District I 625 N. French Dr., Hobbs, 1 District II	NM 88240		Energy M	tate of I linerals a	New Mex and Natura	ico I Resources				 Revise	Form C-14 d April 3, 201		
11 S. First St., Artesia, NM histinet III 000 Rio Brazos Road, Aztes histinet IV 220 S. St. Francis Dr., Santi	88210 c. NM 87410 a Fe. NM 87505	5	Oil 122	Conserv 0 South	ervation Division ath St. Francis Dr.			Submit 1 Copy to appropriate District Office in accordance with 19 15 29 NMAC					
		Pol	ase Notifi	anta Fe	and C	ous	ction						
		Kei	ease Noun	cation	OPERA'	TOR	cuon	I Initi	al Report		Final Rep		
Name of Company Ha	allador Petro	leum LL	Р	(Contact Tin	n Lovseth			ai Report	Å	тпагкер		
Address 16660 Lincol	In St. Ste 270	00			Telephone I	No.303 839- 550	04 x 31	7					
Facility Name Horion	#.)D			0	Facility Typ	be gas well		LIDIN	20.045				
Surface Owner BLM			Mineral	Owner B	SLM			APING). 30-045	51703			
Unit Letter Section	Township	Range	LOC Feet from the	ATION North/	N OF RE	Feet from the	East/V	Vest Line	County				
A 13	32N	12W	1000	North	bouth Ente	725	East	i est Estie	San Juan				
	Latitude	e36.98	962	Lo	ngitude	108.04072		NAD	83				
			NA	TURE	OF REL	EASE							
Type of Release oil spill Source of Release BCT					Volume of	Release unkown	n ca uko	Volume I	Recovered I	NA	2/16/19		
Source of Release BG1 Was Immediate Notice Given?					If YES. To OCD - Co	o Whom? ory Smith	LC UKII	Date and	nour or Di	scovery	2/10/18		
		1 1 65	By Whom? Loyseth					OCD - Cory Smith					
By Whom? Lovseth				-	Date and I	Hour 2/16/18 11.5	58 am						
By Whom? Lovseth Was a Watercourse Read If a Watercourse was Im	ched?	Yes	2 No		Date and I If YES, V	Hour 2/16/18 11.5 olume Impacting	58 am the Wate	ercourse					
By Whom? Lovseth Was a Watercourse Read If a Watercourse was Im Describe Cause of Probl	ched?	Yes A	No Taken.*		Date and I If YES. V	Hour 2/16/18-11.5 olume Impacting	58 am the Wate	ercourse NM	OCD		agent of		
By Whom? Lovseth Was a Watercourse Read If a Watercourse was Im Describe Cause of Probl BGT sample analysis att	ched?	Yes the Fully edial Action	n Taken. *	ve standar	Date and I If YES, V	Hour 2/16/18-11.5 olume Impacting	58 am the Wate	ercourse NM JUN	ocd 1 1 20	18	agent of		
By Whom? Lovseth Was a Watercourse Read If a Watercourse was Im Describe Cause of Probl BGT sample analysis att Describe Area Affected	ched?	Yes Arite Fully	Mo No * * d under alternati	ve standar	Date and I If YES, V	Hour 2/16/18 11.5 olume Impacting	is am the Wate	NM JUN STRI	0 C D 1 1 20 C T _ I	18			
By Whom? Lovseth Was a Watercourse Read If a Watercourse was Im Describe Cause of Probl BGT sample analysis att Describe Area Affected I hereby certify that the regulations all operators public health or the enviro should their operations h or the environment. In a federal, state, or local lat	ched? apacted, Descr em and Reme ached, closur and Cleanup - and Cleanup - are required to ronment. The have failed to addition. NMC ws and/or regi	Yes iven abov to report a adequatel OCD acce	No Taken.* d under alternati ken.* e is true and con nd/or file certair ce of a C-141 re y investigate and plance of a C-14	ve standar nplete to th release n port by the 1 remediate 1 report d	he best of my otifications a e OMOCD n e contaminat	Hour 2/16/18 11.5 olume Impacting y knowledge and t and perform corre narked as "Final F tion that pose a th ve the operator of	D I understa ctive act Report" o reat to g	NM JUN STRI nd that pur ions for re Joes not re round wate ibility for o	OCD 1 20 CT 1 suant to NM leases which leaves which leave	18 MOCD r h may e berator o vater, hu with an	ules and ndanger f Itability iman health y other		
By Whom? Lovseth Was a Watercourse Read If a Watercourse was Im Describe Cause of Probl BGT sample analysis att Describe Area Affected I hereby certify that the regulations all operators public health or the envir should their operations h or the environment. In a federal, state, or local lar Signature:	information g are required to ronment. The ave failed to addition. NMC ws and/or regu	Yes iven abov to report a adequated OCD acce	n Taken.* d under alternati ken.* e is true and con nd/or file certair ce of a C-141 re y investigate and plance of a C-14	ve standar nplete to th release n port by thu remediata 1 report d	he best of my otifications a e NMOCD n e contaminat	Hour 2/16/18 11.5 olume Impacting y knowledge and 1 and perform corre narked as "Final F tion that pose a th ve the operator of OIL CON	D I understa ctive act Report" o respons ISERV	NM JUN STRI nd that pur ions for re Joes not re round wate ability for ATIOS	OCD 1 20 CT 1 suant to NM leases which leaves which leaves which leaves the op or, surface v compliance DIVIS	18 MOCD r h may e berator o vater, hu with an ON	rules and ndanger f Itability iman health y other		
By Whom? Lovseth Was a Watercourse Read If a Watercourse was Im Describe Cause of Probl BGT sample analysis att Describe Area Affected I hereby certify that the r regulations all operators public health or the envi should their operations. In a federal, state, or local lar Signature:	information g are required to ronment. The have failed to ws and/or regu	Yes iven abov to report a adequatel OCD acce	n Taken.* d under alternati ken.* e is true and con nd/or file certair ce of a C-141 re y investigate and plance of a C-14	ve standar nplete to th release n port by the remediata 1 report d	bate and I If YES. V If YES. V rds the best of my otifications a e NMOCD n e contaminat loes not relie Approved by	Hour 2/16/18 11.5 olume Impacting olume Impacting and perform corre- narked as "Final F tion that pose a th ve the operator of OIL CON v Environmental S	D I understa crive act Report" o reat to g ("respons USERV Specialis	INN JUN STRI and that pur ions for re does not re round wate ability for of /ATION at	0 C D 1 1 20 C T 1 Isuant to NN leases which leaves the op r. surface v compliance	MOCD r h may e berator o vater, hu with an	ules and ndanger f liability iman health y other		
By Whom? Lovseth Was a Watercourse Read If a Watercourse was Im Describe Cause of Probl BGT sample analysis att Describe Area Affected I hereby certify that the regulations all operations for public health or the envi should their operations for the environment. In a federal, state, or local lat Signature: Printed Name: Timothy Title, Manager	ched? ipacted. Descr impacted. Descr iem and Reme iached. closure and Cleanup a ronment. The have failed to iddition. NMC ws and/or regi Lovseth	Yes the fully edial Action Ta adequated of the fully edial Action Ta adequated of the fully edial Action Ta adequated of the fully end of the fully edial Action	n Taken. * d under alternati ken. * e is true and con nd/or file certair ce of a C-141 re y investigate and plance of a C-14	ve standar nplete to th release n port by the remediate 1 report d	bate and I If YES. V rds nds he best of my otifications a e NMOCD n e contaminat loes not relie Approved by Approved by	Hour 2/16/18 11.5 olume Impacting olume Impacting ind perform corre- narked as "Final F tion that pose a th ve the operator of <u>OIL CON</u> v Environmental S ite:	D I understa creat to g respons Specialis	NM JUN STRI nd that pur ions for re does not re fround wate ability for of ATION at	OCD 1 20 CT 1 suant to NM leases which lieve the op r. surface v compliance DIVIS	18 MOCD r h may e erator o vater, hu with an	ules and ndanger f liability iman health y other		
By Whom? Lovseth Was a Watercourse Read If a Watercourse Read Describe Cause of Probl BGT sample analysis att Describe Area Affected I hereby certify that the regulations all operators public health or the envi should their operations h or the environment. In a federal, state, or local lar Signature: Printed Name: Timothy Title, Manager E-mail Address: tlovseth	ched? ipacted, Descr em and Reme iached, closurd and Cleanup are required to addition, NMC ws and/or regr Lovseth	Yes iven abov to report a adequate DCD acce ulations.	n Taken. * n Taken. * d under alternati ken. * e is true and con nd/or file certair of a C-141 re y investigate and ptance of a C-14	ve standar aplete to th release n port by the remediat 1 report d	bate and I If YES. Ve rds rds he best of my outfications a e NMOCD n e contaminat loes not relie Approved by Approved by Conditions of	Hour 2/16/18 11.5 olume Impacting olume Impacting ind perform corre- narked as "Final F atom that pose a th ve the operator of <u>OIL CON</u> ve Environmental S ite: OTL CON	D I understa ctive act Repart of Specialis Specialis	NM JUN STRI nd that pur ions for re does not re fround wate ability for of ATION at Expiration	O C D 1 1 20 C T 1 suant to NN leases which ieve surface compliance DIVIS Date: Attache	18 MOCD r h may e water, hu with an	ules and ndanger f liability iman health y other		

Tim Lovseth

From:	Smith, Cory, EMNRD <cory.smith@state.nm.us></cory.smith@state.nm.us>
Sent:	Thursday, February 15, 2018 11.02 AM
To:	Tim Lovseth
Cc:	Fields, Vanessa, EMNRD
Subject:	RE: BGT soil analyses for Horton 3, Horton 3B, Horton 10

Tim,

OCD approves backfill and no further action on the Horton 10. Please complete form C-144 and include all necessary attachments for closure.

For the Horton 3B Hallador needs to indicate that a release did occur, and can either remediate the release or request the OCD for alternative closure standards. If the latter is chosen Hallador needs to justify why leaving contaminates in place is not a threat to human health and the environment.

For the Horton 3, additional remediation is required. After reviewing the site ranking the site is within 200' of a surface body water(Intermittent Arroyo) as is ranked a 20. Setting the closure standards for 100 mg/kg TPH, 50mg/kg BTEX and 10 mg/kg Benzene.

1

If you have any additional questions please give me a call.

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

From: Tim Lovseth [mailto:tlovseth@halladorenergy.com] Sent: Thursday, February 15, 2018 9:53 AM To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us> Subject: BGT soil analyses for Horton 3, Horton 3B, Horton 10

The sampling reports should be completed by EnviroTech by early next week.



February 22, 2018

Project Number 18010-0003

Mr. Timothy Lovseth Hallador Energy 1660 Lincoln Street, Suite 2700 Denver, Colorado 80264

Email: <u>tlovseth@halladorenergy.com</u> Phone: (303) 550-3226

RE: BELOW-GRADE TANK CLOSURE DOCUMENTATION FOR THE HORTON #3B WELL SITE LOCATED AT SECTION 13, TOWNSHIP 32 NORTH, RANGE 12 WEST, SAN JUAN COUNTY, NEW MEXICO

Dear Mr. Lovseth:

Enclosed please find the *Vicinity map, Site Map, Field Notes* and *Analytical Results* for belowgrade tank (BGT) closure activities conducted at the Horton #3B well site located in Section 13, Township 32 North, Range 12 West, San Juan County, New Mexico (site).

Upon Envirotech personnel's arrival on February 2, 2018, a brief site assessment and Job Safety Analysis (JSA) was conducted. The BGT closure standard for the site was determined to be 100 parts per million (ppm) total petroleum hydrocarbons (TPH), 0.2 ppm benzene, and 50 ppm total benzene, toluene, ethylbenzene, and xylene (total BTEX), and 250 ppm chlorides in accordance with the New Mexico Oil and Gas Conservation Division (NMOCD) regulatory standards.

The BGT was removed and staged on-site with Envirotech representative Brittany Hall and New Mexico Oil and Gas Conservation Division (NMOCD) representative Cory Smith as witnesses. One (1) five (5)-point composite sample was collected from directly beneath the former BGT; see enclosed *Field Notes*. The sample was analyzed in the field for organic vapors using a photoionization detector (PID) and returned a result of 0.0 mg/Kg; see enclosed *Field Notes*. Additionally, the sample was placed into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015B (GRO, DRO, and ORO), for benzene and total BTEX using USEPA Method 8021B and for chlorides using USEPA Method 300.0. The sample returned results below the regulatory limits for all constituents analyzed except TPH, which returned results above the BGT closure standard of 100 parts per million (ppm) TPH using USEPA Method 8015B; therefore, confirming a release had occurred.

A brief site assessment was conducted and the cleanup standards for the site were determined to be 1,000 ppm TPH and 100 ppm organic vapors or 10 ppm benzene and 50 ppm total BTEX due to a horizontal distance to surface water between 200 and 1000 feet from the site, depth to groundwater greater than 100 feet, and the well site was not located within a wellhead protection



Hallador Energy BGT Closure Documentation Horton #3B Well Site Project Number 18010-0003 February 2018 Page 2

area, pursuant to the NMOCD Guidelines for Remediation of Spills, Leaks, and Releases. The sample from beneath the former BGT returned results below the regulatory standard for all constituents analyzed; see enclosed *Analytical Results*. Envirotech, Inc. recommends *No Further Action* in regards to this incident.

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

Respectfully submitted, ENVIROTECH, INC.

Brittany Hall Environmental Field Technician <u>bhall@envirotech-inc.com</u>

Enclosure(s): Vicinity Map Site Map Field Notes Analytical Results

Cc: Client File Number 18010





LEGEND

X BGT Sample Location ⊕Well Head

Tunon	er Daren 2/12	12013	101. 2012	103023 101	100.04074	T FIEL 0331 IC FAC				
			S	ITE	MAP)				
	Hallador Energy									
1	Horton #3B Well Site									
SE	CTION	13, 1	ΓWP	32 N	ORTH,	RANGE 12	WEST			
	SA	N JU	IAN	COUN	TY, NI	EW MEXICO				
SCALE: NTS				FICUE		2	REV			
PROJECT NOJ8010-0003										
	REVISIONS									
NO.	DATE	BY			DESC	RIPTION				
MAF	DRWN	BH	2/	15/18	BASE D	RWN IG	11/7/17			
	MAP DRWN BH 2/15/18 BASE DRWN IG 11/7/17									

5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615

CLIENT: 1	allador	,		C	enviro	otech	1	Environmen	tal Specialist: B//GU
CLIENT/JOB $\neq 1$ START DATE: 2	8010-0	0003	_	(505) 8786 U.	632-0615 (6 5. Hwy 54, Parm	00) 362-1879 Ington, NM 174		LAT:	36 9997881
Page #	of							LUNG:	
		FIELD	REPOR	T: BEL	OW GRO	UND TAI	NK VER	IFICATIO	DN
LOCATION NA	ME	Horto	~	<u> </u>	WELL #	3B	Temp Pit		PERM Pit
QUAD/UNIT 🎢	SE	ic 13	TWP	32 N		RNG	N		РМ
QTR/FOOTAGE.			CNTY:	San	Ivan	ST. N	m		
Excavation Approx			Feet X	15	Feet X	15	Feet Deep	3	Cubic Yardage
Disposal Facility:	-					Remediation	Method	1.	-
Land Owner: F	Ederal				API	30-045	-3170	3 Pit-Volume	95 661
Construction Material	1. Single	wall	Steel		Double Walle	d, With Leak	Detection		
SAMPLE DESCRIPTI	ON	ENZENE ≤ 0. TIME	2 mg/kg. BTE SAMPLE ID	EX ≤ 50 mg FI LAB #	Akg. TPH (418 ELD 418.1 A WEIGHT	1) ≤ 100 mg/ NLAYSIS mL FREON		DES ≤ 250 mg READING	CALC. (mg/kg)
	a managa ang ang ang ang ang ang ang ang an								
A CONTRACTOR OF THE OWNER		1			34-14-14				
PID	RESULTS		i, tasta	S	ITE PERIMET	ER			SAMPLE PROFILE
BUT (ing		1/1 TS			NY	$\overline{\mathbf{x}}$			
SAMPLE ID RI	EADING CA	ALC (mg/kg)	K	D'		e e t			$\begin{pmatrix} x \\ x \\ x \end{pmatrix}$
BUT COMP BTE BUT COMP BTE BUT COMP CHL	NAL ISIS NZENE 8 EX 80 O & DRO ORIDES	03 EPA 021B/8015 021B/80260B 8015 EPA300 418.1	well	hed					
Buttan	Ho Analyst Signa	4 ature		NOTES:					
Britta	Printed Nar	M		WO #		Who ordered	/Site Rep		-

Pit Closure Verification 2015



Analytical Report

Report Summary Client: Hallador Chain Of Custody Number: Samples Received: 2/2/2018 1:50:00PM Job Number: 18010-0003 Work Order: P802007 Project Name/Location: BGT Sample

Walter Hindunan of

Date: 2/13/18

Report Reviewed By:

Walter Hinchman, Laboratory Director

Tim Cain, Quality Assurance Officer

Date: 2/13/18

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

5796 US	Highway	64,1	Farmington,	NM	87401
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Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

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Page 1 of 9



Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	18010-0003	Reported:
Colorado NM, 87401	Project Manager:	F.Aragon	13-Feb-18 16:22

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Horton 3B API 3004531703	P802007-01A	Soil	02/02/18	02/02/18	Glass Jar, 4 oz.
	P802007-01B	Soil	02/02/18	02/02/18	Glass Jar, 4 oz.

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Page 2 of 9



Hallador	Project	Name:	BGT Sample						
1660 Lincoln St Suite 2700	Project	Number:	1801	0-0003				Reported:	
Colorado NM, 87401	Project	Manager:	F.Ar	agon				13-Feb-18 16	:22
		Horton 3B	API 300	04531703					
		P8020	07-01 (Se	olid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1806002	02/05/18	02/08/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1806002	02/05/18	02/08/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1806002	02/05/18	02/08/18	EPA 8021B	
p.m-Xylene	ND	200	ug/kg	1	1806002	02/05/18	02/08/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1806002	02/05/18	02/08/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1806002	02/05/18	02/08/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1806002	02/05/18	02/08/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		97.5 %	50	-150	1806002	02/05/18	02/08/18	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1806002	02/05/18	02/08/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1805024	02/05/18	02/06/18	EPA 8015D	
Oil Range Organics (C28-C40+)	328	50.0	mg/kg	1	1805024	02/05/18	02/06/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		101 %	50	-150	1806002	02/05/18	02/08/18	EPA 8015D	
Surrogate: n-Nonane		75.2 %	50	-200	1805024	02/05/18	02/06/18	EP4 8015D	
Anions by 300.0									
Chloride	ND	20.0	mg/kg	1	1807003	02/12/18	02/12/18	EPA 300.0	

5796 US Highway 64, Farmington, NM 87401

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



Hallador	Pro	ject Name:	В	GT Sample						
1660 Lincoln St Suite 2700	Project Number: 1801			8010-0003			эс.		Report	ed:
Colorado NM, 87401	Pro	ject Manager:	F.	Aragon					13-Feb-18	16:22
	Volatile	Organics b	y EPA 8	8021 - Qua	lity Cont	rol				
	E	nvirotech A	Analyti	cal Labor	atory					
		Reporting		Spike	Source		%REC	0.00	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1806002 - Purge and Trap EPA 5030A		······								
Blank (1806002-BLK1)		Prepared: 05-Feb-18 Analyzed: 08-Feb-18								
Benzene	ND	100	ug/kg							
Toluenc	ND	100								
Ethylbenzene	ND	100	•							
p.m-Xylene	ND	200	-							
o-Xylenc	ND	100								
Total Xylenes	ND	100	-							
Total BTEX	ND	100	-							
Surrogate: 4-Bromochlorobenzene-PID	7720			8000		96.5	50-150			
LCS (1806002-BS1)				Prepared: 0	5-Feb-18	Analyzed: 0	8-Feb-18			
Benzene	4980	100	ug/kg	5000		99.7	70-130		and the second constraints of the	
Toluene	4900	100	-8-18	5000		98.0	70-130			
Ethyllonzene	4910	100		5000		08.3	70-130			
n m-Xvlene	9870	200		10000		08.7	70-130			
o-Yulone	4830	100		5000		06.6	70-130			
Total Xylenes	14600	100		15000		90.0	70-130			
	14000	100		15000		91,1	10-130			
Surrogate: 4-Bromocillorobenzene-PID	7830			8000		98.1	50-150			
Matrix Spike (1806002-MS1)	Sou	irce: P802007-	01	Prepared: 05-Feb-18 Analyzed: 08-Feb-18						
Benzene	4960	100	ug/kg	5000	ND	99.2	54.3-133			
Toluene	4880	100	-	5000	ND	97.7	61.4-130			
Ethylbenzene	4890	100	٠	5000	ND	97.9	61.4-133			
p.m-Xylene	9770	200		10000	ND	97.7	63.3-131			
o-Xylene	4800	100	-	5000	ND	96.0	63.3-131			
Total Xylenes	14600	100	-	15000	ND	97.2	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	7790			8000		97.3	50-150			
Matrix Spike Dup (1806002-MSD1)	Sou	irce: P802007-	01	Prepared: ()5-Feb-18	Analyzed: (08-Feb-18			
Benzene	4950	100	ug/kg	5000	ND	99.1	54.3-133	0.177	20	
Toluene	4860	100		5000	ND	97.3	61.4-130	0.354	20	
Ethylbenzene	4880	100		5000	ND	97.7	61.4-133	0.168	20	
p.m-Xylene	9750	200		10000	ND	97.5	63.3-131	0.195	20	
o-Xylene	4790	100		5000	ND	95.9	63.3-131	0.0834	20	
Total Xylenes	14500	100		15000	ND	97.0	63.3-131	0.158	20	
Surrogate: 4-Riomochlorubenzene-PH)	7800		*	8000		975	50,150			

5796 US Highway 64, Farmington, NM 87401	Ph (505) 632-0615	Fx (505) 632-1865	envirotech-Inc.com
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301	Ph (970) 259-0615	Fr (800) 362-1879	laboratory@envirotech-inc.com



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Hallador	Pro	ject Name:	В	GT Sample							
1660 Lincoln St Suite 2700	Pro	ject Number:	13	8010-0003			Reported:				
Colorado NM, 87401	Pro	ject Manager:	F.	Aragon					13-Feb-18 16:22		
	Nonhalog	enated Org	anics by	y 8015 - Qi	ality Co	ntrol					
	Er	wirotech A	Analyti	cal Labor	atory						
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 1805024 - DRO Extraction EPA 3570											
Blank (1805024-BLK1)		Prepared & Analyzed: 05-Feb-18									
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg								
Oil Range Organics (C28-C40+)	ND	50.0	*								
Surrogate: n-Nonane	58.5		-	50.0		117	50-200				
LCS (1805024-BS1)				Prepared &	Analyzed:	05-Feb-18					
Diesel Range Organics (C10-C28)	491	25.0	mg/kg	500		98.2	38-132				
Surrogate: n-Nonane	40.7		-	50.0		81.4	50-200				
Matrix Spike (1805024-MS1)	Sour	rce: P801048-	01	Prepared &	Analyzed:	yzed: 05-Feb-18					
Diesel Range Organics (C10-C28)	4780	250	mg/kg	500	4300	95.7	38-132				
Surrogate: n-Nonane	78.9		-	50.0		158	50-200				
Matrix Spike Dup (1805024-MSD1)	Sour	rce: P801048-	01	Prepared &	Analyzed:	05-Feb-18					
Diesel Range Organics (C10-C28)	5210	250	mg/kg	500	4300	181	38-132	8.51	20	SPK2	
Surrogate: n-Nonane	74.6			50.0		149	50-200				

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Hallador	Proje	et Name:	B	GT Sample									
1660 Lincoln St Suite 2700	Proje	Project Number:					Reported:						
Colorado NM, 87401	Proje	Project Manager: F.Aragon							13-Feb-18 16:22				
	Nonhaloger	nated Org	anics by	8015 - Qu	ality Co	ntrol							
	Env	virotech A	Analyti	cal Labor	atory								
		Reporting		Spike	Source		%REC		RPD				
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes			
Batch 1806002 - Purge and Trap EPA 50	30A												
Blank (1806002-BLK1)				Prepared: 0)5-Fcb-18	Analyzed: (08-Feb-18						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg										
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.75		**	8.00		96.9	50-150						
LCS (1806002-BS2)				Prepared: 0	05-Fcb-18	Analyzed: (08-Feb-18						
Gasoline Range Organics (C6-C10)	46.7	20.0	mg/kg	50.0		93.4	70-130						
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.00		*	8.00		99.9	50-150						
Matrix Spike (1806002-MS2)	Sourc	Source: P802007-01				Prepared: 05-Feb-18 Analyzed: 08-Feb-18							
Gasoline Range Organics (C6-C10)	46.9	20.0	mg/kg	50.0	ND	93.7	70-130						
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.11			8.00		101	50-150						
Matrix Spike Dup (1806002-MSD2)	Sourc	e: P802007-	01	Prepared: 0	5-Feb-18								
Gasoline Range Organics (C6-C10)	47.6	20.0	mg/kg	50.0	ND	95.3	70-130	1.63	20				
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.22		-	8.00		103	50-150						



Hallador	P	roject Name:	B	GT Sample							
1660 Lincoln St Suite 2700	Project Number:			8010-0003			Reported:				
Colorado NM, 87401	P	roject Manager:					13-Feb-18 16:22				
		Anions by 30	00.0 - Q	uality Cor	ntrol						
	I	Envirotech A	nalyti	cal Labor	atory						
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 1807003 - Anion Extraction EPA 300.0/90 Blank (1807003-BLK1))56A			Prepared &	Analyzed:	12-Feb-18					
Chloride	ND	20.0	mg/kg								
LCS (1807003-BS1)				Prepared &	Analyzed:	12-Feb-18					
Chloride	246	20.0	mg/kg	250		98.6	90-110				
Matrix Spike (1807003-MS1)	Se	ource: P802010-0	Prepared &	Analyzed:	12-Feb-18						
Chloride	400	20.0	mg/kg	250	115	114	80-120				
Matrix Spike Dup (1807003-MSD1)	So	ource: P802010-0	1	Prepared & Analyzed: 12-Feb-18							
Chloride	379	20.0	mg/kg	250	115	106	80-120	5.30	20		

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Hallador	Project Name:	BGT Sample	
1660 Lincoln St Suite 2700	Project Number:	18010-0003	Reported:
Colorado NM, 87401	Project Manager:	F.Aragon	13-Feb-18 16:22

Notes and Definitions

SPK2	The spike recovery was outside of QC acceptance limits for the MS and/or MSD of	due to native analyte concentration at 4 times or
	greater than the spike concentration.	

DET	Analyte	DETECTED
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- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference

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Project I	nformatio	n					Chain of Cu	stody												Page _	1	_of	1-
Client: Hallador Project: 6GT Sample Project Manager: F.Aragon Address:					Report Attention				La	b Us	e Or	ly			TA	T		EPA PI	ogra	m			
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Time Sampled	Date Sampled	Matrix	No Containers	Sample I	D			Lab Number	DRO/C	GRO/I	BTEX	VOC b	RCRA	8270	418.1	Chlorid					Rema	irks	
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From: Tim Lovseth tlovseth@halladorenergy.com & Subject: Fw: Below-Grade Tank Closure Documentation Date: February 23, 2018 at 3:21 PM To: Smith, Cory, EMNRD Cory.Smith@state.nm.us

Cc: brian@permitswest.com

Cory

Based on the attached Envirotech risk assessment and report we are requesting permission to backfill the pit at the Horton #3B site. We are still waiting on report and risk assessment for the Horton #3 site from Envirotech. Once we receive the Horton #3 report we will schedule excavation and disposal operations. Tim Lovseth

From: enviro admin <enviroadmin@envirotech-inc.com>
Sent: Friday, February 23, 2018 9:08 AM
To: Tim Lovseth
Cc: Felipe Aragon; Brittany Hall
Subject: Below-Grade Tank Closure Documentation

Good Morning,

Please find attached the Below Grade Tank Closure Documentation for the Horton #3B well site and the Horton #10 well site.

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

Sincerely, Tamara

Environmental Administrator Envirotech, Inc. | 5796 US Highway 64 | Farmington, NM 87401 505.632.0615 Office | 505.632.1865 Fax | 505.947.8326 Cell

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Below Grade Below Grade Tank Cl...3B.pdf Tank Cl...10.pdf

Tim Lovseth

From:	Smith, Cory, EMNRD <cory.smith@state.nm.us></cory.smith@state.nm.us>
Sent:	Tuesday, February 27, 2018 2:15 PM
To:	Tim Lovseth
Cc:	Fields, Vanessa, EMNRD
Subject:	RE: Horton #3B BGT Request

Tim,

OCD approves Hallador's request for alternative closure standards. Please include this email in your Final C-141.

Thank you,

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

From: Tim Lovseth [mailto:tlovseth@halladorenergy.com] Sent: Tuesday, February 27, 2018 11:15 AM To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us> Subject: Horton #3B BGT Request

Cory

Hallador is requesting permission to backfill and close the BGT at the Horton #3B location under the State of New Mexico alternative standard. The TPH concentration from the confirmation sample was 328 mg/kg with no BTEX constituents detected. This suggests the presence of heavy immovable oil. In addition, the site is not located in a wellhead protection area, depth to groundwater is greater than 100 feet and distance to surface water is between 200 and 1000 feet. These site conditions suggest little to no risk to the environment and that no remedial action is warranted.

1

Tim