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

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

APR 01,20

DISTRICT III

Release Notification

Responsible Party

Responsible Party - Hallador Petroleum LLP	OGRID	
Contact Name - Vern Andrews	Contact Telephone 505-320-1763	
Contact email - vern@walsheng.net	Incident # NCS1900849847	
Contact mailing address 7415 E. Main St. Farmington NM 87402		

Location of Release Source

(NAD 83 in decimal degrees to 5 decimal places)

Longitude 107.97335°

Latitude 36.97356°_

Site Name - Horton # 9	Site Type Oil and Gas	
Date Release Discovered 12/3/2018	API# (if applicable) 30-045-22671	

Unit Letter	Section	Township	Range	County	11100D
G	22	32N	11W	San Juan	NMUGD

Surface Owner: State Federal Tribal Private (Name: FEDERAL_

Nature and Volume of Release

🔀 Crude Oil	Volume Released (bbls) Unknown Amount	Volume Recovered (bbls) - 0
Produced Water	Volume Released (bbls) Unknown Amount	Volume Recovered (bbls) - 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls) Unknown Amount	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
The release was discov	was a historical release was probably caused by a proc ered from a soil analysis while closing the below grade &produced water is unknown.	

orm C-141	State of New Mexico	Incident ID
ige 2	Oil Conservation Division	District RP
-		Facility ID
		Application ID
Was this a major	If YES, for what reason(s) does the responsible pa	rty consider this a major release?
release as defined by 19.15.29.7(A) NMAC?		
🗌 Yes 🖾 No		
If YES, was immediate n	otice given to the OCD? By whom? To whom? W	hen and by what means (phone, email, etc)?
		<u> </u>
	Initial Response	se
The responsible	party must undertake the following actions immediately unless th	ey could create a safety hazard that would result in injury
	<u>-</u>	
\square The source of the relation	ease has been stopped.	
The impacted area ha	as been secured to protect human health and the envi	ronment.
Released materials have	ave been contained via the use of berms or dikes, abs	sorbent pads, or other containment devices.
_	ecoverable materials have been removed and manage	•
	d above have <u>not</u> been undertaken, explain why:	
	,,,,	
Per 19 15 29 8 B (4) NM	IAC the responsible party may commence remediati	on immediately after discovery of a release. If remediati
has begun, please attach		ave been successfully completed or if the release occurr
regulations all operators are public health or the environ failed to adequately investig	required to report and/or file certain release notifications a ment. The acceptance of a C-141 report by the OCD does ate and remediate contamination that pose a threat to grou	y knowledge and understand that pursuant to OCD rules and and perform corrective actions for releases which may endanger not relieve the operator of liability should their operations have indwater, surface water, human health or the environment. In ility for compliance with any other federal, state, or local laws
Printed Name: <u>Vern An</u>	drews Title: Production S	Superintendent
Signature:	Date:	

email	vern@walshen

email: vern@walsheng.net Telephone: <u>505-327-4892</u>

OCD Only

Received by: _____ Date: _____

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State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	_
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	(ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗋 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗋 Yes 🖾 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗋 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🔀 No
Did the release impact areas not on an exploration, development, production, or storage site?	T Yes No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.

🛛 Field data

Data table of soil contaminant concentration data

- Depth to water determination
- Determination of water sources and significant watercourses within ¹/₂-mile of the lateral extents of the release
- Boring or excavation logs

Photographs including date and GIS information

- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141 State of New Mexic		co Incident ID
Page 5	Oil Conservation Divi	
		Facility ID
		Application ID
regulations all operators a public health or the enviro failed to adequately invest addition, OCD acceptance and/or regulations. Printed Name:	re required to report and/or file certain releat onment. The acceptance of a C-141 report b ligate and remediate contamination that pos-	e to the best of my knowledge and understand that pursuant to OCD rules and ase notifications and perform corrective actions for releases which may endanger by the OCD does not relieve the operator of liability should their operations have se a threat to groundwater, surface water, human health or the environment. In rator of responsibility for compliance with any other federal, state, or local laws Title: <u>PRODUCTION</u> MANAGEL Date: <u>3/28/19</u> Telephone: <u>505-327-4892</u>
OCD Only		
Received by:		Date:

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: Each of the following items must be	included in the plan.
 Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation points Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.12 Proposed schedule for remediation (note if remediation plan time 	
Deferral Requests Only: Each of the following items must be conf	irmad as part of any request for deferral of remediation
Contamination must be in areas immediately under or around pro deconstruction.	duction equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human health,	the environment, or groundwater.
I hereby certify that the information given above is true and complete rules and regulations all operators are required to report and/or file ce which may endanger public health or the environment. The acceptan- liability should their operations have failed to adequately investigate a surface water, human health or the environment. In addition, OCD ac responsibility for compliance with any other federal, state, or local law	rtain release notifications and perform corrective actions for releases ce of a C-141 report by the OCD does not relieve the operator of and remediate contamination that pose a threat to groundwater, ceptance of a C-141 report does not relieve the operator of
Printed Name:	Title:
Signature:	Date:
email:	Telephone:
OCD Only	
Received by:	Date:
Approved Approved with Attached Conditions of A	pproval 🗌 Denied 🗌 Deferral Approved
Signature:	Date:



State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

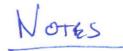
Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15,29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: VERN ANDRALIS Signature: Vern O. Harens	Title: PRODUCTION MANAGER
Signature: Ven O. John Stan	Date: 3/28/19
email: vene wealsheng.net	Telephone: 505-327-4892
OCD Only	
Received by:	Date: 4/1/19
remediate contamination that poses a threat to groundwater, surface	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible
party of compliance with any other federal, state, or local laws and/	or regulations.
Closure Approved by:	Date: 4/9/19
Printed Name:	Title: Environmental Spee.



Hallador BGT Closure Notes for Horton 2A,2B,2C,7 & 9 Well Locations.

11-27-18 – Notified Cory Smith with NMOCD of intent to remove multiple BGT's and sample for closure.

11-30-18 – Removed BGT's and sampled per NMOCD rules. Sample results received on 12-5-18 showed the Horton #9 TPH to be >100 ppm so Cory Smith was notified that the BGT sample did not pass. Initial C-141 for Horton #9 filled out and submitted to NMOCD. (Attached). Horton 2A,2B,2C,7 samples tested below 100 ppm and request for closure submitted to NMOCD.

12-17-18 – Additional excavation on Horton #9 BGT completed, C-138 filled out and submitted to IEI Landfarm, estimated 10 yards. Horton 2A,2B,2C,7 BGT holes backfilled and steel water tanks reset, fences replaced and wells returned to production.

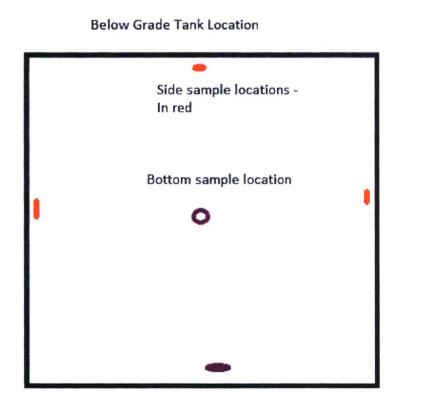
12-20-18 – Michael Dean called Cory Smith with NMOCD and emailed that 2nd sampling desired and 8:30am on 12-21-18 agreed upon.

12-21-18 – Michael Dean & Cory Smith met on location and sampled walls and bottom of BGT excavation, composite samples were taken. Samples submitted to Envirotech Labs for analysis.

1-9-19 – Horton #9 soil sample analysis received. Analysis shows TPH<100ppm, Cory Smith with NMOCD notified that samples are below regulatory limits.

SAMPLE LOCATIONS 1ST SAMPLES- FAILED ANHLYSIS 2ND SAMPLES- OK- <100 PPM

Hallador Petroleum

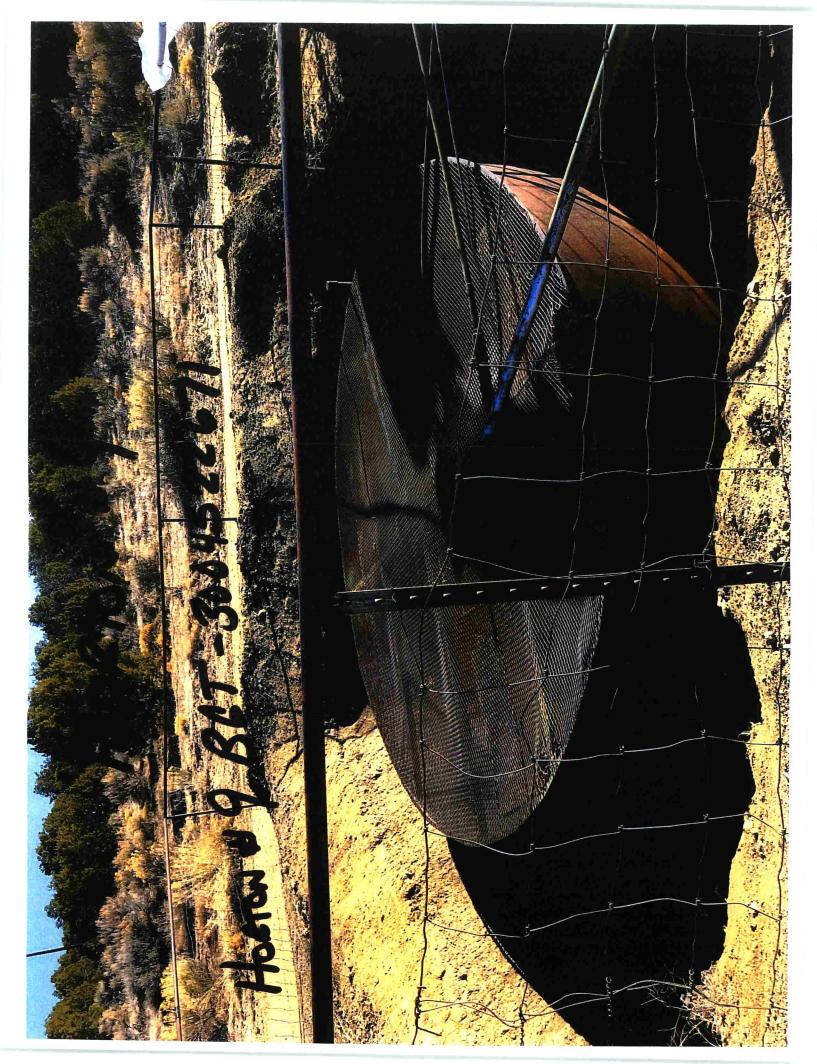


Horton # 9 30-045-22671 G-22-T32N-R11W San Juan, NM N36.97356 W107.97335

Compressor

2 Phase Separater

NORTH



vern@walsheng.net

From:	Smith, Cory, EMNRD <cory.smith@state.nm.us></cory.smith@state.nm.us>
Sent:	Monday, March 18, 2019 10:01 AM
To:	'Tim Lovseth'; Fields, Vanessa, EMNRD
Cc:	Powell, Brandon, EMNRD; vern@walsheng.net; 'John Hampton Jr.'; 'Michael Dean'
Subject:	RE: [EXT] RE: Hallador Horton #9 assigned incident# ncs1900849847
Follow Up Flag:	Follow up
Flag Status:	Flagged

Tim,

OCD has not received the Final C-141 for the release at the Horton #9

The release was discovered on 12/3/2018 the Closure report was due on 3/3/19.

Please submit a final C-141 with all the required attachments per 19.15.29.12 NMAC. No later then 4/1/19

NCS1900849847 HORTON #9 @ 30-045-22671

General Incident Information

Site Name:	HORTON #9
Well:	[30-045-22671] HORTON #009
Facility:	
Operator:	[12672] HALLADOR PETROLEUM LLP
Status:	Closure Not Approved
Туре:	Release Other
District:	Aztec
Incident Location:	G-20-32N-11W Lot 0 FNL 0 FEL
Lat/Long:	36.97356,-107.97335 NAD83

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: Smith, Cory, EMNRD
Sent: Wednesday, January 9, 2019 7:06 AM
To: 'vern@walsheng.net' <vern@walsheng.net>; 'Michael Dean' <michael.dean@walsheng.net>; Fields, Vanessa, EMNRD
<Vanessa.Fields@state.nm.us>; 'John Hampton Jr.' <jdhampton@walsheng.net>
Cc: Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
Subject: RE: [EXT] RE: Hallador Horton #9 assigned incident# ncs1900849847

Vern,

These are assigned incident # because a release occurred at the location. Once Walsh/Hallador submits a final C-141 with all the sample data and required information per 19.15.29 NMAC these incident will be closed with approval.

If you have any other questions please let me know.

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: vern@walsheng.net <vern@walsheng.net>
Sent: Tuesday, January 8, 2019 4:02 PM
To: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; 'Michael Dean' <<u>michael.dean@walsheng.net</u>>; Fields, Vanessa, EMNRD
<<u>Vanessa.Fields@state.nm.us</u>>; 'John Hampton Jr.' <<u>idhampton@walsheng.net</u>>
Cc: Powell, Brandon, EMNRD <<u>Brandon.Powell@state.nm.us</u>>
Subject: [EXT] RE: Hallador Horton #9 assigned incident# ncs1900849847

Cory why are these assigned an incident number with closure not approved? Is this due to exceeding the 100ppm TPH limits per the analysis? Thanks for the clarification help,

Thank you, Vern Andrews 505-320-1763 vern@walsheng.net

From: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>> Sent: Tuesday, January 8, 2019 1:55 PM To: Michael Dean <<u>michael.dean@walsheng.net</u>>; Fields, Vanessa, EMNRD <<u>Vanessa.Fields@state.nm.us</u>>; 'Vern Andrews' <<u>vern@walsheng.net</u>>; 'John Hampton Jr.' <<u>idhampton@walsheng.net</u>> Cc: Powell, Brandon, EMNRD <<u>Brandon.Powell@state.nm.us</u>> Subject: Hallador Horton #9 assigned incident# ncs1900849847

All,

OCD has received the initial C-141 for the release an incident# has been assigned to the release (Highlighted below) please use this for all future communication/submittals

NCS1900849847 HORTON #9 @ 30-045-22671

General Incident Information

#009	
#009	
ROLEUM LI	_P
0 FNL	0 FEL
083	
	0 FNL 083

If you have any additional questions please let me know.

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: Smith, Cory, EMNRD
Sent: Thursday, December 20, 2018 10:02 AM
To: 'Michael Dean' <<u>michael.dean@walsheng.net</u>>; Fields, Vanessa, EMNRD <<u>Vanessa.Fields@state.nm.us</u>>; 'Vern Andrews'
<<u>vern@walsheng.net</u>>; 'John Hampton Jr.' <<u>jdhampton@walsheng.net</u>>
Cc: Powell, Brandon, EMNRD <<u>Brandon.Powell@state.nm.us</u>>
Subject: RE: [EXT] RE: Hallador BGT's

Michael,

Tomorrow at 8:30 AM works for me if this is on federal land please make sure you notify the land owner of the sampling event.

Thanks,

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

3

cory.smith@state.nm.us

From: Michael Dean <<u>michael.dean@walsheng.net</u>> Sent: Thursday, December 20, 2018 10:01 AM To: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; Fields, Vanessa, EMNRD <<u>Vanessa.Fields@state.nm.us</u>>; 'Vern Andrews' <<u>vern@walsheng.net</u>>; 'John Hampton Jr.' <<u>idhampton@walsheng.net</u>> Cc: Powell, Brandon, EMNRD <<u>Brandon.Powell@state.nm.us</u>> Subject: RE: [EXT] RE: Hallador BGT's

That works for me 8:30 am work for you.

From: Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
Sent: Thursday, December 20, 2018 9:36 AM
To: Michael Dean; Fields, Vanessa, EMNRD; Vern Andrews; 'John Hampton Jr.'
Cc: Powell, Brandon, EMNRD
Subject: RE: [EXT] RE: Hallador BGT's

Michael,

OCD Requires 2 business day notification for release confirmation sampling. As I mentioned on the phone earlier it was a possibility that I could make it for sampling today however due to the sampling times and distance between the sites I will not be able to accommodate your request for sampling day. The earliest I can sampling is first thing tomorrow morning would that work for you?

Thanks,

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

From: Michael Dean <<u>michael.dean@walsheng.net</u>> Sent: Thursday, December 20, 2018 8:22 AM To: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; Fields, Vanessa, EMNRD <<u>Vanessa.Fields@state.nm.us</u>>; Vern Andrews <<u>vern@walsheng.net</u>>; 'John Hampton Jr.' <<u>idhampton@walsheng.net</u>> Subject: [EXT] RE: Hallador BGT's

Cory

We have got the Horton #9 listed below ready for the second sampling after the initial samples did not meet the closer numbers could we set a time for this afternoon please.

Thanks!

From: Michael Dean [mailto:michael.dean@walsheng.net]
Sent: Tuesday, November 27, 2018 8:13 AM
To: 'Smith, Cory, EMNRD'; 'Fields, Vanessa, EMNRD'; Vern Andrews; 'John Hampton Jr.'
Subject: Hallador BGT's

Horton 2A API (30-045-23392)

Horton 2C API (30-045-31435) Horton 7 API (30-045-21362) Horton 9 API (30-045-22671) Horton 2B API (30-045-30160) I would like to get these pits pulled and sampled Friday November 30, 2018 at 9:00 am on location at the Horton 2B.

<u>Michael L. Dean</u> Walsh Engineering 505-860-0481

vern@walsheng.net

From:Timothy Cain <tcain@envirotech-inc.com>Sent:Wednesday, January 9, 2019 3:45 PMTo:michael.dean@walsheng.net; Vern AndrewsCc:Walter HinchmanSubject:Hallador, Below Grade Pit / Horton 9, P812047Attachments:P812047 Envirotech2_v15 FINAL 01 09 19 1542.pdf

Mike and Vern,

Thank you for Choosing Envirotech Analytical Laboratory. Attached is the final report for the "Below Grade Pit / Horton 9" project. Let us know if you have any questions.

Envirotech Analytical Laboratory welcomes your feedback. Please visit the survey site below to let us know how we are doing and how we can better serve you.

https://www.surveymonkey.com/r/D5GZ9P5

Tim Cain Envirotech Analytical Laboratory Chemist Office 505-632-0615 <u>tcain@envirotech-inc.com</u> 5796 U.S. Highway 64, Farmington NM 87401



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"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete." – Richard Buckminster Fuller



FINAL SAMPLING. OK TO CLOSIE, A. 1/9/19

Analytical Report

Report Summary

Client: Hallador Chain Of Custody Number: Samples Received: 12/21/2018 12:45:00PM Job Number: 18010-0004 Work Order: P812047 Project Name/Location: Below Grade Pit/ Horton 9 API# 30-045-22671

NCS 1900849847

Report Reviewed By:

Walter Hint

Date:

Date:

1/9/19

1/9/19

Walter Hinchman, Laboratory Director

Tim Cain, Project Manager

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise. Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

5796 US Highway 64, Farmington, NM 87401

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

Ph (505) 632-0615 Fx (505) 632-1865 Ph (970) 259-0615 Fr (800) 362-1879

envirotech-inc.com laboratory@envirotech-inc.com

Page 1 of 10



Γ	Hallador	Project Name:	Below Grade Pit/ Horton 9 API#30-045-22671	
ŀ	1660 Lincoln St Suite 2700	Project Number:	18010-0004	Reported:
ĺ	Denver CO, 80264	Project Manager:	Micheal I. Dean	01/09/19 15:42

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Sides	P812047-01A	Soil	12/21/18	12/21/18	Glass Jar, 4 oz.
Bottom	P812047-02A	Soil	12/21/18	12/21/18	Glass Jar, 4 oz.

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



Hallador	Project Name: Below Grade Pit/ Horton 9 API#30-045-22671							•	
1660 Lincoln St Suite 2700	Project Number: 18010-0004		0-0004				Reported:		
Denver CO, 80264	Project	Project Manager: Micheal I. Dean					01/09/19 15:	01/09/19 15:42	
			Sides						
			47-01 (Se	olid)				<u>.</u> .	
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021				<u> </u>					
Benzene	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Toluene	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		102 %	50	-150	1901002	01/02/19	01/03/19	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1901002	01/02/19	01/03/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1901008	01/02/19	01/07/19	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1901008	01/02/19	01/08/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		107 %	50	-150 .	1901002	01/02/19	01/03/19	EPA 8015D	
Surrogate: n-Nonane		115 %	50	-200	1901008	01/02/19	01/08/19	EPA 8015D	
Anions by 300.0/9056A						•			
Chloride	ND	20.0	mg/L	10	1851030	12/21/18	12/21/18	EPA 300.0/9056A	

PASS

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Hallador	Project Name: Below Grade Pit Project Number: 18010-0004			/ Horton 9 API#30-045-22671					
1660 Lincoln St Suite 2700				0-0004				Reported:	
Denver CO, 80264	Project	Manager:	Mich	ieal I. Dean				01/09/19 15:42	
···· · ·]	Bottom				-		
		· · · ·	47-02 (So	olid)	-				
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021	<u></u>								
Benzene	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Toluene	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1901002	01/02/19	01/03/19	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		102 %	50-	-150	1901002	01/02/19	01/03/19	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1901002	01/02/19	01/03/19	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1901008	01/02/19	01/07/19	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1901008	01/02/19	01/07/19	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		108 %	50-	-150	1901002	01/02/19	01/03/19	EPA 8015D	
Surrogate: n-Nonane		113 %	50-	-200	1901008	01/02/19	01/07/19	EPA 8015D	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/L	10	1851030	12/21/18	12/21/18	EPA 300.0/9056A	

PASS

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Page 4 of 10



Hallador	Project Name:	Below Grade Pit/ Horton 9 API#30-045-22671	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	Reported:
Denver CO, 80264	Project Manager:	Micheal I. Dean	01/09/19 15:42

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

4	Decult	Reporting	T]	Spike	Source	MARC	%REC	מתת	RPD	N-4
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1901002 - Purge and Trap EPA 5030A										
Blank (1901002-BLK1)				Prepared: ()1/02/19 0 A	alyzed: 0	1/02/19 1			_
Benzene	ND	100	ug/kg							
Toluene	ND	. 100								
Ethylbenzene	ND	100	n							
o,m-Xylene	ND	200								
-Xylene	ND	100	н							
Total Xylenes	ND	100								
Total BTEX	ND	100	"							
Surrogate: 4-Bromochlorobenzene-PID	8140		"	8000		102	50-150	_		
LCS (1901002-BS1)				Prepared: 0)1/02/19 0 A	alyzed: 0	1/02/19 2			
Benzene	4180	100	ug/kg	5000		83.6	70-130			
Toluene	4190	100		5000		83.8	70-130			
Ethylbenzene	4220	100	n	5000		84.3	70-130			
o,m-Xylene	8690	200	11	10000		86.9	70-130			
p-Xylene	4290	100	н	5000		85.7	70-130			
Total Xylenes	13000	100		15000		86.5	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8250		#	8000		103	50-150			
Matrix Spike (1901002-MS1)	Sou	rce: P812051-	01	Prepared: 0)1/02/19 0 A	Analyzed: 0	1/02/19 2			
Benzene	4920	100	ug/kg	5000	ND	98.5	54.3-133			
Toluene	4950	100	п	5000	ND	99.0	61.4-130			
Ethylbenzene	5000	100		5000	ND	100	61.4-133			
o,m-Xylene	10200	200	12	10000	ND	102	63.3-131			
p-Xylene	4970	100		5000	ND	99.3	63.3-131			
Total Xylenes	15200	100		15000	ND	101	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	8230		"	8000		103	50-150			
Matrix Spike Dup (1901002-MSD1)	Sou	rce: P812051-	01	Prepared: 0)1/02/19 0 A	analyzed: 0	1/02/19 2			
Benzene	5240	100	ug/kg	5000	ND	105	54.3-133	6.21	20	
Foluene	5240	100	n	5000	ND	105	61.4-130	5.71	20	
Ethylbenzene	5280	100	. "	5000	ND	106	61.4-133	5.55	20	
o,m-Xylene	10800	200		10000	ND	108	63.3-131	5.45	20	
p-Xylene	5240	100		5000	ND	105	63.3-131	5.32	20	
Total Xylenes	16000	100	n	15000	ND	107	63.3-131	5.41	20	

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Hallador	Ргоје	ct Name:	В	elow Grade P	it/ Horton 9)								
1660 Lincoln St Suite 2700	Ргоје	ct Number:	11	8010-0004					Reported:					
Denver CO, 80264	Ргоје	ct Manager:	M	licheal l. Dear	n				01/09/19 15:42					
i i i i i i i i i i i i i i i i i i i	Nonhaloge	nated Org	anics by	7 8015 - Q u	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 1901002 - Purge and Trap EPA 50. Blank (1901002-BLK1)	30A			Prepared: ()1/02/19 0 4	Analyzed: 0	1/02/19 1							
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg											
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.77		n	8.00		110	50-150	<u></u>						
LCS (1901002-BS2)				Prepared: 0)1/02/19 0 /	Analyzed: 0	1/02/19 2							
Gasoline Range Organics (C6-C10)	43.1	20.0	mg/kg	50.0		86.1	70-130							
Surrogate: 1-Chloro-4-fluorobenzene-FID	9.12		"	8.00		114	50-150							
Matrix Spike (1901002-MS2)	Sourc	e: P812051-	01	Prepared: 0)1/02/19 0 A	Analyzed: 0	1/02/19 2							
Gasoline Range Organics (C6-C10)	44.2	20.0	mg/kg	50.0	ND	88.3	70-130							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.71		"	8.00		109	50-150							
Matrix Spike Dup (1901002-MSD2)	Sourc	e: P812051-	01	Prepared: 0	01/02/19 0 4	Analyzed: 0	1/02/19 2			-				
Gasoline Range Organics (C6-C10)	48.8	20.0	mg/kg	50.0	ND	97.6	70-130	9.94	20					
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.83		n	8.00		110	50-150	-						

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Hallador	Pro	ject Name:	В	elow Grade P	it/ Horton 9)								
1660 Lincoln St Suite 2700	Pro	Project Number:							Reported:					
Denver CO, 80264	Pro	ject Manager:	N	licheal I. Dea	n				01/09/19	15:42				
· · · · · · · · ·	Nonhalog	enated Org	anics by	y 8015 - Qu	ality Co	ntrol								
	Eı	wirotech A	Analyti	cal Labor	atory									
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes				
Batch 1901008 - DRO Extraction EPA 3570														
Blank (1901008-BLK1)	Prepared: 01/02/19 1 Analyzed: 01/08/19 1													
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg											
Oil Range Organics (C28-C40+)	ND	50.0	в											
Surrogate: n-Nonane	65.0		"	50.0		130	50-200							
LCS (1901008-BS1)				Prepared: (1/02/19 1 4	Analyzed: (1/07/19 2							
Diesel Range Organics (C10-C28)	460	25.0	mg/kg	500		92.1	38-132							
Surrogate: n-Nonane	56.9		n	50.0		114	50-200	-		·				
Matrix Spike (1901008-MS1)	Sou	rce: P812047-	01	Prepared: (1/02/19 1 /	Analyzed: 0	1/07/19 2							
Diesel Range Organics (C10-C28)	424	25.0	mg/kg	500	ND	84.7	38-132							
Surrogate: n-Nonane	55.8		",	50.0		112	50-200							
Matrix Spike Dup (1901008-MSD1)	Matrix Spike Dup (1901008-MSD1) Source: P812047-01 Prepared:						01/07/19 2							
Diesel Range Organics (C10-C28)	431	25.0	mg/kg	500	ND	86.1	38-132	1.66	20					
Surrogate: n-Nonane	55.9		"	50.0		112	50-200							

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Hallador	Proje	ct Name:	В	elow Grade P	it/ Horton 9)						
1660 Lincoln St Suite 2700	Proje	ct Number:	13	8010-0004					Report	eđ:		
Denver CO, 80264	Proje	ct Manager:	M	licheal l. Dea	n				01/09/19	15:42		
	Anior	ns by 300.()/9056A	- Quality	Control							
١	En	virotech A	Analyti	cal Labor	atory							
		Reporting		Spike	Source		%REC		RPD			
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes		
Blank (1851030-BLK1) Chloride	ND	20.0	mg/L	Prepared &	z Analyzed:	12/21/18 1						
LCS (1851030-BS1)				Prepared &	Analyzed:	12/21/18 1						
Chloride	254	20.0	mg/L	250		102	90-110					
Matrix Spike (1851030-MS1)	Sourc	e: P812047-	01	Prepared &	Analyzed:	12/21/18 1						
Chloride	259	20.0	mg/L	250	ND	104	80-120					
						Source: P812047-01 Prepared & Analyzed: 12/21/18 1						
Matrix Spike Dup (1851030-MSD1)	Sourc	e: P812047-	01	Prepared &	Analyzed:	12/21/181						

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Hallador	Project Name:	Below Grade Pit/ Horton 9	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	Reported:
Denver CO, 80264	Project Manager:	Micheal I. Dean	01/09/19 15:42

Notes and Definitions

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

Methods marked with ** are non-accredited methods. ..

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Page 9 of 10

Project I	nformati	on					Chain	of Cus	tody												Pa	age _/	of
Client: /	HALLAD	DR			1	Re	port Attent	ion				La	b Us	e On	ly			T/	AT		EP	A Progra	am
Project:	BELOW	GRADE	PIT /	HORTON 9	Rep	ort due by:	1-4-19				WO		1	Job	Num	nber		1D	3D	RC	RA	CWA	SDWA
Project N	Manager	MICH	AEL L	DEAN			IN ANDIZ			P	3121	04-	7	180	010	-0	24		X				
	7415						EMA									nd M						Sta	ate
				I.M. 87402			FARMIN		87402	5	50	1										NM CO UT AZ	
	505. 32						320-176			80	8015				0								
Email: /	lichtarel.	DEANG	WALSHE	UL: NET		Email: UERWGE WALSHENG, WET			5.1	by (3021	260	010	300.							X		
Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	12111				Lab Number	DRO/ORO by	GRO/DRO by	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1						Ren	narks
									Number	0	U	ien i	>	2	U	F							
8:45	12-21-18	5D	¢	SIDES			Manage and a second		1	X	¥	X			χ								
8:45	12-21-18	SD	4	BOTTOM					2	1	1	1			1								
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Addition	al Instru	ctions:			11	Ta	2	1.	0	·		L											
(fald and				Alter and the second	V	;) Ju		201CV	DI	1.1.				Sample	s requir	ing them	malpres	ervatio	n must be	receive	d on ice	the day they a	re sampled or
				y of this sample. I am a		impering with or in	Mich	ening the sa	imple location,	, date o	I											on subsequen	
			/ Date	unds for legal action. S	ampled by:				Date		Time							1-	hlle	e On	lu.		
MICHT)EAN			45	Received by:	a Chinth		12.21.	18	Time 12	1	5.	Rece	eive	d on	ice:			N	iiy		
Relinquish	ed by: (Sig	nature)	Date	Time		Redeived by:	(Signation)		Date		Time			T1 AVG	Ter	np°(c (12	× .			<u>T3</u>	
Sample Mat	trix: S - Soil	Sd - Solid. S	ig - Sludge	A - Aqueous, O - Ot	ner				Containe	r Tvn	e: P -	glas	s. p -	-		-	g - ar	mber	glass	. V - V	/OA	and the same contract	
				ults are reported un		rrangements are	e made. Hazard	ous sampl														nalysis of t	ne above
- >				bora			bility of the labo						-						F				
	en	vir	OIC	ech-			5796 US Highway 6	4, Farmington	NM 87401					Ph (505)	632-061	5 Fx (5	05) 632-	1865					envirotech-
-			-	ooratory			Three Springs - 65			go, (0 81	301					15 Fr (80						laborator	y envirotech

vern@walsheng.net

From: Sent: To: Subject: Attachments: Michael Dean <michael.dean@walsheng.net> Monday, January 21, 2019 3:03 PM Vern Andrews C-138 Horton 9 20181217162227946.pdf

-----Original Message-----From: trucklogin@industrialecosystems.com [mailto:trucklogin@industrialecosystems.com] Sent: Monday, January 21, 2019 3:01 PM To: michael.dean@walsheng.net Subject: FW: ricoh scanner

Thank you,

#49 CR 3150 Aztec, NM 87410 Phone: (505) 632-1782 Fax: (505) 632-1876

C-138

-----Original Message-----From: walsh@walsheng.net <walsh@walsheng.net> Sent: Monday, December 17, 2018 2:22 PM To: IEI WASTE DISPOSAL <trucklogin@industrialecosystems.com>; Michael Dean <michael.dean@walsheng.net> Subject: ricoh scanner

This E-mail was sent from "Ricohback" (MP C3003).

Scan Date: 12.17.2018 16:22:27 (-0500) Queries to: walsh@walsheng.net

This email has been checked for viruses by AVG. https://www.avg.com

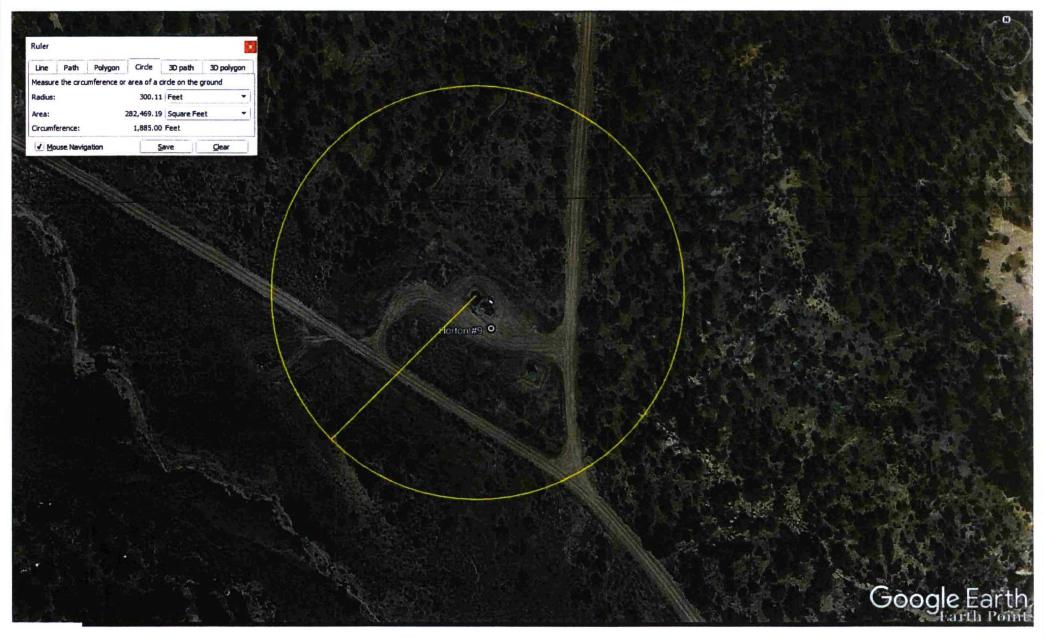
District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 *Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

		TO ACCEPT SOLID WAS	STE
1. Generator Name and Address Hallador Petroleum Suite	: 2700, 1660 Lincoln Street ,	Denver Co. 80264	
2. Originating Site: Horton 9 Sec 22 letter G T32N R	11W		
3. Location of Material (Street Addre Sec 22 letter G T32N R11W	ess, City, State or ULSTR):		
4. Source and Description of Waste: Produced oil and water from a leaking pr Estimated Volume 10 yd ³ / <u>bbls</u> Know	oduction pit	oduction Equipment the operator at the end of the haul)	yd³ / bbls
I, Michael Dean Mohar, repr PRINT & SIGN NAME	esentative or authorized age nservation and Recovery Ac	STATEMENT OF WASTE STATUS Hallador Petroleum COMPANY NAME t (RCRA) and the US Environmental Pro opropriate classification)	do hereby tection Agency's July 1988
		exploration and production operations an $quency \square Monthly \square Weekly X \boxtimes F$	
characteristics established in RCRA	regulations, 40 CFR 261.21-	s that does not exceed the minimum stand 261.24, or listed hazardous waste as defi d to demonstrate the above-described was	ned in 40 CFR, part 261,
MSDS Information RCRA Haz	ardous Waste Analysis	Process Knowledge 🗌 Other (Provide	e description in Box 4)
I, <u>Mucha</u> , repr Generator Signature complete the required testing/sign the Ge I,, repr representative samples of the oil field wa have been found to conform to the specifi of the representative samples are attached	esentative for <u>Hallador Pe</u> nerator Waste Testing Certif esentative for <u>ste have been subjected to th</u> ic requirements applicable to	fication. do h he paint filter test and tested for chloride o landfarms pursuant to Section 15 of 19.	brize JFJ Landfarm to ereby certify that content and that the samples 15.36 NMAC. The results
19.15.36 NMAC. 5. Transporter: 3D Services			
OCD Permitted Surface Waste Manage			
Name and Facility Permit #: JFJ Landfarm	•	Inc. / NM 01-0010B	
Address of Facility: # 49 CR 3150 Aztec, N	M 87410		
Method of Treatment and/or Disposal:			
Evaporation Inject	ction Treating Plant	Landfarm Landfill Oth	er
Waste Acceptance Status:	APPROVED	DENIED (Must Be Maintain	ned As Permanent Record)
PRINT NAME:	TITLI	3:	DATE:
SIGNATURE:	ŋ	ELEPHONE NO.:	

Surface Waste Management Facility Authorized Agent

DISTANCE TO APROYO > 300'





Q64: NE

Q16: SW

Q4: NE

New Mexico Office of the State Engineer Water Column/Average Depth to Water

Township: 32N

Range: 11W

No records found.

Basin/County Search:			•
Basin: San Juan	County: San Juan	Subbasin: Animas River	
PLSS Search:			

Section(s): 22

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/27/19 4:42 PM

District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Hallador Petroleum LLP	OGRID	
Contact Name Vern Andrews	Contact Telephone 505-320-1763	
Contact email vern@walsheng.net	Incident # (assigned by OCD)	
Contact mailing address 7415 E. Main St. Farmington NM 87402		

Location of Release Source

Latitude 36.97356°_

Longitude 107.97335°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Horton # 9	Site Type Oil and Gas
Date Release Discovered 12/3/2018	API# (if applicable) 30-045-22671

Unit Letter	Section	Township	Range	County
G	22	32N	11W	San Juan

Surface Owner: State Federal Tribal Private (Name: FEDERAL_____

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) Unknown Amount	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls) Unknown Amount	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release- This was a historical release was probably caused by a produced water pit overflowed or something to that nature. The release was discovered from a soil analysis while closing the below grade produced water pit. With this being a historical release, the amount of condensate/produced water is unknown.



Form C-141	State of New Mexico	In a land TD
Page 2 -	Oil Conservation Division	Incident ID
1 ugo 2		District RP Facility ID
		Application ID
Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible par	ty consider this a major release?
🗌 Yes 🛛 No		
If YES, was immediate n	otice given to the OCD? By whom? To whom? Wh	en and by what means (phone, email, etc)?
The responsible	Initial Respons party must undertake the following actions immediately unless the	
The source of the rele	ease has been stopped.	
The impacted area ha	is been secured to protect human health and the enviro	onment.
Released materials ha	ave been contained via the use of berms or dikes, abso	orbent pads, or other containment devices.
All free liquids and re	ecoverable materials have been removed and managed	d appropriately.
If all the actions describe	d above have <u>not</u> been undertaken, explain why:	

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Malia Villers	Title: <u>Production Tech.</u>
Signature: Malia Villes	Date: 12/21/2018
email:_malia@walsheng.net	Telephone: <u>505-327-4892</u>
OCD Only	
Received by:	Date:



INITIAL SAMPLES-HORTON 9- NO PASS HORTON 2B- PASS HORTON 2C- PASS HORTON 7- PASS HORTON 2A- PASS

Analytical Report

Report Summary

Client: Hallador Chain Of Custody Number: Samples Received: 11/30/2018 12:30:00PM Job Number: 18010-0004 Work Order: P811087 Project Name/ Location: Below Grade Pits Horton 9,2B,2C,7,2A

Report Reviewed By:

Walter Hinde

Date:

12/5/18

Walter Hinchman, Laboratory Director

Tim Cain, Project Manager

Date: 12/5/18



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise. Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

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Hallador	Project Name:	Below Grade Pits	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	Reported:
Denver CO, 80264	Project Manager:	Micheal I. Dean	12/05/18 16:53

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Horton #9	P811087-01A	Soil	11/30/18	11/30/18	Glass Jar, 4 oz.
Horton 2B	P811087-02A	Soil	11/30/18	11/30/18	Glass Jar, 4 oz.
Horton 2C	P811087-03A	Soil	11/30/18	11/30/18	Glass Jar, 4 oz.
Horton 7	P811087-04A	Soil	11/30/18	11/30/18	Glass Jar, 4 oz.
Horton 2A	P811087-05A	Soil	11/30/18	11/30/18	Glass Jar, 4 oz.

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Hallador	Project Name: Project Number:		Belo	Below Grade Pits					
1660 Lincoln St Suite 2700			1801	0-0004				Reported:	
Denver CO, 80264	Project Manager:		Micheal I. Dean					12/05/18 16:	53
<u></u> , <u>, , , , , , , , , , , , , , , , , , </u>	·····			ton #9 7-01 (Solid)	API# 3	0-045-22671			
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		101 %	50	-150	1848028	11/30/18	12/01/18	EPA 8021B	
Nonhalogenated Organics by 8015								<u> </u>	
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848028	11/30/18	12/01/18	EPA 8015D	
Diesel Range Organics (C10-C28)	808	50.0	mg/kg	2	1848029	11/30/18	12/03/18	EPA 8015D	
Oil Range Organics (C28-C40+)	998	100	mg/kg	2	1848029	11/30/18	12/03/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		103 %	50	-150	1848028	11/30/18	12/01/18	EPA 8015D	
Surrogate: n-Nonane		102 %	50	-200	1848029	11/30/18	12/03/18	EPA 8015D	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1849004	12/04/18	12/04/18	EPA 300.0/9056A	

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Hallador	Project	Belo	w Grade Pit	s						
1660 Lincoln St Suite 2700	Project Number:		1801	18010-0004				Reported:		
Denver CO, 80264	Project	Manager:	Mich	eal l. Dean				12/05/18 16:	53	
		H	orton 2B	AF	PI# 30-045	-30160				
			87-02 (So	olid)						
		Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
Volatile Organics by EPA 8021										
Benzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Toluene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Ethylbenzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
p,m-Xylene	ND	200	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
o-Xylene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Total Xylenes	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Total BTEX	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Surrogate: 4-Bromochlorobenzene-PID		101 %	50	-150	1848028	11/30/18	12/01/18	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848028	11/30/18	12/01/18	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848029	11/30/18	12/04/18	EPA 8015D		
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848029	11/30/18	12/04/18	EPA 8015D		
Surrogate: 1-Chloro-4-fluorobenzene-FID		102 %	50-	-150	1848028	11/30/18	12/01/18	EPA 8015D		
Surrogate: n-Nonane		94.8 %	50	-200	1848029	11/30/18	12/04/18	EPA 8015D		
Anions by 300.0/9056A										
Chloride	20.3	20.0	mg/kg	1	1849004	12/04/18	12/04/18	EPA 300.0/9056A		

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Hallador	Projec	t Name:	Belo	w Grade Pits	3					
1660 Lincoln St Suite 2700	Projec	t Number:	1801	0-0004				Reported:		
Denver CO, 80264	Projec	t Manager:	Mich	eal I. Dean				12/05/18 16:	53	
	···	H	orton 2C	API#	30-045-3	1435				
		P8110	87-03 (So	olid)						
		Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
Volatile Organics by EPA 8021										
Benzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Toluene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Ethylbenzene	ND	100	ug/kg	1	1848028 `	11/30/18	12/01/18	EPA 8021B		
p,m-Xylene	ND	200	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
o-Xylene	ND	. 100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Total Xylenes	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Total BTEX	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B		
Surrogate: 4-Bromochlorobenzene-PID		101 %	50-	-150	1848028	11/30/18	12/01/18	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848028	11/30/18	12/01/18	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848029	11/30/18	12/03/18	EPA 8015D		
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848029	11/30/18	12/03/18	EPA 8015D		
Surrogate: 1-Chloro-4-fluorobenzene-FID		102 %	50-	-150	1848028	11/30/18	12/01/18	EPA 8015D	••	
Surrogate: n-Nonane		93.0 %	50-	-200	1848029	11/30/18	12/03/18	EPA 8015D		
Anions by 300.0/9056A										
Chloride	ND	20.0	mg/kg	1	1849004	12/04/18	12/04/18	EPA 300.0/9056A		

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Hallador	Project	Name:	Belov	w Grade Pits	6				
1660 Lincoln St Suite 2700	Project	Number:	1801	0-0004				Reported:	
Denver CO, 80264	• Project	Manager:	Mich	eal I. Dean				12/05/18 16:	53
		H	forton 7	API	# 30-045-2	21362			
		P8110	87-04 (So	lid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		101 %	50-	-150	1848028	11/30/18	12/01/18	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848028	11/30/18	12/01/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848029	11/30/18	12/03/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848029	11/30/18	12/03/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		103 %	50-	-150	1848028	11/30/18	12/01/18	EPA 8015D	
Surrogate: n-Nonane		91.5 %	50-	-200	1848029	11/30/18	12/03/18	EPA 8015D	
Anions by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1849004	12/04/18	12/04/18	EPA 300.0/9056A	

PA55

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Hallador	Project	Name:	Belov	w Grade Pits	5				
1660 Lincoln St Suite 2700	Project	Number:	1801	0-0004			Reported:		
Denver CO, 80264	Project	Manager:	Mich	eal I. Dean				12/05/18 16:	53
		H	orton 2A	API#	30-045-23	3392	-		
			87-05 (So	lid)					
		Reporting							·
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848028	11/30/18	12/01/18	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		101 %	50-	-150	1848028	11/30/18	12/01/18	EPA 8021B	
Nonhalogenated Organics by 8015	· · ·								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848028	11/30/18	12/01/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848029	11/30/18	12/03/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848029	11/30/18	12/03/18	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		104 %	50-	150	1848028	11/30/18	12/01/18	EPA 8015D	· · · · ·
Surrogate: n-Nonane		97.5 %	50-	200	1848029	11/30/18	12/03/18	EPA 8015D	
Anions by 300.0/9056A					·····		/		
Chloride	ND	20.0	mg/kg	1	1849004	12/04/18	12/04/18	EPA 300.0/9056A	

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Hallador	Project Name:	Below Grade Pits	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	Reported:
Denver CO, 80264	Project Manager:	Micheal I. Dean	12/05/18 16:53

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1848028 - Purge and Trap EPA 5030A										
Blank (1848028-BLK1)				Prepared: 1	1/30/18 I A	nalyzed: 1	2/01/18 0			
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	1 00								
p,m-Xylene	ND	200								
o-Xylene	ND	100								
Total Xylenes	ND	100								
Total BTEX	ND	100	*							
Surrogate: 4-Bromochlorobenzene-PID	8200		"	8000		103	50-150			
LCS (1848028-BS1)				Prepared: I	1/30/18 1 A	nalyzed: 1	2/01/18 0			
Benzene	5360	100	ug/kg	5000		107	70-130			
Toluene	5390	100	"	5000		108	70-130			
Ethylbenzene	5430	100	n	5000		109	70-130			
p,m-Xylene	11100	200	"	10000		111	70-130			
o-Xylene	5370	100	"	5000		107	70-130			
Total Xylenes	16500	100	"	15000		110	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8170			8000		102	50-150			
Matrix Spike (1848028-MS1)	Sou	rce: P811087-	01	Prepared: 1	1/30/18 1 A	analyzed: 1	2/01/18 1			
Benzene	5350	100	ug/kg	5000	ND	107	54.3-133			
Toluene	5360	100	"	5000	ND	107	61.4-130			
Ethylbenzene	5390	100		5000	ND	108	61.4-133			
p,m-Xylene	11000	200		10000	ND	110	63.3-131			
o-Xylene	5300	100	n	5000	ND	106	63.3-131			
Total Xylenes	16300	100	n	15000	ND	109	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	8010		n	8000		100	50-150			
Matrix Spike Dup (1848028-MSD1)	Sou	rce: P811087-	01	Prepared: 1	1/30/18 1 A	nalyzed: 1	2/01/18 1			
Benzene	5390	100	ug/kg	5000	ND	108	54.3-133	0.675	20	
Toluene	5400	100	н	5000	ND	108	61.4-130	0.825	20	
Ethylbenzene	5430	100	н	5000	ND	109	61.4-133	0.780	20	
p,m-Xylene	11100	200		10000	ND	111	63.3-131	0.645	20	
o-Xylene	5350	100	n	5000	ND	107	63.3-131	0.865	20	
Total Xylenes	16400	100	н	15000	ND	109	63.3-131	0.717	20	
Surrogate: 4-Bromochlorobenzene-PID	8010		η	8000		100	50-150			

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Hallador	Proje	ct Name:	В	elow Grade P	'its						
1660 Lincoln St Suite 2700	Proje	ct Number:	1	8010-0004					Report	ed:	
Denver CO, 80264	Proje	ct Manager:	N	licheal I. Dear	n				12/05/18 16:53		
	Nonhaloge	nated Org	anics by	y 8015 - Qu	uality Co	ntrol					
	En	virotech A	Analyti	cal Labor	atory						
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 1848028 - Purge and Trap EPA 50	30A										
Blank (1848028-BLK1)		Prepared: 11/30/18 1 Analyzed: 12/01/18 0									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg								
Surrogate: I-Chloro-4-fluorobenzene-FID	8.21		"	8.00		103	50-150				
LCS (1848028-BS2)				Prepared: 1	1/30/18 1 A	Analyzed: 1	2/01/18 0				
Gasoline Range Organics (C6-C10)	50.6	20.0	mg/kg	50.0		101	70-130				
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.44		n	8.00	·····	105	50-150				
Matrix Spike (1848028-MS2)	Sourc	e: P811087-	01	Prepared: 1	1/30/18 1 A	Analyzed: 1	2/01/18 1				
Gasoline Range Organics (C6-C10)	49.3	20.0	mg/kg	50.0	ND	98.5	70-130	•			
Surrogate: 1-Chloro-4-fluorobenzene-FID	· 8.39		"	8.00		105	50-150				
Matrix Spike Dup (1848028-MSD2)	Sourc	e: P811087-	01	Prepared: 1	1/30/18 1 A	nalyzed: 1	2/01/18 1				
Gasoline Range Organics (C6-C10)	50.3	20.0	mg/kg	50.0	ND	101	70-130	2.14	20		
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.31		"	8.00		104	50-150				

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Hallador	Project Name:	Below Grade Pits	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	Reported:
Denver CO, 80264	Project Manager:	Micheal I. Dean	12/05/18 16:53

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1848029 - DRO Extraction EPA 3570									<u> </u>	
Blank (1848029-BLK1)				Prepared: 1	1/30/18 1 A	Analyzed: 1	2/03/18 1			
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0								
Surrogate: n-Nonane	44.9		"	50.0		89.7	50-200			
LCS (1848029-BS1)				Prepared: 1	1/30/18 1 A	Analyzed: 1	2/03/18 1			
Diesel Range Organics (C10-C28)	480	25.0	mg/kg	500		96.1	38-132			
Surrogale: n-Nonane	45.5		'n	50.0		91.0	50-200			
Matrix Spike (1848029-MS1)	Sou	rce: P811087-	01	Prepared: 1	1/30/18 1 A	8 1 Analyzed: 12/03/18 1				
Diesel Range Organics (C10-C28)	1310	50.0	mg/kg	500	808	100	38-132			
Surrogate: n-Nonane	53.8		"	50.0		108	50-200			
Matrix Spike Dup (1848029-MSD1)	Sou	rce: P811087-	01	Prepared: 1	1/30/18 1 A	nalyzed: I	2/03/18 1			
Diesel Range Organics (C10-C28)	1260	50.0	mg/kg	. 500	808	90.7	38-132	3.68	20	
Surrogate: n-Nonane	54.8	······	"	50.0		110	50-200			

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- -

Hallador	Project Name:	Below Grade Pits	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	Reported:
Denver CO, 80264	Project Manager:	Micheal I. Dean	12/05/18 16:53

Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

	-	Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1849004 - Anion Extraction EPA 30	0.0/9056A									
Blank (1849004-BLK1)				Prepared: 1	2/04/18 0 4	Analyzed: 1	2/04/18 1			
Chloride	ND	20.0	mg/kg							
LCS (1849004-BS1)				Prepared: I	2/04/18 0 /	Analyzed: I	2/04/18 1			
Chloride	256	20.0	mg/kg	250		102	90-110			
Matrix Spike (1849004-MS1)	Sour	ce: P811080-	01	Prepared: I	2/04/18 0 /	analyzed: 1	2/04/18 1			
Chloride	1300	20.0	mg/kg	250	1460	NR	80-120			SPK2
Matrix Spike Dup (1849004-MSD1)	Sour	ce: P811080-	01	Prepared: 1	2/04/18 0 4	Analyzed: 1	2/04/18 1			
Chloride	1560	20.0	mg/kg	250	1460	40.6	80-120	18.3	20	SPK2

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 a envirotech-inc.com



Hallador	Project Name:	Below Grade Pits	
1660 Lincoln St Suite 2700	Project Number:	18010-0004	Reported:
Denver CO, 80264	Project Manager:	Micheal I. Dean	12/05/18 16:53

Notes and Definitions

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

 DET
 Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

** Methods marked with ** are non-accredited methods.

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Project Information						Chain of Custody																Page of				
	HALLAD				_	Report Attention					Lab Use Only								T,	AT		am				
Project: B4LOW BRADE PITS Project Manager: MICHARL & DEAN											WO			Job Number				1D		RC	RA	CWA	SDWA			
Project I	Manager	MICHI	tel L	DEAN	A	ttention	n: DER	en ANS	DREWS		P8	3110	187		180	010-	∞	34		X						
	: 7415					ddress:	7415	EMA	N						Analy				d				St	ate		
City, Sta	te, Zip F,	ARMINUT	TON N	M. 874	02 02	ity, Stat	te, Zip	FARM	INDION	N,MO	5	5		Ι									NM CC	UTA		
Phone:	505-86	0-0481	/		P	hone: 3	505-32	0-1763	3		80.	80:				0.							X			
Email:	MICHAEL	, DERNG	A WALSH	ENG: NE	TE	mail: 4	ERNER	WALSH	ENG. NE	T	0 p	0 pl	802	8260	010	300	-						K.			
Time Sampled	Date Sampled	Matrix	No Containers	Sample I	D					Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1						Rei	marks		
9:00gm	11-30.18 1 2- 30-18	5	6	#9						1	X	X	X			x						1				
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, ,	11-30.18 1-30-18	5	G	20						3																
	11.30-18	S	G	7						4																
10:45	11-30-18	5	6	ZĄ						5	T	T	L			L										
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Addition	nal Instru	ctions:							V.	i ile i	AC	-00	le	r												
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	ed by: (Sign	nature)	Date	0070	12:30p		ved by: (Signature))	Date	10	Time	-11	2	T1	erver	101	ice:		1	1.4		T3			
quist						, incore		-Brierore)							AVG	Ter	np°(1.5			
Sample Mat	trix: S - Soil, !	Sd - Solid, S	g - Sludge, A	- Aqueous	O-Other					Containe	r Tvp	e: g -	glas	s. p -	Contraction of the local division of the loc	Changed Harris Booker	INVESTIGATION IN CONTRACTOR	ACCOUNTS OF A DESCRIPTION OF	nber	glass	V-1	/OA	A	and the construction		
					orted unless oth	er arrange	ements are	e made. Ha	zardous san							-							analysis of	the above		
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3	en								away 64, Farmingto 1 • 65 Mercado Stre	on, NM 87401 et, Suite 115, Duran	qo, (0 813	301			Ph (505) Ph (970)								laborato	envirotech ySenvirotech		