.7	0.10	3.000	0	89.9	80	120			
Surr: 4-Brom	nofluorobenzene	1.1		1.000		112	66.6	132			

Qualifiers:

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D Sample Diluted Due to Matrix

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- P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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

MALL

ENVIRONMENTAL

NALYSIS

LABORATORY

Sample Log-In Check List

Client Name:	GHD	Work Order Numbe	r: 1707C45		RcptNo:	1
Received By:	Erin Melendrez	7/25/2017 8:20:00 AM	И	KUL		
Completed By:	Anne Thorne	7/25/2017 8:33:05 AM	4	n N		
Reviewed By:	NE	7/25/14		Clane Jum		
Neviewed by.	/					
Chain of Cus	tody					
4 Custody say	als intact on sample bottles	2	Vec 🗖	No 🗌	Not Present	
7. Custody sea	Sustadu complete?		Vec M	No 🗍	Not Present	
2. Is criain or c	sample delivered?		Courier			
3. How was the	sample delivered?		Courier			
Log In						
4. Was an atte	empt made to cool the sam	iples?	Yes 🗹	No 🗌	NA 🗆	
5. Were all sar	nples received at a tempe	rature of >0° C to 6.0°C	Yes 🗹	No 🗌		
6. Sample(s) in	n proper container(s)?		Yes 🗹	No 🗌		
7 Sufficient sa	mole volume for indicated	test(s)?	Yes V	No 🗌		
8 Are samples	(except VOA and ONG) r	roperly preserved?	Yes 🔽	No 🗌		
9. Was preserv	vative added to bottles?		Yes D	No 🗹	NA 🗆	
10. VOA vials ha	ave zero headspace?		Yes	No 🗌	No VOA Vials 🗹	
11. Were any sa	ample containers received	broken?	Yes	No 🗹 🗇	# of preserved	
10 -					bottles checked	
12. Does paperv (Note discret	work match bottle labels?	(v)	Yes ⊻	No 🗆	(<2 o	>12 unless noted)
13 Are matrices	correctly identified on Cha	ain of Custody?	Yes 🗹	No 🗌	Adjusted?	
14. Is it clear wh	at analyses were requeste	d?	Yes 🖌	No 🗌		
15. Were all hold	ding times able to be met?		Yes 🗹	No 🗌	Checked by:	
(If no, notify	customer for authorization	.)		-		
Special Hand	lling (if applicable)					
16. Was client n	otified of all discrepancies	with this order?	Yes	No 🗌	NA 🗹	
Persor	Notified:	Date	interest and a second	1		
By Wh	iom:	, Via:	eMail	Phone 🗌 Fax	In Person	1
Regard	ding:	***********	, a a constant and a second second second			
Client	Instructions:	n fall i Sanda an	dyf y 12- ec mennen mennen fal de had di 184	633638884255534387526jejejejejejejesessensndadnika	MARKARAN BARANGARAN ANG ANG ANG ANG ANG ANG ANG ANG ANG A	
17. Additional re	emarks:					λ.
18. Cooler Info	rmation					
Cooler No	o Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By		
h	3.8 Good	Yes		1		
Page 1 of	f1					<u></u>

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Type | HEAL NO. | BTEX + MIT | BTEX + MTE | TPH 8015B | TPH (Method

 | EDB (Method | PAH's (8310 | RCRA 8 Met | Anions (F,CI | 8081 Pesticio | 8260B (VOA
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Walkended com Project Manager: <math>Sech Welded Records Net Package: \Box \Box $DCher$ $DCher Net Scholled Net Scholed Net Scholled Net Scholed Net Scholled Net S$</math></math></td> <td>hain-of-Custody Record Turn-Around Time: GH 0 Sorve: c = 5 I Standard I Resh Some Day.!! Address: GH 1 Indom scholler WE #200 Address: GH 1 Indom scholler WE #200 Address: GH 1 Indom scholler WE #200 Project Name: Seen Some 24-5 #1 Address: Gen Some 24-5 #1 Address: Gen Some 24-5 #1 Address: Gen Some 24-5 #1 Address: Seen Some 24-5 #1 Address: Gen Some 24-5 #1 Address: Gen Some 24-5 #1 Address: Gen Some 24-5 #1 Fax#: Self.uxhlexed.decm Project Manager: Project Manager: Sackage: Gad Level 4 (Full Validation) Sample: Clurke 5 Nellight Matrix Sample Request ID Container Preservative Type HEAL No. 1319 Sci 1 T5P-24-R 1326 T5P-35-R 1336 T5P-35-R 1336 T5P-35-R 1348 T5P-35 1349 T5P-32 1349 T5P-32</td> <td>hain-of-Custody Record Turn-Around Time: GHD Serve: $c \in S$ Istandard Z Resh. Srmt Day.!! 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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

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

August 01, 2017 Jeff Walker

GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

RE: San Juan 27-5 1

OrderNo.: 1707E85

Dear Jeff Walker:

Hall Environmental Analysis Laboratory received 11 sample(s) on 7/28/2017 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

Lab Order 1707E85

Date Reported: 8/1/2017

7/31/2017 10:47:36 AM 33085

7/31/2017 10:15:44 AM G44613

7/31/2017 10:15:44 AM G44613

7/31/2017 10:15:44 AM B44613

Analyst: NSB

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD		0	lient Samp	le ID: TS	P-33				
Project:	San Juan 27-5 1		Collection Date: 7/28/2017 9:51:00 AM							
Lab ID: 1707E85-001		Matrix: S	OIL	Received Date: 7/28/2017 2:26:00 PM						
Analyses		Result	PQL Qual	Units	DF	Date Analyzed	Batch			
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS				Analy	st: TOM			
Diesel Ra	ange Organics (DRO)	88	9.6	mg/Kg	1	7/31/2017 10:47:36 A	M 33085			
Motor Oil	Range Organics (MRO)	ND	48	mg/Kg	1	7/31/2017 10:47:36 A	M 33085			

70-130

54-150

0.016

0.031

0.031

0.062

66.6-132

3.1

S

79.7

21

295

ND

ND

ND

ND

122

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

1

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

Qualifiers:	
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*

Surr: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

Surr: 4-Bromofluorobenzene

EPA METHOD 8021B: VOLATILES

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

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 17 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1707E85

Date Reported: 8/1/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD		Client Sample ID: TSP-34										
Project:	San Juan 27-5 1				Collection 1	Date: 7/2	28/2017 10:00:00 AM						
Lab ID:	1707E85-002	Matrix:	SOIL		Received 1	Date: 7/2	28/2017 2:26:00 PM						
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch					
EPA MET	HOD 8015M/D: DIESEL RAN	GE ORGANICS	;				Analyst:	том					
Diesel Ra	ange Organics (DRO)	77	9.4		mg/Kg	1	7/31/2017 11:12:19 AM	33085					
Motor Oil	Range Organics (MRO)	ND	47		mg/Kg	1	7/31/2017 11:12:19 AM	33085					
Surr: [DNOP	89.8	70-130		%Rec	1	7/31/2017 11:12:19 AM	33085					
EPA MET	HOD 8015D: GASOLINE RAM	IGE					Analyst:	NSB					
Gasoline	Range Organics (GRO)	29	3.4		mg/Kg	1	7/31/2017 10:39:43 AM	G44613					
Surr: E	BFB	458	54-150	S	%Rec	1	7/31/2017 10:39:43 AM	G44613					
EPA MET	HOD 8021B: VOLATILES						Analyst:	NSB					
Benzene		ND	0.017		mg/Kg	1	7/31/2017 10:39:43 AM	B44613					
Toluene		ND	0.034		mg/Kg	1	7/31/2017 10:39:43 AM	B44613					
Ethylben	zene	ND	0.034		mg/Kg	1	7/31/2017 10:39:43 AM	B44613					
Xylenes,	Total	ND	0.068		mg/Kg	1	7/31/2017 10:39:43 AM	B44613					
Surr: 4	4-Bromofluorobenzene	120	66.6-132		%Rec	1	7/31/2017 10:39:43 AM	B44613					

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 17
	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

Lab Order 1707E85

Date Reported: 8/1/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
Lab ID:	1707E85-003	Matrix: S	SOIL		Received	Date: 7/2	28/2017 2:26:00 PM	
Project:	San Juan 27-5 1			(Collection	Date: 7/2	28/2017 10:07:00 AN	Л
CLIENT	: GHD			Cl	ient Samp	ole ID: TS	SP-35	

EPA METHOD 8015M/D: DIESEL RANGE OF	RGANIC	S				Analyst	том
Diesel Range Organics (DRO)	100	9.2		mg/Kg	1	7/31/2017 11:37:12 AM	33085
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	7/31/2017 11:37:12 AM	33085
Surr: DNOP	81.3	70-130		%Rec	1	7/31/2017 11:37:12 AM	33085
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	15	3.3		mg/Kg	1	7/31/2017 11:03:47 AM	G44613
Surr: BFB	306	54-150	S	%Rec	1	7/31/2017 11:03:47 AM	G44613
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.016		mg/Kg	1	7/31/2017 11:03:47 AM	B44613
Toluene	ND	0.033		mg/Kg	1	7/31/2017 11:03:47 AM	B44613
Ethylbenzene	ND	0.033		mg/Kg	1	7/31/2017 11:03:47 AM	B44613
Xylenes, Total	ND	0.066		mg/Kg	1	7/31/2017 11:03:47 AM	B44613
Surr: 4-Bromofluorobenzene	113	66.6-132		%Rec	1	7/31/2017 11:03:47 AM	B44613

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	POL	Practical Quanitative Limit

- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Lab Order 1707E85

Date Reported: 8/1/2017

7/31/2017 11:27:53 AM B44613

Hall Environmental Analysis Laboratory, Inc.

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

CLIENT: GHD	Client Sample ID: TSP-36									
Project: San Juan 27-5 1			Co	llection 1	Date: 7/2	28/2017 10:13:00 AM				
Lab ID: 1707E85-004	Matrix:	SOIL	R	eceived]	Date: 7/2	28/2017 2:26:00 PM				
Analyses	Result	PQL (Qual Ur	nits	DF	Date Analyzed	Batch			
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	;				Analyst:	том			
Diesel Range Organics (DRO)	63	9.9	m	ng/Kg	1	7/31/2017 12:01:58 PM	33085			
Motor Oil Range Organics (MRO)	ND	50	m	ig/Kg	1	7/31/2017 12:01:58 PM	33085			
Surr: DNOP	77.8	70-130	%	Rec	1	7/31/2017 12:01:58 PM	33085			
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst:	NSB			
Gasoline Range Organics (GRO)	12	3.2	m	ig/Kg	1	7/31/2017 11:27:53 AM	G44613			
Surr: BFB	204	54-150	S %	Rec	1	7/31/2017 11:27:53 AM	G44613			
EPA METHOD 8021B: VOLATILES						Analyst:	NSB			

0.016

0.032

0.032

0.064

66.6-132

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

ND

ND

ND

ND

111

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 17
	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 1707E85

Date Reported: 8/1/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD		Client Sample ID: TSP-37									
Project:	San Juan 27-5 1			Collection	Date: 7/2	28/2017 10:20:00 AM						
Lab ID:	1707E85-005	Matrix: S	SOIL	Received Date: 7/28/2017 2:26:00 PM								
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch					
EPA MET	HOD 8015M/D: DIESEL RA	ANGE ORGANICS				Analyst	том					
Diesel Ra	ange Organics (DRO)	17	9.0	mg/Kg	1	7/31/2017 12:26:54 PM	33085					
Motor Oil	Range Organics (MRO)	ND	45	mg/Kg	1	7/31/2017 12:26:54 PM	33085					
Surr: D	DNOP	91.0	70-130	%Rec	1	7/31/2017 12:26:54 PM	33085					

	• • • • •			101100	·		00000
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	4.5	3.5		mg/Kg	1	7/31/2017 11:51:56 AM	G44613
Surr: BFB	157	54-150	S	%Rec	1	7/31/2017 11:51:56 AM	G44613
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.018		mg/Kg	1	7/31/2017 11:51:56 AM	B44613
Toluene	ND	0.035		mg/Kg	1	7/31/2017 11:51:56 AM	B44613
Ethylbenzene	ND	0.035		mg/Kg	1	7/31/2017 11:51:56 AM	B44613
Xylenes, Total	ND	0.070		mg/Kg	1	7/31/2017 11:51:56 AM	B44613
Surr: 4-Bromofluorobenzene	110	66.6-132		%Rec	1	7/31/2017 11:51:56 AM	B44613

Qualifier	S	:	
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- * 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
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 17 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1707E85

Date Reported: 8/1/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD	Client Sample ID: TSP-38								
Project:	San Juan 27-5 1	Collection Date: 7/28/2017 10:28:00 AM								
Lab ID:	1707E85-006	Matrix:	SOIL		Received	Date: 7/2	28/2017 2:26:00 PM			
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	HOD 8015M/D: DIESEL RAN	GE ORGANIC	S				Analyst:	том		
Diesel R	ange Organics (DRO)	62	9.4		mg/Kg	1	7/31/2017 12:51:45 PM	33085		
Motor Oi	I Range Organics (MRO)	ND	47		mg/Kg	1	7/31/2017 12:51:45 PM	33085		
Surr: I	DNOP	85.5	70-130		%Rec	1	7/31/2017 12:51:45 PM	33085		
EPA MET	HOD 8015D: GASOLINE RAM	IGE					Analyst:	NSB		
Gasoline	Range Organics (GRO)	9.6	3.1		mg/Kg	1	7/31/2017 12:16:08 PM	G44613		
Surr: E	BFB	253	54-150	S	%Rec	1	7/31/2017 12:16:08 PM	G44613		
EPA MET	HOD 8021B: VOLATILES						Analyst:	NSB		
Benzene		ND	0.015		mg/Kg	1	7/31/2017 12:16:08 PM	B44613		
Toluene		ND	0.031		mg/Kg	1	7/31/2017 12:16:08 PM	B44613		
Ethylben	zene	ND	0.031		mg/Kg	1	7/31/2017 12:16:08 PM	B44613		
Xylenes,	Total	ND	0.062		mg/Kg	1	7/31/2017 12:16:08 PM	B44613		
Surr: 4	4-Bromofluorobenzene	110	66.6-132		%Rec	1	7/31/2017 12:16:08 PM	B44613		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 17
	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

Lab Order 1707E85

Date Reported: 8/1/2017

7/31/2017 12:40:11 PM B44613

Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

CLIENT:	GHD		Client Sample ID: TSP-39								
Project:	San Juan 27-5 1			(Collection	Date: 7/2	28/2017 10:33:00 AM				
Lab ID:	1707E85-007	Matrix: S	OIL		Received	Date: 7/2	28/2017 2:26:00 PM				
Analyses		Result	PQL Q)ual	Units	DF	Date Analyzed	Batch			
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS					Analyst	TOM			
Diesel R	ange Organics (DRO)	98	10		mg/Kg	1	7/31/2017 1:16:43 PM	33085			
Motor Oi	I Range Organics (MRO)	ND	50		mg/Kg	1	7/31/2017 1:16:43 PM	33085			
Surr: I	DNOP	86.0	70-130		%Rec	1	7/31/2017 1:16:43 PM	33085			
EPA MET	HOD 8015D: GASOLINE R	ANGE					Analyst	NSB			
Gasoline	Range Organics (GRO)	6.8	3.3		mg/Kg	1	7/31/2017 12:40:11 PM	G44613			
Surr: I	BFB	163	54-150	S	%Rec	1	7/31/2017 12:40:11 PM	G44613			
EPA MET	HOD 8021B: VOLATILES						Analyst	NSB			
Benzene		ND	0.017		mg/Kg	1	7/31/2017 12:40:11 PM	B44613			
Toluene		ND	0.033		mg/Kg	1	7/31/2017 12:40:11 PM	B44613			
Ethylben	zene	ND	0.033		mg/Kg	1	7/31/2017 12:40:11 PM	B44613			
Xylenes,	Total	ND	0.066		mg/Kg	1	7/31/2017 12:40:11 PM	B44613			

66.6-132

%Rec

1

114

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	A
	D	Sample Diluted Due to Matrix	E	V
	Н	Holding times for preparation or analysis exceeded	J	A

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1707E85

Date Reported: 8/1/2017

7/31/2017 1:04:18 PM

G44613

B44613

B44613

B44613

B44613

B44613

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD		Client Sample ID: TSP-40 Collection Date: 7/28/2017 10:41:00 AM								
Project:	San Juan 27-5 1										
Lab ID:	1707E85-008	Matrix: S	Matrix: SOIL			Received Date: 7/28/2017 2:26:00 PM					
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS				Analy	st: TOM				
Diesel R	ange Organics (DRO)	150	9.6	mg/Kg	1	7/31/2017 1:41:38 PM	A 33085				
Motor Oi	Range Organics (MRO)	ND	48	mg/Kg	1	7/31/2017 1:41:38 PM	/ 33085				
Surr: [DNOP	90.9	70-130	%Rec	1	7/31/2017 1:41:38 PM	1 33085				
EPA MET	HOD 8015D: GASOLINE R	ANGE				Analy	st: NSB				
Gasoline	Range Organics (GRO)	13	3.1	mg/Kg	1	7/31/2017 1:04:18 PM	A G44613				

54-150

0.016

0.031

0.031

0.062

66.6-132

S

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

310

ND

ND

ND

ND

121

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

Qua	lifiers:
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*

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit
 - W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1707E85

Date Reported: 8/1/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD	Client Sample ID: TSP-41						
Project:	San Juan 27-5 1				Collection	Date: 7/2	28/2017 10:47:00 AM	
Lab ID:	1707E85-009	Matrix: SC	JIL		Received	Date: 7/2	28/2017 2:26:00 PM	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst	том
Diesel Ra	ange Organics (DRO)	130	9.4		mg/Kg	1	7/31/2017 1:29:14 PM	33085
Motor Oil	Range Organics (MRO)	ND	47		mg/Kg	1	7/31/2017 1:29:14 PM	33085
Surr: D	NOP	87.3	70-130		%Rec	1	7/31/2017 1:29:14 PM	33085
EPA MET	HOD 8015D: GASOLINE RANG	E					Analyst	NSB
Gasoline	Range Organics (GRO)	34	3.2		mg/Kg	1	7/31/2017 12:21:00 PM	G44614
Surr: E	FB	510	54-150	S	%Rec	1	7/31/2017 12:21:00 PM	G44614

Surr: BFB	510	54-150	S	%Rec	1	7/31/2017 12:21:00 PM	G44614
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.016		mg/Kg	1	7/31/2017 12:21:00 PM	B44614
Toluene	ND	0.032		mg/Kg	1	7/31/2017 12:21:00 PM	B44614
Ethylbenzene	ND	0.032		mg/Kg	1	7/31/2017 12:21:00 PM	B44614
Xylenes, Total	ND	0.064		mg/Kg	1	7/31/2017 12:21:00 PM	B44614
Surr: 4-Bromofluorobenzene	126	66.6-132		%Rec	1	7/31/2017 12:21:00 PM	B44614

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

Qualifiers:	
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*

- 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
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 9 of 17 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

Analytical Report Lab Order 1707E85

Date Reported: 8/1/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD	Client Sample ID: TSP-28-RR								
Project:	San Juan 27-5 1			(Collectio	n Date: 7/2	28/2017 10:56:00 AM			
Lab ID:	1707E85-010	Matrix:	SOIL		Receive	d Date: 7/2	28/2017 2:26:00 PM			
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	HOD 8015M/D: DIESEL RANGE		6				Analyst:	том		
Diesel Ra	ange Organics (DRO)	17	9.8		mg/Kg	1	7/31/2017 1:00:59 PM	33085		
Motor Oil	Range Organics (MRO)	ND	49		mg/Kg	1	7/31/2017 1:00:59 PM	33085		
Surr: D	DNOP	90.7	70-130		%Rec	1	7/31/2017 1:00:59 PM	33085		
EPA MET	HOD 8015D: GASOLINE RANG	Ε					Analyst:	NSB		
Gasoline	Range Organics (GRO)	5.4	3.6		mg/Kg	1	7/31/2017 12:44:50 PM	G44614		
Surr: E	3FB	174	54-150	S	%Rec	1	7/31/2017 12:44:50 PM	G44614		

our bro		01 100	0 /01100		10112011 12.11.001 1	011011
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.018	mg/Kg	1	7/31/2017 12:44:50 PM	B44614
Toluene	ND	0.036	mg/Kg	1	7/31/2017 12:44:50 PM	B44614
Ethylbenzene	ND	0.036	mg/Kg	1	7/31/2017 12:44:50 PM	B44614
Xylenes, Total	ND	0.072	mg/Kg	1	7/31/2017 12:44:50 PM	B44614
Surr: 4-Bromofluorobenzene	118	66.6-132	%Rec	1	7/31/2017 12:44:50 PM	B44614

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

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 10 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1707E85

Date Reported: 8/1/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD	Client Sample ID: TSP-30-RR									
Project: San Juan 27-5 1			Collection	Date: 7/2	28/2017 11:00:00 AM					
Lab ID: 1707E85-011	Matrix:	SOIL	Received	Date: 7/2	28/2017 2:26:00 PM					
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS	5			Analyst	том				
Diesel Range Organics (DRO)	62	9.8	mg/Kg	1	7/31/2017 12:32:54 PM	33085				
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	7/31/2017 12:32:54 PM	33085				
Surr: DNOP	92.8	70-130	%Rec	1	7/31/2017 12:32:54 PM	33085				
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst:	NSB				
Gasoline Range Organics (GRO)	19	4.2	mg/Kg	1	7/31/2017 1:08:41 PM	G44614				
Surr: BFB	267	54-150	S %Rec	1	7/31/2017 1:08:41 PM	G44614				
EPA METHOD 8021B: VOLATILES					Analyst:	NSB				
-										

Benzene	ND	0.021	mg/Kg	1	7/31/2017 1:08:41 PM	B44614
Toluene	ND	0.042	mg/Kg	1	7/31/2017 1:08:41 PM	B44614
Ethylbenzene	ND	0.042	mg/Kg	1	7/31/2017 1:08:41 PM	B44614
Xylenes, Total	ND	0.084	mg/Kg	1	7/31/2017 1:08:41 PM	B44614
Surr: 4-Bromofluorobenzene	123	66.6-132	%Rec	1	7/31/2017 1:08:41 PM	B44614

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 limitspace 11 of 17
	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#: 1707E85

01-Aug-17

Project: San Juan 27-5 1 Sample ID LCS-33085 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analyte Result POL SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (DRO) 39 10 50.00 73.0 70 130 Sample ID MB-33085 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analyste Result POL SPK Net Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (DRO) ND 50 Sampte ID 1707/268-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-33	Client:	GHD										
Sample ID LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analysis Date: 7/31/2017 SeqNo: 1409986 Units: mg/Kg Analyte Result PQL SPK value	Project:	San Juan	27-5 1									
Client ID: LCSS Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analysis Date: 7/31/2017 SeqNo: 1409986 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Dised Range Organics (DRO) 39 10 50.00 7.8 7.3.2 114 Sur: DNOP 3.6 5.000 7.3.0 70 130 Sample ID MB-33085 SampType: MBLK TestCode: EPA Method 8015M/D: Dises Range Organics Client ID: PPS Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 SeqNo: 1409987 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit %RPD RPDLimit Qual Dised Range Organics (DRO) ND 50 Sampt LO 17072856-001AMS SampType: MS <td< td=""><td>Sample ID</td><td>LCS-33085</td><td>SampTy</td><td>be: LC</td><td>s</td><td>Tes</td><td>tCode: E</td><td>PA Method</td><td>8015M/D: Di</td><td>esel Rang</td><td>e Organics</td><td></td></td<>	Sample ID	LCS-33085	SampTy	be: LC	s	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Prep Date: 7/31/2017 Analysis Date: 7/31/2017 SeqNo: 1409986 Units: mg/kg Analyte Result POL SPK value SPK Ref Val %REC LowLinit HighLinit %RPD RPDLinit Qual Diesel Range Organics (DR0) 39 10 50.00 0 78.5 73.2 114 Sum: DNOP 3.6 50.00 0 78.5 73.2 114 Sample ID MB-33085 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analyte Result POL SPK value	Client ID:	LCSS	Batch I	D: 33	085	F	RunNo: 4	4603				
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLImit Qual Diesel Range Organics (DRO) 39 10 50.00 73.0 70 130 Sample ID MB-33085 Samptype: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PPS Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analysis Date: 7/31/2017 SeqNo: 1409987 Units: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (DRO) ND 10 Modor OI Range Organics (MRO) ND 10 Sample ID 1707E85-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-33 Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analyte Re	Prep Date:	7/31/2017	Analysis Dat	te: 7	/31/2017	S	SeqNo: 1	409986	Units: mg/M	(g		
Diesel Range Organics (DRO) 39 10 50.00 0 78.5 73.2 114 Sum: DNOP 3.6 5.000 73.0 70 130 Sample ID MB-33085 SampType: MBLK TeslCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 3085 RunNo: 44603 Prep Date: 7/31/2017 Analyte Result POL SPK xelfue SK Ref Val %REC LowLimit HighLimit %RPD RPDLImit Qual Diese Range Organics (DRO) ND 10 Modro OR Range Organics (DRO) ND 10 Modro OR Range Organics (DRO) ND 50 Sum: DNOP 7.6 10.00 76.4 70 130 Analyte Result POL SPK xelf Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (DRO) 140 9.7 48.31 87.83 98.0 55.8 122 20 20 RS	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sur: DNOP 3.6 5.000 73.0 70 130 Sample ID MB-33085 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33085 RunNo: 44603 Prep Date: 7131/2017 Analysis Date: 7131/2017 SeqNo: 1409987 Units: mg/Kg Analyte Result PQL SPK Value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (MRO) ND 50 Sur: DNOP 7.6 10.00 76.4 70 130 Sample ID 1707E85-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-33 Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analysis Date: 7/31/2017 SeqNo: 1410357 Units: mg/Kg Analyte Result PQL SPK Kef Val %REC	Diesel Range	Organics (DRO)	39	10	50.00	0	78.5	73.2	114			
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Analyte Result POL SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (DRO) ND 10	Prep Date:	7/31/2017	Analysis Dat	e: 7	31/2017	S	SeqNo: 1	409987	Units: mg/M	٢g		
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Motor Oil Range Organics (MRO) ND 50 Surr. DNOP 7.6 10.00 76.4 70 130 Sample ID 1707E85-001AMIS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-33 Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analyte Result PQL SPK value	Diesel Range	Organics (DRO)	ND	10								
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Sample ID 1707E85-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-33 Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analysis Date: 7/31/2017 SeqNo: 1410357 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (DRO) 140 9.7 48.31 87.83 98.0 55.8 122 Sur: DNOP 4.1 4.831 84.9 70 130 30 Sample ID 1707E85-001AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-33 Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (DRO) 110 9.6 48.12 87.83 47.2 55.8	Surr: DNOP		7.6	_	10.00		76.4	70	130			
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Sample ID 1707E85-001AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: TSP-33 Batch ID: 33085 RunNo: 44603 Prep Date: 7/31/2017 Analysis Date: 7/31/2017 SeqNo: 1410358 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Diesel Range Organics (DRO) 110 9.6 48.12 87.83 47.2 55.8 122 20.0 20 RS Surr: DNOP 4.0 4.812 83.8 70 130 0 0 0 Sample ID LCS-33075 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410830 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit<	Surr: DNOP		4.1		4.831		84.9	70	130			
Client ID:TSP-33Batch ID:33085RunNo:44603Prep Date:7/31/2017Analysis Date:7/31/2017SeqNo:1410358Units:mg/KgAnalyteResultPQLSPK valueSPK Ref Val%RECLowLimitHighLimit%RPDRPDLimitQualDiesel Range Organics (DRO)1109.648.1287.8347.255.812220.020RSSurr: DNOP4.04.81283.870130000Sample IDLCS-33075SampType:LCSTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:LCSSBatch ID:33075RunNo:44604Prep Date:7/28/2017Analysis Date:7/31/2017SeqNo:1410830Units:Surr: DNOP4.45.00087.27013000Sample IDMB-33075SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID:33075RunNo:44604Prep Date:7/28/2017Analysis Date:7/31/2017SeqNo:1410831Units:%RecLowLimitHighLimit%RPDRPDLimitQualSurr: DNOP4.45.00087.2701300Sample IDMB-33075SampType:MBLKTestCode:EPA Method 8015M/D: Diesel Range OrganicsClient ID:PBSBatch ID:33075RunNo:44604 <td< td=""><td>Sample ID</td><td>1707E85-001AMS</td><td>D SampTyp</td><td>e: Ms</td><td>SD</td><td>Tes</td><td>tCode: El</td><td>PA Method</td><td>8015M/D: Die</td><td>esel Rang</td><td>e Organics</td><td></td></td<>	Sample ID	1707E85-001AMS	D SampTyp	e: Ms	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
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Diesel Range Organics (DR0) 110 9.6 48.12 87.83 47.2 55.8 122 20.0 20 RS Surr: DNOP 4.0 4.812 83.8 70 130 0 0 0 Sample ID LCS-33075 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410830 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Surr: DNOP 4.4 5.000 87.2 70 130 30 30 30 Sample ID MB-33075 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33075 RunNo: 44604 44604 44604	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Client ID: LCSS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410830 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Surr: DNOP 4.4 5.000 87.2 70 130 130 Sample ID MB-33075 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410831 Units: %Rec Analyte Result POL SPK value SPK Ref Val %REC LowI imit HighLimit %RPD RPDL imit Qual	Sample ID	LCS-33075	SampTyp	e: LC	s	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410830 Units: %Rec Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Surr: DNOP 4.4 5.000 87.2 70 130 130 Sample ID MB-33075 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410831 Units: %Rec Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual	Client ID:	LCSS	Batch I	D: 33	075	F	RunNo: 4	4604				
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Surr: DNOP 4.4 5.000 87.2 70 130 130 Sample ID MB-33075 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410831 Units: %Rec Analyte Result POL SPK value SPK Ref Val %REC LowI imit HighLimit %RPD RPDL imit Qual	Prep Date:	7/28/2017	Analysis Dat	e: 7/	31/2017	5	SeqNo: 1	410830	Units: %Re	с		
Surr: DNOP 4.4 5.000 87.2 70 130 Sample ID MB-33075 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410831 Units: %Rec Analyte Besult POL SPK value SPK Ref Val %REC Low! imit High! imit %RPD RPD! imit Qual	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID MB-33075 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410831 Units: %Rec Analyte Besult POL SPK value SPK Ref Val %REC Low! imit %RPD RPD! imit Qual	Surr: DNOP		4.4		5.000		87.2	70	130		Cel Sta	
Client ID: PBS Batch ID: 33075 RunNo: 44604 Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410831 Units: %Rec	Sample ID	MB-33075	SampTyp	e: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Prep Date: 7/28/2017 Analysis Date: 7/31/2017 SeqNo: 1410831 Units: %Rec Analyte Result POL SPK value SPK Ref Val %REC Low! imit High! imit %RPD RPD! imit Qual	Client ID:	PBS	Batch I	D: 33	075	F	RunNo: 4	4604		0		
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Analyto hoodit i de offertion var Anteo Edweinite Highelinite Art Deinite Gaar	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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#: 1707E85

01-Aug-17

Client: GHD

Project:	San Juan 2	7-51

Sample ID MB-33075	SampType: MBL	K Test	Code: EPA Method	8015M/D: Dies	el Rang	e Organics	
Client ID: PBS	Batch ID: 3307	5 R	unNo: 44604				
Prep Date: 7/28/2017	Analysis Date: 7/31	/ 2017 S	eqNo: 1410831	Units: %Rec			
Analyte	Result PQL S	SPK value SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.5	10.00	85.3 70	130			

Qualifiers:

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

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WO#: 1707E85 01-Aug-17

Client: Project:	GHD San Juan	27-5 1									
Sample ID	RB	SampTy	e M	BIK	Tes	tCode: F	PA Method	8015D: Gas	oline Rang	0	
Client ID:	PRS	Batch		14614	F		1/61/	00100.003	onne rang	0	
Prep Date:	100	Analysis Dat	te: 7	/31/2017	, i	SeaNo: 1	1410728	Units: ma/k	۲a		
Analyto		Posult		SDK value	SDK Dof Val	% DEC	Lowlimit	Highl imit	% PPD	PPDI imit	Qual
Gasoline Rand	e Organics (GRO)	ND	5.0	SFR Value	SFR Rei Vai	MREC	LOWLINII	riigneinni	MRFD	KFDLIIIII	Quai
Surr: BFB	, ,	1000		1000		104	54	150			
Sample ID	2.5UG GRO LCS	SampTy	be: LC	s	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID:	LCSS	Batch I	D: G 4	44614	F	RunNo: 4	44614				
Prep Date:		Analysis Dat	te: 7	/31/2017	5	SeqNo: 1	1410729	Units: mg/k	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	24	5.0	25.00	0	95.2	76.4	125			
Surr: BFB		1100		1000		113	54	150			
Sample ID	RB	SampTy	be: MI	BLK	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	е	
Client ID:	PBS	Batch I	D: G4	44613	F	RunNo: 4	44613				
Prep Date:		Analysis Dat	e: 7	/31/2017	5	SeqNo: 1	1410767	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	ND	5.0								
Surr: BFB		890		1000		89.3	54	150			
Sample ID	2.5UG GRO LCS	SampTyp	be: LC	s	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	е	
Client ID:	LCSS	Batch I	D: G4	14613	F	RunNo: 4	44613				
Prep Date:		Analysis Dat	e: 7	/31/2017	S	SeqNo: 1	1410768	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	26	5.0	25.00	0	103	76.4	125			
Surr: BFB		1000		1000		103	54	150			
Sample ID	1707E85-001AMS	SampTyp	be: M	S	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	е	
Client ID:	TSP-33	Batch I	D: G4	4613	F	RunNo: 4	4613				
Prep Date:		Analysis Dat	e: 7	/31/2017	5	SeqNo: 1	1410769	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	35	3.1	15.58	21.48	87.8	77.8	128			
Surr: BFB		2600		623.1		412	54	150			S
Sample ID	1707E85-001AMS	D SampTyp	e: M	SD	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID:	TSP-33	Batch I	D: G 4	14613	F	RunNo: 4	14613				
Prep Date:		Analysis Dat	e: 7	31/2017	S	SeqNo: 1	1410770	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits J
 - Page 14 of 17
- Р Sample pH Not In Range RL **Reporting Detection Limit**
- W
 - Sample container temperature is out of limit as specified

WO#: 1707E85

01-Aug-17

Client: GHD **Project:** San Juan 27-5 1

Sample ID 1707E85-001AMS	7E85-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range										
Client ID: TSP-33	3 Batch ID: G44613 RunNo: 44613										
Prep Date:	5	SeqNo: 1	410770	Units: mg/Kg							
Analyte	Result PC	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	41	3.1 15.58	21.48	124	77.8	128	14.9	20			
Surr: BFB	1800	623.1		285	54	150	0	0	S		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits J
 - Р 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	
Hall Environmental Analysis Laboratory, Inc	

WO#: 1707E85

01-Aug-17

Client: Project:	GHD San Juan	27-5 1									
Sample ID	RB	Samp	Гуре: МВ	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batc	h ID: B4	4614	RunNo: 44614						
Prep Date:		Analysis [Date: 7/	31/2017	S	SeqNo: 1	410736	Units: mg/k			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Brom	ofluorobenzene	1.2		1.000		115	66.6	132			
Sample ID	100NG BTEX LCS	Samp	Type: LC	s	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batc	h ID: B4	4614	F	RunNo: 4	4614				
Prep Date:	Date: Analysis Date: 7/31/2017 SeqNo: 1410737 Units: mg/Kg										
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.90	0.025	1.000	0	90.3	80	120			
Toluene		0.90	0.050	1.000	0	90.0	80	120			
Ethylbenzene		0.93	0.050	1.000	0	93.0	80	120			
Xylenes, Total		2.8	0.10	3.000	0	93.6	80	120			
Surr: 4-Brom	ofluorobenzene	1.2		1.000		120	66.6	132			
Sample ID	RB	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batc	h ID: B4	4613	F	RunNo: 4	4613				
Prep Date:		Analysis [Date: 7/	31/2017	S	SeqNo: 1	410775	Units: mg/h	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Brom	ofluorobenzene	1.1		1.000		105	66.6	132			
Sample ID	100NG BTEX LCS	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batc	h ID: B4	4613	F	RunNo: 4	4613				
Prep Date:		Analysis Date: 7/31/2017 SeqNo: 1410776 Units: mg/Kg									
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.97	0.025	1.000	0	96.6	80	120			
Toluene		0.96	0.050	1.000	0	96.2	80	120			
Ethylbenzene		0.96	0.050	1.000	0	95.7	80	120			
Xylenes, Total		2.9	0.10	3.000	0	97.6	80	120			
Surr: 4-Brom	ofluorobenzene	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
- Page 16 of 17

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

WO#: 1707E85

01-Aug-17

Client: Project: GHD San Juan 27-5 1

Sample ID 1707E85-002AMS	S Samp	Туре: МЗ	6	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: TSP-34	Batc	h ID: B4	4613	F	RunNo: 4	4613				
Prep Date:	Analysis [Date: 7/	31/2017	S	SeqNo: 1	410777	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.017	0.6821	0	98.7	80.9	132			
Toluene	0.68	0.034	0.6821	0	99.3	79.8	136			
Ethylbenzene	0.73	0.034	0.6821	0	107	79.4	140			
Xylenes, Total	2.0	0.068	2.046	0.03431	98.5	78.5	142			
Surr: 4-Bromofluorobenzene	0.85		0.6821		124	66.6	132			
Sample ID 1707E85-002AM	SD Samp	Туре: МS	SD.	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: TSP-34	Batc	h ID: B4	4613	F	RunNo: 4	4613				
Prep Date:	Analysis [Date: 7/	31/2017	S	SeqNo: 1	410778	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.66	0.017	0.6821	0	97.0	80.9	132	1.78	20	
Toluene	0.66	0.034	0.6821	0	97.1	79.8	136	2.23	20	
Ethylbenzene	0.73	0.034	0.6821	0	106	79.4	140	0.674	20	
Xylenes, Total	2.0	0.068	2.046	0.03431	97.4	78.5	142	1.10	20	
Surr: 4-Bromofluorobenzene	0.83		0.6821		122	66.6	132	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

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu TEL: 505-345-3975 Website: www.hal	Analysis Laborato 4901 Hawkins N querque, NM 8710 FAX: 505-345-410 lenvironmental.co	WE 09 Samp 07	ole Log-In Checl	k List
Client Name: GHD	Work Order Number:	1707E85		RcptNo: 1	
Received By: Sophia Campuzano Completed By: Erin Melendrez	7/28/2017 2:26:00 PM 7/30/2017 2:00:10 PM		ingha inga		
Reviewed By:	7 31 17				
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?		Client			
<u>Log In</u>					
4. Was an attempt made to cool the same	bles?	Yes 🗹	No 🗌		
5. Were all samples received at a temperative	ature of >0° C to 6.0°C	Yes 🗹	No 🗍		
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated t	est(s)?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) pr	operly 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 I	broken?	Yes	No 🗹 -	# of preserved	:
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody	/)	Yes 🗹	No	for pH: (<2 or >12 u	nless noted)
13. Are matrices correctly identified on Cha	in of Custody?	Yes 🗹	No 🗌	Adjusted?	
14. Is it clear what analyses were requested	1?	Yes 🗹	No 🗌		
15. Were all holding times able to be met? (If no, notify customer for authorization.))	Yes 🗹	No	Checked by:	
Special Handling (if applicable)					
16. Was client notified of all discrepancies w	with this order?	Yes 🗌	No 🗔	NA 🗹	
Person Notified:	Date				
By Whom:	Via:] eMail 🗌 Ph	one 🗌 Fax	In Person	
Regarding:	annan an ann an an ann an ann an ann an	and a state of the s	isth sim is this suith and a strang	an at a star of the last star at a star of the star	
Client Instructions:				· · · · · · · · · · · · · · · · · · ·	
17. Additional remarks:					
18. <u>Cooler Information</u> Cooler No Temp °C Condition	Seal Intact Seal No S	eal Date	Signed By		
1 1.7 Good	Not Present				

Page 1 of 1

C	hain	of-Cu	stody Record	Turn-Around	Time:															
Client:	GHD	Service		- □ Standard	PT Rush	Same day	N			H			E	NV	/IF	20	N	16	NT	AL
12.43				Project Name	e:					A		AL		12	> L	A	30	KA		KT
Mailing	Address	·	1 1 101 10 1000	e T	101 21-	C#1					www	.hal	lenv	ironi	ment	tal.co	m			
()	111	6121 11	ndim School Kd ME #200	Dan J	64 5 4		-	490	01 Ha	awki	ns N	IE -	Alb	uqu	erqu	e, N	M 87	109		
416g	NM	8711	0	1/11/187			14	Te	1. 50	5-34	5-39	975	F	ax	505-	345	4107	7		
Phone	#: 505	884 06	F2	1191001								A	naly	sis	Req	ues	t		1	
email o	r Fax#:	Tell 10	Nelight gha. com	Project Manager:			1)	only	IRO					304)	S					
QA/QC I	Package: dard	00000	Level 4 (Full Validation)	Jeff Walker			(802	Gas	0/0			(SW		04,5	PCB					
Accredi	tation			Sampler: ()	unles Ne	ligh	Ň	H	DR	_		0 SI		02,F	082					
	AP	□ Othe	r	On Ice:	Yes		世+	1++	20	18.1	04.1	827		03,N	\$ / 8		A			N N
	(Type)			Sample Tem	perature: 1.7		H	BE	G	pd 4	od 5	0 or	etals	N'NC	side	A)	2-10			2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	EN + XE	TM + XE	H 8015B	H (Metho	B (Metho	H's (831	RA 8 Me	ons (F,C	1 Pestic	OB (VO	0 (Semi			Bubbles
						1707F85	BTB	BTI	TP	TP	ED	PAI	RC	Ani	808	826	827			Air
7-28-17	0951	Soil	TSP-33			-001	1	Z	1											
1	1000	(757-34	-		-002		P												
	1007		75P-35			-003		\$												
	1013		TSP-36			-004		G												
	1020		T57-37			-005		8												
	1028		T57-38			-006	Π	A												
	1033		T5P-39			-007		X	1											
	ionl		T5P-40			-008		R												
	1047		TSP-41	the second		-00A		X		1				1						
	1056		TSP-28-RR		1	-010									14					
V	1100	V	TSP-30-RR	15 N. 18		-011	3	1×	V		-									
Data:	Timo:	Polinguish		Received by:		Data Tima	Der	0						1						
7-28-17	1425	1	Andrij	Sophi	cor i	7/28/17 1426	Ren	IIdrks	5.											
Date:	Time:	Relinquish	ed by:	Received by:	-	Date Time	1													
			-																	

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

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

July 11, 2017 Jeff Walker GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

RE: San Juan 27 5 1

OrderNo.: 1707327

Dear Jeff Walker:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/7/2017 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

Lab Order 1707327

Date Reported: 7/11/2017

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch
Lab ID:	1707327-001	Matrix:	MEOH (SOIL)	Received	Date: 7/7/2017 4:25:00 PM	
Project:	San Juan 27 5 1			Collection	Date: 7/7/2017 12:09:00 PM	
CLIENT:	GHD		0	lient Sam	ple ID: Floor @ 15'	

	the second s	Statement of the second s		And in the local division of the local divis		the subscription of the section of t	the local division of
EPA METHOD 8015M/D: DIESEL RANGE O	RGANIC	S				Analyst	том
Diesel Range Organics (DRO)	920	9.5		mg/Kg	1	7/10/2017 10:13:43 AM	32699
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/10/2017 10:13:43 AM	32699
Surr: DNOP	95.6	70-130		%Rec	1	7/10/2017 10:13:43 AM	32699
EPA METHOD 8015D: GASOLINE RANGE						Analyst	NSB
Gasoline Range Organics (GRO)	390	18		mg/Kg	5	7/10/2017 10:09:18 AM	G44091
Surr: BFB	797	54-150	S	%Rec	5	7/10/2017 10:09:18 AM	G44091
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.092		mg/Kg	5	7/10/2017 10:09:18 AM	B44091
Toluene	1.1	0.18		mg/Kg	5	7/10/2017 10:09:18 AM	B44091
Ethylbenzene	ND	0.18		mg/Kg	5	7/10/2017 10:09:18 AM	B44091
Xylenes, Total	10	0.37		mg/Kg	5	7/10/2017 10:09:18 AM	B44091
Surr: 4-Bromofluorobenzene	133	66.6-132	S	%Rec	5	7/10/2017 10:09:18 AM	B44091

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

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
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 10 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Lab Order 1707327

Date Reported: 7/11/2017

Hall Environmental Analysis Laboratory, Inc.

EPA MET	HOD 8015M/D: DIESEL	RANGE ORGANICS	5		Analys	st: TOM			
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch			
Lab ID:	1707327-002	Matrix:	MEOH (SOIL)	Received	Date: 7/7/2017 4:25:00 PM				
Project:	San Juan 27 5 1			Collection	Date: 7/7/2017 12:13:00 PM				
CLIENT:	GHD	Client Sample ID: North Wall-West							

Diesel Range Organics (DRO)	40	9.4	mg/Kg	1	7/10/2017 10:41:50 AM	32699
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/10/2017 10:41:50 AM	32699
Surr: DNOP	94.8	70-130	%Rec	1	7/10/2017 10:41:50 AM	32699
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	7/10/2017 10:56:42 AM	G44091
Surr: BFB	139	54-150	%Rec	1	7/10/2017 10:56:42 AM	G44091
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.019	mg/Kg	1	7/10/2017 10:56:42 AM	B44091
Toluene	ND	0.039	mg/Kg	1	7/10/2017 10:56:42 AM	B44091
Ethylbenzene	ND	0.039	mg/Kg	1	7/10/2017 10:56:42 AM	B44091
Xylenes, Total	ND	0.077	mg/Kg	1	7/10/2017 10:56:42 AM	B44091
Surr: 4-Bromofluorobenzene	107	66 6-132	%Rec	1	7/10/2017 10:56:42 AM	B44091

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method
	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
	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
- Blank
- Page 2 of 10
- W Sample container temperature is out of limit as specified

Lab Order 1707327

Date Reported: 7/11/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD	Client Sample ID: TSP-6								
Project: San Juan 27 5 1	Collection Date: 7/7/2017 12:17:00 PM								
Lab ID: 1707327-003	Matrix: MEOH (SOIL)		IL)	Received Date: 7/7/2017 4:25:00 PM					
Analyses	Result	PQL (Qual U	Units	DF	Date Analyzed	Batch		
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S				Analyst	том		
Diesel Range Organics (DRO)	520	9.7		mg/Kg	1	7/10/2017 11:09:57 AM	32699		
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/10/2017 11:09:57 AM	32699		
Surr: DNOP	88.7	70-130		%Rec	1	7/10/2017 11:09:57 AM	32699		
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst:	NSB		
Gasoline Range Organics (GRO)	170	3.2		mg/Kg	1	7/10/2017 11:20:27 AM	G44091		
Surr: BFB	2050	54-150	S	%Rec	1	7/10/2017 11:20:27 AM	G44091		
EPA METHOD 8021B: VOLATILES						Analyst:	NSB		
Benzene	ND	0.016		mg/Kg	1	7/10/2017 11:20:27 AM	B44091		
Toluene	ND	0.032		mg/Kg	1	7/10/2017 11:20:27 AM	B44091		
Ethylbenzene	ND	0.032		mg/Kg	1	7/10/2017 11:20:27 AM	B44091		
Xylenes, Total	1.8	0.063		mg/Kg	1	7/10/2017 11:20:27 AM	B44091		
Surr: 4-Bromofluorobenzene	239	66.6-132	S	%Rec	1	7/10/2017 11:20:27 AM	B44091		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 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

Lab Order 1707327

Date Reported: 7/11/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	GHD		Client Sample ID: TSP-7							
Project:	San Juan 27 5 1	Collection Date: 7/7/2017 12:20:00 PM								
Lab ID:	1707327-004	Matrix:	MEOH (SC	DIL)	Received	Date: 7/7	7/2017 4:25:00 PM			
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed	Batch		
EPA MET	HOD 8015M/D: DIESEL RAN	GE ORGANIC	S				Analyst:	том		
Diesel R	ange Organics (DRO)	460	9.7		mg/Kg	1	7/10/2017 11:37:54 AM	32699		
Motor Oil Range Organics (MRO)		ND	48		mg/Kg	1	7/10/2017 11:37:54 AM	32699		
Surr: DNOP		91.5	70-130		%Rec	1	7/10/2017 11:37:54 AM	32699		
EPA MET	HOD 8015D: GASOLINE RAM	NGE					Analyst:	NSB		
Gasoline	Range Organics (GRO)	170	4.0		mg/Kg	1	7/10/2017 11:44:09 AM	G44091		
Surr: E	BFB	1640	54-150	S	%Rec	1	7/10/2017 11:44:09 AM	G44091		
EPA MET	HOD 8021B: VOLATILES						Analyst:	NSB		
Benzene		ND	0.020		mg/Kg	1	7/10/2017 11:44:09 AM	B44091		
Toluene		ND	0.040		mg/Kg	1	7/10/2017 11:44:09 AM	B44091		
Ethylben	zene	ND	0.040		mg/Kg	1	7/10/2017 11:44:09 AM	B44091		
Xylenes,	Total	0.99	0.080		mg/Kg	1	7/10/2017 11:44:09 AM	B44091		
Surr: 4	4-Bromofluorobenzene	175	66.6-132	S	%Rec	1	7/10/2017 11:44:09 AM	B44091		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 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

Lab Order 1707327

Date Reported: 7/11/2017

Hall Environmental Analysis Laboratory, Inc.

Lab ID: 1	1707327-005 Matrix:		MEOH (SOIL)	Receive	d Date: 7/7/2017 4:25:00 PM			
Project: Sa	an Juan 27 5 1			Collection	n Date: 7/7/2017 12:24:00 PM			
CLIENT: G	GHD	Client Sample ID: TSP-8						

Analyses	Result	PQL ()ual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	6				Analyst:	том
Diesel Range Organics (DRO)	430	9.6		mg/Kg	1	7/10/2017 12:05:58 PM	32699
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/10/2017 12:05:58 PM	32699
Surr: DNOP	95.1	70-130		%Rec	1	7/10/2017 12:05:58 PM	32699
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst:	NSB
Gasoline Range Organics (GRO)	130	3.4		mg/Kg	1	7/10/2017 12:07:47 PM	G44091
Surr: BFB	1520	54-150	S	%Rec	1	7/10/2017 12:07:47 PM	G44091
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.017		mg/Kg	1	7/10/2017 12:07:47 PM	B44091
Toluene	ND	0.034		mg/Kg	1	7/10/2017 12:07:47 PM	B44091
Ethylbenzene	ND	0.034		mg/Kg	1	7/10/2017 12:07:47 PM	B44091
Xylenes, Total	0.83	0.068		mg/Kg	1	7/10/2017 12:07:47 PM	B44091
Surr: 4-Bromofluorobenzene	166	66.6-132	S	%Rec	1	7/10/2017 12:07:47 PM	B44091

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

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 5 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1707327

Date Reported: 7/11/2017

7/10/2017 12:31:34 PM B44091

7/10/2017 12:31:34 PM B44091

7/10/2017 12:31:34 PM B44091

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD	Client Sample ID: TSP-9 Collection Date: 7/7/2017 12:30:00 PM								
Project: San Juan 27 5 1									
Lab ID: 1707327-006	Matrix:	L) Received	Received Date: 7/7/2017 4:25:00 PM						
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch			
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS	5			Analyst	том			
Diesel Range Organics (DRO)	440	9.6	mg/Kg	1	7/10/2017 12:34:08 PM	32699			
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	7/10/2017 12:34:08 PM	32699			
Surr: DNOP	93.1	70-130	%Rec	1	7/10/2017 12:34:08 PM	32699			
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	NSB			
Gasoline Range Organics (GRO)	100	3.4	mg/Kg	1	7/10/2017 12:31:34 PM	G44091			
Surr: BFB	1310	54-150	S %Rec	1	7/10/2017 12:31:34 PM	G44091			
EPA METHOD 8021B: VOLATILES					Analyst:	NSB			
Benzene	ND	0.017	mg/Kg	1	7/10/2017 12:31:34 PM	B44091			
Toluene	ND	0.034	mg/Kg	1	7/10/2017 12:31:34 PM	B44091			

0.034

0.068

66.6-132

mg/Kg

mg/Kg

%Rec

S

1

1

1

ND

0.65

160

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

Qualifiers:

*

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1707327

Date Reported: 7/11/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Project: San Juan 27 5 1		(Client Samp Collection	le ID: M Date:	eOH Blank	
Lab ID: 1707327-007	Matrix:	MEOH BLAN	Received	Date: 7/7	7/2017 4:25:00 PM	
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RAI	NGE	£			Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	7/10/2017 10:32:57 AM	G44091
Surr: BFB	119	54-150	%Rec	1	7/10/2017 10:32:57 AM	G44091
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	7/10/2017 10:32:57 AM	B44091
Toluene	ND	0.050	mg/Kg	1	7/10/2017 10:32:57 AM	B44091
Ethylbenzene	ND	0.050	mg/Kg	1	7/10/2017 10:32:57 AM	B44091
Xylenes, Total	ND	0.10	mg/Kg	1	7/10/2017 10:32:57 AM	B44091
Surr: 4-Bromofluorobenzene	106	66.6-132	%Rec	1	7/10/2017 10:32:57 AM	B44091

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in
	D	Sample Diluted Due to Matrix	E	Value above quanti
	Η	Holding times for preparation or analysis exceeded	J	Analyte detected be
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In H

- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- the associated Method Blank
- itation range
- elow quantitation limits Page 7 of 10
- Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: 1707327

11-Jul-17

Client: GHD Project: San Juan 27 5 1

Sample ID LCS-32699	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 32699	RunNo: 44080	
Prep Date: 7/10/2017	Analysis Date: 7/10/2017	SeqNo: 1391037	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	48 10 50.00	0 96.3 73.2	114
Surr: DNOP	4.3 5.000	85.8 70	130
Sample ID MB-32699	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 32699	RunNo: 44080	
Prep Date: 7/10/2017	Analysis Date: 7/10/2017	SeqNo: 1391038	Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10		
Motor Oil Range Organics (MRO)	ND 50		
Surr: DNOP	8.7 10.00	87.2 70	130
Sample ID LCS-32681	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 32681	RunNo: 44081	
Prep Date: 7/7/2017	Analysis Date: 7/10/2017	SeqNo: 1391339	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Surr: DNOP	5.0 5.000	99.3 70	130
Sample ID MB-32681	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 32681	RunNo: 44081	
Prep Date: 7/7/2017	Analysis Date: 7/10/2017	SeqNo: 1391340	Units: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit Qual
Surr: DNOP	9.2 10.00	91.6 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 8 of 10

WO#: 1707327

11-Jul-17

Client: GHD **Project:**

San Juan 27 5 1

Sample ID RB	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: PBS	Batc	h ID: G4	4091	F	RunNo: 4	4091				
Prep Date:	Analysis [Date: 7/	10/2017	S	SeqNo: 1	391573	Units: mg/k	۲g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		114	54	150			
	1100		1000		114	54	150		and the second se	
Sample ID 2.5UG GRO LCS	Samp	Type: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Sample ID 2.5UG GRO LCS Client ID: LCSS	Samp	Type: LC h ID: G4	:S 14091	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Sample ID 2.5UG GRO LCS Client ID: LCSS Prep Date:	Samp Batc Analysis I	Type: LC h ID: G4 Date: 7/	:S 14091 10/2017	Tes F	tCode: ER RunNo: 44 SeqNo: 1:	PA Method 4091 391574	8015D: Gaso Units: mg/k	bline Rang	e	
Sample ID 2.5UG GRO LCS Client ID: LCSS Prep Date: Analyte	Samp Batc Analysis I Result	Type: LC h ID: G4 Date: 7/ PQL	:S :4091 10/2017 SPK value	Tes F S SPK Ref Val	tCode: EF RunNo: 44 SeqNo: 1: %REC	PA Method 4091 391574 LowLimit	8015D: Gaso Units: mg/M HighLimit	oline Rang Kg %RPD	e RPDLimit	Qual
Sample ID 2.5UG GRO LCS Client ID: LCSS Prep Date: Analyte Gasoline Range Organics (GRO)	Samp Batc Analysis I Result 24	Type: LC h ID: G4 Date: 7/ PQL 5.0	1000 S 14091 10/2017 SPK value 25.00	Tes F S SPK Ref Val 0	tCode: EF RunNo: 4 SeqNo: 1: <u>%REC</u> 95.7	PA Method 4091 391574 LowLimit 76.4	8015D: Gaso Units: mg/k HighLimit 125	oline Rang (g %RPD	e RPDLimit	Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

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

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W

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory,	Inc.

WO#: 1707327

11-Jul-17

Client:	GHD										
Project:	San Juan 2	27 5 1								1.5.1.1	
Sample ID F	RB	Samp	Туре: МЕ	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: F	PBS	Batc	h ID: B4	4091	F	RunNo: 4	4091				
Prep Date:		Analysis [Date: 7/	10/2017	S	SeqNo: 1	391583	Units: mg/h	٨g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Bromot	fluorobenzene	1.1		1.000		106	66.6	132			
Sample ID 1	00NG BTEX LCS	Samp	Type: LC	s	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: L	CSS	Batc	h ID: B4	4091	F	RunNo: 4	4091				
Prep Date:		Analysis [Date: 7/	10/2017	5	SeqNo: 1	391584	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.86	0.025	1.000	0	86.1	80	120			
oluene		0.86	0.050	1.000	0	85.8	80	120			
thylbenzene		0.85	0.050	1.000	0	84.6	80	120			
ylenes, Total		2.5	0.10	3.000	0	84.9	80	120			
Surr: 4-Bromot	fluorobenzene	1.1		1.000		107	66.6	132			
Sample ID 1	707327-002AMS	Samp ⁻	Туре: М	6	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	orth Wall-West	Batc	h ID: B4	4091	F	RunNo: 4	4091				
Prep Date:		Analysis [Date: 7/	10/2017	5	SeqNo: 1	391585	Units: mg/h	٨g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.73	0.019	0.7722	0	94.5	80.9	132			
oluene		0.73	0.039	0.7722	0.01038	93.1	79.8	136			
Ethylbenzene		0.73	0.039	0.7722	0.01407	92.5	79.4	140			
Kylenes, Total		2.2	0.077	2.317	0.03578	93.4	78.5	142			
Surr: 4-Bromot	fluorobenzene	0.86		0.7722		111	66.6	132			
Sample ID 1	707327-002AMSD	Samp	Type: MS	SD	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	orth Wall-West	Batc	h ID: B4	4091	F	RunNo: 4	4091				
Prep Date:		Analysis [Date: 7/	10/2017	5	SeqNo: 1	391586	Units: mg/h	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.71	0.019	0.7722	0	92.1	80.9	132	2.59	20	
Toluene		0.72	0.039	0.7722	0.01038	91.3	79.8	136	1.88	20	
Ethylbenzene		0.72	0.039	0.7722	0.01407	91.4	79.4	140	1.19	20	
Kylenes, Total		2.2	0.077	2.317	0.03578	92.1	78.5	142	1.41	20	
Surr: 4-Bromot	fluorobenzene	0.85		0.7722		111	66.6	132	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

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Page 10 of 10
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

HALL Hall ENVIRONMENTAL ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-3 Website:	4901 Hawkins 4901 Hawkins Albuquerque, NM 87 45-3975 FAX: 505-345-4 www.hallenvironmental.	NE 109 Sam 107 com	ple Log-In Ch	eck List
Client Name: GHD Work Order N	Number: 1707327		RcptNo: 1	1
Received By: Sophia Campuzano 7/7/2017 4:25:	DO PM	Jophen Jagen-	-	
Completed By: Ashley Gallegos 7/9/2017 1:12:	30 PM	A		
Reviewed By: 572 07/10/17		540		
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?	Client			
Log In				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	NA 🗌	
5. Were all samples received at a temperature of >0° C to 6.0°	C Yes	No 🗹		
6 Sampla(a) in proper container(a)2	les were collected the	same day and	d chilled.	
o. Sample(s) in proper container(s) r	tes 💌			
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🛄		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗆	
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials	
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved	
12. Does paperwork match bottle labels?	Yes 🗹	No 🗌	for pH:	>10 uplace no
(Note discrepancies on chain of custody)	Vac M	No 🗖	Adjusted?	>12 unless no
13. Are matrices correctly identified on Chain of Custody?	Yes V			
15 Were all holding times able to be met?	Yes V	No 🗍	Checked by:	
(If no, notify customer for authorization.)				
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗌	NA 🗹	
Person Notified:	Date	n (n Carlon an United Sector and Carlon Sector S		
By Whom:	Via: 🗌 eMail 🗌 F	hone 🗌 Fax	In Person	
Regarding:		at its NetWinner and American at water strain as an		
Client Instructions:				
17. Additional remarks:				
18. <u>Cooler Information</u>				
Cooler No Temp °C Condition Seal Intact Seal	No Seal Date	Signed By		
		a an ai ai		

										Time	Date		Received by:	iby:	Relinquished	Time:	Date:
								arks:	lema	17 1625 F	07/07/,	2	Stiph Cy	Les Nent	Relinquished	Time: He25	Date:
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										1007				Moott Blank Re			
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							5	-	X	-005				75/2-8		1224	
							P		X	84				750-7		0221	-
							2	-	X	500				9-051		1217	-
							P	1	X	ea.				Vorth Wall - West	1 A	1213	-
							X	1	X	100	-	Nech	407 Glase	Floor C15'	SOIL 1	1209	アーノート
Air Bubbles	8270 (Semi	8081 Pestic 8260B (VO	Anions (F,C	RCRA 8 Me	PAH's (831	EDB (Metho	TPH 80158	BTEX + MT	BTEX + ME	T327	, 170	Preservativ Type	Container Type and #	Sample Request ID	Matrix	Time	Date
(Y)	-vo	ide: A)	I,N	etals	0 01	od 5	d 4	BE	-	A STATE OF A	9	erature: 6.	Sample Temp			(Type)	
or N)	A)	s / 8082	O ₃ ,NO ₂		8270	04.1)	18 1)	+ TPH	-TMO	194	S Kel	haves	Sampler:		D Other	UP UP	
		2 PCB's	,PO4,SC		SIMS)	i de dela	RO / MF	(Gas of	4s (8021					 Level 4 (Full Validation) 		'ackage: lard	QA/QC F
_			D ₄)				0	nly))	licer	ant	Ier. Det	Project Manag	alle Calid.com	CR.W	Fax#:	email or
	4	Reques	/sis F	Analy										4-0672	38-54	5, 0	Phone #
	-4107	505-348	BX	-	3975	345-	505-	Tel.			7	12468	Project #: / / /	JUO	MA 8	1 PC	Alb
	M 87109	rque, N	uque	Alb	NE	kins	Haw	4901			#	127-5	Sandua	Indian Sch. Rd	1219	Address:	Mailing
		hental	ironn	llenv	what	100		-	Ì		1		Project Name:				
RY	BORATO	IKC	SIS	×Π			1 L		ĪГ	ME ONY	1 SAM	D RUS	□ Standard	vices Anc.	1381	いてい	Client:
				1			-			1	1	lime:	Lum-Around	stody Record	of-Cus	hain-	C



Pace Analytical Services, LLC 9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665

July 17, 2017

Jeffrey Walker GHD Services, Inc 6121 Indian School Rd NE Ste 200 Albuquerque, NM 87110

RE: Project: 11124687 San Juan 27-5 #1 Pace Project No.: 60248746

Dear Jeffrey Walker:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Spiller

Alice Spiller alice.spiller@pacelabs.com (913)563-1409 Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



CERTIFICATIONS

 Project:
 11124687 San Juan 27-5 #1

 Pace Project No.:
 60248746

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219 WY STR Certification #: 2456.01 Arkansas Certification #: 15-016-0 Illinois Certification #: 003097 Iowa Certification #: 118 Kansas/NELAP Certification #: E-10116 Louisiana Certification #: 03055 Nevada Certification #: KS000212008A Oklahoma Certification #: 9205/9935 Texas Certification #: T104704407 Utah Certification #: KS00021 Kansas Field Laboratory Accreditation: # E-92587 Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

 Project:
 11124687 San Juan 27-5 #1

 Pace Project No.:
 60248746

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60248746001	TSP-15	Solid	07/13/17 12:24	07/14/17 16:00
60248746002	TSP-16	Solid	07/13/17 12:16	07/14/17 16:00
60248746003	TSP-17	Solid	07/13/17 12:09	07/14/17 16:00
60248746004	TSP-18	Solid	07/13/17 12:02	07/14/17 16:00
60248746005	TSP-19	Solid	07/13/17 11:52	07/14/17 16:00
60248746006	TSP-20	Solid	07/13/17 11:47	07/14/17 16:00
60248746007	TSP-21	Solid	07/13/17 11:39	07/14/17 16:00
60248746008	TSP-22	Solid	07/13/17 11:31	07/14/17 16:00
60248746009	TSP-23	Solid	07/13/17 11:26	07/14/17 16:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

 Project:
 11124687 San Juan 27-5 #1

 Pace Project No.:
 60248746

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60248746001	TSP-15	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K
60248746002	TSP-16	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K
60248746003	TSP-17	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K
60248746004	TSP-18	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K
60248746005	TSP-19	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K
60248746006	TSP-20	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K
60248746007	TSP-21	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K
60248746008	TSP-22	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K
60248746009	TSP-23	EPA 8015B	AJM	4	PASI-K
		EPA 5035A/8260	JKL	8	PASI-K
		ASTM D2974	DWC	1	PASI-K

REPORT OF LABORATORY ANALYSIS



PROJECT NARRATIVE

Project: 11124687 San Juan 27-5 #1 Pace Project No.: 60248746

Method: EPA 8015B

Description:8015B Diesel Range OrganicsClient:GHD Services_COP NMDate:July 17, 2017

General Information:

9 samples were analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 485601

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1988798)
 - n-Tetracosane (S)
 - p-Terphenyl (S)
- MSD (Lab ID: 1988799)

• n-Tetracosane (S)

- p-Terphenyl (S)
- TSP-15 (Lab ID: 60248746001)
 - n-Tetracosane (S)
 - p-Terphenyl (S)
- TSP-16 (Lab ID: 60248746002)
 - n-Tetracosane (S)
 - p-Terphenyl (S)
- TSP-18 (Lab ID: 60248746004)
 - n-Tetracosane (S)
 - p-Terphenyl (S)
- TSP-19 (Lab ID: 60248746005)
 - n-Tetracosane (S)
 - p-Terphenyl (S)
- TSP-20 (Lab ID: 60248746006)
- n-Tetracosane (S)
- p-Terphenyl (S)
- TSP-21 (Lab ID: 60248746007)
 - n-Tetracosane (S)
 - p-Terphenyl (S)

REPORT OF LABORATORY ANALYSIS

PROJECT NARRATIVE

 Project:
 11124687 San Juan 27-5 #1

 Pace Project No.:
 60248746

Method: EPA 8015B

Description:8015B Diesel Range OrganicsClient:GHD Services_COP NMDate:July 17, 2017

QC Batch: 485601

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

• TSP-22 (Lab ID: 60248746008)

- n-Tetracosane (S)
- p-Terphenyl (S)

• TSP-23 (Lab ID: 60248746009)

- n-Tetracosane (S)
- · p-Terphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 485601

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60248746001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

• MSD (Lab ID: 1988799) • TPH-DRO (C10-C28)

Additional Comments:

REPORT OF LABORATORY ANALYSIS



PROJECT NARRATIVE

Project: 11124687 San Juan 27-5 #1 Pace Project No.: 60248746

Method: EPA 5035A/8260

 Description:
 8260 MSV GRO and Oxygenates

 Client:
 GHD Services_COP NM

 Date:
 July 17, 2017

General Information:

9 samples were analyzed for EPA 5035A/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS



Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-15	Lab ID: 602	48746001	Collected: 07/13/1	7 12:24	Received: 07	/14/17 16:00 N	latrix: Solid		
Results reported on a "dry weight"	basis and are adj	usted for p	ercent moisture, sa	mple s	ize and any dilut	tions.			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8015B Diesel Range Organics	Analytical Mether	nod: EPA 80	15B Preparation Me	ethod: E	PA 3546				
TPH-DRO (C10-C28)	1030	mg/kg	109	10	07/15/17 00:00	07/17/17 09:51		M1	
TPH-ORO (C28-C35) Surrogates	ND	mg/kg	109	10	07/15/17 00:00	07/17/17 09:51			
n-Tetracosane (S)	0	%	65-119	10	07/15/17 00:00	07/17/17 09:51	646-31-1	S4	
p-Terphenyl (S)	0	%	41-131	10	07/15/17 00:00	07/17/17 09:51	92-94-4	S4	
8260 MSV GRO and Oxygenates	Analytical Mether	nod: EPA 50	35A/8260						
Benzene	ND	ug/kg	5.7	1		07/17/17 12:36	71-43-2		
Ethylbenzene	ND	ug/kg	5.7	1		07/17/17 12:36	100-41-4		
Toluene	ND	ug/kg	5.7	1		07/17/17 12:36	108-88-3		
TPH-GRO	4.3	mg/kg	0.57	1		07/17/17 12:36			
Xylene (Total)	ND	ug/kg	11.5	1		07/17/17 12:36	1330-20-7		
Surrogates									
Toluene-d8 (S)	100	%	77-120	1		07/17/17 12:36	2037-26-5		
4-Bromofluorobenzene (S)	104	%	<mark>81-119</mark>	1		07/17/17 12:36	460-00-4		
1,2-Dichloroethane-d4 (S)	103	%	79-126	1		07/17/17 12:36	17060-07-0		
Percent Moisture	Analytical Meth	nod: ASTM I	02974						
Percent Moisture	12.0	%	0.50	1		07/17/17 00:00			

REPORT OF LABORATORY ANALYSIS

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Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-16	Lab ID: 60248746002 Collected: 07			ed: 07/13/17 12:16 Received: 07/14/17 16:00 Matrix: So					
Results reported on a "dry weight"	basis and are adj	usted for p	ercent mo	isture, sa	mple si	ize and any dilut	ions.		
Parameters	Results	Units	Repo	ort Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Meth	nod: EPA 80	15B Prepa	aration Me	thod: El	PA 3546	-		
TPH-DRO (C10-C28)	1460	mg/kg		108	10	07/15/17 00:00	07/17/17 10:19		
TPH-ORO (C28-C35) Surrogates	114	mg/kg		108	10	07/15/17 00:00	07/17/17 10:19		
n-Tetracosane (S)	0	%		65-119	10	07/15/17 00:00	07/17/17 10:19	646-31-1	S4
p-Terphenyl (S)	0	%		41-131	10	07/15/17 00:00	07/17/17 10:19	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Meth	nod: EPA 50	35A/8260						
Benzene	ND	ug/kg		5.6	1		07/17/17 13:24	71-43-2	
Ethylbenzene	ND	ug/kg		5.6	1		07/17/17 13:24	100-41-4	
Toluene	ND	ug/kg		5.6	1		07/17/17 13:24	108-88-3	
TPH-GRO	2.4	mg/kg		0.56	1		07/17/17 13:24		
Xylene (Total)	ND	ug/kg		11.3	1		07/17/17 13:24	1330-20-7	
Surrogates									
Toluene-d8 (S)	100	%		77-120	1		07/17/17 13:24	2037-26-5	
4-Bromofluorobenzene (S)	104	%		81-119	1		07/17/17 13:24	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%		79-126	1		07/17/17 13:24	17060-07-0	
Percent Moisture	Analytical Meth	nod: ASTM I	02974						
Percent Moisture	11.9	%		0.50	1		07/17/17 00:00		

REPORT OF LABORATORY ANALYSIS



Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-17	Lab ID: 602	48746003	Collected: 07/13/17	7 12:09	Received: 07	/14/17 16:00 N	latrix: Solid	
Results reported on a "dry weight"	basis and are ad	iusted for p	ercent moisture, sai	nple s	ize and any dilut	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Met	hod: EPA 80	15B Preparation Met	hod: E	PA 3546			
TPH-DRO (C10-C28)	810	mg/kg	11.3	1	07/15/17 00:00	07/16/17 02:05		
TPH-ORO (C28-C35) Surrogates	67.2	mg/kg	11.3	1	07/15/17 00:00	07/16/17 02:05		
n-Tetracosane (S)	114	%	65-119	1	07/15/17 00:00	07/16/17 02:05	646-31-1	
p-Terphenyl (S)	102	%	41-131	1	07/15/17 00:00	07/16/17 02:05	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Met	hod: EPA 50	35A/8260					
Benzene	ND	ug/kg	5.8	1		07/17/17 13:40	71-43-2	
Ethylbenzene	ND	ug/kg	5.8	1		07/17/17 13:40	100-41-4	
Toluene	ND	ug/kg	5.8	1		07/17/17 13:40	108-88-3	
TPH-GRO	1.6	mg/kg	0.58	1		07/17/17 13:40		
Xylene (Total) Surrogates	ND	ug/kg	11.5	1		07/17/17 13:40	1330-20-7	
Toluene-d8 (S)	99	%	77-120	1		07/17/17 13:40	2037-26-5	
4-Bromofluorobenzene (S)	103	%	81-119	1		07/17/17 13:40	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	79-126	1		07/17/17 13:40	17060-07-0	
Percent Moisture	Analytical Met	hod: ASTM I	02974					
Percent Moisture	12.4	%	0.50	1		07/17/17 00:00		

REPORT OF LABORATORY ANALYSIS



Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-18	Lab ID: 602	48746004	Collected: 07/13/17	7 12:02	Received: 07	/14/17 16:00 N	Aatrix: Solid	
Results reported on a "dry weight" b	asis and are adj	usted for p	ercent moisture, sai	mple s	ize and any dilut	tions.		
Parameters	Results	Results Units Report Limit DF Prepared				Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Meth	nod: EPA 80	15B Preparation Met	hod: E	PA 3546			
TPH-DRO (C10-C28)	1210	mg/kg	107	10	07/15/17 00:00	07/17/17 10:28		
TPH-ORO (C28-C35) Surrogates	ND	mg/kg	107	10	07/15/17 00:00	07/17/17 10:28		
n-Tetracosane (S)	0	%	65-119	10	07/15/17 00:00	07/17/17 10:28	646-31-1	S4
p-Terphenyl (S)	0	%	41-131	10	07/15/17 00:00	07/17/17 10:28	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Meth	nod: EPA 50	35A/8260					
Benzene	ND	ug/kg	5.6	1		07/17/17 13:56	71-43-2	
Ethylbenzene	ND	ug/kg	5.6	1		07/17/17 13:56	100-41-4	
Toluene	ND	ug/kg	5.6	1		07/17/17 13:56	108-88-3	
TPH-GRO	5.7	mg/kg	0.56	1		07/17/17 13:56		
Xylene (Total)	26.9	ug/kg	11.1	1		07/17/17 13:56	1330-20-7	
Surrogates								
Toluene-d8 (S)	99	%	77-120	1		07/17/17 13:56	2037-26-5	
4-Bromofluorobenzene (S)	103	%	81-119	1		07/17/17 13:56	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	79-126	1		07/17/17 13:56	17060-07-0	
Percent Moisture	Analytical Meth	nod: ASTM [02974					
Percent Moisture	11.3	%	0.50	1		07/17/17 00:00		

REPORT OF LABORATORY ANALYSIS



Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-19	Lab ID: 602	48746005	Collected: 07/13/17	7 11:52	2 Received: 07	/14/17 16:00 N	latrix: Solid	
Results reported on a "dry weight"	basis and are adj	usted for p	ercent moisture, sar	nple s	ize and any dilut	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Mether	nod: EPA 80	15B Preparation Met	hod: E	PA 3546			
TPH-DRO (C10-C28)	1750	mg/kg	109	10	07/15/17 00:00	07/17/17 10:38		
TPH-ORO (C28-C35) Surrogates	111	mg/kg	109	10	07/15/17 00:00	07/17/17 10:38		
n-Tetracosane (S)	0	%	65-119	10	07/15/17 00:00	07/17/17 10:38	646-31-1	S4
p-Terphenyl (S)	0	%	41-131	10	07/15/17 00:00	07/17/17 10:38	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Meth	nod: EPA 50	35A/8260					
Benzene	ND	ug/kg	5.7	1		07/17/17 14:12	71-43-2	
Ethylbenzene	ND	ug/kg	5.7	1		07/17/17 14:12	100-41-4	
Toluene	ND	ug/kg	5.7	1		07/17/17 14:12	108-88-3	
TPH-GRO	2.4	mg/kg	0.57	1		07/17/17 14:12		
Xylene (Total) Surrogates	ND	ug/kg	11.3	1		07/17/17 14:12	1330-20-7	
Toluene-d8 (S)	101	%	77-120	1		07/17/17 14:12	2037-26-5	
4-Bromofluorobenzene (S)	104	%	81-119	1		07/17/17 14:12	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	79-126	1		07/17/17 14:12	17060-07-0	
Percent Moisture	Analytical Meth	nod: ASTM I	D2974					
Percent Moisture	11.1	%	0.50	1		07/17/17 00:00		

REPORT OF LABORATORY ANALYSIS



Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-20	Lab ID: 602	48746006	Collected: 07/13/1	Received: 07/14/17 16:00 Matrix: Solid				
Results reported on a "dry weight" k	asis and are adj	usted for p	ercent moisture, sai	nple s	ize and any dilut	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Meth	nod: EPA 80	15B Preparation Met	hod: E	PA 3546			
TPH-DRO (C10-C28)	1430	mg/kg	112	10	07/15/17 00:00	07/17/17 10:47		
TPH-ORO (C28-C35) Surrogates	ND	mg/kg	112	10	07/15/17 00:00	07/17/17 10:47		
n-Tetracosane (S)	0	%	65-119	10	07/15/17 00:00	07/17/17 10:47	646-31-1	S4
p-Terphenyl (S)	0	%	41-131	10	07/15/17 00:00	07/17/17 10:47	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Meth	nod: EPA 50	35A/8260					
Benzene	ND	ug/kg	5.6	1		07/17/17 14:28	71-43-2	
Ethylbenzene	ND	ug/kg	5.6	1		07/17/17 14:28	100-41-4	
Toluene	ND	ug/kg	5.6	1		07/17/17 14:28	108-88-3	
TPH-GRO	4.4	mg/kg	0.56	1		07/17/17 14:28		
Xylene (Total)	ND	ug/kg	11.2	1		07/17/17 14:28	1330-20-7	
Surrogates								
Toluene-d8 (S)	99	%	77-120	1		07/17/17 14:28	2037-26-5	
4-Bromofluorobenzene (S)	106	%	81-119	1		07/17/17 14:28	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	79-126	1		07/17/17 14:28	17060-07-0	
Percent Moisture	Analytical Meth	nod: ASTM [02974					
Percent Moisture	11.1	%	0.50	1		07/17/17 00:00		

REPORT OF LABORATORY ANALYSIS



Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-21	Lab ID: 602	48746007	Collected: 07/13/17	7 11:39	Received: 07	/14/17 16:00 N	Aatrix: Solid	
Results reported on a "dry weight" b	oasis and are adj	usted for p	ercent moisture, sai	nple s	ize and any dilut	tions.		
Parameters	Results	Results Units Report Limit DF		Prepared	Analyzed	CAS No.	Qual	
8015B Diesel Range Organics	Analytical Meth	nod: EPA 80	15B Preparation Met	hod: E	PA 3546			
TPH-DRO (C10-C28)	1160	mg/kg	108	10	07/15/17 00:00	07/17/17 11:16		
TPH-ORO (C28-C35) Surrogates	ND	mg/kg	108	10	07/15/17 00:00	07/17/17 11:16		
n-Tetracosane (S)	0	%	65-119	10	07/15/17 00:00	07/17/17 11:16	646-31-1	S4
p-Terphenyl (S)	0	%	41-131	10	07/15/17 00:00	07/17/17 11:16	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Meth	nod: EPA 50	35A/8260					
Benzene	ND	ug/kg	5.6	1		07/17/17 14:44	71-43-2	
Ethylbenzene	ND	ug/kg	5.6	1		07/17/17 14:44	100-41-4	
Toluene	ND	ug/kg	5.6	1		07/17/17 14:44	108-88-3	
TPH-GRO	5.2	mg/kg	0.56	1		07/17/17 14:44		
Xylene (Total)	22.8	ug/kg	11.1	1		07/17/17 14:44	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	77-120	1		07/17/17 14:44	2037-26-5	
4-Bromofluorobenzene (S)	105	%	81-119	1		07/17/17 14:44	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	79-126	1		07/17/17 14:44	17060-07-0	
Percent Moisture	Analytical Meth	nod: ASTM [02974					
Percent Moisture	11.4	%	0.50	1		07/17/17 00:00		

REPORT OF LABORATORY ANALYSIS



Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-22	Lab ID: 602	48746008	Collected: 07/13/17	7 11:31	Received: 07	/14/17 16:00 N	latrix: Solid	
Results reported on a "dry weight" b	oasis and are adj	usted for p	ercent moisture, sar	nple s	ize and any dilut	ions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Meth	nod: EPA 80	15B Preparation Met	hod: E	PA 3546			
TPH-DRO (C10-C28)	1070	mg/kg	111	10	07/15/17 00:00	07/17/17 11:25		
TPH-ORO (C28-C35) Surrogates	151	mg/kg	111	10	07/15/17 00:00	07/17/17 11:25		
n-Tetracosane (S)	0	%	65-119	10	07/15/17 00:00	07/17/17 11:25	646-31-1	S4
p-Terphenyl (S)	0	%	41-131	10	07/15/17 00:00	07/17/17 11:25	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Meth	nod: EPA 50	35A/8260					
Benzene	ND	ug/kg	5.6	1		07/17/17 15:00	71-43-2	
Ethylbenzene	ND	ug/kg	5.6	1		07/17/17 15:00	100-41-4	
Toluene	ND	ug/kg	5.6	1		07/17/17 15:00	108-88-3	
TPH-GRO	2.8	mg/kg	0.56	1		07/17/17 15:00		
Xylene (Total)	16.5	ug/kg	11.2	1		07/17/17 15:00	1330-20-7	
Surrogates								
Toluene-d8 (S)	99	%	77-120	1		07/17/17 15:00	2037-26-5	
4-Bromofluorobenzene (S)	102	%	81-119	1		07/17/17 15:00	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	79-126	1		07/17/17 15:00	17060-07-0	
Percent Moisture	Analytical Meth	od: ASTM	D2974					
Percent Moisture	11.0	%	0.50	1		07/17/17 00:00		

REPORT OF LABORATORY ANALYSIS

ace Analvtical www.pacelabs.com

Project: 11124687 San Juan 27-5 #1

Pace Project No.: 60248746

Sample: TSP-23	Lab ID: 602	48746009	Collected: 07/13/1	7 11:26	Received: 07	/14/17 16:00 N	latrix: Solid	
Results reported on a "dry weight"	basis and are adj	usted for p	ercent moisture, sa	mple s	ize and any dilut	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Mether	nod: EPA 80	15B Preparation Me	thod: E	PA 3546			
TPH-DRO (C10-C28)	1080	mg/kg	109	10	07/15/17 00:00	07/17/17 11:34		
TPH-ORO (C28-C35) Surrogates	115	mg/kg	109	10	07/15/17 00:00	07/17/17 11:34		
n-Tetracosane (S)	0	%	65-119	10	07/15/17 00:00	07/17/17 11:34	646-31-1	S4
p-Terphenyl (S)	0	%	41-131	10	07/15/17 00:00	07/17/17 11:34	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Mether	nod: EPA 50	35A/8260					
Benzene	ND	ug/kg	5.6	1		07/17/17 15:16	71-43-2	
Ethylbenzene	ND	ug/kg	5.6	1		07/17/17 15:16	100-41-4	
Toluene	ND	ug/kg	5.6	1		07/17/17 15:16	108-88-3	
TPH-GRO	3.0	mg/kg	0.56	1		07/17/17 15:16		
Xylene (Total)	12.6	ug/kg	11.3	1		07/17/17 15:16	1330-20-7	
Surrogates								
Toluene-d8 (S)	99	%	77-120	1		07/17/17 15:16	2037-26-5	
4-Bromofluorobenzene (S)	101	%	81-119	1		07/17/17 15:16	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	79-126	1		07/17/17 15:16	17060-07-0	
Percent Moisture	Analytical Meth	nod: ASTM I	D2974					
Percent Moisture	11.4	%	0.50	1	*	07/17/17 00:00		

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project:	111246	87 San Juan 2	27-5 #1										
Pace Project No .:	602487	746											
QC Batch:	48570	05		Analys	is Method	E	PA 5035A/8	260					
QC Batch Method:	EPA 8	5035A/8260		Analys	is Descrip	tion: 8	260 MSV G	RO and O	xygenates				
Associated Lab San	nples:	6024874600 6024874600	1, 60248746002 8, 60248746009	60248746	003, 6024	8746004, 6	024874600	5, 6024874	46006, 6024	8746007,			
METHOD BLANK:	198939)4		N	latrix: Sol	id							
Associated Lab San	nples:	6024874600 6024874600	1, 60248746002 8, 60248746009	60248746	003, 6024	8746004, 6	024874600	5, 6024874	46006, 6024	8746007,			
				Blank	R	eporting							
Paran	neter		Units	Result	t	Limit	Analyz	zed	Qualifiers	_			
Benzene			ug/kg		ND	5.0	07/17/17	12:20					
Ethylbenzene			ug/kg		ND	5.0	07/17/17	12:20					
Toluene			ug/kg		ND	5.0	07/17/17	12:20					
TPH-GRO			mg/kg		ND	0.50	07/17/17	12:20					
Xylene (Total)	14 (0)		ug/kg		ND	10.0	07/17/17	12:20					
1,2-Dichloroethane-	d4 (S)		%		103	79-126	07/17/17	12:20					
4-Bromofiluorobenze	ene (S)		%		102	81-119	07/17/17	12:20					
10100118-00 (3)			70		99	77-120	0//1//1/	12.20					
LABORATORY COM	NTROL	SAMPLE: 19	989395										
				Spike	LCS	5	LCS	% Re	С				
Paran	neter		Units	Conc.	Resu	lt	% Rec	Limits	s Qu	lalifiers			
Benzene			ug/kg	100		109	109	8	1-115				
Ethylbenzene			ug/kg	100		113	113	74	4-120				
Toluene			ug/kg	100		110	110	7	7-115				
TPH-GRO			mg/kg	4		4.2	104	7:	2-142				
Xylene (Total)			ug/kg	300		329	110	74	4-120				
1,2-Dichloroethane-	d4 (S)		%				102	79	9-126				
4-Bromofluorobenze	ene (S)		%				103	8	1-119				
Toluene-d8 (S)			%				99	7	7-120				
MATRIX SPIKE & M			CATE: 198939	96		1989397							
				MS	MSD								
			60248746001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene		ug/kg	ND	112	115	76.3	77.0	68	67	34-137	1	28	
Ethylbenzene		ug/kg	ND	112	115	70.4	66.8	63	58	11-150	5	32	
Toluene		ug/kg	ND	112	115	74.4	72.1	66	63	20-142	3	39	
Xylene (Total)		ug/kg	ND	337	344	215	200	62	56	10-155	7	35	
1,2-Dichloroethane-	d4 (S)	%						107	107	79-126			
4-Bromofluorobenze	ene (S)	%						106	105	81-119			
Toluene-d8 (S)		%						103	99	77-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project:	111246	87 San Juar	n 27-5 #1										
Pace Project No.:	602487	46											
QC Batch:	48560	01		Analys	is Method:	E	PA 8015B						
QC Batch Method:	EPA 3	3546		Analys	is Descript	ion: E	PA 8015B						
Associated Lab Sar	nples:	602487460 602487460	01, 60248746002 08, 60248746009	, 60248746	003, 60248	3746004, 6	024874600	5, 6024874	6006, 6024	18746007,			
METHOD BLANK:	198879	96		N	Aatrix: Soli	d							
Associated Lab Sar	nples:	602487460 602487460	01, 60248746002 08, 60248746009	, 60248746	003, 60248	3746004, 6	024874600	5, 6024874	6006, 6024	8746007,			
				Blank	R	eporting							
Parar	neter		Units	Resul	t	Limit	Analyz	ed	Qualifiers				
TPH-DRO (C10-C2	8)		mg/kg		ND	9.8	07/16/17	00:49					
TPH-ORO (C28-C3	5)		mg/kg		ND	9.8	07/16/17	00:49					
n-Tetracosane (S)			%		102	65-119	07/16/17	00:49					
LABORATORY CO	NTROL	SAMPLE:	1988797	Spike	LCS		LCS	% Red					
Parar	neter		Units	Conc.	Resu	It	% Rec	Limits	Q	ualifiers			
TPH-DRO (C10-C2	8)		mg/kg	81.5		88.6	109	80)-112				
n-Tetracosane (S)			%				105	65	5-119				
p-Terphenyl (S)			%				105	41	-131				
MATRIX SPIKE & M	ATRIX S	SPIKE DUPL	ICATE: 198879	98		1988799							
				MS	MSD								
			60248746001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er	Units	s Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
TPH-DRO (C10-C28	B)	mg/k	g 1030	93	92.3	1190	1000	177	-27	10-180	17	39	M1
n-Tetracosane (S)		%						0	0	65-119		58	S4
p-Terphenyl (S)		%						0	0	41-131		56	S4

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project:	111246	37 San Juan 27	7-5 #1								
Pace Project No .:	602487	46									
QC Batch:	C Batch: 485664				hod:	ASTM D2974					
QC Batch Method:	D2974		Analysis Des	cription: [Dry Weight/Percent Moisture						
Associated Lab Samples: 60248746001, 60248 60248746008, 60248				48746002, 60248746003, 60248746004, 60248746005, 60248746006, 60248746007, 48746009							
METHOD BLANK:	198934	9		Matrix:	Solid						
Associated Lab Sam	ples:	60248746001 60248746008	60248746002, 60248746009	60248746003, 6	0248746004,	60248746005, 60	248746006, 6024	8746007,			
				Blank	Reporting						
Parameter			Units	Result	Limit	Analyzed	Qualifiers				
Percent Moisture			%	ND	0.5	0 07/17/17 00:0	0				
SAMPLE DUPLICAT	E: 19	39350		00040740004	Dur		Mari				
Decem	otor		Linita	60248746001	Dup	DDD	Max	Qualifiara			
Param	leter		Units	Result	Result	RPD	KPD	Quaimers			
Percent Moisture %				12.0	12.4	4 3	20				

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



QUALIFIERS

 Project:
 11124687 San Juan 27-5 #1

 Pace Project No.:
 60248746

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA CROSS REFERENCE TABLE

 Project:
 11124687 San Juan 27-5 #1

 Pace Project No.:
 60248746

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60248746001	TSP-15	EPA 3546	485601	EPA 8015B	485610
60248746002	TSP-16	EPA 3546	485601	EPA 8015B	485610
60248746003	TSP-17	EPA 3546	485601	EPA 8015B	485610
60248746004	TSP-18	EPA 3546	485601	EPA 8015B	485610
60248746005	TSP-19	EPA 3546	485601	EPA 8015B	485610
60248746006	TSP-20	EPA 3546	485601	EPA 8015B	485610
60248746007	TSP-21	EPA 3546	485601	EPA 8015B	485610
60248746008	TSP-22	EPA 3546	485601	EPA 8015B	485610
60248746009	TSP-23	EPA 3546	485601	EPA 8015B	485610
60248746001	TSP-15	EPA 5035A/8260	485705		
60248746002	TSP-16	EPA 5035A/8260	485705		
60248746003	TSP-17	EPA 5035A/8260	485705		
60248746004	TSP-18	EPA 5035A/8260	485705		
60248746005	TSP-19	EPA 5035A/8260	485705		
60248746006	TSP-20	EPA 5035A/8260	485705		
60248746007	TSP-21	EPA 5035A/8260	485705		
60248746008	TSP-22	EPA 5035A/8260	485705		
60248746009	TSP-23	EPA 5035A/8260	485705		
60248746001	TSP-15	ASTM D2974	485664		
60248746002	TSP-16	ASTM D2974	485664		
60248746003	TSP-17	ASTM D2974	485664		
60248746004	TSP-18	ASTM D2974	485664		
60248746005	TSP-19	ASTM D2974	485664		
60248746006	TSP-20	ASTM D2974	485664		
60248746007	TSP-21	ASTM D2974	485664		
60248746008	TSP-22	ASTM D2974	485664		
60248746009	TSP-23	ASTM D2974	485664		

REPORT OF LABORATORY ANALYSIS



Project Manager Review:

Sample Condition Upon Receipt



Client Name: GHD	
Courier: FedEx 🗱 UPS 🗆 VIA 🗆 Clay 🗆 F	PEX ECI Pace Xroads Client Other
Tracking #: 8 (05 9 00 0015 Pace	ze Shipping Label Used? Yes 🗆 No 🗆
Custody Seal on Cooler/Box Present: Yes 🛍 No 🗆	Seals intact: Yes 🛍 No 🗆
Packing Material: Bubble Wrap Bubble Bags CF +2.9 CF +0.2	C Foam □ None □ Other □
Thermometer Used: T-266 /(T-239) Type of	f Ice: Wet Blue None Date and initials of person
Cooler Temperature (°C): As-read 3.2 Corr. Facto	tor $CF + 2.9 \Phi = 0.2$ Corrected $7 \cdot 1$ examining contents: $JP = 7/14/13$
Temperature should be above freezing to 6°C	
Chain of Custody present:	
Chain of Custody relinquished:	
Samples arrived within holding time:	Kiyes DNo DN/A
Short Hold Time analyses (<72hr):	□Yes 🕅No □N/A
Rush Turn Around Time requested:	Byes INO IN/A RUSH - Same Day
Sufficient volume:	
Correct containers used:	
Pace containers used:	IŪYes □No □N/A
Containers intact:	ĺĴUYes ⊡No ⊡N/A
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	
Filtered volume received for dissolved tests?	
Sample labels match COC: Date / time / ID / analyses	
Samples contain multiple phases? Matrix: SL	□Yes 🕅 No □N/A
Containers requiring pH preservation in compliance?	
(HNO ₃ , H ₂ SO ₄ , HCI<2; NaOH>9 Sulfide, NaOH>10 Cyanide)	
Cyanide water sample checks:	
Lead acetate strip turns dark? (Record only)	□Yes □No
Potassium iodide test strip turns blue/purple? (Preserve)	□Yes □No
Trip Blank present:	
Headspace in VOA vials (>6mm):	
Samples from USDA Regulated Area: State: A/M	⊡Yes BCNo □N/A
Additional labels attached to 5035A / TX1005 vials in the field?	? 🗆 Yes 🗆 No 🕅 N/A
Client Notification/ Resolution: Copy COC to	o Client? Y / N Field Data Required? Y / N
Person Contacted: Date/T	Time:
Comments/ Resolution:	·
· · · · · · · · · · · · · · · · · · ·	
A 1.	

Date:

F-KS-C-003-Rev.10, August 18, 2016 Page 22 of 23

Project No/ Phase/Task Code:			Laboratory Name:									Lai	b Location:		SSOW ID:	SSOW ID:				
Project Name:		Lab Contact:								an trans		1.02 48 7	Ar.	Cooler No:						
Pro	ject Location:	710	H 1		-		4	10	T		~///	ANA	LYSIS	REQUE	STED	000107		Carrier:		
H	D Chemistry Contact:				-	SAM	PLE	TYPE		6	20	(See Ba	ck of (OC for D	efinition	s)		Airbill N	D:	erinan anan Santa ang papa
an	nnler(s):				_	()	p (C)		140	970	843					hin di sert	sample	Total # o	f Containers:	
	Coveligh					le of CO	r Com	(NIX		*	NO				1.		iners/s	aduest		10
						ix Cod back	0 (G) 0	ered (1	16.8	W/C						Conta	ASD Re	COMMEN	TS/
	SAMPLE IDENTIFICATION	bined on one line)	DATE (mm/dd//vy	TIM (bb:m	E m	Matr (see	Grab	Filte	STC.		DKC						Total	WS/W	PECIAL INSTR	UCTIONS:
1	PRESERVA	TION - (SEE B	ACK OF CO	C FOR	ABB	BREVL	ATIC	NS)												
+	T5P-15		1125	+ 12	Į	50	10	N	X									(2)415		.1
1	TSP-16		14.01	121	6	50	i	1	>	1>	2							C		2
	TSP-17			120	9	1	T		X	1									~	3
1	TSP-18			120	2		1		>	4)	<								P	,4
	757-19			115	ż		IT	TT	X										J.	5
	73P-20			114	14			Π	X		$\langle $	T							00	.6
	TSP-21			113	7			Π	7	$\langle \rangle$									00	7
	757-22			113	1			Π	X	X									a	в
	15P-23		V	1126		V	3	V	X										00	99
D										Ι									-	
1												11								
2																				
	T Required in business days (use 1 Day □ 2 Days □ 3 Days □	separate COCs 1 Week 🔲 2 W	eek 🔏 Ot	nt TATs	i): ncI	Derry		No	tes/	Spe	cial F	Require	ments SA	pí	Je	ff. Wall	kæeg	hd com	305 884	0612
	RELINQUISHED BY		COMPANY			DATE		TIN	AE		i			RECEIVE	DBY			COMPANY	DATE	TI
	Mary Nel: do	B	40		1	R-1	1	12	530	0	1.		NI	-	/				7/14/17	(600

Attachment 2 NMOCD email variance requests and approvals

GHD | Remediation and Closure Report | 11145906 (1)

From:	Smith, Cory, EMNRD
To:	Frost, Gwendolynne; Thomas, Leigh
Cc:	Walker, Jeffrey; dustin d mace; Neligh, Charles; Powell, Brandon, EMNRD; Fields, Vanessa, EMNRD
Subject:	RE: [EXTERNAL] RE: San Juan 27-5 Unit 1
Date:	Wednesday, July 12, 2017 11:33:39 AM

Gwen,

OCD approves COPC request for alternative closure for the base of the excavation as COPC has delineated the remaining portion of the release.

OCD Approval for alternative closure standards does not relieve COPC of any requirements imposed by other regulatory agencies.

Thanks,

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

From: Frost, Gwendolynne [mailto:Gwendolynne.Frost@conocophillips.com] Sent: Tuesday, July 11, 2017 10:21 AM

To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Thomas, Leigh <l1thomas@blm.gov>
Cc: Walker, Jeffrey (Jeff.Walker@ghd.com) <Jeff.Walker@ghd.com>; dustin d mace
<dustin@unlimitedconstructionus.com>; Charles.Neligh@ghd.com; Powell, Brandon, EMNRD
<Brandon.Powell@state.nm.us>; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>
Subject: RE: [EXTERNAL] RE: San Juan 27-5 Unit 1

Cory & Whitney

In follow up to the path forward noted below, ConocoPhillips would like to request risk based closure for the Floor of the excavation at the SJ 27-5 #1 (API# 30-039-07154) based on details below, the additional excavation that occurred, and the attached analytical results (attached).

ConocoPhillips considers the walls of the excavation to be closed, as the walls have been granted Risk Based closure by NMOCD (granted July 6, 2017 below), or are below the NMOCD Recommended Remediation Action Levels (RRALs) for the site, based on analytical results. Additional excavation occurred on the North Wall (West) to further remove impacted soil, as confirmation sampling indicates analytical results below 100 mg/kg Total TPH, and below Total BTEX & Benzene levels (attached).

Therefore, due to the walls being closed, ConocoPhillips requests that the floor of the excavation be

granted Risk Based Closure. The shallow impacted soil has been removed and although the Total TPH (1, 310 mg/kg – DRO 920 mg/kg & GRO 390 mg/kg) are above RRALs for the site, the Benzene level is below detection limit (<0.092 mg/kg), and the total BTEX level (11.1 mg/kg) indicate that the soils left in place are no longer a threat to human health and the environment, and the maximum extent of walls of the excavation has been reached.

ConocoPhillips & GHD will work with Unlimited Construction to attain treated soil standards acceptable to NMOCD and BLM; as COP will then request approval to backfill with treated soil. COP will continue to provide notification of further confirmation sampling of the treated soil piles (TSPs).

Thank you, Gwen Frost Environmental Coordinator San Juan Asset – RBU T: 505.326.9549 | M: 505.215.3121

please consider the environment before printing this email.

From: Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
Sent: Thursday, July 06, 2017 10:47 AM
To: Frost, Gwendolynne <<u>Gwendolynne.Frost@conocophillips.com</u>>; Thomas, Leigh
<<u>l1thomas@blm.gov></u>
Cc: Walker, Jeffrey (Jeff.Walker@ghd.com) <Jeff.Walker@ghd.com>; dustin d mace
<<u>dustin@unlimitedconstructionus.com</u>>; Charles.Neligh@ghd.com; Powell, Brandon, EMNRD
<<u>Brandon.Powell@state.nm.us</u>>; Fields, Vanessa, EMNRD <<u>Vanessa.Fields@state.nm.us</u>>
Subject: [EXTERNAL] RE: San Juan 27-5 Unit 1

Gwen,

OCD approves COPC request for a risk based closure due to existing infrastructure blocking further remediation by excavation on the South West Wall, and the East Wall. The OCD also approves COPC proposed path forward for additional excavation and sampling.

Please keep us informed of COPC decision on the TSP and sampling schedule.

OCD Approval does not relieve COPC of any requirements imposed by other regulatory agencies.

Cory Smith Environmental Specialist Oil Conservation Division Energy, Minerals, & Natural Resources 1000 Rio Brazos, Aztec, NM 87410 (505)334-6178 ext 115

cory.smith@state.nm.us

From: Frost, Gwendolynne [mailto:Gwendolynne.Frost@conocophillips.com]
Sent: Wednesday, July 5, 2017 9:20 AM
To: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; Thomas, Leigh <<u>l1thomas@blm.gov</u>>
Cc: Walker, Jeffrey (Jeff.Walker@ghd.com) <<u>Jeff.Walker@ghd.com</u>>; dustin d mace
<<u>dustin@unlimitedconstructionus.com</u>>; Charles.Neligh@ghd.com
Subject: San Juan 27-5 Unit 1

Cory & Whitney

ConocoPhillips (COP) would like to request closure on the following walls of the excavation at the SJ 27-5 #1 (API# 30-039-07154) based on the analytical results & table attached. The excavation is approximately 50'x40'x10 feet deep.

West Wall – analytical results are below the Recommended Remediation Action Levels (RRALs) for the site; below 100 mg/kg Total TPH, and below Total BTEX & Benzene levels, as noted on Table 1 (attached).

South Wall (West) - Total TPH (654 mg/kg) are above RRALs for the site, although the Benzene level is below detection limit (<0.089 mg/kg), and the total BTEX level (1.549 mg/kg) indicate that the soils left in place are no longer a threat to human health and the environment, and the maximum extent of the wall has been reached with the meter run in place.

South Wall (East) - analytical results are below RRALs for the site, below the 100 mg/kg Total TPH, and below Total BTEX & Benzene levels, as noted on Table 1 (attached).

East Wall - Total TPH (273 ppm) are above the RRALs for the site, although the Benzene level is below detection limit (<0.093 mg/kg), and the total BTEX level (1.033 mg/kg) indicate that the soils left in place are no longer a threat to human health and the environment, and the maximum extent of the wall has been reached with the production tank & BGT in place.

North Wall (East) - analytical results are below the RRALs for the site, below the 100 mg/kg Total TPH, and below Total BTEX & Benzene levels, as indicated on Table 1 (attached).

Path forward:

North Wall (West) – additional excavation will be completed after consultation with Unlimited Construction to ensure OSHA standards of excavation are met.

Floor – additional excavation of an estimated 5 feet will be completed with additional confirmation sampling.

TSP-1 through TSP-5 will be reviewed by Unlimited Construction with GHD & COP for a path forward.

Please let me know of your approval or recommendations.

Thank you, Gwen Frost Environmental Coordinator San Juan Asset – RBU T: 505.326.9549 | M: 505.215.3121

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From:	Smith, Cory, EMNRD
To:	Walker, Jeffrey; Thomas, Leigh
Cc:	Frost, Gwendolynne
Subject:	RE: San Juan 27-5 #1
Date:	Wednesday, July 26, 2017 7:56:43 AM

Good morning Jeff,

At soil shredding sites you do not have to get individual approval for piles that have passed to backfill.

So your request is approved for passing piles.

Thanks.

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

From: Walker, Jeffrey [mailto:Jeff.Walker@ghd.com]
Sent: Wednesday, July 26, 2017 7:50 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Thomas, Leigh <l1thomas@blm.gov>
Cc: Frost, Gwendolynne <Gwendolynne.Frost@conocophillips.com>
Subject: Fw: San Juan 27-5 #1

Please see latest rush results attached. Note five 100cy stockpiles have passed 100ppm threshold. Please provide approval to begin backfill of excavation with these clean soils. Thank you. Sent from my Verizon 4G LTE Smartphone

----- Original message----From: John Caldwell
Date: Tue, Jul 25, 2017 2:35 PM
To: Walker, Jeffrey;
Cc: Neligh, Charles;
Subject:San Juan 27-5 #1

Hi Jeff,

Attached is the rush data for San Juan 27-5 #1. Have a good day.

John

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CONFIDENTIALITY NOTICE: This email, including any attachments, is confidential and may be privileged. If you are not the intended recipient please notify the sender immediately, and please delete it; you should not copy it or use it for any purpose or disclose its contents to any other person. GHD and its affiliates reserve the right to monitor and modify all email communications through their networks.

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From:	Smith, Cory, EMNRD
To:	Frost, Gwendolynne; Thomas, Leigh
Cc:	Jeffrey Walker; Charles Neligh; dustin@unlimitedconstructionus.com; Matt Henderson; ccardoza@hilcorp.com
Subject:	RE: San Juan 27-5 #1 TSP"s variance request for use as backfill material
Date:	Tuesday, August 01, 2017 7:37:54 AM

Gwen,

OCD Approves COPC variance request. Please mix/aerating piles 40-41 first with the passing piles and use them as backfill in the deeper portions of the excavation. Please also include this approval in your final report.

Thank you,

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

From: Frost, Gwendolynne [mailto:Gwendolynne.Frost@conocophillips.com] **Sent:** Monday, July 31, 2017 4:08 PM

To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Thomas, Leigh <l1thomas@blm.gov>
Cc: Walker, Jeffrey (Jeff.Walker@ghd.com) <Jeff.Walker@ghd.com>; Neligh, Charles
<Charles.Neligh@ghd.com>; dustin@unlimitedconstructionus.com; Matt Henderson
<mhenderson@hilcorp.com>; ccardoza@hilcorp.com
Subject: RE: San Juan 27-5 #1 TSP's variance request for use as backfill material

Cory

Good afternoon, in follow up to recent variance request below and in addition to the analytical results attached, ConocoPhillips would like to request a variance for the following TSP piles to be utilized as backfilled based on reasoning below and the analytical results attached.

All treated TSP piles have been remediated to a constituent level that are no longer a threat to human health and the environment.

TSP-28RR – below RRALs for the site, Total TPH 22.4 mg/kg **TSP-30RR** – below RRALs for the site, Total TPH 81 mg/kg

TSP-33 – although the Total TPH 109 mg/kg (88 mg/kg DRO & 21 mg/kg GRO) is above RRALs for the site, the Benzene level is below detection limit (<0.016 mg/kg), and the total BTEX level (0.14 mg/kg)

indicate that this TSP pile if utilized as backfill will not be a threat to human health & the environment.

TSP-34 – although the Total TPH 106 mg/kg (77 mg/kg DRO & 29 mg/kg GRO) is above RRALs for the site, the Benzene level is below detection limit (<0.017 mg/kg), and the total BTEX level (0.153 mg/kg) indicate that this TSP pile if utilized as backfill will not be a threat to human health & the environment.

TSP-35 – although the Total TPH 115 mg/kg (100 mg/kg DRO & 15 mg/kg GRO) is above RRALs for the site, the Benzene level is below detection limit (<0.016 mg/kg), and the total BTEX level (0.148 mg/kg) indicate that this TSP pile if utilized as backfill will not be a threat to human health & the environment.

TSP-36, TSP-37, and TSP-38 are below RRALs for the site

TSP-39 – although the Total TPH 105 mg/kg (98 mg/kg DRO & 6.8 mg/kg GRO) is above RRALs for the site, the Benzene level is below detection limit (<0.017 mg/kg), and the total BTEX level (0.149 mg/kg) indicate that this TSP pile if utilized as backfill will not be a threat to human health & the environment.

Also, based on the recent reduced analytical results of TSP-28RR & TSP-30RR, ConocoPhillips believes that the additional hold time and aerating/turning of **TSP-40 & TSP-41** would sufficiently degrade/reduce the hydrocarbon concentrations of TSP-40 & TSP-41 to meet the RRALs of the site and requests that TSP-40 & TSP-41 be mixed in with the lower concentration TSP piles and granted a variance for use as backfill at the site.

Hence, based on the analytical results attached and variances requested above that the site be approved for all remediated soil to be utilized as backfill.

Thank you, Gwen Frost

From: Frost, Gwendolynne

Sent: Thursday, July 27, 2017 8:46 AM

To: 'Smith, Cory, EMNRD' <<u>Cory.Smith@state.nm.us</u>>; 'Thomas, Leigh' <<u>I1thomas@blm.gov</u>> Cc: Walker, Jeffrey (<u>Jeff.Walker@ghd.com</u>) <<u>Jeff.Walker@ghd.com</u>>; 'Neligh, Charles' <<u>Charles.Neligh@ghd.com</u>>; 'dustin@unlimitedconstructionus.com' <<u>dustin@unlimitedconstructionus.com</u>>; Bockisch, Bernie (<u>Bernard.Bockisch@ghd.com</u>) <<u>Bernard.Bockisch@ghd.com</u>>

Subject: San Juan 27-5 #1 TSP's variance request for use as backfill material

Cory

Good morning, ConocoPhillips would like to request a variance for the following TSP piles to be utilized as backfilled based on reasoning below and the analytical results attached.

ConocoPhillips requests that the following TSP piles be granted a variance to utilize as backfill in the closed excavation. The treated TSP piles have been remediated to a constituent level that are no longer a threat to human health and the environment.

TSP-28R – although the Total TPH 138.4 mg/kg (130 mg/kg DRO & 8.4 mg/kg GRO) is above RRALs for the site, the Benzene level is below detection limit (<0.016 mg/kg), and the total BTEX level (0.148 mg/kg) indicate that this TSP pile if utilized as backfill will not be a threat to human health & the environment.

TSP-29 – although the Total TPH 121 mg/kg (110 mg/kg DRO & 11 mg/kg GRO) is above RRALs for the site, the Benzene level is below detection limit (<0.015 mg/kg), and the total BTEX level (0.136 mg/kg) indicate that this TSP pile if utilized as backfill will not be a threat to human health & the environment.

TSP-30 – although the Total TPH 162 mg/kg (120 mg/kg DRO & 42 mg/kg GRO) is above RRALs for the site, the Benzene level is below detection limit (<0.017 mg/kg), and the total BTEX level (0.153 mg/kg) indicate that this TSP pile if utilized as backfill will not be a threat to human health & the environment. Please also know that this TSP pile will be turned to further remediate prior to use as backfill.

TSP-32 - although the Total TPH 118 mg/kg (100 mg/kg DRO & 18 mg/kg GRO) is above RRALs for the site, the Benzene level is below detection limit (<0.017 mg/kg), and the total BTEX level (0.150 mg/kg) indicate that this TSP pile if utilized as backfill will not be a threat to human health & the environment.

Please know that I am moving offices today in Farmington and can be reached on my cell at **505-215-3121** if needed.

Thank you, Gwen Frost Environmental Coordinator San Juan Asset – RBU T: 505.326.9549 | M: 505.215.3121

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From:	Smith, Cory, EMNRD
To:	Frost, Gwendolynne; Thomas, Leigh
Cc:	Walker, Jeffrey; dustin d mace; Neligh, Charles; Powell, Brandon, EMNRD; Fields, Vanessa, EMNRD
Subject:	RE: San Juan 27-5 Unit 1
Date:	Thursday, July 06, 2017 10:47:36 AM

Gwen,

OCD approves COPC request for a risk based closure due to existing infrastructure blocking further remediation by excavation on the South West Wall, and the East Wall. The OCD also approves COPC proposed path forward for additional excavation and sampling.

Please keep us informed of COPC decision on the TSP and sampling schedule.

OCD Approval does not relieve COPC of any requirements imposed by other regulatory agencies.

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

From: Frost, Gwendolynne [mailto:Gwendolynne.Frost@conocophillips.com]
Sent: Wednesday, July 5, 2017 9:20 AM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Thomas, Leigh <l1thomas@blm.gov>
Cc: Walker, Jeffrey (Jeff.Walker@ghd.com) <Jeff.Walker@ghd.com>; dustin d mace
<dustin@unlimitedconstructionus.com>; Charles.Neligh@ghd.com
Subject: San Juan 27-5 Unit 1

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Thank you, Gwen Frost Environmental Coordinator San Juan Asset – RBU T: 505.326.9549 | M: 505.215.3121

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