R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996 Artesia ▲ Carlsbad ▲ Durango ▲ Midland

June 26, 2018

Olivia Yu NMOCD District 1 1625 N. French Dr. Hobbs, NM 88240

PRELIMINARY RESULTS

RE: Operator: Pride Energy Company NM 87 State #001 (Tank Battery) API#: 30-025-23655 Section 33-14S-34E: Unit K Lea County, New Mexico Site Characterization Report and Remediation Plan 1RP-4625 with Postponement Request

Ms. Yu:

R.T. Hicks Consultants (Hicks Consultants) is pleased to submit the above-referenced document on behalf of Pride Energy. This document addresses **1RP-4625** The C-141 is reproduced in Appendix A.

The proposed remediation plan relies on data collected during our:

- January 2018 initial characterization, and
- April 2018 delineation and characterization

We followed NMOCD's proposed application to repeal and replace Rule 19.15.29 NMAC (the Rule) to characterize and delineate the release and required remediation will not occur at this site until after the proposed Rule is published, probably in August. Thus, proposed activities will be conducted under the new Rule.

The proposed Rule does not cause conflict with the existing Rule. Rather the proposed Rule provides clarity, recognition of decades of data and certitude whereas the existing Rule relied upon 1993 guidance and upon the varied expertise and sometimes conflicting decisions of Districts. We are fully confident that OCD would not be the sponsor of the proposed Rule if the changes did not support the legal mandate of protecting fresh water, public health and the environment.

The proposed Rule also recognizes the fact that the existing Rule and decades of previous practice did not require submission and approval of a characterization work plan. The proposed Rule does incorporate appropriate elements of the directive of Mr. Griswold (attached to the signed C-141 from OCD; Appendix A).

June 26, 2018 Page 2

Seven out of twelve sample locations are located within former production pad areas (Plate 10a) as shown on a 1971 aerial photograph. The tank battery storage site is located within the center of the former production pad areas; and is likely placed on top of a former reserve pit associated with the drilling of the abandoned salt water disposal well. A conservative assumption is to define the storage site at the center of the former production areas as mapped on Plate 10b; using the tank battery berm as the northern boundary and the former production pad areas as the eastern boundary.

After attending the presentation of OCD testimony at the June hearing, we understand section 19.15.29.12.B(2) of the proposed Rule, the impacted surface area of releases within a storage site is "otherwise contained" and may be subject to deferred remediation at the time of plugging and abandonment. If deferred remediation is approved, Table I Closure Criteria¹ will apply to remediation at P&A.

Releases outside the confines of a storage site are subject to remediation per proposed section 19.15.29.12.B(3). Based upon proposed Table I and a depth to groundwater of 70-feet, Closure Criteria is:

Depth (below ground surface)	Depth to Water (bottom of release)	Chloride (mg/kg)	TPH (GRO+DRO+MRO) (mg/kg)	TPH (GRO+DRO) (mg/kg)	BTEX (mg/kg)	Benzene (mg/kg)
0-4 feet		600	2,500		50	10
>4 feet	>50 feet	10,000	2,500	1,000	50	10

Exhibit 1: Closure Criteria from proposed Table I for areas at SE Pasture & SW Pasture.

Characterization Results

Table 1, attached, presents the result of all sampling conducted at the site. Plates 1-9 show that this site meets the characterization criteria established by proposed section 19.15.29.11.A.1-4. Plate 2 shows the depth to groundwater at the location is approximately 70-feet below ground surface; interpolated from the USGS 2007 potentiometric surface². The density of groundwater elevation data from the USGS measurements provides a high degree of certainty regarding the depth to groundwater at the site.

¹ (2) The responsible party shall restore the impacted surface area of a release occurring on a developed well pad, central tank battery, drilling site, compressor site or other exploration, development, production or storage sites to meet the standards of Table I of 19.15.29.12 NMAC and restore and reclaim the area pursuant to 19.15.29.13 NMAC. If contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause safety issues or cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first. The deferral may be granted so long as the contamination is fully delineated and does not cause an imminent risk to human health, the environment, or groundwater. Final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations.

² Current (2004-07) Conditions and Changes in Ground-Water Levels from Predevelopment to 2007, Southern High Plains Aquifer, Southeast New Mexico-Lea County Underground Water Basin; 2008; SIM; 3044; Tillery, Anne

June 26, 2018 Page 3

Plates 11 show the sample locations with total depth relative to the 2017 and historic releases. Plate 12 presents chemicals of concern (chloride and/or TPH) data in the upper 4-feet at each location during the January and/or April 2018 characterization activities. Appendix B discusses our January and April 2018 characterization activities.

Below is a summary of observations during characterization. Please refer to Table 1 and Appendix D for summary of analytical and trench/auger logs, respectively.

• 2017 East

Chloride, Benzene, BTEX, and TPH concentrations show no impairment at 0.5 feet bgs. No remediation is necessary.

- 2017 West Chloride, Benzene, BTEX, and TPH concentrations show no impairment at 0.5 feet bgs. No restoration is necessary.
- 2017 Northeast (NE) Chloride, Benzene, BTEX, and TPH concentrations are below closure criteria levels at 0.5 feet bgs. No remediation is necessary.
- 2017 Northwest (NW Berm)

The trench sample was located within the berm area of an active tank battery and is likely placed over a former reserve pit associated with the drilling of the now abandoned SWD well. Chloride and BTEX concentrations show that the area is impacted. Remediation of regulated hydrocarbons may be deferred until P&A.

• Historic North

Chloride, Benzene, BTEX, and TPH concentrations are below closure criteria levels. No remediation is necessary.

• Historic Northeast

Chloride, Benzene, BTEX, and TPH concentrations are below closure criteria levels. No remediation is necessary.

• Historic Southwest

Chloride, Benzene, BTEX, and TPH concentrations show no impairment at 2 and 8 feet bgs. No restoration is necessary.

• Historic Southeast

Chloride, Benzene, BTEX, and TPH concentrations are below closure criteria levels at 0.5 feet bgs. No remediation is necessary.

• SB-01

Chloride, Benzene, and BTEX concentrations shows no impairment. TPH concentrations (<1665 mg/kg) shows surface impairment at 0-feet. Restoration is necessary.

• SB-02

At the surface (0-feet) Chloride is 4,200 mg/kg. BTEX, Benzene, and TPH are below cleanup closure levels. Remediation for chloride is necessary.

• SB-03 Playa (within the natural depression) Chloride, Benzene, BTEX, and TPH are below closure cleanup levels. No remediation is necessary. June 26, 2018 Page 4

> • July 2017 Borehole (TT-1). The location of the borehole is unknown. Conversations with site personnel have placed this boring at three different locations; one being at the wellhead location 1300-feet west As we could not reproduce data from this boring, we are discounting any reported results.

Proposed Remediation Plan

We respectively ask NMOCD for a temporary deferment to the proposed restoration and remediation plan. The purpose of the request is to postpone remediation/restoration design until the final ruling of NMOCD's proposed application to repeal and replace Rule 19.15.29 NMAC (the Rule). The final ruling is expected to be delivered by the first week of August 2018.

Delaying the remediation design for 30-days after the final ruling will allow us to implement regulations in effect at the time of remediation activities.

Please contact me at 970-570-9535 with any questions or comments.

Sincerely, R.T. Hicks Consultants, Ltd.

Andrew Parker Project Scientist

Copy: Hobbs NMOCD office – Oliva Yu (Olivia.Yu@state.nm.us) NMOCD – Brad Billings (bradford.billings@state.nm.us) NM SLO - Mark Naranjo (mnaranjo@slo.state.nm.us)

TABLES

Table 1 Summary of Analytical

Sample Name	Date	Cl	BTEX	Benzene	ТРН	ТРН
Sample Name	Date				(GRO+DRO+MRO)	(GRO+DRO)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Table 1 (19.15.29 NMAC)		Lab				
Upper 4-feet		600	50	10	1,000	2,500
Ground water 50 to 100 ft (Soil > 4 ft)		10,000	50	10	1,000	2,500
2017 East @ 0.5 ft	1/8/2018	<30	<0.221	<0.025	<14.5	<62.5
2017 West @ 0.5 ft	1/8/2018	<30	<0.225	<0.025	<15	<66
2017 NE @ 0.5 ft	1/8/2018	<30	<0.213	<0.024	<14.4	<62.4
2017 NW Berm @ 2 ft	1/8/2018	4,600	2.358	0.27	12,150	21,250
2017 NW Berm @ 12 ft	1/8/2018	2,900	35.25	<0.25	8,320	11,220
Historia North @ 0 ft	4/2/2019	<20	<0.207	<0.022	<241.6	-C1 C
Historic North @ 0 ft Historic North @ 0.5 ft	4/2/2018	<30 <30	<0.207	<0.023	<241.6 60.8	<61.6 122.8
Historic North @ 0.5 ft	1/8/2018 4/2/2018	<30 78	0.34 <0.216	<0.024		<14.1
				<0.024	<60.1	
Historic North @ 4 ft	4/2/2018	36	<0.216	<0.024	<62.3	<14.3
Historic Northeast @ 0.5 ft	1/8/2018	260	<0.222	<0.025	<14.2	<61.2
Historic Southwest @ 2 ft	1/8/2018	500	<0.22	<0.024	<14.8	<63.8
Historic Southwest @ 8 ft	1/8/2018	45				
Historic Southeast @ 0.5 ft	1/8/2018	<30	<0.217	<0.024	<14.5	<63.5
SB-01 2017 @ 0 ft	1/8/2018	93	<0.21	<0.023	144.7	374.7
SB-01 2017 @ 0 ft	4/2/2018	56	<0.216	<0.024	<1664.8	<664.8
SB-01 2017 @ 2 ft	4/2/2018	490	<0.208	<0.023	<62.3	<14.3
SB-01 2017 @ 4 ft	4/2/2018	320	<0.221	<0.025	<63.7	<14.7
SB-01 2017 @ 5 ft	1/8/2018					
SB-01 2017 @ 6 ft	4/2/2018	360	<0.217	<0.024	<61.3	<14.3
SB-01 2017 @ 10 ft	1/8/2018					-
SB-01 2017 @ 15 ft	1/8/2018	40				
SB-02 Historic @ 0 ft	1/8/2018	4,200	<0.208	<0.023	<14.4	<63.4
SB-02 Historic @ 4 ft	1/8/2018	4,200	10.200	<0.023	×1+:+	NOD. 4
SB-02 Historic @ 9 ft	1/8/2018	<30				
SB-02 Historic @ 15 ft	1/8/2018	<30				
SB-02 Historic @ 21 ft	1/8/2018	(30				
SB-03 Playa @ 0 ft	1/8/2018					
SB-03 Playa @ 0 ft	4/3/2018	<30	<0.212	<0.024	<62.4	<14.4
SB-03 Playa @ 2 ft	4/3/2018	47	<0.211	<0.023	<60	<14
SB-03 Playa @ 4 ft	4/3/2018	200	<0.216	<0.024	<62.5	<14.5
SB-03 Playa @ 5 ft	1/8/2018	660	<0.215	<0.024	<14.3	<61.3
SB-03 Playa @ 6 ft	4/3/2018	530	<0.21	<0.023	<61.2	<14.2
SB-03 Playa @ 9 ft	1/8/2018					
SB-03 Playa @ 15 ft	1/8/2018					
SB-03 Playa @ 21 ft	1/8/2018	220				
SB-03 Playa @ 25 ft	1/8/2018					
SB-03 Playa @ 31 ft	1/8/2018	200				
(July 2017 Borehole)						
TT-1 @ 0 ft	7/7/2017	4,830		<0.00109	401.2	498
TT-1 @ 4 ft	7/7/2017	8,670		<0.00112	<28.1	<28.1
TT-1 @ 8 ft	7/7/2017	705		<0.00123	<30.9	<30.9
TT-1 @ 12 ft	7/7/2017	2,630		<0.00109	<21.7	<21.7

PLATES

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate1_DTW.mxd





R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Depth To Water	Plate 1 Legend
	Pride Energy Company NM 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate2_topographyGW.mxd







M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate4_NearbyStructures.mxd



M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate5_wellFields.mxd



M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate6_wetlands.mxd



M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate7_minesMinerals.mxd



M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate8_karstPotential.mxd



M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate9_femaFlood.mxd

	12			X
Legend			E	
Estimated Produced Water Release Ex	tent			
2017 c.2000				
Distance from releases	Sand and the Frank			State 19
200 ft	and a second of the second			
300 ft	and the second second			1.44 C 38 S. S. S.
500 ft 1000 ft				Sector States
National Flood Hazard Layer	AND AND AND A			No. of the second
Areas with possible but undetermined Flood Hazard. No flood hazard analysis has been conducted (Zone D).				
N				
w E 0 500 1,000	R.T. Hicks Consultants, Ltd		FEMA Flood Map	Plate 9
Feet	901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	N	Pride Energy Company M 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Wellhead 1RP_4624\gis_ap\Figures\plate10a_1971 extents.mxd



M:\Pride Energy\NM 87 State 001 Wellhead 1RP_4624\gis_ap\Figures\plate10b_2017extents.mxd



M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate11_sampleLocations.mxd



M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate12_chloride.mxd





R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-14 Albuquerque, NM 87104 Ph: 505.266.5004

M 87104 Pride Energy Company May 2018	<u>ultants, Ltd</u> NW Suite F-142	Chloride and TPH Concentrations in the Upper 4-feet (Jan/April 2018)	Plate 12
	M 87104		May 2018



PRIDE ENERGY COMPANY

Physical Address: 4641 E. 91st Street Tulsa, OK 74137

(918) 524-9200 + Fax (918) 524-9292 + www.pride-energy.com Mailing Address: Email Address:

P.O. Box 701950 Tulsa, OK 74170-1950 mattp@pride-energy.com

January 16, 2017

New Mexico Oil Conservation 1625 N. French Drive Hobbs, NM 88240

Via Certified Mail Return Receipt #

91 7199 9991 7034 2014 0874

RE: New Mexico 87 State #001 API # 30-025-23655 Section 33-14S-34E: 2086' FSL and 1,874' FWL (Unit Letter K) Lea County, New Mexico

Dear Maxey,

In reference to the above well, please find enclosed a completed Form C-141 (Initial Report).

Thank you and if there are any questions, please feel free to contact me at 918-524-9200.

Sincerely,

Matthen L. Phide

Matthew L. Pride Pride Energy Company Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

	1015 D1., 04111			Sa	anta F	Fe, NM 87	/50	5					
			Rel	ease Notifi	catio	n and C	Cor	rective A	ction	3			
						OPER A	\T(OR		🕅 Initi	al Report	□ Fina	al Repor
Name of Co	ompany	Pride	Company		Contact		Atthew Pride	;					
Address								. 918-524-					
Facility Na	Facility Name New Mexico 87 State #1						ype	Oil Well	l				
Surface Ow	Surface Owner Mineral Own									API No	<u></u>		
State of New	State of New Mexico State									AFINO	30-025-23	3655	
						N OF RI	T 15	TASE		1	30 023 2		
Unit Letter	Unit Letter Section Township Range Feet from the							Feet from the	Fast/	West Line	County		
J	33	14S [°]	34E	2086	South	h/South Line h	1	874	West	West Line	Lea		
			La	titude 33.059	9717	Longitu	ıde	-103.5141	53				
				NAT	URE	C OF REI							
Type of Rele		nd Water						elease 95 bbl			Recovered		
Source of Re	iease T	ank Battery				Date and Unknowr		ir of Occurrenc	e		Hour of Disc	covery	
Was Immedi	ate Notice C	iven?				If YES, 7		/hom?		1:55 PM	, 1/13/17		
		\boxtimes	Yes 🗌] No 🗌 Not R	equired								
By Whom?	Willie Dea	in (contract pi	imper)			Date and			1/13/17				
Was a Water	course Reac		Yes 🗵	1 No		If YES, V	/olu	me Impacting t	he Wate	ercourse.			
16							~						
I a watercou	irse was Imp	pacted, Descri	be Fully.'	*			CE	IVED					
Describe Cau	ise of Proble	m and Remed	lial Actio	n Taken.*		Bv (Dli	via Yu at	t 9:4	9 am. l	Mar 01.	2017	
When the spill up the spill. Describe Are The area that has scraped u dug in the par pertaining to	a Affected a was affecte up the oily so st.) A fence the oil well.	l, the pumping und Cleanup A d was the soil bil which will around the tar	ction Tak around th be proper	ve rubbed up agai immediately turn ten.* te tank battery. The ly disposed of. (n and pumping uni l be reconstructed	ne vac t nost of i t will a	and a vac tru ruck has pick the free stanc lso be constri	ced u ling	packhoe and rou up all free stand oil ran into a he d to keep livest	ling oil, ole that	and the rou is within 10 the away fi	stabout crew of feet of the t	e location to	clean hoe) l been
occur in the f	uture.									-			-
public health should their c or the enviror	or the envir operations has nment. In ac or local law	are required to onment. The ave failed to a ddition, NMO vs and/or regu	report ar acceptanc dequately CD accep lations.	is true and comp id/or file certain r e of a C-141 repo investigate and r tance of a C-141	elease r ort by th emedia	notifications : ne NMOCD r te contamina	and park nark tion ve th	perform correct red as "Final Re that pose a thre ne operator of r	tive acti eport" d eat to gr esponsi	ons for rele oes not relic ound water, bility for co	eases which neve the opera , surface wate ompliance wi	nay endange ator of liabili er, human he th any other	er ity ealth
Signature: Matter L. Pride						OIL CONSERVATION DIVISION							
Printed Name: Matthew L. Pride						Approved by Environmental Specialist:							
Title: President of Pride Production Co., Inc. General Partner of Pride Energy Company						Approval Date: 3/1/2017 Expiration Date:							
E-mail Addre	ss: mattp@	pride-energy.c	om			Conditions o					Attached		
Date:	1/16/17		Ph	one: 918-524-920	0		se	e attached	l direa	ctive			
Attach Addit	tional Shee	ts If Necessa	ıry	· · · · · · · · · · · · · · · · · · ·	[IRP-462	5	fOY1706	0363	76 [n(OY1706	036760	
			pOY1	706037126	_ Ľ		-					000103	

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _1/31/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number __1R-_4625_ has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _4/1/2017_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

• Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

• Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

• Nominal detection limits for field and laboratory analyses must be provided.

• Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us

APPENDIX B

January 2018 Sample Locations

On January 08, 2018 Andrew Parker and Kristin Pope of Hicks Consultants mobilized to the Pride Energy State New Mexico 87 State 001 (Tank Battery) location to conduct a limited characterization of an accidental release in January 2017. The release was predominantly crude oil and occurred at the tank battery, which is located at the production pad for the plugged NM 83 State #1 SWD well (Latitude: 33.05973, Latitude: -103.514153; 33-14S-34E Unit Letter J), about 1325 feet east of the NM 87 State #001 producing well.

Gandy Backhoe Services provided backhoe trenching services. Adkins Engineering provided drilling rig services.

We excavated eight (8) backhoe trenches and drilled three (3) soil borings to characterize the 2017 and historic releases. Excavation depth was determined by the extent of the backhoe reach or bucket refusal caused by the underlying caliche. Borehole depth was determined by chloride field titrations. Vertical delineation was determined complete when chloride titrations showed less than 250 mg/kg for ten vertical feet.

Soil samples were collected for the analysis of chloride, BTEX, and GRO/DRO/MRO. Soil samples were submitted to Hall Environmental Laboratory in Albuquerque, NM; on-ice and under strict chain-of-custody. Appendix D contains the laboratory Certificate of Analysis.

Plate 11 shows the location of the sample locations. Exhibit A, below, shows the latitude, longitude, depth, and sampling type. Table 1 is a summary of the laboratory analysis. Appendix D contains the lithologic logs for the sample locations.

Name	Date	Release	Туре	Depth (ft)	Latitude WGS84	Longitude (WGS84)
2017 NE	1/8/2018	2017 Release	Backhoe	1	33.06003943	-103.5138131
Historic Southeast	1/8/2018	Historic Release	Backhoe	1	33.059401	-103.513557
Historic Northeast	1/8/2018	Historic Release	Backhoe	1	33.05984562	-103.5133808
SB-02 Historic	1/8/2018	Historic Release	Soil Boring	21	33.0597343	-103.5137094
Historic North	1/8/2018	Historic Release	Soil Boring	6	33.06000135	-103.5139305
2017 West	1/8/2018	2017 Release	Backhoe	1	33.05998348	-103.5140252
2017 East	1/8/2018	2017 Release	Backhoe	1	33.05992135	-103.5138477
SB-01 2017	1/8/2018	2017 Release	Soil Boring	14	33.05983205	-103.513957
Historic Southwest	1/8/2018	Historic Release	Backhoe	9	33.05941708	-103.5141641
2017 Northwest (within berm)	1/8/2018	2017 Release	Backhoe	12	33.059876	-103.514189
SB-03 Playa	1/8/2018	Historic Release	Soil Boring	31	33.059934	-103.514626

Exhibit A: Sample location and type.

April 2018 Sample Locations

On April 02-03, 2018 Andrew Parker and Kristin Pope of Hicks Consultants mobilized to the Pride Energy State New Mexico 87 State 001 (Wellhead) location to perform additional vertical characterization of three areas (SB-01 2017, Historic North, and SB-03 Playa). Additional characterization at SB-01 and SB-03 was to gather additional data in the upper 4-feet of the soil

column. At Historic North, additional data was collected to evaluate TPH from the surface to 4-feet. Atkins Engineering provided drilling services.

We drilled the boreholes at the locations identified during the January 2018 characterization and offset by 5-feet east. (Plate 11 and Exhibit A).

We collected split-spoon soil samples at 0, 2, 4, 6 feet bgs and total depth. Vertical delineation ceased at 6 feet when:

- PID readings for VOCs were below 100 ppm (using the heated headspace method of field testing), and
- Chloride titrations were below 600 mg/kg (using field titration method).

At Historic North, the split spoon sample had no return due to the very hard caliche. No sample was collect at 6-feet.

Appendix D contains the lithologic logs for the sample locations.

Soil samples were submitted for laboratory testing of TPH (GRO, DRO, MRO), BTEX, Benzene, and Chloride. Soil samples were submitted to Hall Environmental Laboratory in Albuquerque, NM; on-ice and under strict chain-of-custody. Appendix C contains the laboratory Certificates of Analysis.

Protocols for chloride field titrations and VOC screening with a photoionization detector (PID) are located in Appendix E.



Exhibit B: Trench sample at Historic Southeast. Hard caliche encountered at 1-foot below ground surface. Land surface is undergoing natural restoration/re-vegetation. Drilling of SB-02 is visible in upper right of photo.



Exhibit C: Drilling of SB-03, within the natural depression ("playa") west-northwest of the tank battery. Tank battery is visible in photo center.



Exhibit D: Split spoon sample core at SB-03 Playa. 0-feet is at left. 2-feet is at right. Silty sand dominates the upper soil column from the surface to 6-feet.



Exhibit E: Background photo is the drilling of SB-01 2017. Photo front center foreground is the borehole for Historic North. Re-vegetation is occurring in the area of Historic North.



Exhibit F: SB-01 2017 split-spoon core sampling at 4-feet. Core sample is from 4-feet (left) to 6-feet (right). Caliche dominates the core sample.



PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



Analytical Report

Prepared for:

Bob Allen Safety & Environmental Solutions, Inc. 703 E Clinton Hobbs, New Mexico, TX 88240

Project: Pride NM 83 SWD State #1 Project Number: PRI-17-001 Location: Lea County

Lab Order Number: 7G07005



NELAP/TCEQ # T104704516-16-7

Report Date: 07/13/17

Project: Pride NM 83 SWD State #1 Project Number: PRI-17-001 Project Manager: Bob Allen

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TT-1 Surface	7G07005-01	Soil	07/05/17 09:00	07-06-2017 17:00
TT-1 4'	7G07005-02	Soil	07/05/17 10:00	07-06-2017 17:00
TT-1 8'	7G07005-03	Soil	07/05/17 10:20	07-06-2017 17:00
TT-1 12'	7G07005-04	Soil	07/05/17 10:35	07-06-2017 17:00

TT-1 Surface

7G07005-01 (Soil)									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	1ian Basin F	Invironmen	tal Lab, I	L.P.				
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		105 %	75-1	25	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		97.2 %	75-1	25	P7G1103	07/07/17	07/07/17	EPA 8021B	
General Chemistry Parameters by EP.	A / Standard Method	ls							
Chloride	4830	27.2	mg/kg dry	25	P7G1110	07/11/17	07/12/17	EPA 300.0	
% Moisture	8.0	0.1	%	1	P7G1004	07/10/17	07/10/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 8	015M							
C6-C12	ND	27.2	mg/kg dry	1	P7G1106	07/07/17	07/08/17	TPH 8015M	
>C12-C28	374	27.2	mg/kg dry	1	P7G1106	07/07/17	07/08/17	TPH 8015M	
>C28-C35	124	27.2	mg/kg dry	1	P7G1106	07/07/17	07/08/17	TPH 8015M	
Surrogate: 1-Chlorooctane		98.7 %	70-1	30	P7G1106	07/07/17	07/08/17	TPH 8015M	
Surrogate: o-Terphenyl		112 %	70-1	30	P7G1106	07/07/17	07/08/17	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	498	27.2	mg/kg dry	1	[CALC]	07/07/17	07/08/17	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.
TT-1 4'

7G07005-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	nvironmen	tal Lab, I	 .				
Organics by GC									
Benzene	ND	0.00112	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Toluene	ND	0.00225	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		88.3 %	75-1.	25	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		95.6 %	75-1.	25	P7G1103	07/07/17	07/07/17	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	ds							
Chloride	8670	28.1	mg/kg dry	25	P7G1110	07/11/17	07/12/17	EPA 300.0	
% Moisture	11.0	0.1	%	1	P7G1004	07/10/17	07/10/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	015M							
C6-C12	ND	28.1	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: 1-Chlorooctane		92.8 %	70-1.	30	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: o-Terphenyl		96.5 %	70-1.	30	P7G1109	07/07/17	07/07/17	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	07/07/17	07/07/17	calc	

TT-1 8'

7G07005-03 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	Cnvironmer	ıtal Lab, l	L.P.				
Organics by GC									
Benzene	ND	0.00123	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Toluene	ND	0.00247	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Ethylbenzene	ND	0.00123	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (p/m)	ND	0.00247	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (o)	ND	0.00123	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		91.8 %	75-1	25	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		87.0 %	75-1	25	P7G1103	07/07/17	07/07/17	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Method	ds							
Chloride	705	1.23	mg/kg dry	1	P7G1110	07/11/17	07/12/17	EPA 300.0	
% Moisture	19.0	0.1	%	1	P7G1004	07/10/17	07/10/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 80	015M							
C6-C12	ND	30.9	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C12-C28	ND	30.9	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C28-C35	ND	30.9	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: 1-Chlorooctane		94.7 %	70-1	30	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: o-Terphenyl		97.8 %	70-1	30	P7G1109	07/07/17	07/07/17	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	30.9	mg/kg dry	1	[CALC]	07/07/17	07/07/17	calc	

Permian Basin Environmental Lab, L.P.

TT-1 12'

7G07005-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perr	nian Basin F	Invironme	ntal Lab, l	L .P.				
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		88.1 %	75-1	25	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		95.1 %	75-1	25	P7G1103	07/07/17	07/07/17	EPA 8021B	
General Chemistry Parameters by EPA	/ Standard Metho	ds							
Chloride	2630	10.9	mg/kg dry	10	P7G1110	07/11/17	07/12/17	EPA 300.0	
% Moisture	8.0	0.1	%	1	P7G1004	07/10/17	07/10/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 8	015M							
C6-C12	ND	27.2	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: 1-Chlorooctane		94.4 %	70-1	30	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: o-Terphenyl		97.6 %	70-1	30	P7G1109	07/07/17	07/07/17	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	07/07/17	07/07/17	calc	

Permian Basin Environmental Lab, L.P.

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

	D. 14	Reporting	T.I., ''	Spike	Source	0/050	%REC	DPD	RPD	NI (
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P7G1103 - General Preparation (GC))									
Blank (P7G1103-BLK1)				Prepared &	Analyzed:	07/07/17				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	0.0521		"	0.0600		86.8	75-125			
Surrogate: 4-Bromofluorobenzene	0.0524		"	0.0600		87.4	75-125			
LCS (P7G1103-BS1)				Prepared &	Analyzed:	07/07/17				
Benzene	0.106	0.00100	mg/kg wet	0.100		106	70-130			
Toluene	0.104	0.00200	"	0.100		104	70-130			
Ethylbenzene	0.104	0.00100	"	0.100		104	70-130			
Xylene (p/m)	0.187	0.00200	"				70-130			
Xylene (o)	0.0900	0.00100	"				70-130			
Surrogate: 1,4-Difluorobenzene	0.0616		"	0.0600		103	75-125			
Surrogate: 4-Bromofluorobenzene	0.0534		"	0.0600		89.0	75-125			
LCS Dup (P7G1103-BSD1)				Prepared &	Analyzed:	07/07/17				
Benzene	0.115	0.00100	mg/kg wet	0.100		115	70-130	7.80	20	
Toluene	0.112	0.00200	"	0.100		112	70-130	7.13	20	
Ethylbenzene	0.112	0.00100	"	0.100		112	70-130	7.62	20	
Xylene (p/m)	0.200	0.00200	"				70-130		20	
Xylene (o)	0.0985	0.00100	"				70-130		20	
Surrogate: 4-Bromofluorobenzene	0.0603		"	0.0600		101	75-125			
Surrogate: 1,4-Difluorobenzene	0.0652		"	0.0600		109	75-125			
Matrix Spike (P7G1103-MS1)	Sou	irce: 7G07005	5-03	Prepared &	Analyzed:	07/07/17				
Benzene	0.119	0.00123	mg/kg dry	0.123	ND	96.5	80-120			
Toluene	0.112	0.00247	"	0.123	ND	90.4	80-120			
Ethylbenzene	0.113	0.00123	"	0.123	ND	91.7	80-120			
Xylene (p/m)	0.200	0.00247	"		ND		80-120			
Xylene (o)	0.0991	0.00123	"		ND		80-120			
Surrogate: 4-Bromofluorobenzene	0.0782		"	0.0741		106	75-125			
Surrogate: 1,4-Difluorobenzene	0.0819		"	0.0741		111	75-125			

Permian Basin Environmental Lab, L.P.

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7G1103 - General Preparation (GC)										
Matrix Spike Dup (P7G1103-MSD1)	Sour	ce: 7G07005	-03	Prepared &	Analyzed:	07/07/17				
Benzene	0.116	0.00123	mg/kg dry	0.123	ND	94.1	80-120	2.48	20	
Toluene	0.110	0.00247	"	0.123	ND	89.1	80-120	1.35	20	
Ethylbenzene	0.109	0.00123	"	0.123	ND	88.7	80-120	3.36	20	
Xylene (p/m)	0.209	0.00247	"		ND		80-120		20	
Xylene (o)	0.0994	0.00123	"		ND		80-120		20	
Surrogate: 4-Bromofluorobenzene	0.0751		"	0.0741		101	75-125			
Surrogate: 1,4-Difluorobenzene	0.0794		"	0.0741		107	75-125			

Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7G1004 - *** DEFAULT PREP ***										
Blank (P7G1004-BLK1)				Prepared &	Analyzed:	07/10/17				
% Moisture	ND	0.1	%							
Duplicate (P7G1004-DUP1)	Sour	ce: 7G07004-	-04	Prepared &	Analyzed:	07/10/17				
% Moisture	2.0	0.1	%		1.0			66.7	20	
Duplicate (P7G1004-DUP2)	Sour	·ce: 7G07022-	-02	Prepared &	Analyzed:	07/10/17				
% Moisture	11.0	0.1	%	-	11.0			0.00	20	
Batch P7G1110 - *** DEFAULT PREP ***										
Blank (P7G1110-BLK1)				Prepared &	Analyzed:	07/11/17				
Chloride	ND	1.00	mg/kg wet							
LCS (P7G1110-BS1)				Prepared &	Analyzed:	07/11/17				
Chloride	419	1.00	mg/kg wet	400		105	80-120			
LCS Dup (P7G1110-BSD1)				Prepared &	Analyzed:	07/11/17				
Chloride	410	1.00	mg/kg wet	400		102	80-120	2.29	20	
Duplicate (P7G1110-DUP1)	Sour	·ce: 7G10001-	-58	Prepared &	Analyzed:	07/11/17				
Chloride	3.28	1.04	mg/kg dry	*	4.07			21.5	20	R
Duplicate (P7G1110-DUP2)	Sour	ce: 7G07005-	-03	Prepared: (07/11/17 A	nalyzed: 07	/12/17			
Chloride	715	1.23	mg/kg dry		705			1.45	20	
Matrix Spike (P7G1110-MS1)	Sour	·ce: 7G10001-	-58	Prepared &	Analyzed:	07/11/17				
Chloride	1080	1.04	mg/kg dry	1040	4.07	103	80-120			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyta	Pagult	Reporting Limit	Unita	Spike	Source	0/DEC	%REC	DDD	RPD Limit	Noter
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P7G1106 - TX 1005										
Blank (P7G1106-BLK1)				Prepared &	Analyzed:	07/07/17				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0								
Surrogate: 1-Chlorooctane	92.9		"	100		92.9	70-130			
Surrogate: o-Terphenyl	51.2		"	50.0		102	70-130			
LCS (P7G1106-BS1)				Prepared &	Analyzed:	07/07/17				
C6-C12	1140	25.0	mg/kg wet	1000		114	75-125			
>C12-C28	1060	25.0	"	1000		106	75-125			
Surrogate: 1-Chlorooctane	108		"	100		108	70-130			
Surrogate: o-Terphenyl	59.0		"	50.0		118	70-130			
LCS Dup (P7G1106-BSD1)				Prepared &	Analyzed:	07/07/17				
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125	9.86	20	
>C12-C28	1040	25.0		1000		104	75-125	2.03	20	
Surrogate: 1-Chlorooctane	122		"	100		122	70-130			
Surrogate: o-Terphenyl	55.8		"	50.0		112	70-130			
Matrix Spike (P7G1106-MS1)	Sour	ce: 7G07005	5-01	Prepared: 0	07/07/17 A	nalyzed: 07	7/08/17			
C6-C12	1280	27.2	mg/kg dry	1090	ND	118	75-125			
>C12-C28	1350	27.2	"	1090	374	89.6	75-125			
Surrogate: 1-Chlorooctane	139		"	109		128	70-130			
Surrogate: o-Terphenyl	64.6		"	54.3		119	70-130			
Matrix Spike Dup (P7G1106-MSD1)	Sour	ce: 7G07005	5-01	Prepared: 0)7/07/17 A	nalyzed: 07	7/08/17			
C6-C12	1170	27.2	mg/kg dry	1090	ND	108	75-125	8.88	20	
>C12-C28	1240	27.2		1090	374	79.3	75-125	12.2	20	
Surrogate: 1-Chlorooctane	140		"	109		129	70-130			
Surrogate: o-Terphenyl	58.5		"	54.3		108	70-130			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P7G1109 - TX 1005										
Blank (P7G1109-BLK1)				Prepared &	Analyzed:	07/07/17				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	95.0		"	100		95.0	70-130			
Surrogate: o-Terphenyl	49.6		"	50.0		99.2	70-130			
LCS (P7G1109-BS1)				Prepared &	Analyzed:	07/07/17				
C6-C12	966	25.0	mg/kg wet	1000		96.6	75-125			
>C12-C28	959	25.0	"	1000		95.9	75-125			
Surrogate: 1-Chlorooctane	103		"	100		103	70-130			
Surrogate: o-Terphenyl	57.1		"	50.0		114	70-130			
LCS Dup (P7G1109-BSD1)				Prepared &	Analyzed:	07/07/17				
C6-C12	956	25.0	mg/kg wet	1000		95.6	75-125	1.01	20	
>C12-C28	961	25.0	"	1000		96.1	75-125	0.244	20	
Surrogate: 1-Chlorooctane	99.9		"	100		99.9	70-130			
Surrogate: o-Terphenyl	47.5		"	50.0		95.0	70-130			
Matrix Spike (P7G1109-MS1)	Sour	ce: 7G07005	5-03	Prepared: (07/07/17 A	nalyzed: 07	//08/17			
C6-C12	1240	30.9	mg/kg dry	1230	ND	100	75-125			
>C12-C28	1200	30.9	"	1230	17.6	96.1	75-125			
Surrogate: 1-Chlorooctane	129		"	123		105	70-130			
Surrogate: o-Terphenyl	60.2		"	61.7		97.6	70-130			
Matrix Spike Dup (P7G1109-MSD1)	Sour	rce: 7G07005	5-03	Prepared: (07/07/17 A	nalyzed: 07	//08/17			
C6-C12	1260	30.9	mg/kg dry	1230	ND	102	75-125	2.05	20	
>C12-C28	1270	30.9	"	1230	17.6	102	75-125	5.60	20	
Surrogate: 1-Chlorooctane	134		"	123		108	70-130			
Surrogate: o-Terphenyl	63.3		"	61.7		102	70-130			

Notes and Definitions

R3 The RI	D exceeded the acceptance	limit due to sample matrix effects.
-----------	---------------------------	-------------------------------------

- BULK Samples received in Bulk soil containers
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike

Report Approved By:

Dup Duplicate

un Barron

Date: 7/13/2017

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

TPTSTET, A . Project Manager:	CHAIN OF C ROD ALL)Y RI	ECORD AND	ANALYSIS	Perm 1400	ian B Ranl	Basin kin H	Envir Iwy s 797		ental L	.ab, I	.P	Pro	oject	Nan	ne: _	N J	>~	10	ど	686-7/ 5 K		হা	MT	<u>ل</u> -*
Company Name	· · · ·		1	nined	VAL	Sd	lui	TIC	0.0	:			_			oject		í	PR	T	- (- D(
Company Address:	703 E.	C	()	you						-				F	Proje	ct Le			Q2		Cr	<i>sur</i>	m	1		
City/State/Zip:	Hobbs No	N	87	8240												PO	#:_								. <u></u>	
Telephone No:	575-397-	05	510	0	Fax No	: :							_ R	eport	For	mat:	>	< s	tand	ard	. [] _{ŤRI}	RP	۵,	NPDES	5
Sampler Signature:	50 s. fr	~ ~			e-mail	: _								_												-
	1005	•					<u> </u>	Prese	vation	k # of (Contain	ərs	Ma	itrix				_/			ze For				se call)	
AB # (Bb test only)		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	ield Filtered otal #. of Containers	lce	HNO3250.m Poy	Hci V	NaOH	Na ₂ S ₂ O ₃ None 11 Polv	aOH/ZnAc	g Water	ow = oroundwater S=Sousould VP=Non-Potable Specify Other	FPH by TX 1005 8015B 8015M	sloride	IEX by 8021B	STEV DUZ	HLADIAN -						Rush 24 48 72 (Please	
	LD CODE	ň	<u>ш</u>	ชาโอร	0900	<u> </u>		T	T I T	2	22	ا گ	6	Ż	₽	ō	Ē	χĻ	Ň		┝╌╀╴	+	\vdash	++	f	S
2 11-1	46			07/05	1000		X						Ľ.]		ŕŇ	2			\square			
3 TT-1	8 FT			57/05	(020	\square	K								Ľ	_	_P	<u>لا</u>	εĶ	-	┝╌╄╴	-	┝─┝╸	++		
<u>vj (1-1</u>	(247			07105	1035	++	¥			$\left \right $						-	Ŧ	¥	: K	-	┢┼╋	+	\vdash	┿┿		$\left - \right $
						++				$\left \cdot \right $		┿				-	+	+	╈	+			\vdash	++	+	
							+-				+	+-							Τ							
	• •																									
							╞										-	\downarrow	_	_	┝─┤-		┝─┼─	┿╋	+	
Special Instructions:																	abo	rato			ents;	322,6318		╧╓╧		
New mey	and Ment	045															Samı	ole C	Conta	iners	Intact Ispace	t? —		á	N N	
	M 07/06	14C	Ø		í X	уð	70	>			4	1 D	ate 6-1	3]	Time U Time	1	labe Custo Justo Sami	is or ody s ody s ole H	con seals seals land	taine on c on c Deliv	r(s) ontain ooler(l ered	ier(s) s)		ÿ	N N N	
	7216/17	Time		Received	21	7						<u>}</u>	f= 6]	1		e	b b Femp Rece Adjus	y Sa y Co beral ivéd itéd:	mplei uner ture L 2	Jpon	nt Rep UPS Recei 7	DHI pt C C Fact	- Fo	edEx L V <i>C</i> .(N .one St	tar
		- 146			and an extension of the second se						<u></u>	7	<i>\</i> r	4								and a second				لتسيير

Page 13 of 13



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

February 01, 2018

Andrew Parker R.T. Hicks Consultants, LTD 901 Rio Grande Blvd. NW Suite F-142 Albuquerque, NM 87104 TEL: (505) 266-5004 FAX (505) 266-0745

RE: NM 87 State 001 Tank Battery

OrderNo.: 1801659

Dear Andrew Parker:

Hall Environmental Analysis Laboratory received 18 sample(s) on 1/11/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

NM 87 State 001 Tank Battery

Project:

Client Sample ID: 2017 East @ 0.5 ft Collection Date: 1/8/2018 8:45:00 AM Received Date: 1/11/2018 2:15:00 PM

Lab ID: 1801659-001	Matrix:	SOIL	Received	Received Date: 1/11/2018 2:15:00 PM						
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	MRA				
Chloride	ND	30	mg/Kg	20	1/17/2018 2:33:10 PM	36067				
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	6			Analyst	: TOM				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	1/16/2018 10:32:53 AM	36022				
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	1/16/2018 10:32:53 AM	36022				
Surr: DNOP	101	70-130	%Rec	1	1/16/2018 10:32:53 AM	36022				
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/15/2018 10:21:21 AM	36006				
Surr: BFB	87.1	15-316	%Rec	1	1/15/2018 10:21:21 AM	36006				
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG				
Benzene	ND	0.025	mg/Kg	1	1/15/2018 11:15:19 AM	36006				
Toluene	ND	0.049	mg/Kg	1	1/15/2018 11:15:19 AM	36006				
Ethylbenzene	ND	0.049	mg/Kg	1	1/15/2018 11:15:19 AM	36006				
Xylenes, Total	ND	0.098	mg/Kg	1	1/15/2018 11:15:19 AM	36006				
Surr: 4-Bromofluorobenzene	105	70-130	%Rec	1	1/15/2018 11:15:19 AM	36006				
Surr: Toluene-d8	92.3	70-130	%Rec	1	1/15/2018 11:15:19 AM	36006				

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

- * Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 23 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

NM 87 State 001 Tank Battery

Project:

Client Sample ID: 2017 West @ 0.5 ft Collection Date: 1/8/2018 9:00:00 AM Received Date: 1/11/2018 2:15:00 PM

Lab ID: 1801659-002	Matrix: S	SOIL	Received	Received Date: 1/11/2018 2:15:00 PM						
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analyst	MRA				
Chloride	ND	30	mg/Kg	20	1/17/2018 2:45:35 PM	36067				
EPA METHOD 8015M/D: DIESEL R/	ANGE ORGANICS	;			Analyst	TOM				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	1/16/2018 5:57:24 PM	36022				
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	1/16/2018 5:57:24 PM	36022				
Surr: DNOP	77.7	70-130	%Rec	1	1/16/2018 5:57:24 PM	36022				
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB				
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/15/2018 10:45:09 AM	36006				
Surr: BFB	91.3	15-316	%Rec	1	1/15/2018 10:45:09 AM	36006				
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG				
Benzene	ND	0.025	mg/Kg	1	1/15/2018 12:24:01 PM	36006				
Toluene	ND	0.050	mg/Kg	1	1/15/2018 12:24:01 PM	36006				
Ethylbenzene	ND	0.050	mg/Kg	1	1/15/2018 12:24:01 PM	36006				
Xylenes, Total	ND	0.10	mg/Kg	1	1/15/2018 12:24:01 PM	36006				
Surr: 4-Bromofluorobenzene	110	70-130	%Rec	1	1/15/2018 12:24:01 PM	36006				
Surr: Toluene-d8	94.2	70-130	%Rec	1	1/15/2018 12:24:01 PM	36006				

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 23
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

NM 87 State 001 Tank Battery

Project:

Client Sample ID: 2017 NW @ 0.5 ft Collection Date: 1/8/2018 9:15:00 AM Received Date: 1/11/2018 2:15:00 PM

Lab ID: 1801659-003	Matrix:	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	MRA		
Chloride	ND	30	mg/Kg	20	1/17/2018 2:57:59 PM	36067		
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	5			Analyst	TOM		
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	1/16/2018 12:38:08 PM	36022		
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	1/16/2018 12:38:08 PM	36022		
Surr: DNOP	85.3	70-130	%Rec	1	1/16/2018 12:38:08 PM	36022		
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	1/15/2018 5:53:49 PM	36006		
Surr: BFB	91.7	15-316	%Rec	1	1/15/2018 5:53:49 PM	36006		
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG		
Benzene	ND	0.024	mg/Kg	1	1/15/2018 12:46:56 PM	36006		
Toluene	ND	0.047	mg/Kg	1	1/15/2018 12:46:56 PM	36006		
Ethylbenzene	ND	0.047	mg/Kg	1	1/15/2018 12:46:56 PM	36006		
Xylenes, Total	ND	0.095	mg/Kg	1	1/15/2018 12:46:56 PM	36006		
Surr: 4-Bromofluorobenzene	112	70-130	%Rec	1	1/15/2018 12:46:56 PM	36006		
Surr: Toluene-d8	94.6	70-130	%Rec	1	1/15/2018 12:46:56 PM	36006		

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 23
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

CLIENT:R.T. Hicks Consultants, LTDProject:NM 87 State 001 Tank BatteryLab ID:1801659-004	Matrix:	SOIL	Collection I	Date: 1/8/	7 NW Berm @ 2 ft 2018 9:30:00 AM 1/2018 2:15:00 PM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	CJS
Chloride	4600	150	mg/Kg	100	1/19/2018 12:33:57 AM	36067
EPA METHOD 8015M/D: DIESEL RANGE		S			Analyst	том
Diesel Range Organics (DRO)	12000	1000	mg/Kg	100	1/16/2018 5:33:18 PM	36022
Motor Oil Range Organics (MRO)	9100	5000	mg/Kg	100	1/16/2018 5:33:18 PM	36022
Surr: DNOP	0	70-130	S %Rec	100	1/16/2018 5:33:18 PM	36022
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB
Gasoline Range Organics (GRO)	150	24	mg/Kg	5	1/15/2018 9:33:37 AM	36006
Surr: BFB	193	15-316	%Rec	5	1/15/2018 9:33:37 AM	36006
EPA METHOD 8260B: VOLATILES SHOP	RT LIST				Analyst	AG
Benzene	0.27	0.049	mg/Kg	2	1/15/2018 1:09:56 PM	36006
Toluene	ND	0.098	mg/Kg	2	1/15/2018 1:09:56 PM	36006
Ethylbenzene	0.69	0.098	mg/Kg	2	1/15/2018 1:09:56 PM	36006
Xylenes, Total	1.3	0.20	mg/Kg	2	1/15/2018 1:09:56 PM	36006
Surr: 4-Bromofluorobenzene	123	70-130	%Rec	2	1/15/2018 1:09:56 PM	36006
Surr: Toluene-d8	94.7	70-130	%Rec	2	1/15/2018 1:09:56 PM	36006

Hall Environmental Analysis Laboratory, Inc.

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 23
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: NM 87 State 001 Tank Battery

Client Sample ID: 2017 NW Berm @ 12 ft Collection Date: 1/8/2018 9:32:00 AM Beceived Date: 1/11/2018 2:15:00 PM

Lab ID: 1801659-005	Matrix:	SOIL	Received 1	Date: 1/11/2018 2:15:00 PM			
Analyses	Result	PQL Qua	al Units	DF Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS				Analyst:	CJS		
Chloride	2900	150	mg/Kg	100 1/19/2018 12:46:22 AM	36067		
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	5		Analyst:	ТОМ		
Diesel Range Organics (DRO)	7900	98	mg/Kg	10 1/16/2018 1:28:43 PM	36022		
Motor Oil Range Organics (MRO)	2900	490	mg/Kg	10 1/16/2018 1:28:43 PM	36022		
Surr: DNOP	0	70-130 S	S %Rec	10 1/16/2018 1:28:43 PM	36022		
EPA METHOD 8015D: GASOLINE R	ANGE			Analyst:	NSB		
Gasoline Range Organics (GRO)	420	50	mg/Kg	10 1/15/2018 9:57:38 AM	36006		
Surr: BFB	298	15-316	%Rec	10 1/15/2018 9:57:38 AM	36006		
EPA METHOD 8260B: VOLATILES	SHORT LIST			Analyst:	AG		
Benzene	ND	0.25	mg/Kg	10 1/15/2018 1:32:54 PM	36006		
Toluene	ND	0.50	mg/Kg	10 1/15/2018 1:32:54 PM	36006		
Ethylbenzene	7.5	0.50	mg/Kg	10 1/15/2018 1:32:54 PM	36006		
Xylenes, Total	27	1.0	mg/Kg	10 1/15/2018 1:32:54 PM	36006		
Surr: 4-Bromofluorobenzene	102	70-130	%Rec	10 1/15/2018 1:32:54 PM	36006		
Surr: Toluene-d8	102	70-130	%Rec	10 1/15/2018 1:32:54 PM	36006		

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 23
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: NM 87 State 001 Tank Battery

Client Sample ID: 2000 North @ 0.5 ft Collection Date: 1/8/2018 10:45:00 AM Provinged Date: 1/11/2018 2:15:00 DM

Lab ID: 1801659-006	Matrix:	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	MRA		
Chloride	ND	30	mg/Kg	20	1/17/2018 4:24:50 PM	36067		
EPA METHOD 8015M/D: DIESEL R	ANGE ORGANICS	6			Analyst	ТОМ		
Diesel Range Organics (DRO)	56	9.7	mg/Kg	1	1/16/2018 2:17:42 PM	36022		
Motor Oil Range Organics (MRO)	62	48	mg/Kg	1	1/16/2018 2:17:42 PM	36022		
Surr: DNOP	97.2	70-130	%Rec	1	1/16/2018 2:17:42 PM	36022		
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/15/2018 6:17:41 PM	36006		
Surr: BFB	98.0	15-316	%Rec	1	1/15/2018 6:17:41 PM	36006		
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	AG		
Benzene	ND	0.024	mg/Kg	1	1/15/2018 1:55:54 PM	36006		
Toluene	ND	0.048	mg/Kg	1	1/15/2018 1:55:54 PM	36006		
Ethylbenzene	ND	0.048	mg/Kg	1	1/15/2018 1:55:54 PM	36006		
Xylenes, Total	0.22	0.095	mg/Kg	1	1/15/2018 1:55:54 PM	36006		
Surr: 4-Bromofluorobenzene	104	70-130	%Rec	1	1/15/2018 1:55:54 PM	36006		
Surr: Toluene-d8	92.6	70-130	%Rec	1	1/15/2018 1:55:54 PM	36006		

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 6 of 23 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

NM 87 State 001 Tank Battery

Project:

Client Sample ID: 2000 NE @ 0.5 ft Collection Date: 1/8/2018 11:00:00 AM Received Date: 1/11/2018 2:15:00 PM

Lab ID: 1801659-007	Matrix:	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	MRA		
Chloride	260	30	mg/Kg	20	1/17/2018 4:37:15 PM	36067		
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	5			Analyst	: TOM		
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	1/16/2018 2:42:17 PM	36022		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	1/16/2018 2:42:17 PM	36022		
Surr: DNOP	98.6	70-130	%Rec	1	1/16/2018 2:42:17 PM	36022		
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/15/2018 6:41:29 PM	36006		
Surr: BFB	93.0	15-316	%Rec	1	1/15/2018 6:41:29 PM	36006		
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	AG		
Benzene	ND	0.025	mg/Kg	1	1/15/2018 2:18:49 PM	36006		
Toluene	ND	0.049	mg/Kg	1	1/15/2018 2:18:49 PM	36006		
Ethylbenzene	ND	0.049	mg/Kg	1	1/15/2018 2:18:49 PM	36006		
Xylenes, Total	ND	0.099	mg/Kg	1	1/15/2018 2:18:49 PM	36006		
Surr: 4-Bromofluorobenzene	108	70-130	%Rec	1	1/15/2018 2:18:49 PM	36006		
Surr: Toluene-d8	93.1	70-130	%Rec	1	1/15/2018 2:18:49 PM	36006		

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 23
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: NM 87 State 001 Tank Battery

Client Sample ID: 2000 SW @ 2 ft Collection Date: 1/8/2018 11:15:00 AM Pageived Date: 1/11/2018 2:15:00 PM

Lab ID: 1801659-008	Matrix:	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	MRA		
Chloride	500	30	mg/Kg	20	1/17/2018 4:49:40 PM	36067		
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	;			Analyst	том		
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	1/16/2018 3:06:55 PM	36022		
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/16/2018 3:06:55 PM	36022		
Surr: DNOP	87.9	70-130	%Rec	1	1/16/2018 3:06:55 PM	36022		
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/15/2018 7:05:19 PM	36006		
Surr: BFB	91.8	15-316	%Rec	1	1/15/2018 7:05:19 PM	36006		
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG		
Benzene	ND	0.024	mg/Kg	1	1/15/2018 2:41:47 PM	36006		
Toluene	ND	0.049	mg/Kg	1	1/15/2018 2:41:47 PM	36006		
Ethylbenzene	ND	0.049	mg/Kg	1	1/15/2018 2:41:47 PM	36006		
Xylenes, Total	ND	0.098	mg/Kg	1	1/15/2018 2:41:47 PM	36006		
Surr: 4-Bromofluorobenzene	108	70-130	%Rec	1	1/15/2018 2:41:47 PM	36006		
Surr: Toluene-d8	96.9	70-130	%Rec	1	1/15/2018 2:41:47 PM	36006		

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

- * Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 8 of 23 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analys		Lab Order 1801659 Date Reported: 2/1/2018				
CLIENT: R.T. Hicks Consultants, LTD			Client Sampl	le ID: 20	00 SW @ 8 ft	
Project: NM 87 State 001 Tank Batter	у		Collection 2	Date: 1/8	3/2018 11:20:00 AM	
Lab ID: 1801659-009	Matrix: S	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM	
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	rst: CJS
Chloride	45	30	mg/Kg	20	1/18/2018 11:19:42 A	M 36090

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
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 23

Analytical Report

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

NM 87 State 001 Tank Battery

Project:

Client Sample ID: 2000 SE @ 0.5 ft Collection Date: 1/8/2018 12:45:00 PM Received Date: 1/11/2018 2:15:00 PM

Lab ID: 1801659-010	Matrix:	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	: CJS		
Chloride	ND	30	mg/Kg	20	1/18/2018 12:34:08 PM	36090		
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	6			Analyst	: TOM		
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	1/16/2018 3:56:02 PM	36022		
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/16/2018 3:56:02 PM	36022		
Surr: DNOP	78.5	70-130	%Rec	1	1/16/2018 3:56:02 PM	36022		
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/15/2018 7:29:02 PM	36006		
Surr: BFB	90.8	15-316	%Rec	1	1/15/2018 7:29:02 PM	36006		
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG		
Benzene	ND	0.024	mg/Kg	1	1/15/2018 3:04:47 PM	36006		
Toluene	ND	0.048	mg/Kg	1	1/15/2018 3:04:47 PM	36006		
Ethylbenzene	ND	0.048	mg/Kg	1	1/15/2018 3:04:47 PM	36006		
Xylenes, Total	ND	0.097	mg/Kg	1	1/15/2018 3:04:47 PM	36006		
Surr: 4-Bromofluorobenzene	110	70-130	%Rec	1	1/15/2018 3:04:47 PM	36006		
Surr: Toluene-d8	94.2	70-130	%Rec	1	1/15/2018 3:04:47 PM	36006		

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 23
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1801659

1/15/2018 3:27:36 PM

1/15/2018 3:27:36 PM

1

1

36006

36006

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 2/1/2018
Client Sample ID: SB 1 @ 0 ft

CLIENT: R.T. Hicks Consultants, LTD **Project:** NM 87 State 001 Tank Battery Collection Date: 1/8/2018 9:30:00 AM Lab ID: 1801659-011 Matrix: SOIL Received Date: 1/11/2018 2:15:00 PM Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: CJS 1/18/2018 12:46:32 PM 36090 Chloride 93 30 mg/Kg 20 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM **Diesel Range Organics (DRO)** 140 mg/Kg 1/16/2018 4:20:18 PM 36022 9.5 1 mg/Kg Motor Oil Range Organics (MRO) 230 48 1 1/16/2018 4:20:18 PM 36022 Surr: DNOP 95.1 70-130 %Rec 1 1/16/2018 4:20:18 PM 36022 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.7 mg/Kg 1 1/15/2018 7:52:47 PM 36006 Surr: BFB 1/15/2018 7:52:47 PM 36006 88.6 15-316 %Rec 1 EPA METHOD 8260B: VOLATILES SHORT LIST Analyst: AG Benzene ND 0.023 mg/Kg 1 1/15/2018 3:27:36 PM 36006 Toluene ND 0.047 mg/Kg 1/15/2018 3:27:36 PM 36006 1 mg/Kg Ethylbenzene ND 0.047 1/15/2018 3:27:36 PM 36006 1 Xylenes, Total ND 0.093 mg/Kg 1 1/15/2018 3:27:36 PM 36006

70-130

70-130

%Rec

%Rec

111

95.1

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

Qualifiers:

Surr: 4-Bromofluorobenzene

Surr: Toluene-d8

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- The Holding times for preparation of analysis exceed
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 11 of 23
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis		Lab Order 1801659 Date Reported: 2/1/2018			
CLIENT: R.T. Hicks Consultants, LTD			Client Sampl	le ID: SB 1 @ 15 ft	
Project: NM 87 State 001 Tank Battery			Collection 1	Date: 1/8/2018	
Lab ID: 1801659-012	Matrix:	SOIL	Received	Date: 1/11/2018 2:15:00 PM	
Analyses	Result	PQL Qua	d Units	DF Date Analyzed Batch	
EPA METHOD 300.0: ANIONS				Analyst: CJS	
Chloride	40	30	mg/Kg	20 1/18/2018 12:58:57 PM 36090	

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
- % 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 limit Page 12 of 23 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

NM 87 State 001 Tank Battery

Project:

Client Sample ID: SB 2 @ 0 ft Collection Date: 1/8/2018 11:38:00 AM Received Date: 1/11/2018 2:15:00 PM

Lab ID: 1801659-013	Matrix:	Received	Date: 1/11	1/2018 2:15:00 PM		
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	4200	150	mg/Kg	100	1/19/2018 10:35:22 PM	36090
EPA METHOD 8015M/D: DIESEL R/	ANGE ORGANICS	5			Analyst	: ТОМ
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/16/2018 4:44:54 PM	36022
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/16/2018 4:44:54 PM	36022
Surr: DNOP	81.3	70-130	%Rec	1	1/16/2018 4:44:54 PM	36022
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	1/15/2018 8:16:29 PM	36006
Surr: BFB	89.2	15-316	%Rec	1	1/15/2018 8:16:29 PM	36006
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG
Benzene	ND	0.023	mg/Kg	1	1/15/2018 3:50:36 PM	36006
Toluene	ND	0.046	mg/Kg	1	1/15/2018 3:50:36 PM	36006
Ethylbenzene	ND	0.046	mg/Kg	1	1/15/2018 3:50:36 PM	36006
Xylenes, Total	ND	0.093	mg/Kg	1	1/15/2018 3:50:36 PM	36006
Surr: 4-Bromofluorobenzene	108	70-130	%Rec	1	1/15/2018 3:50:36 PM	36006
Surr: Toluene-d8	95.6	70-130	%Rec	1	1/15/2018 3:50:36 PM	36006

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

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 13 of 23
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analys		Lab Order 1801659 Date Reported: 2/1/2018				
CLIENT: R.T. Hicks Consultants, LTD)		Client Sampl	e ID: SB	2 @ 9 ft	
Project: NM 87 State 001 Tank Batter	ry		Collection 1	Date: 1/8	2018 10:53:00 AM	
Lab ID: 1801659-014	Matrix: S	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM	
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	vst: CJS
Chloride	ND	30	mg/Kg	20	1/18/2018 1:23:46 PM	A 36090

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 14 of 23

Analytical Report

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

Hall Environmental Analy		Lab Order 1801659 Date Reported: 2/1/2018				
CLIENT: R.T. Hicks Consultants, LTI	D		Client Sampl	e ID: SB	2 @ 15 ft	
Project: NM 87 State 001 Tank Batte	ery		Collection 1	Date: 1/8	3/2018 12:30:00 PM	
Lab ID: 1801659-015	Matrix: S	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: CJS
Chloride	ND	30	mg/Kg	20	1/18/2018 1:36:11 PM	1 36090

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
- D Sample Difuted 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 15 of 23

Analytical Report

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

Analytical Report Lab Order 1801659

Date Reported: 2/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

NM 87 State 001 Tank Battery

Project:

Client Sample ID: SB 3 @ 5 ft Collection Date: 1/8/2018 1:58:00 PM Provinged Date: 1/11/2018 2:15:00 DM

Lab ID: 1801659-016	Matrix:	SOIL	Received	Received Date: 1/11/2018 2:15:00 PM				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	CJS		
Chloride	660	30	mg/Kg	20	1/18/2018 1:48:36 PM	36090		
EPA METHOD 8015M/D: DIESEL R	ANGE ORGANICS	6			Analyst	: TOM		
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	1/16/2018 5:09:04 PM	36022		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	1/16/2018 5:09:04 PM	36022		
Surr: DNOP	85.0	70-130	%Rec	1	1/16/2018 5:09:04 PM	36022		
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	1/15/2018 8:40:13 PM	36006		
Surr: BFB	87.6	15-316	%Rec	1	1/15/2018 8:40:13 PM	36006		
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG		
Benzene	ND	0.024	mg/Kg	1	1/15/2018 4:13:32 PM	36006		
Toluene	ND	0.048	mg/Kg	1	1/15/2018 4:13:32 PM	36006		
Ethylbenzene	ND	0.048	mg/Kg	1	1/15/2018 4:13:32 PM	36006		
Xylenes, Total	ND	0.095	mg/Kg	1	1/15/2018 4:13:32 PM	36006		
Surr: 4-Bromofluorobenzene	109	70-130	%Rec	1	1/15/2018 4:13:32 PM	36006		
Surr: Toluene-d8	92.7	70-130	%Rec	1	1/15/2018 4:13:32 PM	36006		

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

- * Value exceeds Maximum Contaminant Level. D
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limit Page 16 of 23 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analys	is Labora	Lab Order 1801659 Date Reported: 2/1/2018					
CLIENT: R.T. Hicks Consultants, LTD			Client Sampl	e ID: SB 3 (@ 21 ft		
Project: NM 87 State 001 Tank Batter	у		Collection 2	Date: 1/8/20	18 1:48:00 PM		
Lab ID: 1801659-017	Matrix:	SOIL	Received	Date: 1/11/2	018 2:15:00 PM		
Analyses	Result	PQL Qua	l Units	DF Da	te Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analyst	CJS	
Chloride	220	30	mg/Kg	20 1/	18/2018 2:25:50 PM	36090	

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
- % 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 limit Page 17 of 23 J

Analytical Report

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

Hall Environmental Analys	sis Laborat	tory, Inc.	Lab Order 1801659 Date Reported: 2/1/2018					
CLIENT: R.T. Hicks Consultants, LTD			Client Samp	le ID: SB	3 @ 31 ft			
Project: NM 87 State 001 Tank Batter	ry		Collection 1	Date: 1/8	3/2018 3:33:00 PM			
Lab ID: 1801659-018	Matrix:	SOIL	Received	Date: 1/1	1/2018 2:15:00 PM			
Analyses	Result	PQL Qua	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analy	st: CJS		
Chloride	200	30	mg/Kg	20	1/18/2018 2:38:15 PM	1 36090		

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
- % 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 limit Page 18 of 23 J

Analytical Report

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

WO#:	1801659
	01-Feb-18

Client:	R.T. Hicks Consultants, LTD							
Project:	NM 8′	7 State 001 Tank Battery						
Sample ID	MB-36067	SampType: mblk	TestCode: EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID: 36067	RunNo: 48508					
Prep Date:	1/17/2018	Analysis Date: 1/17/2018	SeqNo: 1560534	Units: mg/Kg				
Analyte Chloride		Result PQL SPK value ND 1.5	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit	Qual		
Sample ID	LCS-36067	SampType: Ics	TestCode: EPA Method	300.0: Anions				
Client ID:	LCSS	Batch ID: 36067	RunNo: 48508					
Prep Date:	1/17/2018	Analysis Date: 1/17/2018	SeqNo: 1560535	Units: mg/Kg				
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit	Qual		
Chloride		15 1.5 15.00	0 98.2 90	110				
Sample ID	MB 26000	0	TestCode: EPA Method	200.0. Aniona				
1	INID-20030	SampType: mblk	resicoue. EFA Welliou	300.0: Anions				
Client ID:	PBS	Batch ID: 36090	RunNo: 48535	300.0: Anions				
Client ID: Prep Date:	PBS			Units: mg/Kg				
	PBS	Batch ID: 36090 Analysis Date: 1/18/2018	RunNo: 48535		RPDLimit	Qual		
Prep Date:	PBS	Batch ID: 36090 Analysis Date: 1/18/2018	RunNo: 48535 SeqNo: 1561668	Units: mg/Kg	RPDLimit	Qual		
Prep Date: Analyte Chloride	PBS	Batch ID: 36090 Analysis Date: 1/18/2018 Result PQL SPK value	RunNo: 48535 SeqNo: 1561668	Units: mg/Kg HighLimit %RPD	RPDLimit	Qual		
Prep Date: Analyte Chloride	PBS 1/18/2018 LCS-36090	Batch ID: 36090 Analysis Date: 1/18/2018 Result PQL SPK value ND 1.5	RunNo: 48535 SeqNo: 1561668 SPK Ref Val %REC LowLimit	Units: mg/Kg HighLimit %RPD	RPDLimit	Qual		
Prep Date: Analyte Chloride Sample ID	PBS 1/18/2018 LCS-36090 LCSS	Batch ID: 36090 Analysis Date: 1/18/2018 Result PQL SPK value ND 1.5 SampType: Ics	RunNo: 48535 SeqNo: 1561668 SPK Ref Val %REC LowLimit TestCode: EPA Method	Units: mg/Kg HighLimit %RPD	RPDLimit	Qual		
Prep Date: Analyte Chloride Sample ID Client ID:	PBS 1/18/2018 LCS-36090 LCSS	Batch ID: 36090 Analysis Date: 1/18/2018 Result PQL SPK value ND 1.5 SampType: Ics Batch ID: 36090 Analysis Date: 1/18/2018	RunNo: 48535 SeqNo: 1561668 SPK Ref Val %REC LowLimit TestCode: EPA Method RunNo: 48535	Units: mg/Kg HighLimit %RPD 300.0: Anions	RPDLimit	Qual		

- * 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 19 of 23

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	1801659
	01-Feb-18

Client: Project:		s Consulta ate 001 Ta	,								
Sample ID	LCS-36022	SampTy	/pe: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID:	LCSS	Batch	ID: 36	022	F	RunNo: 4	8464				
Prep Date:	1/15/2018	Analysis Da	ate: 1/	16/2018	S	SeqNo: 1	557778	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	45	10	50.00	0	90.4	70	130			
Surr: DNOP		4.4		5.000		88.3	70	130			
Sample ID	MB-36022	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	PBS	Batch	ID: 36	022	F	RunNo: 4	8464				
Prep Date:	1/15/2018	Analysis Da	ate: 1/	16/2018	S	SeqNo: 1	557779	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	ND	10								
Motor Oil Rang	e Organics (MRO)	ND	50								
Surr: DNOP		9.4		10.00		93.6	70	130			
Sample ID	1801659-001AMS	SampTy	/pe: M \$	3	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID:	2017 East @ 0.5 ft	Batch	ID: 36	022	F	RunNo: 4	8464				
Prep Date:	1/15/2018	Analysis Da	ate: 1/	16/2018	5	SeqNo: 1	558759	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	44	9.4	46.90	5.011	82.4	55.8	125			
Surr: DNOP		4.2		4.690		90.6	70	130			
Sample ID	1801659-001AMSE	SampTy	/pe: M \$	SD	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	2017 East @ 0.5 ft	Batch	ID: 36	022	F	RunNo: 4	8464				
Prep Date:	1/15/2018	Analysis Da	ate: 1/	16/2018	S	SeqNo: 1	558761	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	44	9.5	47.35	5.011	83.4	55.8	125	1.82	20	
Surr: DNOP		4.4		4.735		91.9	70	130	0	0	

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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 20 of 23

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	1801659

Client: Project:		tate 001 Ta	,								
Sample ID	MB-36006	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	PBS	Batch	ID: 36	006	F	RunNo: 4	8452				
Prep Date:	1/12/2018	Analysis D	ate: 1/	15/2018	S	SeqNo: 1	557550	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 930	5.0	1000		93.2	15	316			
Sample ID	LCS-36006	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	LCSS	Batch	ID: 36	006	F	RunNo: 4	8452				
Prep Date:	1/12/2018	Analysis D	ate: 1/	15/2018	S	SeqNo: 1	557551	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	24	5.0	25.00	0	94.0	75.9	131			
Surr: BFB		1000		1000		101	15	316			
Sample ID	1801659-002AMS	SampT	уре: М	6	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	2017 West @ 0.5 f	t Batch	ID: 36	006	F	RunNo: 4	8452				
Prep Date:	1/12/2018	Analysis D	ate: 1/	15/2018	S	SeqNo: 1	557554	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	21	4.8	24.13	0	85.4	77.8	128			
Surr: BFB		950		965.3		98.9	15	316			
Sample ID	1801659-002AMSI) SampT	уре: М	SD	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	2017 West @ 0.5 f	t Batch	ID: 36	006	F	RunNo: 4	8452				
Prep Date:	1/12/2018	Analysis D	ate: 1/	15/2018	S	SeqNo: 1	557555	Units: mg/ł	٨g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	22	4.8	23.85	0	92.6	77.8	128	6.94	20	
Surr: BFB		920		954.2		96.2	15	316	0	0	

Qualifiers:

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

Page 21 of 23

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: **1801659**

Sample ID	lcs-36006	Sama	ype: LC	·\$4	Too	tCodo: E	PA Mothod	8260B- Vola	ilas Shart	List	
•	BatchQC	•			TestCode: EPA Method 8260B: Volatiles Short List RunNo: 48454						
			n ID: 36								
Prep Date:	1/12/2018	Analysis [Date: 1/	15/2018	5	SeqNo: 1	557603	Units: mg/K	g		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.83	0.025	1.000	0	82.8	80	120			
Toluene		0.89	0.050	1.000	0	88.7	80	120			
Ethylbenzene Xylenes, Total		0.90 2.6	0.050 0.10	1.000 3.000	0 0	90.2 87.1	80 80	120 120			
,	ofluorobenzene	0.50	0.10	0.5000	0	99.5	70	120			
Surr: Toluene		0.30		0.5000		95.9	70	130			
						00.0	10	100			
Sample ID		SampType: MBLK						8260B: Volat	iles Short	List	
Client ID:	PBS	Batch ID: 36006			F	RunNo: 4	8454				
Prep Date:	1/12/2018	Analysis E	Date: 1/	15/2018	S	SeqNo: 1	557604	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	a	ND	0.10	0 5000				100			
	ofluorobenzene	0.55		0.5000		110	70 70	130 130			
Surr: Toluene	÷-uð	0.47		0.5000		93.4	70	130			
Sample ID	1801659-001ams	SampT	туре: М	64	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
•	1801659-001ams 2017 East @ 0.5 ft	•	ype: M h ID: 36			tCode: El RunNo: 4		8260B: Volat	iles Short	List	
•	2017 East @ 0.5 ft	•	h ID: 36	006	F		8454	8260B: Volat		List	
Client ID:	2017 East @ 0.5 ft	Batc	h ID: 36	006 15/2018	F	RunNo: 4	8454			List RPDLimit	Qual
Client ID: Prep Date: Analyte	2017 East @ 0.5 ft	Batc Analysis [h ID: 36 Date: 1/	006 15/2018	F	RunNo: 4 SeqNo: 1 %REC 87.3	8454 557606 LowLimit 80	Units: mg/K	g		Qual
Client ID: Prep Date: Analyte Benzene Toluene	2017 East @ 0.5 ft	Batc Analysis E Result 0.84 0.87	h ID: 36 Date: 1/ PQL 0.024 0.048	006 15/2018 SPK value 0.9597 0.9597	F SPK Ref Val 0 0	RunNo: 4 SeqNo: 1 %REC 87.3 91.1	8454 557606 LowLimit 80 80	Units: mg/K HighLimit 120 120	g		
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene	2017 East @ 0.5 ft	Batcl Analysis E Result 0.84 0.87 ND	h ID: 36 Date: 1/ <u>PQL</u> 0.024 0.048 0.048	006 15/2018 SPK value 0.9597 0.9597 0.9597	F SPK Ref Val 0 0.01008	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05	8454 557606 LowLimit 80 80 80	Units: mg/K HighLimit 120 120 120	g		S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	2017 East @ 0.5 ft 1/12/2018	Batc Analysis E Result 0.84 0.87 ND ND	h ID: 36 Date: 1/ PQL 0.024 0.048	006 15/2018 SPK value 0.9597 0.9597 0.9597 2.879	F SPK Ref Val 0 0	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721	8454 557606 LowLimit 80 80 80 80	Units: mg/K HighLimit 120 120 120 120	g		
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brow	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene	Batcl Analysis I Result 0.84 0.87 ND ND 0.53	h ID: 36 Date: 1/ <u>PQL</u> 0.024 0.048 0.048	006 15/2018 SPK value 0.9597 0.9597 0.9597 2.879 0.4798	F SPK Ref Val 0 0.01008	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721 110	8454 557606 LowLimit 80 80 80 80 70	Units: mg/K HighLimit 120 120 120 120 120 130	g		S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene	Batc Analysis E Result 0.84 0.87 ND ND	h ID: 36 Date: 1/ <u>PQL</u> 0.024 0.048 0.048	006 15/2018 SPK value 0.9597 0.9597 0.9597 2.879	F SPK Ref Val 0 0.01008	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721	8454 557606 LowLimit 80 80 80 80	Units: mg/K HighLimit 120 120 120 120	g		S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromo Surr: Toluene	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene	: Batc Analysis I Result 0.84 0.87 ND ND 0.53 0.45	h ID: 36 Date: 1/ <u>PQL</u> 0.024 0.048 0.048	006 15/2018 SPK value 0.9597 0.9597 0.9597 2.879 0.4798 0.4798	F SPK Ref Val 0 0 0.01008 0.02842	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721 110 94.8	8454 557606 80 80 80 80 80 70 70 70	Units: mg/K HighLimit 120 120 120 120 120 130	g %RPD	RPDLimit	S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromo Surr: Toluene Sample ID	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene -d8	Batc Analysis I Result 0.84 0.87 ND ND 0.53 0.45	h ID: 36 Date: 1/ <u>PQL</u> 0.024 0.048 0.048 0.096	006 15/2018 SPK value 0.9597 0.9597 2.879 0.4798 0.4798	F SPK Ref Val 0 0.01008 0.02842 Tes	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721 110 94.8	8454 557606 LowLimit 80 80 80 80 80 70 70 PA Method	Units: mg/K HighLimit 120 120 120 120 120 130 130	g %RPD	RPDLimit	S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromo Surr: Toluene Sample ID	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene e-d8 1801659-001amsd 2017 East @ 0.5 ft	Batc Analysis I Result 0.84 0.87 ND ND 0.53 0.45	h ID: 36 Date: 1/ PQL 0.024 0.048 0.048 0.096	006 15/2018 SPK value 0.9597 0.9597 0.9597 2.879 0.4798 0.4798 0.4798 0.4798	F SPK Ref Val 0 0 0.01008 0.02842 Tes F	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721 110 94.8 tCode: El	8454 557606 80 80 80 80 70 70 70 PA Method 8454	Units: mg/K HighLimit 120 120 120 120 120 130 130	g %RPD	RPDLimit	S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromo Surr: Toluene Sample ID Client ID:	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene e-d8 1801659-001amsd 2017 East @ 0.5 ft	Batcl Analysis I Result 0.84 0.87 ND 0.53 0.45	h ID: 36 Date: 1/ PQL 0.024 0.048 0.048 0.096	006 15/2018 SPK value 0.9597 0.9597 2.879 0.4798 0.4798 0.4798 0.4798 0.4798 0.4798	F SPK Ref Val 0 0 0.01008 0.02842 Tes F	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721 110 94.8 tCode: El RunNo: 4	8454 557606 80 80 80 80 70 70 70 PA Method 8454	Units: mg/K HighLimit 120 120 120 120 130 130 8260B: Volat	g %RPD	RPDLimit	S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromo Surr: Toluene Sample ID Client ID: Prep Date: Analyte	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene e-d8 1801659-001amsd 2017 East @ 0.5 ft	Batcl Analysis I Result 0.84 0.87 ND 0.53 0.45 Samp1 Samp1 Batcl Analysis I	PQL 0.024 0.024 0.048 0.048 0.048 0.096	006 15/2018 SPK value 0.9597 0.9597 2.879 0.4798 0.4798 0.4798 0.4798 0.4798 0.4798	F SPK Ref Val 0 0.01008 0.02842 Tes F	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721 110 94.8 tCode: El RunNo: 4 SeqNo: 1	8454 557606 LowLimit 80 80 80 80 70 70 70 PA Method 8454 557607	Units: mg/K HighLimit 120 120 120 120 130 130 8260B: Volat Units: mg/K	g %RPD iles Short	RPDLimit	S S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromo Surr: Toluene Sample ID Client ID: Prep Date:	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene e-d8 1801659-001amsd 2017 East @ 0.5 ft	Batcl Analysis I Result 0.84 0.87 ND 0.53 0.45 Samp Samp Batcl Analysis I Result	h ID: 36 Date: 1/ PQL 0.024 0.048 0.048 0.048 0.096	006 15/2018 SPK value 0.9597 0.9597 2.879 0.4798 0.4798 0.4798 5D4 006 15/2018 SPK value	F SPK Ref Val 0 0 0.01008 0.02842 Tes F SPK Ref Val	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721 110 94.8 tCode: El RunNo: 4 SeqNo: 1 %REC	8454 557606 2000 80 80 80 80 80 70 70 70 70 PA Method 8454 557607 LowLimit	Units: mg/K HighLimit 120 120 120 120 130 130 8260B: Volat Units: mg/K HighLimit	g %RPD iles Short g %RPD	RPDLimit List	S S
Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromo Surr: Toluene Sample ID Client ID: Prep Date: Analyte Benzene	2017 East @ 0.5 ft 1/12/2018 ofluorobenzene e-d8 1801659-001amsd 2017 East @ 0.5 ft	Batcl Analysis I Result 0.84 0.87 ND 0.53 0.45 Samp Samp Analysis I Result 0.83	h ID: 36 Date: 1/ PQL 0.024 0.048 0.048 0.048 0.096 • •	006 15/2018 SPK value 0.9597 0.9597 0.9597 2.879 0.4798 0.4798 0.4798 0.4798 0.4798 0.4798 5D4 006 15/2018 SPK value 0.9234	F SPK Ref Val 0 0 0.01008 0.02842 Tes F SPK Ref Val 0	RunNo: 4 SeqNo: 1 %REC 87.3 91.1 -1.05 -0.0721 110 94.8 tCode: El RunNo: 4 SeqNo: 1 %REC 89.9	8454 557606 80 80 80 80 70 70 70 PA Method 8454 557607 LowLimit 80	Units: mg/K HighLimit 120 120 120 120 130 130 8260B: Volat Units: mg/K HighLimit 120	g %RPD iles Short g %RPD 0.927	RPDLimit List RPDLimit 0	S 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 22 of 23

Client:	R.T. Hicks Consultants, LTD										
Project:	NM 87 St	ate 001 Ta	nk Ba	ttery							
Sample ID 1801659-001amsd SampType: MSD4 TestCode: EPA Method 8260B: Volatiles Short List											
Client ID: 2	2017 East @ 0.5 ft Batch ID: 36006				F	RunNo: 4	8454				
Prep Date:	1/12/2018	Analysis Da	ate: 1	/15/2018	SeqNo: 1557607 l			Units: mg/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofl	luorobenzene	0.51		0.4617		111	70	130	0	0	
Surr: Toluene-c	d8	0.46		0.4617		98.6	70	130	0	0	

Qualifiers:

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

Page 23 of 23

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

Sample Log-In Check List

=

Client Name:	RT HICKS	Work Order Num	ber: 1801659		RcptNo: 1
Received By:	Dennis Suazo	1/11/2018 2:15:00	PM	Danig	σ
Completed By:	Dennis Suązo	1/12/2018 9:12:36	АМ	Daniga Daniga	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Reviewed By:	My PPS	01 12	118	- /	U
Chain of Cus	tody				
1. Is Chain of C	ustody complete?		Yes 🔽	Νο	Not Present
2. How was the	sample delivered?		<u>Client</u>		
Log In					
3. Was an atten	npt made to cool the sam	ples?	Yes 🗹	No 🗌	
4. Were all sam	ples received at a temper	ature of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗔
5. Sample(s) in	proper container(s)?		Yes 🔽	No 🗌	
6. Sufficient sam	ple volume for indicated	test(s)?	Yes 🗹	No 🗌	
7. Are samples (except VOA and ONG) p	roperly preserved?	Yes 🔽	No 🗌	
8. Was preserva	tive added to bottles?		Yes 🗌	No 🗹	NA 🗌
9. VOA vials hav	e zero headspace?		Yes	No 🗔	No VOA Vials 🗹
0. Were any sar	nple containers received	broken?	Yes 🗆	No 🗹 🗆	# of preserved
	ork match bottle labels? ancies on chain of custod	w)	Yes 🗹	No 🗌	bottles checked for pH: (<2 or >12 unless not
	correctly identified on Cha		Yes 🔽	No 🗌	Adjusted?
	t analyses were requested		Yes 🔽	No 🗌	
	ng times able to be met? ustomer for authorization.)	Yes 🗹	No 🗋 _	Checked by:
	ing (if applicable)	,			
	tified of all discrepancies	with this order?	Yes 🗌	No 🗔	NA 🗹
Person	Notified:				
By Who	om:	Via:	🗌 eMail 📃 F	Phone 🗌 Fax	In Person
Regardi	ing:				
Client Ir	nstructions:		******		en inini aleini na maanala inaala ka
16. Additional ren	marks:				
17. <u>Cooler Infor</u>					
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By	

---

1944 - Alexandria

Client:	RT 1	Hicks	RT Hicks (nucliberty	XStandard	L Rush		Ų		-	HALL		SN	RO	MM	ENVIRONMENTAL	AL
			A WELLOW	Project Name:					4	N	ANALYSIS	STO	Š	õ	LABORATORY	RY
Mailing	Mailing Address:	sin the	Pile -	NM 87 Project #:	5442 001	1 Tank Battery		1061	Jawki	4901 Hawkins NE	1 00	nquer	anvironmental.com Albuquerque, NM 87109	M 871	60	
Phone #.		970-570	-9530					Tel, 5	05-34	505-345-3975	Anal	Fax 50 vsis Re	505-345-4107 Request	4107		
email o	r Fax#: c	andrew		Project Manager.	ger.		-	100		F					-	-
QA/QC Packs	QA/QC Package INStandard		다 Level 4 (Full Validation)	Andrew	Andrew Parker			10.00		(SPA)	(000		KI40		_	
Accreditation	Itation	C Other	21	Sampler: Av On Ice:	Andrew Pirker	er No					0 0170			()		_
DEDD	C EDD (Type)			Sample Temperature: 5	perature: 5.1	-0-4(cf)=4-7	_						_	101	_	_
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	TM + X3T8	TM + X978 88108 H9T	ortisM) H9T	orliaM) 803	PAH's (831) PAH's (831)	O,7) enoinA Peetic	8081 Pestic	ime2) 0758	Shinolds	
1/5/18	54:80	Soil a	2017 East @ 0.5 ft	Hor Jer - 2	305	100		X				-	-	C. 2.	X	
	00:60	4	zoig west			002		X		-			×	F	X	
_	51.60	*	2017 NW @ 0.5 H			003		×				-	×	1	X	
	02:60	•	F107			400		×					×	~	×	
-	04:32	-	JOIT AN BRMEILA			500	-	×		-			×	1	×	
-	10:45		2000 North O O, S A			006		×	1	_		_	×	~	×	
-	11:00	•	2000 NE @ 0.5 A			LUD	-	×					X		×	
	11:15	4	1000 SWO 2 Ft			008		X		-			×	-	×	_
-	11:10	4	2000 Sw @ 8 At			000	-	- 1							X	
-	54:21		2000 SE @ 0.5 A			010		X			Ē	H	×	~	×	
_	05.40	•	58.1			011		X		_			×		×	
N		. >	501 @ 15 Pt			012				-		-		0		
9	Time.	Reinquished by	" and "	Received by:	X	Date Time 1/11/18 /415	Remarks	KS.	to 1	2 to	5	-				
Data	Time	Reinquished	ed by	Received by	0	Date Time										

women of the component of the sevent of the sevent of the serves as route of the possibility. Any sub-contracted data will be deerly relating on the analytical report.
Client R.1 Hz. br. Could by the cou	5	ain	17-10	Chain-or-Custody Record					H	2	N	TPC	NINE	HALL ENVIRONMENTAL
Address: on-file Project Name: Project Name: Address: on-file Moleculation Moleculation <th< th=""><th></th><th>11</th><th>Hicks</th><th>11</th><th>R Standard</th><th>1</th><th></th><th></th><th>A</th><th>A</th><th>SIS</th><th>1</th><th>BO</th><th>ANALYSIS LABORATORY</th></th<>		11	Hicks	11	R Standard	1			A	A	SIS	1	BO	ANALYSIS LABORATORY
Address: o_2 - ErltNM 87 ShelteOolTark Kulter#: 470 - 520 4535 Project #:Project #:Project #:Project #:*: 470 - 520 4535 Project #:Project #:Project #:Project #:*: 470 - 520 4535 Project #:Project #:Project #:*: 470 - 520 4535 Project #:Project #:Project #:*:Project #:Project #:Project #:Project #:*: 470 - 520 4535 Project ManagerProject #:*:Project #:Project ManagerProject #:Project #:*:Project #:Project #:Project #:Project #:APOtherProject #:Project #:Project #:APProject #:Project #:Project #:Project #:APSandeSandeProject #:Project #:Project #:					Project Name	-			200	www.hallenvironmental.com	Inviront	nental	mos	
# 970- 570 · 9535Project ## 970- 570 · 9535Project #Faxet: and travel of rull Validation)And rew ParterPackage:Level 4 (Full Validation)And rew ParterPackage:DotherSample: An Arew ParterPackage:DotherSample: Fampersture 5: 1 y y(kf) = 4.7, 7TimeMatrixSample: Request IDType and #TimeMatrixSample: Request IDType and #Package:SR 2 (C) of 44PackagePackage:SR 2 (C) of 44Package	Mailing Ac	laress.		File	200		001 Tank Butter		Hawkins	NE -	Albuque	anbie	18 MN	109
# 970-520・9535 Fax# anitrea (Full Validation) and Text anitrea (Full Validation) and and and and archer Project Manager Policage and and and archer Project Manager Policage and and and archer Preservative HEAL No. Time Matrix Sample Request ID Time Matrix Sample Req					Project #;				05-345-	3975	Fax	505-345-4107	5-4107	
Fackt: Goldstreew C) r Huitebroscult.com Project Manager Poldsoge: Determine Prove Poldsoge: Determine Parker Poldsoge: Determine Parker AP Other Onlog Time Matrix Sample Request ID 10:55 Sail 2:0 9 12:55 Sail 2:0 9 15:55	Phone #:	976	0- 570							An		Request	st	
Package: Lavel 4 (Full Validation) Andrew Parker Parker dard Lavel 4 (Full Validation) Andrew Parker Reverted (Full Validation) dard Lavel 4 (Full Validation) Andrew Parker Reverted (Full Validation) dard Ditter Andrew Parker Reverted (Full Validation) AP Ditter Andrew Parker Reverted (Full Validation) AP Ditter Andrew Parker Reverted (Reverted (Full Validation)) AP Ditter Sample Request ID Sample Temperature: S 1-0, 4(Lf) = 4, .7) AP SR 2.0 AP Type Reverted (Reverted (Reve	email or F	ax#: c	andrew	10) rthickleasult.co	1	ger		(Alu			(*O	-		
tation: AP D Other Time Matrix Sample Request ID Time Matrix Sample Request ID Time Matrix Sample Request ID Time Matrix Sample Request ID Type and # Type BTEX + MTBE + TMBE	O/VOC Pac	okage: rd		Level 4 (Full Validation)				o seg		_	S'*0d		47.00	
AP Other Ornice XYes I/u Time Matrix Sample Request ID Container Preservative HEAL No. Time Matrix Sample Request ID Type HEAL No. RTEX + MTBE + 1 Time Matrix Sample Request ID Container Preservative HEAL No. 11:5% Scill 5.8.2.0 7.44 Method 8015 K + MTBE + 1 10:5% 5.8.2.0 7.44 Method 8015 K + MTBE + 1 Method 8015 10:5% 5.8.2.0 7.44 1.2.6 0.14 K + MTBE + 1 12:1% 5.8.2.0 7.44 0.15 K + MTBE + 1 12:1% 5.8.3 0.15 K + MTBE + 1 0.15 13:1% 5.8.3 0.15 K + MTBE + 1 0.15 13:1% 5.8.3 0.15 K + MTBE + 1 0.15 13:1% 5.8.3 0.15 K + MTBE + 1 0.15 K + MTBE + 1 13:1% 5.8.3 0.15 K + 1 0.15	Accreditat	ion.			Sämpler:	1211	ter	На	10		105,1	-	. Y.	-
Time Sample Request ID Sample Temperature Temperature Sample Temperature Temperature Sample Temperature Temperate Temperature Temperate	D NELAP		D Other		1.	1.1		1+	.81	HA		-		
Time Matrix Sample Request ID Container Preservative Type HEAL No. Matrix Matrix Sample Request ID Type and # Type BTEX + MI Matrix Sample Request ID Type and # Type BTEX + MI Matrix Sample Request ID Matrix BOIL659 BTEX + MI Matrix SR1.0 7.PH Method Matrix SR2.0 7.PH 0.15 X Matrix SR3.0 5.PH 0.17 X Matrix SR3.0 3.1 PH 0.17 1	D EDD (1	(adv			Sample Temp	berature: 5. 1-		ЭЯ	Þ P0	or P	_			
INTERS Seriel Sale		lime	Matrix			Preservative Type	HEAL NO. 1801659	TM + X3T8	A PLO PROPERT	AN9) 0168	RCRA 8 Me Anions (F,C	oitse9 r808 40V) 80828	ime2) 0728	apvalto
5820 94 014 5820 94 014 5820 94 015 5820 94 016 51 5830 59 016 4 5830 59 016 5830 51 54 017 5830 21 54 018 5830 31 54 018	the second se	25:1		0	- 20M	TCE	013	X			-	×		X
581@15 Pf 015 P 582@9 016 N 583@5Pf 016 N 583@15Pf 016 N 583@15Pf 017 S13@21Pf 018 017 S13@21Pf 018 017 S13@21Pf 018 018	1c	1:53		N			014				_			×
P 582 @ @ @ Soil SR3 @ S @ S @ N S @ 3 @ S S S 2 @ 31 PF 017 S S S 2 @ 31 PF 018 S S S 2 @ 31 PF 018	9	9:12		5			015				_	-		×
Soil SR3@ 5 AF 016 M SB3@ 15 AF 016 N SB3@ 15 AF 017 SB3@ 21 AF 017 018 SB3@ 31 AF 018 018	1	1	4	582 0 0 4				X	1	T	_	×	Ţ	X
N 583 @ 15 Ph 7 513 @ 21 Ph 7 583 @ 31 Ph 7 01	4	35:5	_				016					×		X
563 C 31 44 7 01			M	- AL							-	-		X
563 C 31 44 (01	X	34.8		513 0 21 24	*		L10				_	-		X
	2	5.33		in the second se			018							X
Date Time Reinquished by: Date Time Remarks; 2 4 11 10 14 15 Quark Curry Processing by: Date Time Remarks; 2 4 Date Time Reinquished by: Date Time	0	10	Relinquish Quad Relinquish	and the second se	Received by:	R	Time 1 (Remarks:		0t2	1			
						7								



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

April 24, 2018

Andrew Parker R.T. Hicks Consultants, LTD 901 Rio Grande Blvd. NW Suite F-142 Albuquerque, NM 87104 TEL: (505) 266-5004 FAX (505) 266-0745

RE: Pride NM 87 St 001 Battery

OrderNo.: 1804243

Dear Andrew Parker:

Hall Environmental Analysis Laboratory received 11 sample(s) on 4/4/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1804243 Date Reported: 4/24/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Client Sample ID: SB Hist N-0' Collection Date: 4/2/2018 3:15:00 PM Received Date: 4/4/2018 0:55:00 AM

Lab ID: 1804243-001	Matrix:	SOIL	Received	Date: 4/4	/2018 9:55:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	4/9/2018 11:23:19 PM	37502
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: AG
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/9/2018 11:07:43 PM	37463
Surr: BFB	124	70-130	%Rec	1	4/9/2018 11:07:43 PM	37463
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	6			Analyst	: TOM
Diesel Range Organics (DRO)	57	9.4	mg/Kg	1	4/10/2018 1:43:36 PM	37471
Motor Oil Range Organics (MRO)	180	47	mg/Kg	1	4/10/2018 1:43:36 PM	37471
Surr: DNOP	102	70-130	%Rec	1	4/10/2018 1:43:36 PM	37471
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG
Benzene	ND	0.023	mg/Kg	1	4/9/2018 11:07:43 PM	37463
Toluene	ND	0.046	mg/Kg	1	4/9/2018 11:07:43 PM	37463
Ethylbenzene	ND	0.046	mg/Kg	1	4/9/2018 11:07:43 PM	37463
Xylenes, Total	ND	0.092	mg/Kg	1	4/9/2018 11:07:43 PM	37463
Surr: 4-Bromofluorobenzene	125	70-130	%Rec	1	4/9/2018 11:07:43 PM	37463
Surr: Toluene-d8	80.0	70-130	%Rec	1	4/9/2018 11:07:43 PM	37463

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 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 1804243 Date Reported: 4/24/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Client Sample ID: SB Hist N-2.5' Collection Date: 4/2/2018 3:30:00 PM Received Date: 4/4/2018 9:55:00 AM

Lab ID: 1804243-002	Matrix:	SOIL	Received	Date: 4/4	/2018 9:55:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	78	30	mg/Kg	20	4/9/2018 11:35:43 PM	37502
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	AG
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/10/2018 12:16:58 AM	37463
Surr: BFB	117	70-130	%Rec	1	4/10/2018 12:16:58 AM	37463
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	6			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	4/9/2018 3:25:51 PM	37471
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	4/9/2018 3:25:51 PM	37471
Surr: DNOP	97.5	70-130	%Rec	1	4/9/2018 3:25:51 PM	37471
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	AG
Benzene	ND	0.024	mg/Kg	1	4/10/2018 12:16:58 AM	37463
Toluene	ND	0.048	mg/Kg	1	4/10/2018 12:16:58 AM	37463
Ethylbenzene	ND	0.048	mg/Kg	1	4/10/2018 12:16:58 AM	37463
Xylenes, Total	ND	0.096	mg/Kg	1	4/10/2018 12:16:58 AM	37463
Surr: 4-Bromofluorobenzene	118	70-130	%Rec	1	4/10/2018 12:16:58 AM	37463
Surr: Toluene-d8	83.8	70-130	%Rec	1	4/10/2018 12:16:58 AM	37463

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 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 1804243 Date Reported: 4/24/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Pride NM 87 St 001 Battery

Project:

Client Sample ID: SB Hist N-4' Collection Date: 4/2/2018 3:45:00 PM

Lab ID: 1804243-003 Matrix: SOIL Received Date: 4/4/2018 9:55:00 AM Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride 36 30 mg/Kg 4/9/2018 11:48:07 PM 37502 20 **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: AG 4/10/2018 1:26:13 AM Gasoline Range Organics (GRO) ND 37463 4.8 mg/Kg 1 Surr: BFB 133 70-130 S %Rec 1 4/10/2018 1:26:13 AM 37463 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM Diesel Range Organics (DRO) ND 9.5 mg/Kg 1 4/9/2018 3:47:47 PM 37471 Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 4/9/2018 3:47:47 PM 37471 Surr: DNOP 99.9 70-130 %Rec 1 4/9/2018 3:47:47 PM 37471 EPA METHOD 8260B: VOLATILES SHORT LIST Analyst: AG Benzene ND 0.024 mg/Kg 1 4/10/2018 1:26:13 AM 37463 mg/Kg Toluene ND 0.048 4/10/2018 1:26:13 AM 37463 1 Ethylbenzene ND 0.048 mg/Kg 4/10/2018 1:26:13 AM 37463 1 Xylenes, Total ND 0.096 mg/Kg 1 4/10/2018 1:26:13 AM 37463 Surr: 4-Bromofluorobenzene 135 70-130 S %Rec 4/10/2018 1:26:13 AM 37463 1 Surr: Toluene-d8 85.2 70-130 %Rec 1 4/10/2018 1:26:13 AM 37463

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

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1804243 Date Reported: 4/24/2018

CLIENT: R.T. Hicks Consultants, LTD Project: Pride NM 87 St 001 Battery				ent Samp		-01-0' /2018 4:15:00 PM	
Lab ID: 1804243-004	Matrix:	SOIL	_			/2018 9:55:00 AM	
Analyses	Result	PQL Q	ual U	nits	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analys	t: MRA
Chloride	56	30	r	ng/Kg	20	4/10/2018 12:25:22 AM	1 37502
EPA METHOD 8015D MOD: GASOLINE	RANGE					Analys	t: AG
Gasoline Range Organics (GRO)	ND	4.8	r	ng/Kg	1	4/10/2018 1:49:18 AM	37463
Surr: BFB	109	70-130	Q	%Rec	1	4/10/2018 1:49:18 AM	37463
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	6				Analys	t: TOM
Diesel Range Organics (DRO)	660	97	r	ng/Kg	10	4/9/2018 4:10:01 PM	37471
Motor Oil Range Organics (MRO)	1000	490	r	ng/Kg	10	4/9/2018 4:10:01 PM	37471
Surr: DNOP	0	70-130	S 9	%Rec	10	4/9/2018 4:10:01 PM	37471
EPA METHOD 8260B: VOLATILES SHO	RT LIST					Analys	t: AG
Benzene	ND	0.024	r	ng/Kg	1	4/10/2018 1:49:18 AM	37463
Toluene	ND	0.048	r	ng/Kg	1	4/10/2018 1:49:18 AM	37463
Ethylbenzene	ND	0.048	r	ng/Kg	1	4/10/2018 1:49:18 AM	37463
Xylenes, Total	ND	0.096	r	ng/Kg	1	4/10/2018 1:49:18 AM	37463
Surr: 4-Bromofluorobenzene	110	70-130	0	%Rec	1	4/10/2018 1:49:18 AM	37463
Surr: Toluene-d8	82.8	70-130	9	%Rec	1	4/10/2018 1:49:18 AM	37463

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

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

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1804243 Date Reported: 4/24/2018

CLIENT: R.T. Hicks Consultants, LTD Project: Pride NM 87 St 001 Battery		(Client Sampl Collection 1		-01-2' 2/2018 4:30:00 PM	
Lab ID: 1804243-005	Matrix:	SOIL	Received	Date: 4/4	/2018 9:55:00 AM	
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	MRA
Chloride	490	30	mg/Kg	20	4/10/2018 12:37:47 AM	37502
EPA METHOD 8015D MOD: GASOLINE F	RANGE				Analyst:	AG
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	4/10/2018 2:12:23 AM	37463
Surr: BFB	117	70-130	%Rec	1	4/10/2018 2:12:23 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE		6			Analyst:	том
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/9/2018 4:32:02 PM	37471
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/9/2018 4:32:02 PM	37471
Surr: DNOP	91.7	70-130	%Rec	1	4/9/2018 4:32:02 PM	37471
EPA METHOD 8260B: VOLATILES SHOP	RT LIST				Analyst:	AG
Benzene	ND	0.023	mg/Kg	1	4/10/2018 2:12:23 AM	37463
Toluene	ND	0.046	mg/Kg	1	4/10/2018 2:12:23 AM	37463
Ethylbenzene	ND	0.046	mg/Kg	1	4/10/2018 2:12:23 AM	37463
Xylenes, Total	ND	0.093	mg/Kg	1	4/10/2018 2:12:23 AM	37463
Surr: 4-Bromofluorobenzene	118	70-130	%Rec	1	4/10/2018 2:12:23 AM	37463
Surr: Toluene-d8	80.1	70-130	%Rec	1	4/10/2018 2:12:23 AM	37463

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

Date Reported: 4/24/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Pride NM 87 St 001 Battery

Project:

Client Sample ID: SB-01-4' Collection Date: 4/3/2018 4:40:00 PM

Lab ID: 1804243-006 Matrix: SOIL Received Date: 4/4/2018 9:55:00 AM Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA Chloride 320 30 mg/Kg 4/11/2018 3:35:41 PM 37540 20 **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: AG 4/10/2018 2:35:31 AM Gasoline Range Organics (GRO) ND mg/Kg 37463 4.9 1 Surr: BFB 116 70-130 %Rec 1 4/10/2018 2:35:31 AM 37463 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM Diesel Range Organics (DRO) ND 9.8 mg/Kg 1 4/9/2018 4:54:11 PM 37471 Motor Oil Range Organics (MRO) ND 49 mg/Kg 1 4/9/2018 4:54:11 PM 37471 Surr: DNOP 96.6 70-130 %Rec 1 4/9/2018 4:54:11 PM 37471 EPA METHOD 8260B: VOLATILES SHORT LIST Analyst: AG Benzene ND 0.025 mg/Kg 1 4/10/2018 2:35:31 AM 37463 Toluene ND 4/10/2018 2:35:31 AM 37463 0.049 mg/Kg 1 Ethylbenzene ND 0.049 mg/Kg 4/10/2018 2:35:31 AM 37463 1 Xylenes, Total ND 0.098 mg/Kg 1 4/10/2018 2:35:31 AM 37463 Surr: 4-Bromofluorobenzene 117 70-130 %Rec 4/10/2018 2:35:31 AM 37463 1 Surr: Toluene-d8 80.8 70-130 %Rec 1 4/10/2018 2:35:31 AM 37463

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

Qualifiers:

*

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

Date Reported: 4/24/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Client Sample ID: SB-01-6' **Collection Date:** 4/2/2018 4:50:00 PM

Lab ID: 1804243-007	Matrix: S	SOIL	Received	Date: 4/4	/2018 9:55:00 AM	
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	360	30	mg/Kg	20	4/11/2018 3:48:06 PM	37540
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	AG
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	4/10/2018 2:58:36 AM	37463
Surr: BFB	117	70-130	%Rec	1	4/10/2018 2:58:36 AM	37463
EPA METHOD 8015M/D: DIESEL R/	ANGE ORGANICS	i			Analyst	том
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/9/2018 5:16:17 PM	37471
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2018 5:16:17 PM	37471
Surr: DNOP	93.5	70-130	%Rec	1	4/9/2018 5:16:17 PM	37471
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: AG
Benzene	ND	0.024	mg/Kg	1	4/10/2018 2:58:36 AM	37463
Toluene	ND	0.048	mg/Kg	1	4/10/2018 2:58:36 AM	37463
Ethylbenzene	ND	0.048	mg/Kg	1	4/10/2018 2:58:36 AM	37463
Xylenes, Total	ND	0.097	mg/Kg	1	4/10/2018 2:58:36 AM	37463
Surr: 4-Bromofluorobenzene	118	70-130	%Rec	1	4/10/2018 2:58:36 AM	37463
Surr: Toluene-d8	84.3	70-130	%Rec	1	4/10/2018 2:58:36 AM	37463

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1804243 Date Reported: 4/24/2018

CLIENT: R.T. Hicks Consultants, LTD			Client Sampl	e ID: SB	-03-0'	
Project: Pride NM 87 St 001 Battery			Collection 1	Date: 4/3	2018 8:00:00 AM	
Lab ID: 1804243-008	Matrix:	SOIL	Received	Date: 4/4	/2018 9:55:00 AM	
Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	MRA
Chloride	ND	30	mg/Kg	20	4/11/2018 4:50:09 PM	37540
EPA METHOD 8015D MOD: GASOLINE	RANGE				Analyst	AG
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2018 3:21:41 AM	37463
Surr: BFB	120	70-130	%Rec	1	4/10/2018 3:21:41 AM	37463
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	6			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	4/10/2018 2:08:05 PM	37471
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/10/2018 2:08:05 PM	37471
Surr: DNOP	88.9	70-130	%Rec	1	4/10/2018 2:08:05 PM	37471
EPA METHOD 8260B: VOLATILES SHO	RT LIST				Analyst	AG
Benzene	ND	0.024	mg/Kg	1	4/10/2018 3:21:41 AM	37463
Toluene	ND	0.047	mg/Kg	1	4/10/2018 3:21:41 AM	37463
Ethylbenzene	ND	0.047	mg/Kg	1	4/10/2018 3:21:41 AM	37463
Xylenes, Total	ND	0.094	mg/Kg	1	4/10/2018 3:21:41 AM	37463
Surr: 4-Bromofluorobenzene	122	70-130	%Rec	1	4/10/2018 3:21:41 AM	37463
Surr: Toluene-d8	83.6	70-130	%Rec	1	4/10/2018 3:21:41 AM	37463

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

- * Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1804243 Date Reported: 4/24/2018

CLIENT: R.T. Hicks Consultants, LTD			Client Sampl	le ID: SB-03-2'
Project: Pride NM 87 St 001 Battery			Collection 1	Date: 4/3/2018 8:10:00 AM
Lab ID: 1804243-009	Matrix:	SOIL	Received	Date: 4/4/2018 9:55:00 AM
Analyses	Result	PQL Qua	Units	DF Date Analyzed Bate
EPA METHOD 300.0: ANIONS				Analyst: MR
Chloride	47	30	mg/Kg	20 4/11/2018 5:02:34 PM 3754
EPA METHOD 8015D MOD: GASOLINE	RANGE			Analyst: AG
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1 4/10/2018 3:44:46 AM 3746
Surr: BFB	112	70-130	%Rec	1 4/10/2018 3:44:46 AM 3746
EPA METHOD 8015M/D: DIESEL RANG		6		Analyst: TON
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1 4/9/2018 6:00:48 PM 3747
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1 4/9/2018 6:00:48 PM 3747
Surr: DNOP	93.7	70-130	%Rec	1 4/9/2018 6:00:48 PM 3747
EPA METHOD 8260B: VOLATILES SHO	RT LIST			Analyst: AG
Benzene	ND	0.023	mg/Kg	1 4/10/2018 3:44:46 AM 3746
Toluene	ND	0.047	mg/Kg	1 4/10/2018 3:44:46 AM 3746
Ethylbenzene	ND	0.047	mg/Kg	1 4/10/2018 3:44:46 AM 3746
Xylenes, Total	ND	0.094	mg/Kg	1 4/10/2018 3:44:46 AM 3746
Surr: 4-Bromofluorobenzene	113	70-130	%Rec	1 4/10/2018 3:44:46 AM 3746
Surr: Toluene-d8	69.1	70-130 S	%Rec	1 4/10/2018 3:44:46 AM 3746

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

Qualifiers:

*

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

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/24/2018

CLIENT: R.T. Hicks Consultants, LTD Client Sample ID: SB-03-4' **Project:** Pride NM 87 St 001 Battery Collection Date: 4/3/2018 8:15:00 AM Lab ID: 1804243-010 Matrix: SOIL Received Date: 4/4/2018 9:55:00 AM Analyses Result **PQL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: MRA 4/11/2018 5:14:58 PM Chloride 200 30 mg/Kg 37540 20 **EPA METHOD 8015D MOD: GASOLINE RANGE** Analyst: AG Gasoline Range Organics (GRO) ND mg/Kg 4/10/2018 4:07:54 AM 37463 4.8 1 Surr: BFB 124 70-130 %Rec 1 4/10/2018 4:07:54 AM 37463 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM Diesel Range Organics (DRO) ND 9.7 mg/Kg 1 4/9/2018 6:23:05 PM 37471 Motor Oil Range Organics (MRO) ND 48 mg/Kg 1 4/9/2018 6:23:05 PM 37471 Surr: DNOP 86.8 70-130 %Rec 1 4/9/2018 6:23:05 PM 37471 EPA METHOD 8260B: VOLATILES SHORT LIST Analyst: AG Benzene ND 0.024 mg/Kg 1 4/10/2018 4:07:54 AM 37463 Toluene ND 0.048 4/10/2018 4:07:54 AM 37463 mg/Kg 1 Ethylbenzene ND 0.048 mg/Kg 1 4/10/2018 4:07:54 AM 37463 Xylenes, Total ND 0.096 mg/Kg 1 4/10/2018 4:07:54 AM 37463 Surr: 4-Bromofluorobenzene 125 70-130 %Rec 4/10/2018 4:07:54 AM 37463 1

70-130

%Rec

1

4/10/2018 4:07:54 AM

37463

82.8

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

Qualifiers:

*

Surr: Toluene-d8

- 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

Value exceeds Maximum Contaminant Level.

- 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

Hall Environmental Analysis Laboratory, Inc.

Lab Order **1804243** Date Reported: **4/24/2018**

CLIENT: R.T. Hicks Consultants, LTD			Client Sampl	e ID: SB	-03-6'	
Project: Pride NM 87 St 001 Battery			Collection I	Date: 4/3	/2018 8:25:00 AM	
Lab ID: 1804243-011	Matrix:	SOIL	Received l	Date: 4/4	/2018 9:55:00 AM	
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: MRA
Chloride	530	30	mg/Kg	20	4/11/2018 5:27:23 PM	37540
EPA METHOD 8015D MOD: GASOLINE	RANGE				Analys	t: AG
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	4/10/2018 4:30:58 AM	37463
Surr: BFB	124	70-130	%Rec	1	4/10/2018 4:30:58 AM	37463
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	5			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	4/9/2018 6:45:20 PM	37471
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	4/9/2018 6:45:20 PM	37471
Surr: DNOP	85.0	70-130	%Rec	1	4/9/2018 6:45:20 PM	37471
EPA METHOD 8260B: VOLATILES SHO	RT LIST				Analys	t: AG
Benzene	ND	0.023	mg/Kg	1	4/10/2018 4:30:58 AM	37463
Toluene	ND	0.047	mg/Kg	1	4/10/2018 4:30:58 AM	37463
Ethylbenzene	ND	0.047	mg/Kg	1	4/10/2018 4:30:58 AM	37463
Xylenes, Total	ND	0.093	mg/Kg	1	4/10/2018 4:30:58 AM	37463
Surr: 4-Bromofluorobenzene	125	70-130	%Rec	1	4/10/2018 4:30:58 AM	37463
Surr: Toluene-d8	82.5	70-130	%Rec	1	4/10/2018 4:30:58 AM	37463

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 11 of 17
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#:	1804243
	24-Apr-18

Client: Project:		icks Consultants, LTD IM 87 St 001 Battery		
Sample ID	MB-37502	SampType: mblk	TestCode: EPA Method 300.0:	Anions
Client ID:	PBS	Batch ID: 37502	RunNo: 50408	
Prep Date:	4/9/2018	Analysis Date: 4/9/2018	SeqNo: 1634794 Units:	mg/Kg
Analyte Chloride		ResultPQLSPK valueND1.5	SPK Ref Val %REC LowLimit High	Limit %RPD RPDLimit Qual
Sample ID	LCS-37502	SampType: Ics	TestCode: EPA Method 300.0:	Anions
Client ID:	LCSS	Batch ID: 37502	RunNo: 50408	
Prep Date:	4/9/2018	Analysis Date: 4/9/2018	SeqNo: 1634795 Units:	mg/Kg
Analyte			SPK Ref Val %REC LowLimit High	
Chloride		14 1.5 15.00	0 94.0 90	110
Sample ID	MB-37540	SampType: mblk	TestCode: EPA Method 300.0:	Anions
Client ID:	PBS	Batch ID: 37540	RunNo: 50519	
Prep Date:	4/11/2018	Analysis Date: 4/11/2018	SeqNo: 1638382 Units:	mg/Kg
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit High	Limit %RPD RPDLimit Qual
Chloride		ND 1.5		
Sample ID	LCS-37540	SampType: Ics	TestCode: EPA Method 300.0:	Anions
Client ID:	LCSS	Batch ID: 37540	RunNo: 50519	
Prep Date:	4/11/2018	Analysis Date: 4/11/2018	SeqNo: 1638383 Units:	mg/Kg
Analyte Chloride		Result PQL SPK value	SPK Ref Val %REC LowLimit High	Limit %RPD RPDLimit Qual
CHIOHUE		10 1.0 15.00	0 97.4 90	

Qualifiers:

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

Page 12 of 17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	1804243
	24 4

	ks Consulta 4 87 St 001	,								
Sample ID MB-37471	SampT	ype: MB	LK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batch	n ID: 374	171	R	anNo: 5	0391				
Prep Date: 4/6/2018	Analysis D	ate: 4/9	9/2018	S	eqNo: 1	633657	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		98.9	70	130			
Sample ID LCS-37471	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	n ID: 374	1 71	R	lunNo: 5	0391				
Prep Date: 4/6/2018	Analysis D	ate: 4/9	9/2018	S	SeqNo: 1	633785	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.6	70	130			
Surr: DNOP	4.3		5.000		86.2	70	130			
Sample ID 1804243-001AMS	SampT	ype: MS	;	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: SB Hist N-0'		n ID: 374		R	unNo: 5	0426			•	
Prep Date: 4/6/2018	Analysis D	ate: 4/	10/2018	S	SeqNo: 1	635711	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	84	9.5	47.39	57.08	56.1	55.8	125			
Surr: DNOP	4.2		4.739		89.4	70	130			
Sample ID 1804243-001AMS	D SampT	ype: MS	D	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: SB Hist N-0'		n ID: 374			unNo: 5			-	-	
Prep Date: 4/6/2018	Analysis D	ate: 4/	10/2018	S	SeqNo: 1	635712	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	75	9.7	48.40	57.08	36.8	55.8	125	11.1	20	S
Surr: DNOP	4.3		4.840		87.9	70	130	0	0	
Sample ID LCS-37482	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS		n ID: 374			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			J	.	
Prep Date: 4/9/2018	Analysis D				SeqNo: 1		Units: %Re	с		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		93.1	70	130	, or (i)		Quui
Sample ID MP 27492	Samet			Taa	tCodo: F		901EM/D. D:	and Bana	Organica	
Sample ID MB-37482		ype: MB					8015M/D: Di	esei kang	e organics	
Client ID: PBS		n ID: 374			lunNo: 5			-		
Prep Date: 4/9/2018	Analysis D				SeqNo: 1		Units: %Re			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- 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 W
- Page 13 of 17

Client:	R.T.]	R.T. Hicks Consultants, LTD Bride NM 87 St 001 Bettemy											
Project:	Pride NM 87 St 001 Battery												
Sample ID	MB-37482	SampT	ype: M	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics			
Client ID:	PBS	Batch	ID: 37	482	R	anNo: 5	0425						
Prep Date:	4/9/2018	Analysis D	ate: 4	/10/2018	S	SeqNo: 1	635886	Units: %Ree	0				
Analyte		Result	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Surr: DNOP		10		10.00		103	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 14 of 17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: **1804243**

24-Apr-18

Client: Project:	R.T. Hick Pride NM		,									
Sample ID 18042			Гуре: М		Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List		
	ist N-2.5'	Batcl	h ID: 37	463	RunNo: 50421							
Prep Date: 4/6/2		Analysis D				SeqNo: 1		Units: mg/k	(a			
•	2010					•		-	-			
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene Toluene		0.80 0.84	0.023 0.046	0.9208 0.9208	0 0.005776	86.6 90.8	80 80	120 120				
Ethylbenzene		0.94	0.040	0.9208	0.004503	30.8 101	80	120				
(ylenes, Total		2.8	0.040	2.762	0.02714	101	80	120				
Surr: 4-Bromofluorol	henzene	0.47	0.002	0.4604	0.02714	101	70	120				
Surr: Toluene-d8	Denzene	0.38		0.4604		82.6	70 70	130				
						02.0	10	100				
Sample ID 18042			Гуре: М					8260B: Volat	tiles Short	List		
	ist N-2.5'		h ID: 37			lunNo: 5						
Prep Date: 4/6/2	2018	Analysis D	Date: 4/	10/2018	S	SeqNo: 1	634653	Units: mg/k	٢g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene		0.85	0.024	0.9597	0	88.5	80	120	6.30	0		
oluene		0.86	0.048	0.9597	0.005776	89.5	80	120	2.67	0		
Ethylbenzene		0.97	0.048	0.9597	0.004503	100	80	120	2.94	0		
(ylenes, Total		2.8	0.096	2.879	0.02714	96.6	80	120	0.164	0		
Surr: 4-Bromofluorol	benzene	0.50		0.4798		104	70	130	0	0		
Surr: Toluene-d8		0.40		0.4798		82.8	70	130	0	0		
Sample ID Ics-37	7463	SampT	Type: LC	S4	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List		
Client ID: Batch	nQC	Batch	h ID: 37	463	R	lunNo: 5	0421					
Prep Date: 4/6/2	2018	Analysis D	Date: 4/	9/2018	S	SeqNo: 1	634695	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	92.8	80	120				
oluene		0.99	0.050	1.000	0	98.6	80	120				
thylbenzene		1.1	0.050	1.000	0	108	80	120				
(ylenes, Total		3.2	0.10	3.000	0	108	80	120				
Surr: 4-Bromofluorol	benzene	0.52		0.5000		105	70	130				
Surr: Toluene-d8		0.45		0.5000		89.6	70	130				
Sample ID mb-3	7463	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List		
Client ID: PBS		Batch	h ID: 37	463	R	lunNo: 5	0421					
Prep Date: 4/6/2	2018	Analysis D	Date: 4/	9/2018	S	SeqNo: 1	634697	Units: mg/k	٢g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene		ND	0.025									
oluene		ND	0.050									
thylbenzene		ND	0.050									
(ylenes, Total		ND	0.10									
Dualifiers:												

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 15 of 17

Client: Project:	R.T. Hicks Consultants, LTD Pride NM 87 St 001 Battery											
Sample ID mb-37	463	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List		
Client ID: PBS		Batch	ID: 37	463	F	anNo: 5	0421					
Prep Date: 4/6/2	018	Analysis D	ate: 4	/9/2018	S	SeqNo: 1	634697	Units: mg/k	٢g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobe				0.5000		119	70	130				
Surr: Toluene-d8		0.42		0.5000		83.6	70	130				

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 16 of 17

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:		ts Consulta I 87 St 001	,								
Sample ID	1804243-001ams	SampT	ype: M \$	6	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	SB Hist N-0'	Batch	ID: 37	463	F	RunNo: 5	0421				
Prep Date:	4/6/2018	Analysis D	ate: 4/	9/2018	S	SeqNo: 1	634590	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	26	4.7	23.43	3.364	96.6	64.7	142			
Surr: BFB		500		468.6		106	70	130			
Sample ID	1804243-001amsd	SampT	уре: М	SD	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	SB Hist N-0'	Batch	ID: 37	463	F	RunNo: 5	0421				
Prep Date:	4/6/2018	Analysis D	ate: 4/	9/2018	S	SeqNo: 1	634591	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	26	4.7	23.65	3.364	96.1	64.7	142	0.327	20	
Surr: BFB		520		473.0		110	70	130	0	0	
Sample ID	lcs-37463	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	LCSS	Batch	ID: 37	463	F	RunNo: 5	0421				
Prep Date:	4/6/2018	Analysis D	ate: 4/	9/2018	5	SeqNo: 1	634632	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	24	5.0	25.00	0	96.2	70	130			
Surr: BFB		530		500.0		106	70	130			

Sample ID mb-37463	SampT	ype: ME	BLK	Test	Code: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID: PBS	Batch	ID: 37	463	R	unNo: 5	0421				
Prep Date: 4/6/2018	Analysis D	ate: 4/	9/2018	S	eqNo: 1	634634	Units: mg/k	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	590		500.0		118	70	130			

Qualifiers:

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

Page 17 of 17

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albi TEL: 505-345-3975 Website: www.ha	490 iquerq FAX:	l Hawkin: ue, NM 87 505-345-4	^{s NE} 7109 Sar	Sample Log-In Check List				
Client Name: RT HICKS	Work Order Number:	1804	243		RcptNo	e 1			
Received By: Anne Thorne	4/4/2018 9:55:00 AM			ann A.					
Completed By: Anne Thorne	4/5/2018 9:59:51 AM			Anne H. Anne H.					
Reviewed By: DDS	115/18			and m					
Labeled By: MW 4/5	18				•				
Chain of Custody									
1. Is Chain of Custody complete?	• •	Yes		No 🗌	Not Present				
2. How was the sample delivered?		Clien	t						
Log In 3. Was an attempt made to cool the samples?		Yes		No 🗌	NA 🗔				
4. Were all samples received at a temperature of	of >0° C to 6.0°C	Yes	V	No 🗌	NA 🗀				
5. Sample(s) in proper container(s)?		Yes	v	No 🗌					
6. Sufficient sample volume for indicated test(s)	?	Yes	V	No 🗌					
7. Are samples (except VOA and ONG) properly	preserved?	Yes	✓	No 🗌					
8. Was preservative added to bottles?		Yes		No 🗹	NA 🗌				
9. VOA vials have zero headspace?		Yes		No 🗌	No VOA Vials 🗹				
10. Were any sample containers received broken	?	Yes	i	No 🔽	·				
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes	✓	No 🗌	# of preserved bottles checked for pH: (<2.0	H2)mess noted)			
12. Are matrices correctly identified on Chain of C	ustodv?	Yes		No 🗌	Adjusted?	- 12 (miless fibled)			
13. Is it clear what analyses were requested?	•	Yes [No 🗌	11 Mar				
14. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes		No 🗌	Checked by:	······································			
Special Handling (if applicable)				-					
15. Was client notified of all discrepancies with the	is order?	Yes		No 🗌	NA 🔽				
Person Notified:	Date								
By Whom:	·····	eMai	I _ Pr	ione 📃 Fax	In Person				
Regarding:									
Client Instructions:					******				
16. Additional remarks:	· · · · · · · · · · · · · · · · · · ·								
17. <u>Cooler Information</u> Cooler No │ Temp ⁰C │ Condition │ Sea	al Intact Seal No Se	al Dat	e I 4	Signed By	1				
	Present	a Da	<u>~ _ `</u>	Signed by					

....<u>-</u>.........

______ · . ____

- · · · · · · · · · · ·

Andress Andress <t< th=""></t<>



	Logger:		/Andrew Parker		Client:			Boring ID:	
	Driller:		nvironmental		Pride E	nergy			
	g Method:	Hollow	Stem Auger		Project Name:		.		
	Start Date:	4/2	2/2018 2/2018		1RP-4625 (NM 87 Sta Location:	ate 001 Tank	Battery)	SB-01 207	17
	End Date:	4/2	2/2016		33.059926, -103.5139	17 (WGS84/		_	
					00.00020, -100.010				
Depth		Deseri fi			0	Chloride	Borehole	Boring Diameter	Depth
(feet)		Description	Litr	nology	Comments	Tiitrate/Lab			(feet)
, í		0 - 0.5 ft		****		65/93 mg/	11		l Ó
0.0	Silty Sand	; caliche rocks; li	ght brown 🛛 🕅	×***		05/95 mg/	Ng /		0.0
1.0		0.5 - 3.5 ft		옷옷					1.0
2.0		Caliche; white		255	Hard	/490			2.0
3.0 4.0						492/320		0 - 10 ft	3.0 4.0
5.0						73/ mg/kg		Bentonite Plug	5.0
6.0		3.5 - 10 ft		222		383/360			6.0
7.0	C	Caliche; light pink	: 83						7.0
8.0									8.0
9.0 10.0				222		04/			9.0 10.0
10.0		10 - 12.5 ft	2,2,2 (2000)	- , / , / , ¹	Interbedded calcihe	21/ mg/kg	2		10.0
12.0	Mee	lium sand; light p	vink		cobbles			10 to 14 ft	12.0
12.0	IVIEC	12.5 - 14 ft			Hard (blowcount = 50/3	-		Backfill	13.0
14.0	Sa	andstone; tan; dr	у 🗱	2223	inches)	99/40 mg/kg			14.0
15.0					,				15.0
16.0									16.0
17.0 18.0									17.0 18.0
18.0									18.0
20.0									20.0
21.0									21.0
22.0									22.0
23.0									23.0
24.0									24.0
25.0 26.0									25.0 26.0
27.0									20.0
28.0									28.0
29.0									29.0
30.0									30.0
31.0 32.0									31.0 32.0
32.0									32.0
34.0									34.0
35.0									35.0
36.0									36.0
37.0									37.0
38.0 39.0									38.0 39.0
39.0 40.0									40.0
41.0									41.0
42.0									42.0
43.0									43.0
44.0									44.0
45.0 46.0									45.0 46.0
40.0									40.0
48.0									48.0
49.0									49.0
50.0									50.0
51.0									51.0
52.0 53.0									52.0 53.0
54.0									54.0
55.0									55.0
						•			-
R.T.	. Hicks Consu	ltants, Ltd							
	1 Rio Grande				Pride Energy			Appendix D	,
	Suite F-14								
Al	lbuquerque, N			E	Borehole Sampling Log	9		May 2018	
	505-266-50	004			· 5	-			

	Logger:	Andre	ew Parker	Client:		Trench ID:
	Driller:		Backhoe		de Energy	
Drilling	g Method:		ckhoe	Project Name:		<u> </u>
	Start Date:	1/8	3/2018		' State 001 Tank Battery	2017 East
	End Date:	1/8	3/2018	Location:	, , , , , , , , , , , , , , , , , , ,	<u></u>
					14, -103.513758	
Depth		Description	Lithology	Comments	Chloride Trer	
(feet)		Description	Littiology	Comments	(LAB) Comp	letion (feet)
		0 - 1 ft			111	Backfill with
	-	ine sand, silt; brov			<30 (0.5 ft)	excavated
		At 1 foot caliche; ta			<30 (0.5 11)	material
0.0		At 1 1001 calicite, la	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		1 1	0.0
1.0				Very hard caliche		1.0
2.0						2.0
3.0						3.0
4.0						4.0
5.0						5.0
6.0						6.0
7.0						7.0
8.0						8.0
9.0 10.0						9.0 10.0
10.0						10.0
12.0						12.0
13.0						13.0
14.0 15.0						14.0 15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						20.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0 45.0						44.0 45.0
45.0 46.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
50.0						49.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0
-						
D. (7)	Halo C.	ultanta I ()				
		sultants, Ltd		Pride Energy		Appendix D
90	1 Rio Grande					••••
A 1	Suite F-					
Al	lbuquerque, l			Trench Sampling L	og	May 2018
	505-266-	5004				

	Logger:	Andre	w Parker	Client:			Trench ID:	
Driller: Gandy Backhoe		P						
Drilling Method: Backhoe F		Project Name:	-					
	tart Date:		/2018	1RP-4625 (NM 87 State 001 Tank Battery) Location:			2017 We	et
	End Date:	1/8	/2018					
				345, -103.513492		1		
					-, , , ,			
Depth		Decorintian	16- al c	Comments	Chloride	Trench		Depth
(feet)		Description	Lithology	Comments	(LAB)	Completion		(feet)
		0 - 1 ft					Backfill with	
	Fi	ne sand, silt; brow	/n 🕅		< 30 @ 0.5 ft		excavated	
		t 1 foot caliche; ta					material	
0.0	~		~~~~~				material	0.0
1.0				Very hard caliche				1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0 8.0								7.0 8.0
9.0								9.0
9.0								9.0
11.0								11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0
17.0								17.0
18.0								18.0
19.0								19.0
20.0								20.0
21.0								21.0
22.0								22.0
23.0								23.0
24.0								24.0
25.0								25.0
26.0								26.0
27.0								27.0
28.0								28.0
29.0								29.0
30.0								30.0
31.0								31.0
32.0								32.0
33.0								33.0
34.0								34.0
35.0								35.0
36.0 37.0								36.0 37.0
37.0								37.0
38.0								38.0
40.0								40.0
41.0								41.0
42.0								42.0
43.0								43.0
44.0								44.0
45.0								45.0
46.0								46.0
47.0								47.0
48.0								48.0
49.0								49.0
50.0								50.0
51.0								51.0
52.0								52.0
53.0								53.0
54.0								54.0
55.0								55.0
R.T.	Hicks Consu	ultants, Ltd					• • •	_
	1 Rio Grande			Pride Energy			Appendix I	J
Suite F-142		Translation in the second seco			May 2010			
All	Albuquerque, NM 87104 505-266-5004		Trench Sampling Log			May 2018		

	Logger:	Andre	w Parker	Client:		Trench ID:	
	Driller: Gandy Backhoe		Pri				
Drilling	g Method:		ckhoe	Project Name:			
	Start Date:	1/8	/2018	1RP-4625 (NM 87	2017 North	2017 Northeast	
	End Date:	1/8	/2018	Location:			
					64, -103.513115		
-							
Depth (feet)		Description	Lithology	Comments	Chloride Tren (LAB) Comple		Depth (feet)
(1001)					(LAD) Compi		(1001)
						E LOU M	
		0 - 1 ft			<30 at 0.5 ft	Backfill with	
		ne sand, silt; brow				excavated	
0.0	А	t 1 foot caliche; ta	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			material	0.0
1.0				Very hard caliche			1.0
2.0							2.0
3.0							3.0
4.0							4.0
5.0							5.0
6.0 7.0							6.0 7.0
7.0 8.0							8.0
9.0							9.0
10.0							10.0
11.0							11.0
12.0							12.0
13.0							13.0
14.0							14.0
15.0							15.0
16.0							16.0
17.0							17.0
18.0							18.0
19.0 20.0							19.0 20.0
20.0							20.0
22.0							21.0
23.0							23.0
24.0							24.0
25.0							25.0
26.0							26.0
27.0							27.0
28.0							28.0
29.0							29.0
30.0							30.0
31.0							31.0
32.0							32.0
33.0 34.0							33.0 34.0
34.0							35.0
36.0							36.0
37.0							37.0
38.0							38.0
39.0							39.0
40.0							40.0
41.0							41.0
42.0							42.0
43.0							43.0
44.0 45.0							44.0 45.0
45.0							45.0
40.0							40.0
48.0							48.0
49.0							49.0
50.0							50.0
51.0							51.0
52.0							52.0
53.0							53.0
54.0							54.0
55.0							55.0
.	H A C	14					
	Hicks Cons 1 Rio Grande			Pride Energy		Appendix I)
20							
	Suite F-142			May 2019			
Al	Albuquerque, NM 87104 505-266-5004			Trench Sampling L	oq	May 2018	

Logger: Andrew Parker C			Client:	Trench ID:				
	Driller: Gandy Backhoe			Pride E	Trench ID.			
Drillin	g Method:		ckhoe	Project Name:	2017 Northwest			
	Start Date:		3/2018	1RP-4625 (NM 87 Sta				
	End Date:		3/2018	Location:		(within tank battery berm		
				33.059876, -	103.514189			
Depth					Chloride	Trench		Depth
(feet)		Description	Litholog	gy Comments	Lab (mg/kg) (Completion		(feet)
0.0		0.44		Destrute of immediate it				0.0
1.0	- :	0 - 1 ft	. 8333	Pockets of impacted soil				1.0
2.0	Fine s	and, silt; medium	brown	from 1 to 2 feet	4600			2.0
3.0								3.0
4.0							Backfill with	4.0
5.0							excavated	5.0
6.0		2 - 12 ft					material	6.0
7.0		silt, interbedded c		Hydrocarbon impacted soil			material	7.0
8.0	gre	ey, hydrocarbon od	dor					8.0
9.0 10.0								9.0 10.0
11.0								10.0
12.0					0000			
12.0					2900			12.0 13.0
13.0								13.0
14.0								14.0
16.0								16.0
17.0								17.0
18.0								18.0
19.0								19.0
20.0								20.0
21.0								21.0
22.0								22.0
23.0								23.0
24.0								24.0
25.0								25.0
26.0								26.0
27.0								27.0
28.0								28.0
29.0								29.0
30.0 31.0								30.0 31.0
32.0								31.0
33.0								33.0
34.0								34.0
35.0								35.0
36.0								36.0
37.0								37.0
38.0								38.0
39.0								39.0
40.0								40.0
41.0								41.0
42.0								42.0
43.0 44.0								43.0 44.0
44.0								44.0
45.0								45.0
40.0								46.0
48.0								48.0
49.0								49.0
50.0								50.0
51.0							51.0	
52.0							52.0	
53.0							53.0	
54.0							54.0	
55.0							55.0	
R.T	. Hicks Cons	ultants. Ltd						
	1 Rio Grande			Pride Energy			Appendix I	כ
20	Suite F-1							
A	lbuquerque, N			Tronch Compliant			May 2040	
	505-266-5			Trench Sampling Log			May 2018	
505-266-5004								

	Logger: Andre	ew Parker	Client:		Trench ID:		
	Driller: Atkins Egineering		Pride E				
	Drilling Method: Hollow Stem Auger P Start Date: 4/2/2018 P		Project Name:				
St	tart Date: 4/2	2/2018	1RP-4625 (NM 87 Sta	Historic Release	Historic Release North		
E	End Date: 4/2/2018 L		Location: 33.060086, -*	102 5125/2			
			33.000080, -	105.515542			
Depth				Chloride Trend	ch	Depth	
(feet)	Description	Lithology	Comments	field/lab Comple		(feet)	
0.0	0 - 0.5 ft		Sparse Vegetation at	<30/		0.0	
1.0	Silt; brown		surface	<00/		1.0	
2.0	0, 5.0		Caliche clasts at 2ft	/78		2.0	
3.0	0.5 - 6 ft		Light grey, very hard		Hydrated	3.0	
4.0	Caliche		Light pink, med. Density	100/36	bentonite	4.0	
5.0	Calicite		Very hard			5.0	
6.0			refusal at 6ft		:	6.0	
7.0			No split spoon return at 6 ft		_	7.0	
8.0 9.0					-	8.0 9.0	
9.0					-	9.0	
11.0					-	11.0	
12.0					-	12.0	
12.0					ŀ	13.0	
14.0					ł	14.0	
15.0					ŀ	15.0	
16.0					F	16.0	
17.0						17.0	
18.0						18.0	
19.0					_	19.0	
20.0					-	20.0	
21.0 22.0					-	21.0 22.0	
22.0					-	22.0	
24.0						24.0	
25.0						25.0	
26.0					-	26.0	
27.0						27.0	
28.0						28.0	
29.0						29.0	
30.0						30.0	
31.0					_	31.0	
32.0					-	32.0	
33.0 34.0					-	33.0 34.0	
34.0					-	35.0	
36.0						36.0	
37.0					-	37.0	
38.0					ŀ	38.0	
39.0					f	39.0	
40.0					ľ	40.0	
41.0						41.0	
42.0						42.0	
43.0					Ļ	43.0	
44.0					ŀ	44.0	
45.0 46.0					ŀ	45.0 46.0	
46.0					ŀ	46.0	
47.0					F	48.0	
49.0					ł	49.0	
50.0					ŀ	50.0	
51.0					f	51.0	
52.0					ľ	52.0	
53.0						53.0	
54.0						54.0	
55.0						55.0	
	<u>Hicks Consultants, Ltd</u> Rio Grande Blvd NW		Pride Energy				
	Suite F-142						
Alb	505 266 5004		Trench Sampling Log	May 2018			
	505-266-5004						

Driller: Gandy Backhoe Pride Energy Drilling Method: Backhoe Project Name: Start Date: 1/8/2018 1RP-4625 (NM 87 State 001 Tank Battery) End Date: 1/8/2018 Location: Depth (feet) Description Lithology Comments 0 - 1 ft Silit; brown 260 at 0.5 ft Back exception	Trench ID:	
Defining Method: Backhoe Project Name: Start Date: 1/8/2018 TRP-4625 (MM 87 State 001 Tank Battery) Histori End Date: 1/8/2018 Location: 33.059774, -103.513591 Histori Depth Description Lithology Comments Chloride Trench (feet) Description Lithology Comments Chloride Trench 0.0 At 1 foot caliche; tan Comments 260 at 0.5 ft Bac ext 10 Comments Chloride Trench ext m 10.0 Comments Chloride Trench ext 110 Comments Chloride m m 110 Completion Completion m m 110 Completion Completion m m 110 Completion Completion m m 1100 Commonts Chloride m m 1100 Commonts Chloride m m	Trendrind.	
Start Date: 1/8/2018 1/8/2018 1/8/2018 1/8/2018 Histori Brit Date: 1/8/2018 Location: 33.059774, 1/03.513591 Histori Opth Description Lithology Comments Chioride Trench ab (mg/kg: Completion 0.0 A11 foot caliche; tan 51.51.51 Very hard caliche 80 80 10 0.1 ft Sili: brown 51.51.51 Very hard caliche 80 80 20 0.0 A11 foot caliche; tan 51.51.51 Very hard caliche 80 110 12.0 13.0 14.0 14.0 14.0 16.0 110 12.0 13.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0		
End Date: 1/8/2018 Location: 33.059774, -103.513591 Dopth (feet) Description Lithology Comments Chloride Lab (mg/kg_ Completion) 0.0 0 - 1 ft Silt; brown 260 at 0.5 ft Bac ext m 20 30.059774, -103.513591 260 at 0.5 ft Bac ext m 100	storic Release Northeas	
Depth Description Lithology Comments Chloride Lab (mg/kg) Trench Competion 0.0 01 ft Sitt brown 260 at 0.5 ft Bac m 10 10 10.51555 Very hard caliche m 200 30.69774,-103.513691 260 at 0.5 ft Bac 30.0 At 1 foot caliche; tan 15.5555 Very hard caliche m 200 50 50 50 50 50 60 70 50 50 50 50 610 70 70 70 70 70 800 90 70 70 70 70 1100 1130 100 1130 100 100 1130 120 120 100 100 1130 1200 220 230 100 100 110 100 110 28.0 29.0 30.0 31.0 100 100 100 100 100 100		
Deptity Description Lithology Comments Chloride Lab (mg/kg: Completion 0 0 - 1 ft Sitt; brown At 1 foot calche; tan Sitt; brown Sitt; brown At 1 foot calche; tan Sitt; Sitt; Sitt; Very hard caliche 260 at 0.5 ft Bac exc m 10 Sitt; brown At 1 foot calche; tan Sitt; Sitt; Sitt; Very hard caliche 10 10 Sitt; brown At 1 foot calche; tan Very hard caliche 10 10 Sitt; brown At 1 foot calche; tan Very hard caliche 10 100 Sitt; brown At 1 foot calche; tan Very hard caliche 10 100 Sitt; brown At 1 foot calche; tan 10 10 100 Sitt; brown Sitt; bro		
(feet) Description Lithology Comments Lab (mg/kg: Completion 0.0 A11 foot caliche; tan 280 at 0.5 tt Bac 10 1:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0		
(feet) Description Lithology Comments Lab (mg/kg: Completion 0.0 A11 foot caliche; tan 280 at 0.5 tt Bac 10 1:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0	Depth	
0.1 ft Sit; brown At 1 foot caliche; tan 260 at 0.5 ft Bac exc m 20 41 foot caliche; tan 55:55 Very hard caliche 1 </td <td>(feet)</td>	(feet)	
Silt: brown At 1 foot caliche; tan 200 at 0.5 nt m exc m 200 30.55555 Very hard caliche m 200 30.0		
Sitt brown At 1 foot caliche; tan 200 at 0.5 nt m exc m 200 At 1 foot caliche; tan 1000000000000000000000000000000000000	Devel (11	
Stit brown exc 10 11 foot caliche; tan 11 foot caliche; tan 11 foot caliche 11 foot caliche 11 foot caliche; tan 11 foot caliche 11 foot caliche 11 foot caliche 11 foot caliche 11 foot caliche; tan	Backfill with	
0.0 Very hard caliche 2.0	excavated	
20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 180 220 2210 220 220 230 240 250 280 290 300 310 32.0 330 340 35.0 360 380 440 450 460 470	material 0.0	
20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 180 220 2210 220 220 230 240 250 280 290 300 310 32.0 330 340 35.0 360 380 440 450 460 470	1.0	
40 50 60 70 80 90 100 110 120 13.0 14.0 15.0 16.0 17.0 18.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 34.0 36.0 37.0 38.0 44.0 45.0 46.0 47.0	2.0	
5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 230 24.0 25.0 26.0 27.0 28.0 33.0 34.0 35.0 38.0 39.0 41.0 42.0 44.0 45.0 48.0	3.0	
60 70 80 90 100 110 120 130 140 150 160 170 180 200 210 220 230 230 240 250 260 270 280 280 300 310 32.0 33.0 34.0 35.0 360 37.0 38.0 39.0 44.0 44.0 48.0	4.0	
7.0 8.0 9.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 23.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 33.0 34.0 45.0 44.0 45.0 48.0	5.0	
80 90 100 110 120 130 140 150 160 170 180 190 200 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 440 440 440 440	6.0	
80 90 100 110 120 130 140 150 160 170 180 190 200 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 440 440 440 440	7.0	
100 110 12.0 13.0 14.0 15.0 16.0 17.0 18.0 190 22.0 23.0 24.0 25.0 26.0 27.0 280 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 44.0 44.0 48.0	8.0	
100 110 12.0 13.0 14.0 15.0 16.0 17.0 18.0 190 22.0 23.0 24.0 25.0 26.0 27.0 280 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 44.0 44.0 48.0	9.0	
12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 44.0 44.0 44.0 48.0	10.0	
13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 33.0 34.0 35.0 36.0 39.0 40.0 41.0 42.0 43.0 44.0 48.0	11.0	
13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 34.0 35.0 36.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 48.0	12.0	
14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 48.0	13.0	
16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 41.0 42.0 44.0 45.0 48.0	14.0	
16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 41.0 42.0 44.0 45.0 48.0	15.0	
18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 33.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 41.0 42.0 43.0 44.0 45.0 48.0	16.0	
19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 44.0 44.0 44.0 48.0	17.0	
20.0 21.0 22.0 230 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 44.0 44.0 44.0 44.0 48.0	18.0	
$ \begin{array}{c} 21.0\\ 22.0\\ 23.0\\ 24.0\\ 25.0\\ 26.0\\ 27.0\\ 28.0\\ 29.0\\ 30.0\\ 30.0\\ 31.0\\ 32.0\\ 33.0\\ 34.0\\ 35.0\\ 36.0\\ 36.0\\ 37.0\\ 38.0\\ 38.0\\ 39.0\\ 40.0\\ 41.0\\ 41.0\\ 41.0\\ 41.0\\ 41.0\\ 41.0\\ 43.0\\ 43.0\\ 43.0\\ 43.0\\ 43.0\\ 44.0\\ 44.0\\ 44.0\\ 45.0\\ 48.0$	19.0	
22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 44.0 44.0 45.0 48.0	20.0	
23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	21.0	
24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	22.0	
25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	23.0	
$ \begin{array}{c} 26.0 \\ 27.0 \\ 28.0 \\ 29.0 \\ 30.0 \\ 31.0 \\ 32.0 \\ 33.0 \\ 34.0 \\ 35.0 \\ 36.0 \\ 35.0 \\ 36.0 \\ 37.0 \\ 38.0 \\ 39.0 \\ 40.0 \\ 41.0 \\ 42.0 \\ 43.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 48.0 \\ \end{array} $	24.0	
$ \begin{array}{c} 27.0\\ 28.0\\ 29.0\\ 30.0\\ 31.0\\ 32.0\\ 33.0\\ 33.0\\ 34.0\\ 35.0\\ 36.0\\ 36.0\\ 37.0\\ 38.0\\ 39.0\\ 40.0\\ 41.0\\ 41.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 44.0\\ 45.0\\ 46.0\\ 46.0\\ 48.0$	25.0	
$ \begin{array}{c} 28.0 \\ 29.0 \\ 30.0 \\ 31.0 \\ 31.0 \\ 32.0 \\ 33.0 \\ 33.0 \\ 34.0 \\ 35.0 \\ 36.0 \\ 36.0 \\ 36.0 \\ 36.0 \\ 36.0 \\ 36.0 \\ 38.0 \\ 39.0 \\ 40.0 \\ 41.0 \\ 41.0 \\ 42.0 \\ 44.0 \\ 4$	26.0	
$ \begin{array}{c} 29.0 \\ 30.0 \\ 31.0 \\ 32.0 \\ 33.0 \\ 33.0 \\ 34.0 \\ 35.0 \\ 36.0 \\ 37.0 \\ 38.0 \\ 39.0 \\ 40.0 \\ 41.0 \\ 42.0 \\ 43.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 45.0 \\ 48.0 \\ \end{array} $	27.0	
30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	28.0	
31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	29.0	
32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	30.0	
33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	31.0	
$ \begin{array}{r} 34.0 \\ 35.0 \\ 36.0 \\ 37.0 \\ 38.0 \\ 39.0 \\ 40.0 \\ 41.0 \\ 41.0 \\ 42.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 45.0 \\ 46.0 \\ 46.0 \\ 48.0 \\ \end{array} $	32.0	
$ \begin{array}{r} 35.0 \\ 36.0 \\ 37.0 \\ 38.0 \\ 39.0 \\ 40.0 \\ 41.0 \\ 41.0 \\ 42.0 \\ 42.0 \\ 43.0 \\ 44.0 \\ 48.0 \\ $	33.0	
$ \begin{array}{r} 36.0 \\ 37.0 \\ 38.0 \\ 39.0 \\ 40.0 \\ 41.0 \\ 42.0 \\ 42.0 \\ 43.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 45.0 \\ 46.0 \\ 47.0 \\ 48.0 \\ \end{array} $	34.0	
$ \begin{array}{r} 37.0 \\ 38.0 \\ 39.0 \\ 40.0 \\ 41.0 \\ 42.0 \\ 42.0 \\ 43.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 45.0 \\ 46.0 \\ 47.0 \\ 48.0 \\ \end{array} $	35.0	
$ \begin{array}{r} 38.0 \\ 39.0 \\ 40.0 \\ 41.0 \\ 42.0 \\ 43.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 44.0 \\ 45.0 \\ 46.0 \\ 47.0 \\ 48.0 \\ \end{array} $	36.0	
39.0 40.0 41.0 42.0 43.0 44.0 45.0 45.0 46.0 47.0 48.0	37.0	
40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	38.0	
41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0	39.0	
42.0 43.0 44.0 45.0 46.0 47.0 48.0	40.0	
43.0 44.0 45.0 46.0 47.0 48.0	41.0	
44.0 45.0 46.0 47.0 48.0	42.0	
45.0 46.0 47.0 48.0	43.0	
46.0 47.0 48.0	44.0	
47.0 48.0	45.0	
48.0	46.0	
	47.0	
4911	48.0	
	49.0	
50.0	50.0	
51.0	51.0	
52.0	52.0	
53.0	53.0	
54.0 55.0	54.0 55.0	
5.0	55.0	
R.T. Hicks Consultants, Ltd Pride Energy	Appendix D	
901 Rio Grande Blvd NWPride EnergyAp	Appendix D	
Suite F-142		
	May 2049	
Albuquerque, NM 8/104Trench Sampling LogN505-266-5004Image: Solution of the second secon	May 2018	

	Logger:	Andrew Parker	Client:		Trench ID:	
	Driller: (Gandy Backhoe		Pride Energy		
Drilling	g Method:	Backhoe	Project Name:	Historic Release Southwes		
	tart Date: End Date:	1/8/2018 1/8/2018	Location:	1RP-4625 (NM 87 State 001 Tank Battery)		
		1/0/2010		109, -103.514169		
Depth	Descripti	ion Litholo	ogy Comments	Chloride Tren		
(feet)		>`>`>`	5	(LAB) Comple	etion (feet)	
	0 - 0.5	ft	÷.			
	Caliche, silt; da					
0.0			<u>,</u> ,		0.0	
1.0	0.5 - 2				1.0	
2.0	Silt; brov	wn	7	500	2.0	
	2 - 4 ft					
3.0	Caliche,		Ş		Backfill with 3.0	
4.0					excavated 4.0	
			÷.		material	
5.0	4 - 8 ft				5.0	
6.0	Caliche, ligh	5.5.5	÷.		6.0	
7.0		· · · · · · · · · · · · · · · · · · ·			7.0	
8.0				45	8.0	
	8 - 9 ft		Van hard -+ 0 f	.		
9.0	Caliche,		Very hard at 8 fee	a.	9.0	
10.0					10.0	
11.0					11.0	
12.0					12.0	
13.0					13.0	
14.0 15.0					<u>14.0</u> 15.0	
16.0					16.0	
17.0					17.0	
18.0					18.0	
19.0					19.0	
20.0 21.0					20.0 21.0	
22.0					22.0	
23.0					23.0	
24.0					24.0	
25.0					25.0	
26.0 27.0					<u>26.0</u> 27.0	
28.0					28.0	
29.0					29.0	
30.0					30.0	
31.0 32.0					31.0 32.0	
33.0					33.0	
34.0					34.0	
35.0					35.0	
36.0					36.0	
37.0 38.0					37.0 38.0	
39.0					39.0	
40.0					40.0	
41.0					41.0	
42.0					42.0	
43.0 44.0					43.0 44.0	
45.0					45.0	
46.0					46.0	
47.0					47.0	
48.0					48.0	
49.0 50.0					<u>49.0</u> 50.0	
51.0					51.0	
52.0					52.0	
53.0					53.0	
54.0 55.0					54.0 55.0	
55.0					55.0	
	Hicks Consultants, Ltd 1 Rio Grande Blvd NW		Pride Energy	Pride Energy		
Al	Suite F-142 buquerque, NM 87104 505-266-5004		Trench Sampling I	Trench Sampling Log		

	Logger: Andrew Parker			Client:		Trench ID:		
	Driller:	Gandy Backhoe		Pride	Trenon ID.			
Drilling	Drilling Method: Backhoe P		Project Name:		-			
	tart Date:	1/8/2018		1RP-4625 (NM 87 S) Historic Release	Southeast		
	End Date:	1/8/2018		Location:	,			
				-103.513557				
				*				
Depth	Door	cription	Lithology	Comments	Chloride Trer		Depth	
(feet)			Littiology	Comments	(LAB) Comp	letion	(feet)	
		0.5 ft				Backfill with		
0.0	Silt, caliche clas	sts (6 inches), tan				excavated	0.0	
		- 1 ft		Very hard	<30 @ 0.5 ft	material		
1.0	Calic	he, tan		Very hard		material	1.0	
2.0							2.0	
3.0							3.0	
4.0							4.0	
5.0 6.0							5.0 6.0	
7.0							7.0	
8.0							8.0	
9.0							9.0	
10.0							10.0	
11.0							11.0	
12.0							12.0	
13.0							13.0	
14.0							14.0	
15.0							15.0	
16.0							16.0	
17.0							17.0	
18.0							18.0	
19.0							19.0	
20.0 21.0							20.0 21.0	
21.0							21.0	
22.0							22.0	
24.0							24.0	
25.0							25.0	
26.0							26.0	
27.0							27.0	
28.0							28.0	
29.0							29.0	
30.0							30.0	
31.0							31.0	
32.0							32.0	
33.0							33.0	
34.0							34.0	
35.0							35.0	
36.0 37.0							36.0 37.0	
37.0							37.0	
39.0							39.0	
40.0							40.0	
41.0							41.0	
42.0							42.0	
43.0							43.0	
44.0							44.0	
45.0							45.0	
46.0							46.0	
47.0							47.0	
48.0							48.0	
49.0							49.0	
50.0 51.0							50.0 51.0	
52.0	╡ │ │					52.0		
53.0	j					53.0		
54.0							54.0	
55.0							55.0	
L								
	Hicks Consultants, I Rio Grande Blvd NV			Pride Energy		Appendix D		
Alb	Suite F-142			Trench Sampling Log	1	May 2018	3	

Logger: Kristin Pope			Client:			Boring ID:				
_	Driller:	Atkins E	nvironmental		Pride E					
	g Method:		Stem Auger		Project Name:					
	Start Date: End Date:	1/8	3/2018 3/2018		1RP-4625 (NM 87 State 001 Tank Battery)			SB-02 Historic		
	Enu Date:	1/0	0/2010		Location: 33.059743, -103.513652 (WGS84/NAD83)			-		
Depth		Description		Lithology	Comments	Chloride Boreh		Boring Diameter	Depth	
(feet)				Liniology		Titrate/Lab Comple	etion	3.5 Inches	(feet)	
0.0	S	0 - 0.25 ft ilty sand; dark bro	wn		No vegetation	2968/4200 mg/kg			0.0	
1.0	0	iny sand, dant bro	WI I			2000/4200 mg/kg			1.0	
2.0		0.25 - 5 ft							2.0	
3.0 4.0	С	aliche; light pink, o	dry		Hard	101/ mallia			3.0 4.0	
4.0 5.0						404/ mg/kg			4.0 5.0	
6.0						1 0			6.0	
7.0		5 - 9 ft							7.0	
8.0 9.0	Med	lium sand; tan, pin	k; dry			157/<30 mg/kg			8.0 9.0	
10.0						1377<30 mg/kg		0 - 21 feet	10.0	
11.0								Bentonite Plug	11.0	
12.0		9 - 16 ft							12.0	
13.0 14.0	Caliche; w	hite; interbedded	sand (15%)		Hard				13.0 14.0	
15.0									14.0	
16.0						45/<30 mg/kg			16.0	
17.0									17.0	
18.0 19.0		16 - 21 ft			Hard				18.0 19.0	
20.0	Caliche	, sand (10%); light	pink; dry		Blowcounts = 50/6 inches				20.0	
21.0						57/ mg/kg			21.0	
22.0 23.0									22.0 23.0	
23.0									23.0	
25.0									25.0	
26.0									26.0	
27.0									27.0	
28.0 29.0									28.0 29.0	
30.0									30.0	
31.0									31.0	
32.0 33.0									32.0 33.0	
34.0									34.0	
35.0									35.0	
36.0									36.0	
37.0 38.0									37.0 38.0	
39.0									39.0	
40.0									40.0	
41.0 42.0									41.0 42.0	
42.0									42.0	
44.0									44.0	
45.0									45.0	
46.0 47.0									46.0 47.0	
48.0									48.0	
49.0									49.0	
50.0									50.0	
51.0 52.0	<u>32.0</u> <u>33.0</u> <u>44.0</u>								51.0 52.0	
53.0									53.0	
54.0								54.0		
55.0						I			55.0	
ът	Hieles Com	aultonta I tel								
	. Hicks Cons 1 Rio Grand	<mark>sultants, Ltd</mark> e Blvd NW			Pride Energy			Appendix D		
20	Suite F-									
A	lbuquerque,			F	Borehole Sampling Log	I		May 2018		
	505-266-	-5004		•		,	1	way 2018		

				Client:	Boring ID:	Boring ID:		
	Driller: Atkins Environmental		Pride E					
	Start Date: 4/3/2018		Project Name:					
			1RP-4625 (NM 87 Sta	SB-03 Pla	ya			
			Location: 33.059934, -103.5146	26 (\\/GS&1/NIADO2)				
				33.039934, -103.3140	20 (WG384/NAD83)			
Depth		-			Chloride Boreho	ble Boring Diameter	Depth	
(feet)		Description	Lithology	Comments	Titrate/Lab Comple		(feet)	
0.0					108/ mg/kg 💋		0.0	
1.0							1.0	
2.0		0 - 6 ft		Interbedded calcihe from 4	/47		2.0	
3.0	S	ilty sand; dark brow	wn 🛛 🔅	to 6 ft			3.0	
4.0 5.0					/200 632/660 mg/kg		4.0 5.0	
6.0					614/530		6.0	
7.0							7.0	
8.0							8.0	
9.0					672/ mg/kg		9.0	
10.0							10.0	
11.0		6 - 16 ft					11.0	
12.0 13.0		Silt; light grey					12.0 13.0	
13.0							13.0	
14.0					341/ mg/kg		14.0	
16.0						Bentonite Plug	16.0	
17.0					💋		17.0	
18.0							18.0	
19.0 20.0					207/220 mg/kg		19.0 20.0	
20.0					2077220 mg/kg		20.0	
22.0							22.0	
23.0		16 - 31 ft					23.0	
24.0	Medium s	and, well sorted, r	ound; light				24.0	
25.0		tan			168/ mg/kg		25.0	
26.0							26.0	
27.0 28.0							27.0 28.0	
28.0							28.0	
30.0					129/200 mg/kg		30.0	
31.0							31.0	
32.0							32.0	
33.0							33.0	
34.0 35.0							34.0 35.0	
36.0							36.0	
37.0							37.0	
38.0		Located in lowest point of playa					38.0	
39.0		point of playa					39.0	
40.0							40.0	
41.0 42.0							41.0 42.0	
43.0							42.0	
44.0							44.0	
45.0							45.0	
46.0							46.0	
47.0							47.0	
48.0 49.0							48.0 49.0	
49.0 50.0							49.0 50.0	
51.0							51.0	
52.0							52.0	
53.0						53.0		
54.0							54.0	
55.0							55.0	
	R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 505-266-5004			Pride Energy	Appendix [)		
Al			Borehole Sampling Log	May 2018				

APPENDIX E

FIELD PROCEDURE Chloride Titration Using 0.282 Normal Silver Nitrate Solution

1.0 Purpose

This procedure is to be used to determine the concentration of chloride in soil and other solids (e.g. drilling waste).

2.0 Scope

This procedure is to be used as the standard field measurement for soil chloride concentrations.

3.0 Sample Collection and Preparation

- 3.1 Collect at least 80 grams of soil from the sample collection point. Take care to ensure that the sample is representative of the general area of concern to include visible concentrations of hydrocarbons and soil types. If necessary, prepare a composite sample for soils obtained at several points in the sample area.
- 3.2 The soil sample(s) shall be immediately inserted into a one-quart or larger polyethylene freezer bag. Care should be taken to insure that no cross-contamination occurs between the soil sample and the collection tools or sample processing equipment.
- 3.3 The sealed sample bag should be massaged to break up any clods.

4.0 Sample Preparation

- 4.1 Tare a clean glass vial having a <u>minimum</u> 40 ml capacity. Add at least 10 grams of the soil sample and record the weight.
- 4.2 Add at least 10 grams of reverse osmosis water or distilled water to the soil sample and shake or agitate for 20 seconds.
- 4.3 Allow the sample to set for a period of 5 minutes or until the separation of soil and water.
- 4.4 Carefully pour the free liquid extract from the sample, through a paper filter if necessary, into a clean plastic cup.

5.0 Titration Procedure

5.1 Using a graduated pipette, remove 10 ml extract and dispense into a clean plastic cup.

- 5.2 Add 2-3 drops potassium chromate (K₂CrO₄) to mixture.
- 5.3 If the sample contains any sulfides (hydrogen or iron sulfides are common to oilfield soil samples) add 2-3 drops of hydrogen peroxide (H₂O₂) to mixture.
- 5.4 Using a 1 ml pipette, carefully add .282 normal silver nitrate (one drop at a time) to the sample while constantly agitating it. Stop adding silver nitrate when the solution begins to change from yellow to red. Be consistent with endpoint recognition.
- 5.5 Record the ml of silver nitrate used.

6.0 Calculation

To obtain the chloride concentration, insert measured data into the following formula:

<u>.282 X 35,450 X ml AgNO3</u>	Х	grams of water in mixture
ml water extract		grams of soil in mixture

Using Step 5.0, determine the chloride concentration of the RO water used to mix with the soil sample. Record this concentration and subtract it from the formula results to find the net chloride in the soil sample.

Record all results on a field form.

Additional Notes

- 1) Make sure the scale is weighing in grams.
- 2) "Zero" the scale with clean, empty 40 ml container (including the cap) sitting on the scale.
- 3) Add 10 to 20 grams of sample soil to the container. Record the weight.
- 4) "Re-zero" the scale.
- 5) Add distilled water to almost fill the container. Record the weight.
- 6) Screw the cap on, and shake the container to thoroughly mix the sample with the distilled water. Set aside to allow settling of the sample. This will take only a few minutes for coarse grained material and up to 20 minutes for very fine grained sediments. The solution does not need to be perfectly clear to continue the procedure.
- 7) Add 3 drops of Potassium Chromate to a small, clean, plastic cup.
- 8) Extract 10 ml (using a large pipette at least 10 ml) of solution from the sample container and put it into the plastic cup. Record ml of solution placed in the cup.
 - a. This can be kept track of by careful recording of "before" and "after" fluid levels in the pipette.
 - b. Or: Place the plastic cup on the scale with the potassium chromate and "zero" the scale. Add solution to the cup until 10 grams is indicated on the scale.
- 9) Swirl the solution and the potassium chromate to mix them.
- 10) Using a 1 ml pipette, add silver nitrate to the mixed solution drop by drop while swirling. The entire solution will change from a pale lemon yellow color to a brick red color when sufficient silver nitrate has been added. STOP when it all turns brick red. It does not need to be a deep brick red color. This will result in an overly high result. Record ml of silver nitrate used.
- 11) The chloride concentration of the sample is given by:

$$C_{sam} = (35,450 * 0.282) * (grams of water) * (ml of silver nitrate) (grams of soil) (ml of solution)$$

or:

$$C_{sam} = (9997) * (grams of water (Step 5)) * (ml of silver nitrate (Step 10))(grams of soil (Step 3)) (ml of solution (Step 8))$$

Units are: mg(of chloride)/kg(of soil)

Equipment List:

Scale 10 ml pipettes 1 ml pipettes Controllers for pipettes (small and large), press pipette into open end (carefully) 40 ml sample containers Small plastic cups Silver Nitrate Potassium Chromate Distilled water Waste container for final solution. A robust plastic jug with lid will do for field use. DO NOT pour this down a drain. Dispose of with a chemical lab. Waste bags for used plastic cups (rinse and pour rinsing fluid into robust jug)

Calculator Nitrile gloves Safety glasses Paper towels

Safety Data

http://ptcl.chem.ox.ac.uk/~hmc/hsci/chemicals/silver_nitrate.html

http://ptcl.chem.ox.ac.uk/~hmc/hsci/chemicals/potassium_chromate.html

Photo-Ionization Detector (PID) Standard Operating Procedures

Headspace analysis procedures should be conducted according to NMOCD approved industry standards or other NMOCD-approved procedures. Accepted NMOCD procedures are as follows:

- a) Fill a 0.5 liter or larger jar half full of sample and seal the top tightly with aluminum foil or fill a one quart zip-lock bag one-half full of sample and seal the top of the bag leaving the remainder of the bag filled with air.
- b) Ensure that the sample temperature is between 15 to 25 degrees Celsius (59-77 degrees Fahrenheit).
- c) Allow aromatic hydrocarbon vapors to develop within the headspace of the sample jar or bag for 5 to 10 minutes. During this period, the sample jar should be shaken vigorously for 1 minute or the contents of the bag should be gently massaged to break up soil clods.
- d) If using a jar, pierce the aluminum foil seal with the probe of either a PID or FID organic vapor meter (OVM), and then record the highest (peak) measurement. If using a bag, carefully open one end of the bag and insert the probe of the OVM into the bag and re-seal the bag around the probe as much as possible to prevent vapors from escaping. Record the peak measurement. The OVM must be calibrated to assume a benzene response factor.