District I 1 1625 N. French Dr., Hobbs, NM 88240
District II 1301 W. Grand Avenue, Artesia, NM 88210
District III 1000 Rio Brazos Road, Aztec, NM 87410
District IV

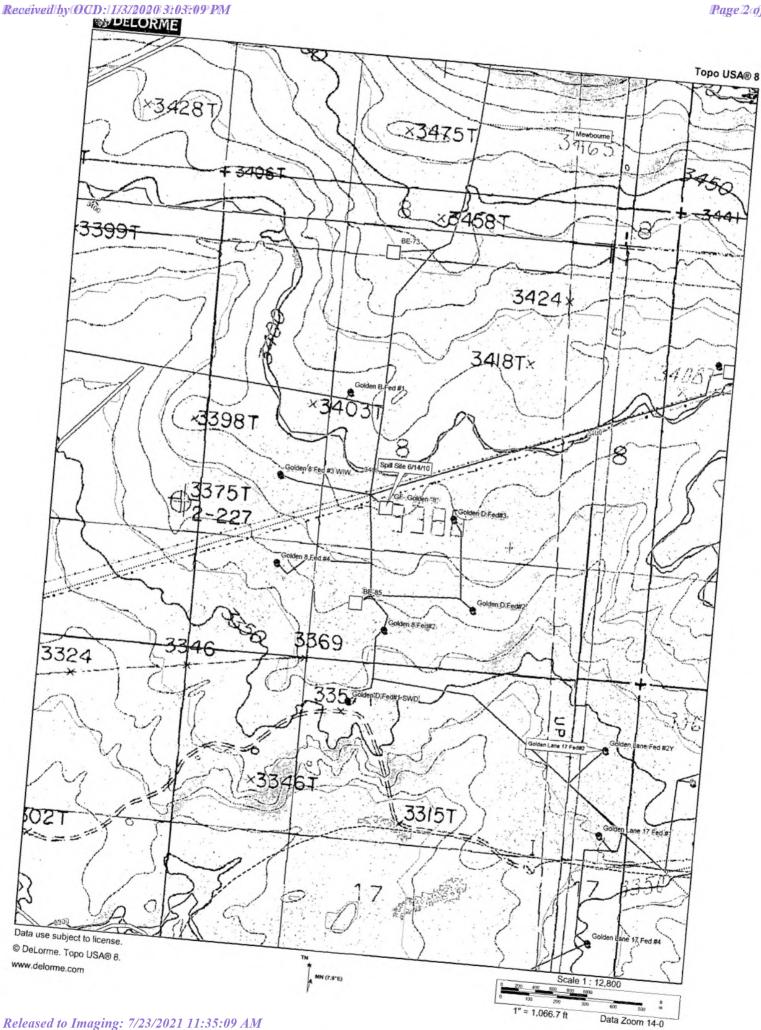
State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

JUN **2 2** 2010Submit 2 Copies to appropriate District Office in accordance With Rule 116 on back side of form

	-2693		Rel	ease Notifica	ation			ction	1			
	35646					<b>OPERA</b>	FOR		✓ Initial	al Report		Final Re
Name of Company BOPCO, L.P. 260737				Contact Tony Savoie								
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220						No. 432-556-87	30					
Facility Na	me: Golde	n 8 Federal I	Battery #	1		Facility Typ	e E&P					
Surface Owner Federal Mineral Owner				wner F	ederal			Lease N	No.			
				LOCA	TION	OF REI	LEASE					
Unit Letter	Section	Township	Range			South Line	Feet from the	East/	West Line	County		-
K	8	218	29E							Eddy		
			1	Latitude_N 32.49	_			147				
Гуре of Rele	ase: Crude	oil		NAT	URE		Release: 90 Bbls	s of	Volume I	Recovered:	80 bbls o	of crude
Source of Re	lease: Drain	n line connect	ion on the	back of a 500 bbl.	tank	Date and H Unknown	lour of Occurrence	ce		Hour of Di	scovery	
Was Immedi	ate Notice (					If YES, To			6/14/10	o.30 a.m.	- 9	
D 11/1 C =			Yes L	No Not Rec	quired		IOCD on call ope					
By Whom? T Was a Water							lour 6/14/10 9:2					
was a water	course Rea		Yes 🗵	No		II YES, VO	olume Impacting	the wat	ercourse.			
f a Watercou	urea was Im	pacted, Descr										
		pacted, Descr	ribe Fully.	•								
	ise of Probl	em and Reme	edial Actio	* on Taken.* The drai ed, inspected and re								e remaini
Describe Arcaround the tanders of the Site remains a public health should their cortice or the environment.	ase of Problek was remo  a Affected anks. The final from the diation for the diation of the environment. In a	lem and Reme ved, the tank and Cleanup ee standing flu irea will be sa re the crude oil information g are required to ronment. The	edial Action was cleaned Action Taluids were impled to complete spill will iven above to report a exceptane adequately OCD acceptance.	n Taken.* The drai	fluid affivily satuextent; a D guide ete to the elease nort by the emediate	fected an area trated soil is it a remediation clines for leak the best of my otifications are e NMOCD me e contaminati	a of approximatel in the process of by plan along with a sand spills.  knowledge and by the plan along with a sand spills.  knowledge and by the process of the plan along with a sand spills.  knowledge and by the plan along the process of the plan along with a sand spills.	ly 2,000 being re a new co understa ctive act Report of reat to g	sq. ft inside moved and containment and that pur- tions for rel does not rel ground wate	e the earthe placed on p plan will be suant to NN leases which ieve the op- r, surface w	n contain plastic. The submitted MOCD run h may enterator of vater, hur	nment he area red. lles and danger liability nan healt
Describe Arcaround the tanders of the Site rem I hereby certifications a public health should their cortine environments.	ase of Problek was remo  a Affected anks. The final from the diation for the diation of the environment. In a	lem and Reme ved, the tank and Cleanup ee standing fla trea will be sa the crude oil information g are required to ronment. The nave failed to addition, NMO	edial Action was cleaned Action Taluids were impled to complete spill will iven above to report a exceptane adequately OCD acceptance.	on Taken.* The draited, inspected and recken.*The released fremoved. The heaviletermine vertical effollow the NMOCI is true and completed in the certain rece of a C-141 report investigate and re	fluid affivily satuextent; a D guide ete to the elease nort by the emediate	fected an area trated soil is it a remediation clines for leak the best of my otifications are e NMOCD me e contaminati	a of approximatel in the process of by plan along with a sand spills.  knowledge and by the plan along with a sand spills.  knowledge and by the process of the plan along with a sand spills.  knowledge and by the plan along the process of the plan along with a sand spills.	ly 2,000 being re a new co understa ctive act Report" of reat to g	sq. ft inside moved and containment and that puritions for rel does not rel ground water sibility for containing the same and the same	e the earthe placed on p plan will be suant to NN leases which ieve the op- or, surface we compliance	n contair blastic. The submitt MOCD ruth may enerator of vater, hur with any	nment he area red. lles and danger liability nan healt
Describe Arcaround the tanders of the Site rem I hereby certifications a public health should their corthe environments.	ase of Problek was remote a Affected anks. The frontainment a ediation for ify that the II operators or the environment. In a problem, or local large	lem and Remeved, the tank and Cleanup ee standing flucture will be sain the crude oil information guare required to ronment. The nave failed to addition, NMC was and/or reg	edial Action was cleaned Action Taluids were impled to complete spill will iven above to report a exceptane adequately OCD acceptance.	on Taken.* The draited, inspected and recken.*The released fremoved. The heaviletermine vertical effollow the NMOCI is true and completed in the certain rece of a C-141 report investigate and re	fluid affirily saturextent; a D guide ete to the lease nort by the emediate report defends a few control of the	by replacing fected an area trated soil is it a remediation elines for leak the best of my otifications at e NMOCD m e contamination oes not reliev	a of approximatel in the process of beginning that along with a sand spills.  knowledge and the process of beginning that process of beginning that process arked as "Final Report of the operator of OIL CON	ly 2,000 being re a new coundersta ctive act Report" of reat to grespons	sq. ft inside moved and containment and that puritions for rel does not rel ground water sibility for containing the same and the same	e the earthe placed on p plan will be suant to NN leases which ieve the op- or, surface we compliance	n contair blastic. The submitt MOCD ruth may enerator of vater, hur with any	he area red. les and danger liability
Describe Arcaround the taninside the con The Site remains a public health should their control the environment of the environme	ase of Problek was remote a Affected anks. The fination for if that the ll operators or the environment. In a period of the control of the co	lem and Remeved, the tank and Cleanup ee standing flucture will be sare the crude oil information get are required to addition, NMC was and/or regional and the same failed to addition, NMC was and/or regional and the same failed to addition, NMC was and/or regional and the same failed to addition, NMC was and/or regional and the same failed to addition, NMC was and failed to addition.	edial Action was cleaned Action Taluids were impled to complete spill will iven above to report a exceptane adequately OCD acceptance.	on Taken.* The draited, inspected and recken.*The released fremoved. The heaviletermine vertical effollow the NMOCI is true and completed in the certain rece of a C-141 report investigate and re	fluid affirily saturextent; a D guide ete to the lease nort by the emediate report defends a few control of the	by replacing fected an area trated soil is it a remediation elines for leak the best of my otifications at e NMOCD m e contamination oes not reliev	a of approximatel in the process of by plan along with a sand spills.  knowledge and the process of bright along with a sand spills.  knowledge and the process of bright along arked as "Final Report of the process of	ly 2,000 being re a new coundersta ctive act Report of reat to grespons	sq. ft inside moved and containment and that puritions for rel does not rel ground water sibility for containing the same and the same	e the earthe placed on p plan will be suant to NN leases which ieve the op- or, surface we compliance	n contair blastic. The submitt MOCD ruth may enerator of vater, hur with any	nment he area red. lles and danger liability nan healt
Describe Arcaround the taninside the con The Site remains a public health should their control the environment of the environme	ase of Problek was remote a Affected anks. The fination for if that the ll operators or the environment. In a period of the control of the co	lem and Remeved, the tank and Cleanup ee standing flucture will be sare the crude oil information get are required to addition, NMC was and/or regional and the same failed to addition, NMC was and/or regional and the same failed to addition, NMC was and/or regional and the same failed to addition, NMC was and/or regional and the same failed to addition, NMC was and failed to addition.	Action Tai uids were mpled to despill will iven above to report a elecceptane adequately OCD accepulations.	on Taken.* The draited, inspected and recken.*The released fremoved. The heaviletermine vertical effollow the NMOCI is true and completed in the certain rece of a C-141 report investigate and re	fluid affirily saturextent; a D guide ete to the elease nort by the emediate report de	by replacing fected an area trated soil is it a remediation elines for leak the best of my otifications at e NMOCD m e contamination oes not reliev	a of approximatel in the process of the plan along with its and spills.  knowledge and the process of the plan along with its and spills.  knowledge and the process of the plan along with its and spills.  knowledge and the process of the plan along with its and spills.  knowledge and the process of the plan along with its and perform correct arked as "Final Right on that pose a three the operator of the plan along with its answer.  OIL CON  District Supervisions Signed By	ly 2,000 being re a new coundersta ctive act Report" of respons	sq. ft inside moved and containment and that puritions for rel does not rel ground water sibility for containing the same and the same	the earther placed on plac	n contair blastic. The submitt MOCD ruth may enerator of vater, hur with any	nment he area red. lles and danger liability nan healt
Describe Arcaround the taning the control of the Site rem I hereby certific gulations a public health should their control of the environmental, state.  Signature:  Printed Name	ase of Problek was remote a Affected anks. The fination for ify that the II operators or the environment. In a portion of the intervention of the	lem and Remeved, the tank and Cleanup ee standing flucture will be sare the crude oil information get are required to ronment. The nave failed to addition, NMC was and/or region of the crude of the crude oil	Action Tai uids were mpled to despill will iven above to report at e acceptant adequately OCD accepulations.	on Taken.* The draited, inspected and recken.*The released fremoved. The heaviletermine vertical effollow the NMOCI is true and completed in the certain rece of a C-141 report investigate and re	fluid affirily saturextent; a D guide ete to the elease nort by the emediate eport de	by replacing fected an area trated soil is it a remediation elines for leak the best of my otifications at e NMOCD m e contamination oes not reliev  Approved by  Approval Dat  Conditions of	the connections are the connections are of approximately in the process of the plan along with a sand spills.  In the process of the plan along with a sand	ly 2,000 being re a new coundersta ctive act Report" (reat to grespons)	sq. ft inside moved and containment and that puritions for rel does not rel ground water sibility for containment.	the earther placed on plac	n contair blastic. The submitted MOCD run h may enerator of vater, hur with any	nment he area red. lles and danger liability nan healt
Describe Arcaround the taning the control of the Site rem I hereby certific gulations a public health should their control of the environmental, state.  Signature:  Printed Name	ase of Problek was remote a Affected anks. The fination for ify that the II operators or the environment. In a portion of the intervention of the	lem and Remeved, the tank and Cleanup ee standing flucture will be sare the crude oil information get are required to addition, NMC was and/or regulation of the crude of the crude oil information get are required to addition, NMC was and/or regulation of the crude oil information oil	Action Tai uids were mpled to despill will iven above to report at e acceptant adequately OCD accepulations.	on Taken.* The draited, inspected and recken.*The released fremoved. The heaviletermine vertical effollow the NMOCI is true and completed in the certain rece of a C-141 report investigate and re	fluid affirily saturextent; a D guide ete to the elease nort by the emediate eport de	by replacing fected an area trated soil is it a remediation clines for leak the best of my otifications at the NMOCD me the contamination oes not reliev  Approved by  Approval Dat  Reme	a of approximatel in the process of the plan along with its and spills.  knowledge and the process of the plan along with its and spills.  knowledge and the process of the plan along with its and spills.  knowledge and the process of the plan along with its and spills.  knowledge and the plan along the process of the process of the plan along with its and plan along the plan alo	ly 2,000 being re a new co understa ctive act Report" of respons SSERV	sq. ft inside moved and containment and that puritions for rel does not rel ground water sibility for containment.  Expiration  Les & 1	e the earthe placed on plan will be suant to NN teases which ieve the oper, surface who compliance	n contair blastic. The submitted MOCD run h may enerator of vater, hur with any	nment he area red. lles and danger liability nan healt



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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	2RP-521
Facility ID	
Application ID	

## **Release Notification**

### **Responsible Party**

Responsible Party XTO Energy				OGRID 5	5380			
Contact Name Kyle Littrell				Contact Telephone 432-221-7331				
Contact ema	il Kyle_Lit	trell@xtoenergy.	com		Incident # (assigned by OCD)			
Contact mail	ling address	522 W. Mermoo	l, Carlsbad, NM 8	88220				
			Location	n of R	Release So	Source		
Latitude 32.4	91438		(NAD 83 in a	decimal de	Longitude - egrees to 5 decim	: -104.008147 cimal places)		
Site Name O	Golden 8 Fed	leral Battery #1			Site Type	Exploration and Production		
Date Release	Discovered	06/14/2010			API# (if app	pplicable) 30-015-26931		
Unit Letter	Section	Township	Range		Coun	unty		
K	8	21S	29E	Edd	y			
	Materia	l(s) Released (Select :	Nature and attached that apply and attached			Release  ic justification for the volumes provided below)		
Crude Oi		Volume Releas		cii caicuiai	tions of specific	Volume Recovered (bbls) 80		
Produced	Water	Volume Releas	ed (bbls)			Volume Recovered (bbls)		
			ntion of dissolved >10,000 mg/l?	chloride	e in the	☐ Yes ☐ No		
Condensa		Volume Releas	ed (bbls)			Volume Recovered (bbls)		
Natural Gas Volume Released (Mcf)					Volume Recovered (Mcf)			
Other (describe) Volume/Weight Released (provide units			de units	s) Volume/Weight Recovered (provide units)				
Cause of Rel	ease	1						
site to recove impacted an in August of	er the free pr area that had 2011, refere	oduct. The spill in I been cleaned up	mpacted approxir as far as practica ate d2/6/2011. Th	nately 90	00 sq. ft. of the area around t	ed out of the vessel, a vacuum truck was dispatched to the tank battery earthen containment area. The spill I the vessels and lines during a remediation at the facility Idressed, cleaned up as required, and a new closure report		

Incident ID	
District RP	2RP-0521
Facility ID	
Application ID	

Was this a major		nsible party consider this a major release?
release as defined by	Volume of release is greater than 25 bbls.	
19.15.29.7(A) NMAC?		
⊠ Yes □ No		
If YES, was immediate no	otice given to the OCD? By whom? To w	nom? When and by what means (phone, email, etc)?
	acted the on-call NMOCD operator (Randy	
	Initial R	esponse
The responsible	party must undertake the following actions immediate	ly unless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.	
	s been secured to protect human health and	the environment.
	_	likes, absorbent pads, or other containment devices.
	ecoverable materials have been removed an	-
	d above have <u>not</u> been undertaken, explain	<b>U</b> 11 1 <b>V</b>
N/A	d above have <u>not</u> been undertaken, explain	wny:
		emediation immediately after discovery of a release. If remediation
		efforts have been successfully completed or if the release occurred blease attach all information needed for closure evaluation.
		best of my knowledge and understand that pursuant to OCD rules and fications and perform corrective actions for releases which may endanger
public health or the environr	ment. The acceptance of a C-141 report by the	OCD does not relieve the operator of liability should their operations have
		eat to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
and/or regulations.	1 a C-141 report does not reneve the operator of	responsibility for compliance with any other federal, state, or focal laws
D' ( IN IV	1.1% 11	T'A GHOEG
Printed Name:Ky	le Littrell	Title:SH&E Supervisor
Signature:		Date:12/31/2019
email:Kyle_Littrel	1@xtoenergy.com	Telephone:432-221-7331
-		
OCD Only		
Received by:		Date:

# State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-0521
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.

ı	
What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;100</u> (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 <b>not</b> on an exploration, development, production, or storage site?	⊠ 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 ½-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.

Incident ID	
District RP	2RP-0521
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the failed to adequately investigate and remediate contamination that pose a threaddition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	ifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In
Printed Name:Kyle Littrell	Title:SH&E Supervisor
Signature:	Date:12/31/2019
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331
OCD Only	
Received by:	Date:

#### State of New Mexico Oil Conservation Division

Incident ID	nKMW1035646177
District RP	2RP-0521
Facility ID	
Application ID	

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be	e included in the plan.
☐ Detailed description of proposed remediation technique ☐ Scaled sitemap with GPS coordinates showing delineation point ☐ Estimated volume of material to be remediated ☐ Closure criteria is to Table 1 specifications subject to 19.15.29. ☐ Proposed schedule for remediation (note if remediation plan times)	12(C)(4) NMAC
Deferral Requests Only: Each of the following items must be con	nfirmed as part of any request for deferral of remediation.
	roduction equipment where remediation could cause a major facility
☐ Contamination does not cause an imminent risk to human health	n, the environment, or groundwater.
	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of
Printed Name:Kyle Littrell	Title:SH&E Supervisor
Signature:	Date:12/31/2019
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331
OCD Only	
Received by:	Date:
☐ Approved ☐ Approved with Attached Conditions of	Approval Denied XDeferral Approved
Signature: Bradford Billings	Date: 07/23/2021

Form C-141

District I
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District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

#### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Revised October 10, 2003

30-015-26931 **Release Notification and Corrective Action OPERATOR Final Report** Contact Tony Savoie Name of Company BOPCO, L.P. 260737 Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Telephone No. 432-556-8730 Facility Type E&P Facility Name: Golden 8 Federal Battery #1 Surface Owner Federal Mineral Owner Federal Lease No. LOCATION OF RELEASE North/South Line Feet from the East/West Line Unit Letter Section Township Range Feet from the County Eddy K 8 **21S** 29F. Longitude W 104.008223 Latitude\_N 32.491352 NATURE OF RELEASE Volume Recovered: 290 Volume of Release: 310 Bbls Type of Release: Crude Oil . Crude oil Date and Hour of Occurrence Date and Hour of Discovery Source of Release: 500 bbl tank overflow 2/16/11 hour not known 2/16/11 10:00 a.m. If YES, To Whom? NMOCD emergency reporting. Left message with details. Was Immediate Notice Given? By Whom? Tony Savoie Date and Hour 2/16/11 1:30 p.m. RECEIVED Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ⊠ No MAR 02 2011 If a Watercourse was Impacted, Describe Fully.\* Describe Cause of Problem and Remedial Action Taken.\* A 500 bbl. Oil product tank overflowed due to a heater-treater malfunction. The heater-treater was repaired and put back in service. Describe Area Affected and Cleanup Action Taken.\*An area inside the earthen tank containment measuring approximately 14,100 sq. ft. and an area of pasture land outside the containment measuring approximately 400 sq. ft. The area outside the containment had been affected by a previous flow line spill reported to the NMOCD on 10/6/10. The oil saturated soil outside the containment was removed by Basin Env. using a hydro-vac. Approximately 290 bbls of crude oil was recovered from inside the containment. The area inside the containment was covered with soil to absorb small areas of free product. The Site remediation for the crude oil spill will follow the NMOCD guidelines for leaks and spills. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: Tony Savoie Title: Waste Mgmt.& Remediation Specialist Approval Date: **Expiration Date:** E-mail Address: TASavoie@BassPet.com Conditions of Approval: Attached Remediation per OCD Rules & Phone:432-556-8730 Date: 3/3/11 Guidelines. SUBMIT REMEDIATION 2RP. 633 \* Attach Additional Sheets If Necessary PROPOSAL NOT LATER THAN:

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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	2RP-0633
Facility ID	
Application ID	

## **Release Notification**

### **Responsible Party**

Responsible	Party XTO	Energy			OGRID 5380			
Contact Name Kyle Littrell					Contact Telephone 432-221-7331			
Contact email Kyle_Littrell@xtoenergy.com						(assigned by OCD)		
Contact mail	ing address	522 W. Mermod	, Carlsbad, NM 8	88220				
			Location	n of Re	elease So	ource		
Latitude 32.491352(NAD 83 in decimal deg					ongitude - ees to 5 decin	-104.008223		
Site Name C	Golden 8 Fed	leral Battery #1			Site Type	Exploration and Production		
Date Release	Discovered	02/16/2011			API# (if app	plicable) 30-015-26931		
Unit Letter	Section	Township	Range		Cour	nty		
K	8	21S	29E	Eddy				
	Materia	l(s) Released (Select a	Nature and attack that apply and attack			Release  justification for the volumes provided below)		
Crude Oi		Volume Release		en carcaratio	ns or specific	Volume Recovered (bbls) 290		
Produced	Water	Volume Release	ed (bbls)			Volume Recovered (bbls)		
		Is the concentrate produced water		l chloride i	in the	Yes No		
Condensa	nte	Volume Release				Volume Recovered (bbls)		
Natural G	as	Volume Release	ed (Mcf)			Volume Recovered (Mcf)		
Other (describe) Volume/Weight Released (provide u			ide units)	its) Volume/Weight Recovered (provide units)				
Cause of Rel	ease					1		
inside the ear measuring ap reported to th	then tank co oproximately ne NMOCD	ontainment measur 400 sq. ft. was af	ring approximate fected. The area ne oil saturated so	ely 14,100 outside th oil outside	sq. ft. and te containm the contai	eater was repaired and put back into service. An area an area of pasture land outside the containment ment had been affected by a previous flow line spill imment was removed by Basin Env. Using a hydro-vac.		

Incident ID	
District RP	2RP-0633
Facility ID	
Application ID	

Was this a major		nsible party consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	Release volume was greater than 25 bbls	
⊠ Yes □ No		
	otice given to the OCD? By whom? To we ded the NMOCD on 2/16/2011 via telephore.	hom? When and by what means (phone, email, etc)? le (NMOCD emergency reporting).
	Initial R	esponse
The responsible p	party must undertake the following actions immediate	- ly unless they could create a safety hazard that would result in injury
☐ The source of the rele	ease has been stopped.	
	s been secured to protect human health and	the environment.
Released materials ha	we been contained via the use of berms or	dikes, absorbent pads, or other containment devices.
All free liquids and re	ecoverable materials have been removed ar	nd managed appropriately.
If all the actions described N/A	d above have <u>not</u> been undertaken, explain	why:
D. 10.15.20.0 D. (4) NM	71	
has begun, please attach	a narrative of actions to date. If remedial	remediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred please attach all information needed for closure evaluation.
regulations all operators are public health or the environm failed to adequately investiga	required to report and/or file certain release not ment. The acceptance of a C-141 report by the ate and remediate contamination that pose a thr	best of my knowledge and understand that pursuant to OCD rules and iffications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
Printed Name:Ky	le Littrell	Title:SH&E Supervisor
Signature:		Date:12/31/2019
email:Kyle_Littrel	1@xtoenergy.com	Telephone:432-221-7331
OCD Only		
Received by:		Date:

# State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-0633
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?	<u>&gt;100</u> (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 <b>not</b> on an exploration, development, production, or storage site?	⊠ 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 ½-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.

Incident ID	
District RP	2RP-0633
Facility ID	
Application ID	

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:Kyle Littrell	Title:SH&E Supervisor					
Signature:	Date:12/31/2019					
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331					
OCD Only						
Received by:	Date:					
Signature:	Date:12/31/2019					

### State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-0633
Facility ID	
Application ID	

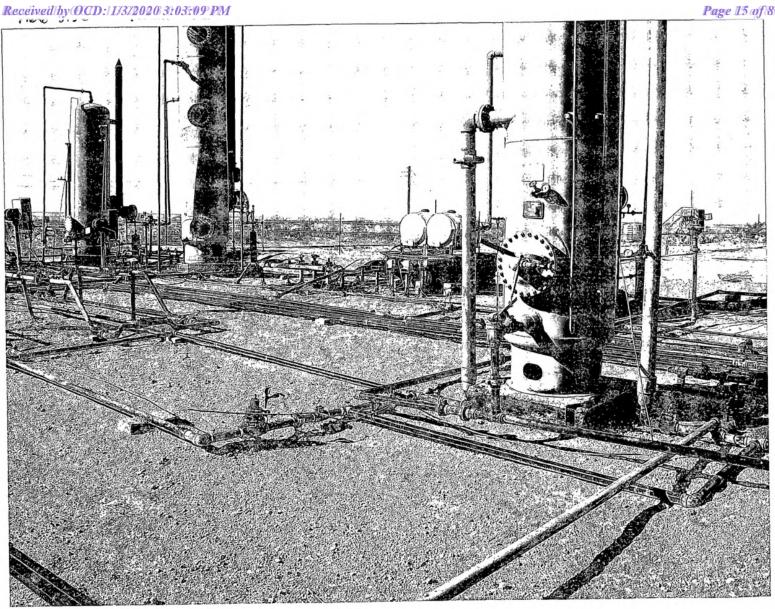
# **Remediation Plan**

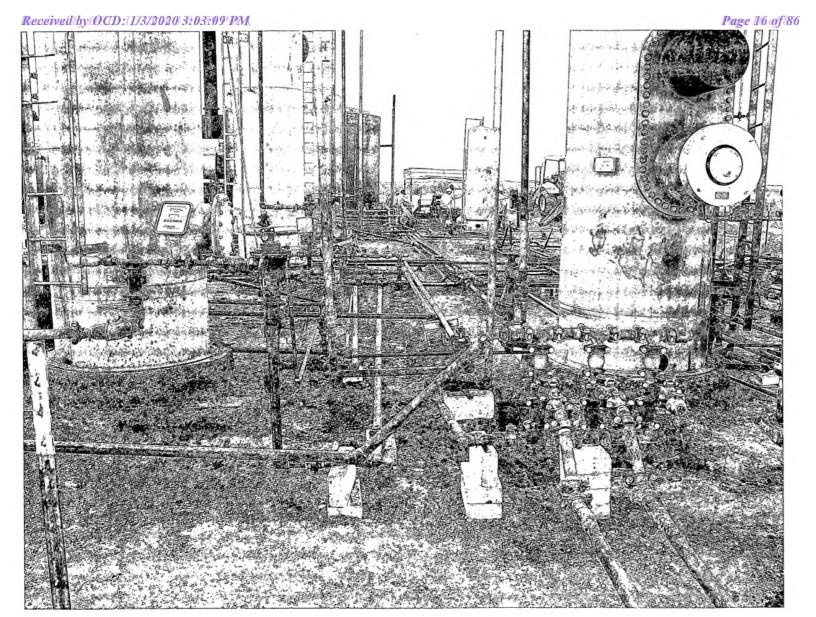
Remediation Plan Checklist: Each of the following items must be	e included in the plan.
<ul> <li>□ Detailed description of proposed remediation technique</li> <li>□ Scaled sitemap with GPS coordinates showing delineation point</li> <li>□ Estimated volume of material to be remediated</li> <li>□ Closure criteria is to Table 1 specifications subject to 19.15.29.</li> <li>□ Proposed schedule for remediation (note if remediation plan times)</li> </ul>	12(C)(4) NMAC
<u>Deferral Requests Only:</u> Each of the following items must be con	ifirmed as part of any request for deferral of remediation.
$\boxtimes$ Contamination must be in areas immediately under or around prodeconstruction.	roduction equipment where remediation could cause a major facility
☐ Contamination does not cause an imminent risk to human health	n, the environment, or groundwater.
	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of
Printed Name:Kyle Littrell	Title:SH&E Supervisor
Signature:	Date:12/31/2019
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331
OCD Only	
Received by:	Date:
Approved Approved with Attached Conditions of	Approval
Signature:	Date:

District III 1625 N. French Dr., Hobbs, NM 88240 RECEIVED State of New Mexico District III 1811 S. First St., Artesia, NM 88210 NOV 2 6 2013 Oil Conservation Division District IV 1220 S. St. Francis Dr., Santa Fe, NM 87805							Form C-141 Revised August 8, 2011 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.						
											220 S. St. Fran	I Sant	a rc, NW 6/60
Tul	1000			ase Mount	catioi				_			C: 15	
MU	M 1333	30536	8			OPERA'				ial Report		Final Repo	
		OPCO, L.P.		oad, N.M. 8822		Contact: To	No. 575-887-73	20					
				, the Well #1 w	vas	Facility Typ	e: Exploration	and Pro	duction				
Surface Ow	ner: Feder	al		Mineral (	Owner:	Federal			API N	o. 30-015-2	6931		
				LOC	ATIO	N OF RE	FASE						
Unit Letter K	Section 8	Township 21S	Range 29E	Feet from the 1650		South Line	Feet from the 2180	East/W West	Vest Line	County Eddy			
				Latitude N 32	2.49114	1 Longitud	e_W 104.00777:	5					
						OF REL							
Type of Rele	ease: Crude	oil and produ	ced water				Release: 6 Bbls nd 15 Bbls water		Volume water.	Recovered:	Bbls o	oil and 2 Bbls	
Source of Re	elease; Heat	er-treater fire	tube			Date and I	Hour of Occurrence //13 Time unknow	ce:	Date and	Hour of Dis			
Was Immedi	iate Notice (		Yes [	No Not R	equired	If YES, To							
By Whom?						Date and Hour							
Was a Water	course Rea		Yes ⊠	] No		If YES, Volume Impacting the Watercourse.							
Describe Car The fire tube	use of Probl	em and Reme	edial Action	n Taken.*	on was s	witched out o	f the vessel, a vac	cuum truc	ck was dis	patched to the	ne site t	o recover the	
The spill imp practicable in	ea Affected pacted appro	round the vess	sq. ft. of t	he tank battery ea es during a reme	diation a	t the facility	ea. The spill impo n August of 2011 uding data from t	l, referen	ce spill re				
regulations a public health should their or or the enviro	Il operators or the envi operations benment. In a	are required to ronment. The nave failed to	to report are acceptance acceptance adequately DCD acceptance	nd/or file certain ce of a C-141 rep investigate and	release r ort by th remedian	otifications a e NMOCD m e contaminat	knowledge and und perform correlative as "Final Rights on that pose a three the operator of	ctive acti Report" d reat to gr	ons for re oes not re ound water	leases which lieve the ope er, surface w	may e rator o ater, hu	ndanger f liability ıman health	
_		0	0				OIL CON	SERV	ATION	DIVISIO	NC		
Signature! j au Dauw				Approved by	Environmental S	Specialist	and P.	all.	K				
	e. Tony Sat	roje		Printed Name: Tony Savoie  Title: Waste Management and Remediation Specialist					Approved by Environmental Specialist: Signed By Mile Banness  Approval Dato 2 6 2013 Expiration Date:				
Printed Nam			iation Spec	cialist		Approval Da	QV 2 6 201	13			7,7,70-0,-	A. C. S. C.	
Printed Nam	Manageme			cialist		Approval Da	f Approval:		Expiration	Date:		AN LOT	
Printed Nam Title: Waste E-mail Addre	Management dess: tasavoid	nt and Remed	m Phone:	cialist 432-556-8730	Re	Conditions o		Guidelin	Expiration				

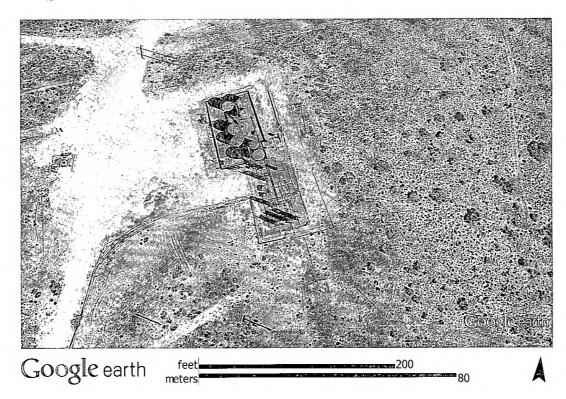


Page 15 of 86









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	2RP-2082
Facility ID	
Application ID	

## **Release Notification**

### **Responsible Party**

Responsible Party XTO Energy					OGRID 5380				
Contact Name Kyle Littrell					Contact Telephone 432-221-7331				
Contact emai	il Kyle_Lit	trell@xtoenergy.c	om		Incident #	# (assigned by OCD)			
Contact mail	ing address	522 W. Mermod,	Carlsbad, NM 8	88220	•				
			Location	of R	Release S	Source			
Latitude 32.4	91141				Longitude	e -104.007775			
			(NAD 83 in d	lecimal de	grees to 5 deci	cimal places)			
Site Name C	Golden 8 Fed	leral Battery #1			Site Type	e Exploration and Production			
Date Release	Discovered	11/25/2013			API# (if ap	applicable) 30-015-26931			
Unit Letter	G4:	T1:	D		C				
K	Section 8	Township 21S	Range 29E	Edd		ounty			
IX	O	215	2)L	Luu.	y 				
Surface Owner	r: State	⊠ Federal □ Tr	ribal  Private	(Name:	BLM	)			
	_		_	`	-	<del>-</del>			
			Nature an	d Vo	lume of	f Kelease			
<b></b>				h calculat	tions or specifi	fic justification for the volumes provided below)			
Crude Oil		Volume Release	d (bbls) 6		Volume Recovered (bbls) 3				
Produced	Water	Volume Release	d (bbls) 15			Volume Recovered (bbls) 2			
		Is the concentrate produced water	ion of dissolved >10,000 mg/l?	chloride	e in the Yes No				
Condensa	ite	Volume Release	d (bbls)			Volume Recovered (bbls)			
Natural G	as	Volume Release	d (Mcf)			Volume Recovered (Mcf)			
Other (de	scribe)	Volume/Weight	Released (provid	de units)	ts) Volume/Weight Recovered (provide units)				
Cause of Rel	ease								
site to recove impacted an a in August of	er the free pro area that had 2011, refere	oduct. The spill in I been cleaned up a	npacted approximas far as practical te d2/6/2011. The	nately 90 l in the a	00 sq. ft. of area around	ned out of the vessel, a vacuum truck was dispatched to the f the tank battery earthen containment area. The spill d the vessels and lines during a remediation at the facility ddressed, cleaned up as required, and a new closure report			

Incident ID	
District RP	2RP-2082
Facility ID	
Application ID	

Was this a major	_	nsible party consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	N/A	
19.13.29.7(A) NMAC:		
☐ Yes ⊠ No		
	otice given to the OCD? By whom? To w	hom? When and by what means (phone, email, etc)?
N/A		
	Initial R	esponse
The responsible p	party must undertake the following actions immediate	ly unless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.	
The impacted area ha	s been secured to protect human health and	the environment.
Released materials ha	we been contained via the use of berms or	dikes, absorbent pads, or other containment devices.
	ecoverable materials have been removed ar	nd managed appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explain	why:
N/A		
		remediation immediately after discovery of a release. If remediation
		efforts have been successfully completed or if the release occurred please attach all information needed for closure evaluation.
		best of my knowledge and understand that pursuant to OCD rules and iffications and perform corrective actions for releases which may endanger
public health or the environr	ment. The acceptance of a C-141 report by the	OCD does not relieve the operator of liability should their operations have
		eat to groundwater, surface water, human health or the environment. In responsibility for compliance with any other federal, state, or local laws
and/or regulations.		
Printed Name:Ky	le Littrell	Title:SH&E Supervisor
Signature:		Date:12/31/2019
email: Kvle Littrel	l@xtoenergy.com	Telephone:432-221-7331
		. —
OCD Only		
Received by:		Date:
J ·		

# State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-2082
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?	<u>&gt;100</u> (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 <b>not</b> on an exploration, development, production, or storage site?	⊠ 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 ½-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.

Incident ID	
District RP	2RP-2082
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the Gailed to adequately investigate and remediate contamination that pose a threaddition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	fications and perform corrective actions for releases which may endanger DCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In
Printed Name:Kyle Littrell	Title:SH&E Supervisor
Signature:	Date:12/31/2019
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331
OCD Only	
Received by:	Date:

#### State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-2082
Facility ID	
Application ID	

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must b	e included in the plan.				
<ul> <li>□ Detailed description of proposed remediation technique</li> <li>□ Scaled sitemap with GPS coordinates showing delineation points</li> <li>□ Estimated volume of material to be remediated</li> <li>□ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>□ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>					
<u>Deferral Requests Only</u> : Each of the following items must be con	nfirmed as part of any request for deferral of remediation.				
Contamination must be in areas immediately under or around predeconstruction.	roduction 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	h, the environment, or groundwater.				
	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of				
Printed Name:Kyle Littrell	Title:SH&E Supervisor				
Signature:	Date:12/31/2019				
email:Kyle_Littrell@xtoenergy.com					
OCD Only					
Received by:	Date:				
Approved	Approval Denied Deferral Approved				
Signature:	Date:				

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u>

District III 1000 Rio Brazos Road, Aztec, NM 87410

<u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

ARTESIA DISTRICT

AUG 1 3 2014

Form C-141 Revised August 8, 2011

Submic Cepy Enppropriate District Office in accordance with 19.15.29 NMAC.

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr.

Santa Fe, NM 87505

0001	12011	MAIN	Rele	ease Notifica	atioi				nitial Day -	"	Final Dance
NAB 4226372/9						OPERATOR					
						No. 575-887-732	29	7400			
						e: Exploration		on			
Surface Ow	ner: Feder	al		Mineral Ov	vner:	Federal		AP	No. 30-01	5-26931	
				LOCA	TIO	N OF REI	LEASE				
Unit Letter K	Section 8	Township 21S	Range 29E	Feet from the 1650	North/ South	orth/South Line Feet from the East/West Line County			У		
				Latitude N 32.4				5			
T CD-1-	C1-	-11 1 1	1	NAT	URE	OF REL		e Vele	D	ol. 1 Ohl	ail and 17
Type of Rele	ease: Crude	oil and produ	ed water				Release: 3 Bbls ond 38 Bbls water	Bbls	me Recovere water.		
Source of Re	elease: Victa	aulic fitting on	the produ	ction header.			Iour of Occurrence 14 Time unknown		and Hour of 14 Time app		y: Date y 10:30 a.m.
Was Immedi	ate Notice (		Yes [	No □ Not Rec	quired	If YES, To NMOCD I	Whom? Emergency #104				
By Whom?	Tony Savoie	2				Date and I-	lour: 8/12/14 at 1	2:10 p.m.			
Was a Water		ched?	Yes 🗵	1 N			olume Impacting		se.		
		<u> </u>					N	M OIL COM	SERVAT	ION-	
If a Waterco	urse was Im	pacted, Descr	ibe Fully.	•				ARTESIA	DISTRICT 3 2014		
Describe Are The spill impracticable in	vas replaced ea Affected pacted appro n the area an spill referen	and Cleanup a oximately 150 round the vess nce 2RP-2082	Action Tal 0 sq. ft. of els and lin	ter due to a normalimed to normal.  cen.*  'the tank battery eales during a remediwill be re-addresse	rthen o	containment a	rea. The spill imp	pacted an area l, reference 2R	that had beer P-633. And t	n cleaned u	up as far as re as
regulations a public health should their or the enviro	all operators or the envi operations lonment. In a	are required to ronment. The nave failed to	o report as acceptant adequately OCD accep	e is true and comple nd/or file certain re ce of a C-141 repor investigate and re otance of a C-141 re	lease n t by th mediat	otifications a e NMOCD m e contaminati	nd perform correct arked as "Final Ricon that pose a the	ctive actions for deport" does no reat to ground	r releases what relieve the water, surfac	nich may e operator o e water, hi	endanger of liability uman health
		_					OIL CON	SERVATI	ON DIVI	SION	
Signature: 164 Dans				11							
Printed Nam	e: Tony Sa	voie				Approved by	Environmental Signed By	WHITE L	KANTELLER		
Title: Waste	Manageme	nt and Remed	iation Spe	cialist		Approval Da	te: 5/14/14	Expira	tion Date:	1 A	
E-mail Addr	ess: tasavoi	e@basspet.co	m			Conditions o	f Approval: ediation per O	CD Rule &	Attac	ched	
Date:8/13/14				Phone: 432-556-87	30		es. <b>SUBMIT R</b>		N_		
Attach Add	itional She	ets If Necess	ary				POSAL NO LAT			RP 2	439

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	2RP-2439
Facility ID	
Application ID	

## **Release Notification**

#### **Responsible Party**

				<b>I</b>		,		
Responsible Party XTO Energy				OGRID 5380				
Contact Name Kyle Littrell				Contact Telephone 432-221-7331				
Contact emai	il Kyle_Lit	trell@xtoenergy.c	om		Incident #	Incident # (assigned by OCD)		
Contact mail	ing address	522 W. Mermod	, Carlsbad, NM 8	88220	•			
			Location	n of R	elease So	ource		
Latitude 32.4	91141					-104.007775		
			(NAD 83 in a	decimal de	grees to 5 decin	nal places)		
Site Name C	Golden 8 Fed	leral Battery #1			Site Type	Exploration and Production		
Date Release	Discovered	08/12/2014			API# (if app	plicable) 30-015-26931		
TI '. I		T 1:	D		C			
Unit Letter K	Section 8	Township 21S	Range 29E	Eddy	Coun	ity		
K	0	213	2915	Luuy	<i>y</i>			
Surface Owner	r: State		ribal  Private	(Name:	BLM	)		
			NT 4	1 77 1		D. I.		
			Nature ar	ia Vol	ume of 1	Kelease		
				ch calculat	ions or specific	justification for the volumes provided below)		
	Crude Oil Volume Released (bbls) 3					Volume Recovered (bbls) 1		
Produced	Water	Volume Release				Volume Recovered (bbls) 17		
		Is the concentrate		chloride	e in the	☐ Yes ☐ No		
produced water >10,000 mg/l?  Condensate Volume Released (bbls)				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 Rel	ease	1						
gasket. The g earthen conta during a remo	asket was re ainment area ediation at th	eplaced and the va . The spill impactone facility in Augu	lve was returned ed an area that ha st of 2011, refer	to normad been cence 2RI	al. The spill cleaned up as P-0633 and t	was shut causing pressure to build up and blow out the impacted approximately 1500 sq. ft. of the tank battery s far as practical in the area around the vessels and lines the same areas impacted by spill reference 2RP-2082. will be submitted including data from the previous two		

Incident ID	
District RP	2RP-2439
Facility ID	
Application ID	

Was this a major release as defined by		nsible party consider this a major release?		
19.15.29.7(A) NMAC?	Volume of release is greater than 25 bbls	•		
⊠ Yes □ No				
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Tony Savoie (XTO) contacted the NMOCD emergency operator #104 on 08/12/2014 at 12:10 pm.				
	Initial R	esponse		
The responsible p	party must undertake the following actions immediate	ly unless they could create a safety hazard that would result in injury		
The source of the rele	ease has been stopped.			
The impacted area ha	s been secured to protect human health and	the environment.		
Released materials ha	we been contained via the use of berms or	dikes, absorbent pads, or other containment devices.		
-	ecoverable materials have been removed ar			
N/A	l above have <u>not</u> been undertaken, explain			
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:Ky	le Littrell	Title:SH&E Supervisor		
Signature:		Date:12/31/2019		
email:Kyle_Littrel	1@xtoenergy.com	Telephone:432-221-7331		
OCD Only				
Received by:		Date:		

# State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-2439
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.

Ţ	1
What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (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 <b>not</b> on an exploration, development, production, or storage site?	⊠ 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 ½-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.

Incident ID	
District RP	2RP-2439
Facility ID	
Application ID	

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:Kyle Littrell	Title:SH&E Supervisor	
Signature:	Date:12/31/2019	
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331	
OCD O I		
OCD Only		
Received by:	Date:	

#### State of New Mexico Oil Conservation Division

Incident ID	
District RP	2RP-2439
Facility ID	
Application ID	

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.				
<ul> <li>□ Detailed description of proposed remediation technique</li> <li>□ Scaled sitemap with GPS coordinates showing delineation points</li> <li>□ Estimated volume of material to be remediated</li> <li>□ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>□ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>				
<u>Deferral Requests Only</u> : Each of the following items must be confirmed as part of any request for deferral of remediation.				
☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.				
☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.				
Thomby contify that the information given shows is tone and complete	to to the heat of my knowledge and understand that myman at to OCD			
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:Kyle Littrell	Title:SH&E Supervisor			
Signature:	Date:12/31/2019			
email:Kyle_Littrell@xtoenergy.com	Telephone:432-221-7331			
OCD Only				
Received by:	Date:			
Approved Approved Denied Deferral Approved Deferral Denied				
Signature:	Date:			



LT Environmental, Inc.

3300 North "A" Street Building 1, Unit 222 Midland, Texas 79705 432.704.5178

January 2, 2020

Mr. Mike Bratcher New Mexico Oil Conservation Division 811 South First Street Artesia, New Mexico 88210

RE: Deferral Request – Addendum to Original Closure Request
Golden 8 Federal Battery #1
Remediation Permit Numbers 2RP-521, 2RP-633, 2RP-2082, and 2RP-2439
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request as an addendum to a previously submitted Closure Request detailing site assessment and soil sampling activities at the Golden 8 Federal Battery #1 (Site) in Unit K, Section 8, Township 21 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The original Closure Request addressed seven historical releases that occurred at the same well pad location. The New Mexico Oil Conservation Division (NMOCD) approved closure of three of the historical releases, but requested additional information for deferral consideration of four releases that occurred around production equipment. The purpose of the site assessment and soil sampling activities documented in this report was to delineate previously identified impacted soil associated with those four historical releases. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Deferral Request, requesting deferral of final remediation for these release events.

#### **RELEASE BACKGROUND**

#### 2RP-521

On June 14, 2010 a drain line connection on a tank failed due to internal corrosion releasing 90 barrels (bbls) of crude oil into the lined earthen tank battery containment. The remaining oil in the tank was removed, the tank was cleaned, inspected and repaired. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 80 bbls of crude oil were recovered. The heavily saturated soils were removed. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141 on June 22, 2010, and the NMOCD subsequently issued RP Number 2RP-521.





Bratcher, M. Page 2

#### 2RP-633

On February 12, 2011 a heater-treater malfunction caused an oil product tank to overflow releasing 310 bbls of crude oil to the lined earthen containment and pasture outside the containment. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 290 bbls of crude oil were recovered.

#### 2RP-2082

On November 25, 2013 a fire tube on the heater-treater developed a leak resulting in a release of 6 bbls of crude oil and 15 bbls of produced water to the lined earthen containment. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 3 bbls of crude oil and 2 bbls of produced water were recovered.

#### 2RP-2439

On August 12, 2014 a Victaulic gasket failed on the production header due to a blow out on the gasket resulting in a release of 3 bbls of crude oil and 38 bbls of produced water. A vacuum truck was dispatched to the Site to recover freestanding fluids; approximately 1 bbl of crude oil and 17 bbls of water were recovered. The gasket was replaced.

XTO submitted a Closure Request dated May 25, 2018, for this site addressing seven separate historical releases. The NMOCD approved closure of 2RP-3612, 2RP-4017, and 2RP-4601 via email dated June 6, 2018. In consideration of the other historical releases, which were inside the tank battery, NMOCD responded with a recommendation to attempt a delineation, remediate as much as possible, and defer anything left until final plugging and abandonment.

#### SITE CLOSURE STANDARDS

The original site work and subsequent sampling occurred prior to promulgation of new spill response requirements listed in Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). As described and approved in the original Closure Request, closure standards were established as follows: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice in this region at the time of sampling and previous reporting, LTE applied a site-specific chloride action level of 600 mg/kg.

#### SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On June 7, 2018 LTE evaluated the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected six preliminary soil samples (SS06-SS11) within the lined earthen containment. Soil from the soil sample location was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID)



Bratcher, M. Page 3

and Hach® chloride QuanTab® test strips, respectively. The preliminary soil sample locations are depicted on Figure 2. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Based on laboratory analytical results for chloride in preliminary soil sample SS09, additional vertical delineation was conducted at that location.

On June 13, 2018 LTE personnel advanced a borehole via hand-auger at one location within the lined tank battery containment on the northeastern side of the caliche well pad. The borehole was advanced at SS09 to delineate the impacted soils. Three soil samples were collected at depths ranging from 7 feet and 12.5 feet bgs (BH01A through BH01C). Soil from the soil sample location was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each sample were documented on a lithologic/soil sampling log and are included as Attachment 1. The borehole was backfilled with the soil removed and LTE personnel repaired the liner. The borehole and vertical delineation soil sample location is depicted on Figure 2.

#### **ANALYTICAL RESULTS**

Laboratory analytical results for delineation soil samples SS09 and BH01A, collected at depths ranging from 0.5 feet to 7 feet bgs, indicated that chloride concentrations exceeded 600 mg/kg. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the documented closure standards in all other soil samples. Laboratory analytical results are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

#### **DEFERRAL REQUEST**

LTE personnel advanced one borehole in the location of the SS09 in the lined earthen containment. Delineation soil samples BH01A through BH01C were collected from within the lined tank battery containment from depths ranging from 0.5 foot to 12.5 feet bgs to assess for the presence or absence of soil impacts as a result of the four releases in the lined earthen containment. Laboratory analytical results indicated that chloride concentrations exceeded the the previously documented closure standards in soil samples SS09 and BH01A, collected at





Bratcher, M. Page 4

depths ranging from 0.5 feet to 7 feet bgs. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the previously documented closure standards in soil samples SS06 through SS08, SS10, SS11 and BH01B through BH01C at depths of approximately 0.5 feet and 12.5 feet bgs, respectively.

Residual impacted soil in the area of delineation borehole BH01 was left in place under the lined containment in which active operating equipment exists. Vertical delineation was achieved at approximately 10 feet bgs. The lateral extent of impacted soil remaining in place is defined by the other samples documented in this report and the numerous samples collected outside the containment and documented in the original Closure Request. An estimated 555 cubic yards of impacted soil remains in place surrounding borehole BH01 and beneath the lined tank battery containment, assuming a maximum 10-foot depth based on soil sample BH01B collected at a depth of 10 feet bgs.

Because depth to groundwater is estimated to be greater than 200 feet bgs, there no nearby surface features, and the impacted soil exists above and beneath a liner, LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The lined containment was repaired by XTO and will restrict potential vertical migration of residual impacts. XTO requests deferral of final remediation for this release event until final reclamation of the well pad or major construction, whichever comes first. An updated Form C-141 is attached.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Ashley L. Ager

Ashley L. Ager, P.G.

Senior Geologist

Sincerely,

cc:

LT ENVIRONMENTAL, INC.

Morrissey

Tacoma Morrissey Staff Geologist

Kyle Littrell, XTO

United States Bureau of Land Management – New Mexico

Robert Hamlet, NMOCD Victoria Venegas, NMOCD





Bratcher, M. Page 5

#### Appendices:

Figure 1 Site Receptor Map

Figure 2 Delineation Soil Sample Locations

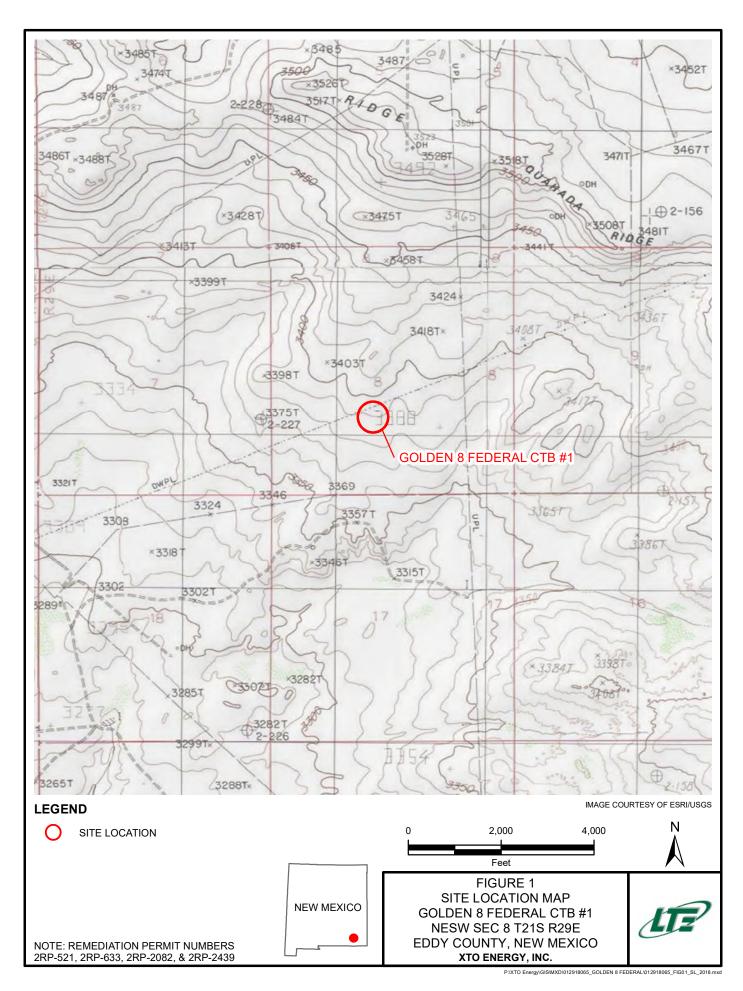
Table 1 Soil Analytical Results

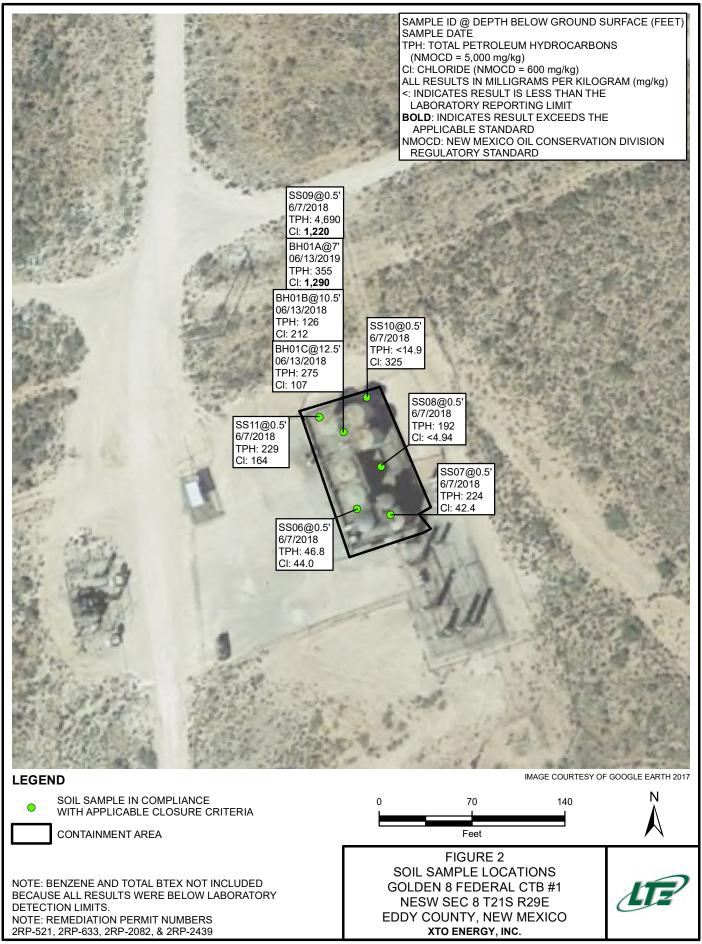
Attachment 1 Lithologic/Soil Sampling Logs

Attachment 2 Photographic Log

Attachment 3 Laboratory Analytical Reports







## TABLE 1 SOIL ANALYTICAL RESULTS

# GOLDEN 8 FEDERAL CENTRAL TANK BATTERY #1 REMEDIATION PERMIT NUMBER 2RP-521, 2RP-633, 2RP-2082, AND 2RP-2439 EDDY COUNTY, NEW MEXICO XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table	1 Closure Crit	eria	10	NE	NE	NE	50	NE	NE	NE	NE	5,000	600
SS06 @ 6" bgs	0.5	06/07/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	46.8	<15.0	46.8	46.8	44.0
SS07	0.5	06/07/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	203	21.3	203	224	42.4
SS08	0.5	06/07/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	172	20.3	172	192	<4.94
SS09	0.5	06/07/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	659	3,900	129	4,550	4,690	1,220
SS10	0.5	06/07/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	325
SS11	0.5	06/07/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	210	19.2	210	229	164
BH01 A	7	06/13/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	331	24.0	331	355	1,290
BH01 B	10.5	06/13/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	126	<15.0	126	126	212
BH01 C	12.5	06/13/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	258	17.1	258	275	107

#### Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

**Bold** - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018





LT Environm	Pantal Inc			<b>.T Envir</b> 08 Wesi	ronmenta t Stevens	al, Inc. Street		Identifier: BH01	Date: 6/13/2019
Advancing Op	portunity		Carl	lsbad, N	lew Mexic	Street co 88220	)	Project Name:	RP Number:
	ARS		Compli	iance · Ei	ngineering	ı · Remedi	ation	Golden 8 Federal #1	2RP-521, 2RP-633, 2RP-2082, and 2RP-2439
		LITHO	LOGIC			LING LO	)G	Logged By: L. Laumbach	Method: Hand Auger
Lat/Long: 32.491438	104 009	8147			Field Scree	ening:		Hole Diameter: 3"	Total Depth: 12.5'
Comments									
<del> </del>		I	Т			<u> </u>			
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Litholog	gy/Remarks
					0				
					1				
					2				
					3				
	985	352			4	4'	S	Caliche/sand light brown-	- hydrocarbon odor detected
					5				
					6				
	1160	215		BH01 A	7	7'	S	sand/ c	lay brown
					8				
	462	95.4			9	9.5'	S	sand/clay brown- no staining	g or hydrocarbon odor detected
	156.4	492	I	BH01B	10	10.5'		sand/clay brown- no staining	g or hydrocarbon odor detected
	50.1	630			11	11.5'		caliche/sand- no staining o	or hydrocarbon odor detected
	65.1	115	]	ВН01С	12	12.5'		caliche/sand- no staining or hydro	carbon odor detected; auguer refusal



Western view of lined tank battery containment.

Project: 012918065	XTO Energy, Inc. Golden 8 Federal Battery #1	<u>IIZ</u>
March 3, 2018	Photographic Log	Advancing Opportunity

Page 1 of 2



View of lined tank battery containment and liner hole during soil sampling activities.

Project: 012918065	XTO Energy, Inc. Golden 8 Federal Battery #1	LIE
March 4, 2018	Photographic Log	Advancing Opportunity

Page 2 of 2



## **Analytical Report 588640**

for

LT Environmental, Inc.

Project Manager: Adrian Baker Golden 8 Federal #1

11-JUN-18

Collected By: Client





#### 1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)





11-JUN-18

Project Manager: Adrian Baker LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: XENCO Report No(s): **588640** 

Golden 8 Federal #1

Project Address: NM 2RP-2439

#### **Adrian Baker:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 588640. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 588640 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

fession beamer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



## Sample Cross Reference 588640



#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
SS06 @ 6"bgs.	S	06-07-18 10:00	6 In	588640-001
SS07	S	06-07-18 10:15	6 In	588640-002
SS08	S	06-07-18 10:35	6 In	588640-003
SS09	S	06-07-18 10:50	6 In	588640-004
SS10	S	06-07-18 11:00	6 In	588640-005
SS11	S	06-07-18 10:20	6 In	588640-006

## XENCO

#### CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: Golden 8 Federal #1

Project ID: Report Date: 11-JUN-18 Work Order Number(s): 588640 Date Received: 06/08/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3052932 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3052970 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 588640

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal #1

TNI TNI

**Project Id:** 

Contact: Adrian Baker
Project Location: NM 2RP-2439

Date Received in Lab: Fri Jun-08-18 10:09 am

**Report Date:** 11-JUN-18 **Project Manager:** Jessica Kramer

	Lab Id:	588640-0	001	588640-0	002	588640-0	003	588640-	004	588640-	005	588640-	006
Analysis Bogyested	Field Id:	SS06 @ 6	"bgs.	SS07		SS08		SS09		SS10		SS11	
Analysis Requested	Depth:	6- In		6- In		6- In		6- In		6- In		6- In	ı
	Matrix:	SOIL	,	SOIL	,	SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-07-18	10:00	Jun-07-18 10:15		Jun-07-18 10:35		Jun-07-18	10:50	Jun-07-18 11:00		Jun-07-18 10:20	
BTEX by EPA 8021B	Extracted:	Jun-09-18	07:55	Jun-09-18 07:55		Jun-09-18	07:55	Jun-10-18	08:30	Jun-09-18	07:55	Jun-09-18	07:55
	Analyzed:	Jun-10-18	00:43	Jun-10-18	01:01	Jun-10-18	01:19	Jun-10-18	21:34	Jun-10-18	01:55	Jun-10-18	02:13
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00199	0.00199	< 0.00198	0.00198	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199
Toluene		< 0.00199	0.00199	< 0.00198	0.00198	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199
Ethylbenzene		< 0.00199	0.00199	< 0.00198	0.00198	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199
m,p-Xylenes		< 0.00398	0.00398	< 0.00397	0.00397	< 0.00402	0.00402	< 0.00399	0.00399	< 0.00401	0.00401	< 0.00398	0.00398
o-Xylene		< 0.00199	0.00199	< 0.00198	0.00198	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199
Total Xylenes		< 0.00199	0.00199	< 0.00198	0.00198	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199
Total BTEX		< 0.00199	0.00199	< 0.00198	0.00198	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00200	0.00200	< 0.00199	0.00199
Inorganic Anions by EPA 300	Extracted:	Jun-08-18	15:15	Jun-08-18	15:15	Jun-08-18	15:15	Jun-08-18	15:15	Jun-08-18	15:15	Jun-08-18	15:15
	Analyzed:	Jun-09-18	01:09	Jun-09-18	01:15	Jun-09-18	01:20	Jun-09-18	01:26	Jun-09-18	01:31	Jun-09-18	01:47
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		44.0	4.93	42.4	4.99	<4.94	4.94	1220	24.7	325	4.96	164	4.98
TPH by SW8015 Mod	Extracted:	Jun-08-18	14:00	Jun-08-18	14:00	Jun-08-18	14:00	Jun-08-18	14:00	Jun-08-18	14:00	Jun-08-18	14:00
	Analyzed:	Jun-09-18	01:03	Jun-09-18	01:23	Jun-09-18	01:44	Jun-09-18	02:04	Jun-09-18	02:25	Jun-09-18	02:45
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	659	74.8	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		46.8	15.0	203	15.0	172	14.9	3900	74.8	<14.9	14.9	210	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	21.3	15.0	20.3	14.9	129	74.8	<14.9	14.9	19.2	15.0
Total TPH		46.8	15.0	224	15.0	192	14.9	4690	74.8	<14.9	14.9	229	15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi



Jessica Kramer Project Assistant

Tech:



OJS

### **Certificate of Analytical Results 588640**



#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS06 @ 6"bgs. Matrix: Soil Date Received:06.08.18 10.09

Lab Sample Id: 588640-001 Date Collected: 06.07.18 10.00 Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

% Moisture:

Analyst: SCM Date Prep: 06.08.18 15.15 Seq Number: 3052933

06.08.18 15.15 Basis: Wet Weight

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 44.0
 4.93
 mg/kg
 06.09.18 01.09
 1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.08.18 14.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	06.09.18 01.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	46.8	15.0		mg/kg	06.09.18 01.03		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	06.09.18 01.03	U	1
Total TPH	PHC635	46.8	15.0		mg/kg	06.09.18 01.03		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	91	%	70-135	06.09.18 01.03		
o-Terphenyl		84-15-1	96	%	70-135	06.09.18 01.03		





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS06 @ 6"bgs. Matrix: Soil Date Received:06.08.18 10.09

Lab Sample Id: 588640-001 Date Collected: 06.07.18 10.00 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: ALJ Date Prep: 06.09.18 07.55 Basis: Wet Weight

Seq Number: 3052932

ALJ

Tech:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	06.10.18 00.43	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	06.10.18 00.43	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	06.10.18 00.43	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	06.10.18 00.43	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	06.10.18 00.43	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	06.10.18 00.43	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	06.10.18 00.43	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	06.10.18 00.43		
1,4-Difluorobenzene		540-36-3	99	%	70-130	06.10.18 00.43		



SCM

Analyst:

### **Certificate of Analytical Results 588640**



Wet Weight

#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

06.08.18 15.15

**SS07** Sample Id: Matrix: Soil Date Received:06.08.18 10.09

Date Prep:

Lab Sample Id: 588640-002 Date Collected: 06.07.18 10.15 Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Basis:

Tech: OJS % Moisture:

Seq Number: 3052933

**Parameter** Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 06.09.18 01.15 42.4 4.99 mg/kg

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

ARM Tech: % Moisture:

ARM Analyst:  $06.08.18\ 14.00$ Basis: Wet Weight Date Prep:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	06.09.18 01.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	203	15.0		mg/kg	06.09.18 01.23		1
Oil Range Hydrocarbons (ORO)	PHCG2835	21.3	15.0		mg/kg	06.09.18 01.23		1
Total TPH	PHC635	224	15.0		mg/kg	06.09.18 01.23		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	06.09.18 01.23		
o-Terphenyl		84-15-1	95	%	70-135	06.09.18 01.23		





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS07 Matrix: Soil Date Received:06.08.18 10.09

Lab Sample Id: 588640-002 Date Collected: 06.07.18 10.15 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

ALJ % Moisture:

Analyst: ALJ Date Prep: 06.09.18 07.55 Basis: Wet Weight

Seq Number: 3052932

Tech:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	06.10.18 01.01	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	06.10.18 01.01	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	06.10.18 01.01	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	06.10.18 01.01	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	06.10.18 01.01	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	06.10.18 01.01	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	06.10.18 01.01	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	104	%	70-130	06.10.18 01.01		
1,4-Difluorobenzene		540-36-3	95	%	70-130	06.10.18 01.01		





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS08 Matrix: Soil Date Received:06.08.18 10.09

Lab Sample Id: 588640-003 Date Collected: 06.07.18 10.35 Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: OJS % Moisture:

Analyst: SCM Date Prep: 06.08.18 15.15 Basis: Wet Weight

Seq Number: 3052933

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.94	4.94	mg/kg	06.09.18 01.20	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.08.18 14.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	06.09.18 01.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	172	14.9		mg/kg	06.09.18 01.44		1
Oil Range Hydrocarbons (ORO)	PHCG2835	20.3	14.9		mg/kg	06.09.18 01.44		1
Total TPH	PHC635	192	14.9		mg/kg	06.09.18 01.44		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	91	%	70-135	06.09.18 01.44		
o-Terphenyl		84-15-1	93	%	70-135	06.09.18 01.44		





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS08** Soil Date Received:06.08.18 10.09 Sample Id: Matrix:

Lab Sample Id: 588640-003 Date Collected: 06.07.18 10.35 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Tech: ALJ ALJ Analyst:  $06.09.18\ 07.55$ Basis: Wet Weight Date Prep:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	06.10.18 01.19	U	1	
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	06.10.18 01.19	U	1	
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	06.10.18 01.19	U	1	
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	06.10.18 01.19	U	1	
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	06.10.18 01.19	U	1	
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	06.10.18 01.19	U	1	
Total BTEX		< 0.00201	0.00201		mg/kg	06.10.18 01.19	U	1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene		540-36-3	97	%	70-130	06.10.18 01.19			
4-Bromofluorobenzene		460-00-4	110	%	70-130	06.10.18 01.19			





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS09** Sample Id: Matrix: Soil Date Received:06.08.18 10.09

Lab Sample Id: 588640-004 Sample Depth: 6 In Date Collected: 06.07.18 10.50

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

% Moisture:

OJS Tech: SCMAnalyst: 06.08.18 15.15 Basis: Wet Weight Date Prep:

Seq Number: 3052933

Parameter	Cas Number	Result	RL	Units	<b>Analysis Date</b>	Flag	Dil
Chloride	16887-00-6	1220	24.7	mg/kg	06.09.18 01.26		5

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

ARM % Moisture:

ARM Analyst: 06.08.18 14.00 Basis: Wet Weight Date Prep:

Seq Number: 3052902

Tech:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	659	74.8		mg/kg	06.09.18 02.04		5
Diesel Range Organics (DRO)	C10C28DRO	3900	74.8		mg/kg	06.09.18 02.04		5
Oil Range Hydrocarbons (ORO)	PHCG2835	129	74.8		mg/kg	06.09.18 02.04		5
Total TPH	PHC635	4690	74.8		mg/kg	06.09.18 02.04		5
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	121	%	70-135	06.09.18 02.04		
o-Terphenyl		84-15-1	117	%	70-135	06.09.18 02.04		





Wet Weight

#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS09** Soil Date Received:06.08.18 10.09 Sample Id: Matrix:

Lab Sample Id: 588640-004 Date Collected: 06.07.18 10.50 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Date Prep:

% Moisture:

Tech: ALJ ALJ Analyst: 06.10.18 08.30 Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	06.10.18 21.34	U	1	
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	06.10.18 21.34	U	1	
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	06.10.18 21.34	U	1	
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	06.10.18 21.34	U	1	
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	06.10.18 21.34	U	1	
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	06.10.18 21.34	U	1	
Total BTEX		< 0.00200	0.00200		mg/kg	06.10.18 21.34	U	1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene		540-36-3	94	%	70-130	06.10.18 21.34			
4-Bromofluorobenzene		460-00-4	100	%	70-130	06.10.18 21.34			





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS10 Matrix: Soil Date Received:06.08.18 10.09

Lab Sample Id: 588640-005 Date Collected: 06.07.18 11.00 Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: OJS % Moisture:

Date Prep: 06.08.18 15.15 Basis: Wet Weight

Seq Number: 3052933

Analyst:

SCM

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	325	4.96	mg/kg	06.09.18 01.31		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.08.18 14.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	06.09.18 02.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9		mg/kg	06.09.18 02.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9		mg/kg	06.09.18 02.25	U	1
Total TPH	PHC635	<14.9	14.9		mg/kg	06.09.18 02.25	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	06.09.18 02.25		
o-Terphenyl		84-15-1	98	%	70-135	06.09.18 02.25		





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS10** Soil Date Received:06.08.18 10.09 Sample Id: Matrix:

Lab Sample Id: 588640-005 Date Collected: 06.07.18 11.00 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Date Prep:

% Moisture:

Tech: ALJ ALJ Analyst:  $06.09.18\ 07.55$ Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	06.10.18 01.55	U	1	
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	06.10.18 01.55	U	1	
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	06.10.18 01.55	U	1	
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	06.10.18 01.55	U	1	
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	06.10.18 01.55	U	1	
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	06.10.18 01.55	U	1	
Total BTEX		< 0.00200	0.00200		mg/kg	06.10.18 01.55	U	1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1,4-Difluorobenzene		540-36-3	95	%	70-130	06.10.18 01.55			
4-Bromofluorobenzene		460-00-4	113	%	70-130	06.10.18 01.55			





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

Sample Id: SS11 Matrix: Soil Date Received:06.08.18 10.09

Lab Sample Id: 588640-006 Date Collected: 06.07.18 10.20 Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

% Moisture:

Analyst: SCM Date Prep: 06.08.18 15.15 Basis: Wet Weight

Seq Number: 3052933

Tech:

OJS

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	164	4.98	mg/kg	06.09.18 01.47		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.08.18 14.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	06.09.18 02.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	210	15.0		mg/kg	06.09.18 02.45		1
Oil Range Hydrocarbons (ORO)	PHCG2835	19.2	15.0		mg/kg	06.09.18 02.45		1
Total TPH	PHC635	229	15.0		mg/kg	06.09.18 02.45		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	101	%	70-135	06.09.18 02.45		
o-Terphenyl		84-15-1	105	%	70-135	06.09.18 02.45		





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal #1

**SS11** Soil Date Received:06.08.18 10.09 Sample Id: Matrix:

Lab Sample Id: 588640-006 Date Collected: 06.07.18 10.20 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Tech: ALJ

ALJ Basis: Analyst:  $06.09.18\ 07.55$ Wet Weight Date Prep:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	06.10.18 02.13	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	06.10.18 02.13	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	06.10.18 02.13	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	06.10.18 02.13	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	06.10.18 02.13	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	06.10.18 02.13	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	06.10.18 02.13	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	87	%	70-130	06.10.18 02.13		
4-Bromofluorobenzene		460-00-4	98	%	70-130	06.10.18 02.13		



### **Flagging Criteria**



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

SMP Client Sample BLK Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample BKSD/LCSD Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate MS Matrix Spike MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



#### **QC Summary** 588640

#### LT Environmental, Inc.

Golden 8 Federal #1

Analytical Method: Inorganic Anions by EPA 300

3052933 Seq Number:

Matrix: Solid

Prep Method: Date Prep:

E300P 06.08.18

MB Sample Id:

7656302-1-BLK

LCS Sample Id: 7656302-1-BKS LCSD Sample Id: 7656302-1-BSD

Analysis Flag

**Parameter** 

MB

LCS LCS

LCSD LCSD

%RPD RPD Limit Units Limits %Rec

20

Date

Chloride

Result Amount < 5.00

Result %Rec 270 108

267

Result

107 90-110

06.09.18 00:05

Analytical Method: Inorganic Anions by EPA 300

47.6

3052933

Matrix: Soil

Prep Method: Date Prep:

E300P

mg/kg

Seq Number: Parent Sample Id:

588639-001

MS Sample Id: 588639-001 S

06.08.18 MSD Sample Id: 588639-001 SD

Analysis

**Parameter** 

**Parent** 

Spike Result Amount

Spike

250

MS MS Result %Rec

MSD MSD Result %Rec

117

Limits

%RPD RPD Limit Units

Flag

X

Chloride

247

120

345

337

90-110

20 mg/kg

Date 06.09.18 00:21

Analytical Method: Inorganic Anions by EPA 300

Prep Method:

E300P

Seq Number: Parent Sample Id: 3052933

Amount

248

1000

Matrix: Soil

104

Date Prep: 588640-005 S MSD Sample Id: 588640-005 SD

2

06.08.18

mg/kg

mg/kg

**Parameter** 

Chloride

588640-005

**Parent** Spike Result

325

<15.0

MS Sample Id: MS MSResult %Rec

583

MSD Result

Limits MSD %Rec

90-110

70-135

104

100

%RPD RPD Limit Units

20

20

0

1

Analysis Date

06.09.18 01:36

06.08.18 19:37

Flag

Flag

Diesel Range Organics (DRO)

Analytical Method: TPH by SW8015 Mod

3052902

Matrix: Solid

1000

584

Prep Method:

TX1005P

06.08.18

Seq Number: Date Prep: LCS Sample Id: 7656356-1-BKS LCSD Sample Id: 7656356-1-BSD MB Sample Id: 7656356-1-BLK

993

MB LCS LCS %RPD RPD Limit Units Spike LCSD LCSD Limits Analysis **Parameter** Result Result Amount %Rec %Rec Date Result 943 06.08.18 19:37 Gasoline Range Hydrocarbons (GRO) <15.0 1000 94 954 95 70-135 20 mg/kg

99

MB MB LCS LCS LCSD LCSD Limits Units Analysis Surrogate Flag %Rec Flag Flag Date %Rec %Rec 101 125 06.08.18 19:37 1-Chlorooctane 122 70-135 % 06.08.18 19:37 o-Terphenyl 106 108 107 70-135 %

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

Flag

Flag



#### **QC Summary** 588640

#### LT Environmental, Inc.

Golden 8 Federal #1

Prep Method: TX1005P Analytical Method: TPH by SW8015 Mod 3052902 Seq Number: Matrix: Soil Date Prep: 06.08.18

MS Sample Id: 588620-001 S MSD Sample Id: 588620-001 SD Parent Sample Id: 588620-001

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	890	89	903	90	70-135	1	20	mg/kg	06.08.18 20:38	
Diesel Range Organics (DRO)	<15.0	998	924	93	942	94	70-135	2	20	mg/kg	06.08.18 20:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		124		70-135	%	06.08.18 20:38
o-Terphenyl	107		107		70-135	%	06.08.18 20:38

Prep Method: SW5030B Analytical Method: BTEX by EPA 8021B

3052932 Seq Number: Matrix: Solid Date Prep: 06.09.18 LCSD Sample Id: 7656352-1-BSD LCS Sample Id: 7656352-1-BKS MB Sample Id: 7656352-1-BLK

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00202	0.101	0.0866	86	0.0847	85	70-130	2	35	mg/kg	06.09.18 18:38
Toluene	< 0.00202	0.101	0.0902	89	0.0897	90	70-130	1	35	mg/kg	06.09.18 18:38
Ethylbenzene	< 0.00202	0.101	0.0922	91	0.0914	91	70-130	1	35	mg/kg	06.09.18 18:38
m,p-Xylenes	< 0.00403	0.202	0.192	95	0.187	94	70-130	3	35	mg/kg	06.09.18 18:38
o-Xylene	< 0.00202	0.101	0.0929	92	0.0977	98	70-130	5	35	mg/kg	06.09.18 18:38

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		95		94		70-130	%	06.09.18 18:38
4-Bromofluorobenzene	93		95		99		70-130	%	06.09.18 18:38

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B Seq Number: 3052970 Matrix: Solid Date Prep: 06.10.18

MB Sample Id: 7656395-1-BLK LCS Sample Id: 7656395-1-BKS LCSD Sample Id: 7656395-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.0879	88	0.0862	85	70-130	2	35	mg/kg	06.10.18 19:28
Toluene	< 0.00200	0.100	0.0934	93	0.0907	90	70-130	3	35	mg/kg	06.10.18 19:28
Ethylbenzene	< 0.00200	0.100	0.0917	92	0.0893	88	70-130	3	35	mg/kg	06.10.18 19:28
m,p-Xylenes	< 0.00401	0.200	0.189	95	0.185	92	70-130	2	35	mg/kg	06.10.18 19:28
o-Xylene	< 0.00200	0.100	0.0921	92	0.0897	89	70-130	3	35	mg/kg	06.10.18 19:28
G 4	MB	MB	L	CS I	LCS	LCSI	) LCS	D L	imits	Units	Analysis

Surrogate	MB %Rec	Flag	%Rec	Flag	%Rec	Flag	Limits	Units	Date
1,4-Difluorobenzene	93		99		94		70-130	%	06.10.18 19:28
4-Bromofluorobenzene	87		98		94		70-130	%	06.10.18 19:28

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100\*(C-A) / B RPD = 200\* | (C-E) / (C+E) | [D] = 100\*(C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result

MS = Matrix Spike B = Spike AddedC = MS/LCS Result D = MSD/LCSD % RecE = MSD/LCSD Result

4-Bromofluorobenzene

06.09.18 19:16

Flag



#### QC Summary 588640

#### LT Environmental, Inc.

Golden 8 Federal #1

Analytical Method:BTEX by EPA 8021BPrep Method:SW5030BSeq Number:3052932Matrix:SoilDate Prep:06.09.18Parent Sample Id:588112-021MS Sample Id:588112-021 SDMSD Sample Id:588112-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0473	47	0.0544	55	70-130	14	35	mg/kg	06.09.18 19:16	X
Toluene	< 0.00200	0.100	0.0502	50	0.0567	57	70-130	12	35	mg/kg	06.09.18 19:16	X
Ethylbenzene	< 0.00200	0.100	0.0468	47	0.0537	54	70-130	14	35	mg/kg	06.09.18 19:16	X
m,p-Xylenes	< 0.00401	0.200	0.0968	48	0.111	56	70-130	14	35	mg/kg	06.09.18 19:16	X
o-Xylene	< 0.00200	0.100	0.0465	47	0.0653	66	70-130	34	35	mg/kg	06.09.18 19:16	X
Surrogate				IS Rec	MS Flag	MSI %Re			Limits	Units	Analysis Date	
1,4-Difluorobenzene			8	38		106	<u>,                                    </u>	7	0-130	%	06.09.18 19:16	

104

70-130

Analytical Method:BTEX by EPA 8021BPrep Method:SW5030BSeq Number:3052970Matrix:SoilDate Prep:06.10.18

95

Parent Sample Id: 588647-004 MS Sample Id: 588647-004 S MSD Sample Id: 588647-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date
Benzene	< 0.00202	0.101	0.0756	75	0.0760	75	70-130	1	35	mg/kg	06.10.18 20:04
Toluene	< 0.00202	0.101	0.0813	80	0.0797	79	70-130	2	35	mg/kg	06.10.18 20:04
Ethylbenzene	< 0.00202	0.101	0.0814	81	0.0819	81	70-130	1	35	mg/kg	06.10.18 20:04
m,p-Xylenes	< 0.00404	0.202	0.167	83	0.171	85	70-130	2	35	mg/kg	06.10.18 20:04
o-Xylene	< 0.00202	0.101	0.0767	76	0.0782	77	70-130	2	35	mg/kg	06.10.18 20:04

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		70-130	%	06.10.18 20:04
4-Bromofluorobenzene	104		106		70-130	%	06.10.18 20:04

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100\*(C-A) / B RPD = 200\* | (C-E) / (C+E) | [D] = 100\* (C) / [B]

[D] = 100 \* (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample) LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



Stafford, Texas (281-240-4200)	San Antonio, Texas (210-509-3334)	Phoenix, Arizona (480-355-0900)	
Dallas Texas (214-902-0300)	Midland, Texas (432-704-5251)  www.xenco.com	Xenco Quote # Xenco Job #	100 # 100
		Analytical information	Matrix Codes
Client / Reporting Information	Project Information		
Company Name / Branch: LT Environmental, Inc Permian Office	Project Name/Number: Colder & Federal	))	W = Water S = Soil/Sed/Solid
Company Address:	Project Location:	EX.	GW =Ground Water DW = Drinking Water
3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705		BIRCO	P = Product
Email: Phone No:	Invoice To: XTO Energy - Kyle Littrell	1	SW = Surface water SL = Sludge
Abaker@LTEnv.com (432) 704-5178		(a)	OW =Ocean/Sea Water
Project Contact: Adrian Baker	PO Number:	, 61	WI = Wipe O = Oil
Samplers's Name Goda Complex Ch		RO	WW= Waste Water
C	Collection Number o	M	A = Air
No. Field ID / Point of Collection S	Sample Time Marky hottles ICI lacetate INO3	ach land land land land land land land land	Field Comments
1 2506 (0) 6"695.	0/1/18 10:00 5 1		ETB-S
	1 10:15 S 1	XXXX	E7B-N
3 508	10:35 8 1	X X X X	W-mid TB
4 5509	10:50 5 1	XXXX	SW-midTB
5 85/0	11:00 5 1	× × × ×	NW-WTS
6 SS H	V V 11:20 S 1	XXXX	&W-WTB
7			
8			
9			
10			
		۱ ا	
Same Day TAT 5 Day TAT	Level II Std QC	Level IV (Full Data Pkg /raw data)	
Next Day EMERGENCY	Level III Std QC+ Forms	TRRP Level IV	
2 Day EMERGENCY Contract TAT	Level 3 (CLP Forms)	UST/RG-411	
3 Day EMERGENCY	TRRP Checklist		
TAT Starts Day received by Lab, if received by 5:00 pm	pm	FED-EX / UPS: Tracking #	scking #
	OCUMENTED		
Relinquished by Sampler D. 1 J.	Date Time:    Date Time:   Received By:   Color	Relinguished By:  Relinguished By:  Date Time:  Received By:  Received By:	01 8118 0 MMS VIGERA
Relinquished by:	Date Time: Received Bv:	Custody Seal # Preserved where applicable	On Ice Cooler Temp. Thermo. Corr. Factor
e of this document and relinquishment of samples constitute	5 a valid purchase order from client company to Xenco, its affiliates and sub	contractors. It assigns standard terms and conditions of service. Xenco will be liable	a only for the cost of samples and shall not assume any responsibility for an
			The state of the s



## XENCO Laboratories

#### Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

**Date/ Time Received:** 06/08/2018 10:09:00 AM

Work Order #: 588640

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used: R8

Sample Receipt Checklis	st	Comments
#1 *Temperature of cooler(s)?	4.2	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	N/A	
#5 Custody Seals intact on sample bottles?	N/A	
#6*Custody Seals Signed and dated?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	N/A	
#18 Water VOC samples have zero headspace?	N/A	

* Must be	completed for after-hours de	elivery of samples prior to plac	ing in the refrigerator
Analyst:		PH Device/Lot#:	
	Checklist completed by:	Brianna Teel	Date: <u>06/08/2018</u>
	Checklist reviewed by:	Jessica Kramer  Jessica Kramer	Date: <u>06/08/2018</u>

## **Analytical Report 589277**

for

LT Environmental, Inc.

Project Manager: Adrian Baker Golden 8 Federal 1

15-JUN-18

Collected By: Client





#### 1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)





15-JUN-18

Project Manager: Adrian Baker LT Environmental, Inc. 4600 W. 60th Avenue Arvada, CO 80003

Reference: XENCO Report No(s): 589277

Golden 8 Federal 1

Project Address: NM 2RP-3612

#### Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 589277. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 589277 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



### **Sample Cross Reference 589277**



#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
BH01 A	S	06-13-18 09:50	7 ft	589277-001
BH01 B	S	06-13-18 10:30	10.5 ft	589277-002
BH01 C	S	06-13-18 11:15	12.5 ft	589277-003

## XENCO

#### CASE NARRATIVE

Client Name: LT Environmental, Inc. Project Name: Golden 8 Federal 1

Project ID: Report Date: 15-JUN-18
Work Order Number(s): 589277
Date Received: 06/14/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3053586 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected; data confirmed by re-

analysis.

Samples affected are: 589277-001 S.

Batch: LBA-3053603 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 589277

LT Environmental, Inc., Arvada, CO

Project Name: Golden 8 Federal 1



Project Id:

**Contact:** Adrian Baker **Project Location:** NM 2RP-3612

**Date Received in Lab:** Thu Jun-14-18 02:00 pm

**Report Date:** 15-JUN-18 **Project Manager:** Jessica Kramer

Lab Id:	589277-0	001	589277-0	02	589277-0	03			
Field Id:	BH01 A	BH01 A		BH01 B		2			
Depth:	7- ft		10.5- ft		12.5- ft				
Matrix:	SOIL		SOIL		SOIL				
Sampled:	Jun-13-18 (	Jun-13-18 09:50		0:30	Jun-13-18 1	1:15			
Extracted:	Jun-14-18	Jun-14-18 16:00		6:00	Jun-14-18 1	6:00			
Analyzed:	Jun-14-18	Jun-14-18 19:08		9:26	Jun-14-18 1	9:44			
Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200			
	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200			
	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200			
	< 0.00402	0.00402	< 0.00398	0.00398	< 0.00400	0.00400			
	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200			
	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200			
	< 0.00201	0.00201	< 0.00199	0.00199	< 0.00200	0.00200			
Extracted:	Jun-14-18	14:30	Jun-14-18 14:30		Jun-14-18 14:30				
Analyzed:	Jun-14-18	18:51	Jun-14-18 1	8:56	Jun-14-18 1	9:02			
Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
	1290	24.6	212	4.94	107	5.00			
Extracted:	Jun-15-18	12:00	Jun-15-18 1	2:00	Jun-15-18 1	2:00			
Analyzed:	Jun-15-18	14:06	Jun-15-18 1	5:06	Jun-15-18 1	5:27			
Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
·	<15.0	15.0	<15.0	15.0	<15.0	15.0			
	331	15.0	126	15.0	258	15.0			
	24.0	15.0	<15.0	15.0	17.1	15.0			
	355	15.0	126	15.0	275	15.0			
	Field Id: Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Analyzed: Analyzed:	Field Id: BH01 A Depth: 7- ft Matrix: SOIL Sampled: Jun-13-18 0  Extracted: Jun-14-18 1 Units/RL: mg/kg  <0.00201  <0.00201  <0.00201  <0.00201  <0.00201  <0.00201  <0.00201  <1.000201  <0.00201  <1.000201  <1.000201  <1.000201  Extracted: Jun-14-18 1 Analyzed: Jun-14-18 1 Units/RL: mg/kg  1290  Extracted: Jun-15-18 1 Analyzed: Jun-15-18 1 Units/RL: mg/kg  <15.0  331 24.0	Field Id:       BH01 A         Depth:       7- ft         Matrix:       SOIL         Sampled:       Jun-13-18 09:50         Extracted:       Jun-14-18 16:00         Analyzed:       Jun-14-18 19:08         Units/RL:       mg/kg       RL         <0.00201	Field Id:         BH01 A         BH01 F           Depth:         7- ft         10.5- ft           Matrix:         SOIL         SOIL           Sampled:         Jun-13-18 09:50         Jun-13-18 1           Extracted:         Jun-14-18 16:00         Jun-14-18 1           Analyzed:         Jun-14-18 19:08         Jun-14-18 18           Units/RL:         mg/kg         RL         mg/kg           <0.00201         0.00201         <0.00199           <0.00201         0.00201         <0.00199           <0.00201         0.00201         <0.00199           <0.00201         0.00201         <0.00199           <0.00201         0.00201         <0.00199           <0.00201         0.00201         <0.00199           <0.00201         0.00201         <0.00199           Extracted:         Jun-14-18 14:30         Jun-14-18 1           Analyzed:         Jun-14-18 18:51         Jun-14-18 1           Units/RL:         mg/kg         RL         mg/kg           Extracted:         Jun-15-18 12:00         Jun-15-18 1         Jun-15-18 1           Analyzed:         Jun-15-18 14:06         Jun-15-18 1         Jun-15-18 1         Jun-15-18 1           Units/	Field Id:         BH01 A         BH01 B           Depth:         7- ft         10.5- ft           Matrix:         SOIL         SOIL           Sampled:         Jun-13-18 09:50         Jun-13-18 10:30           Extracted:         Jun-14-18 16:00         Jun-14-18 16:00           Analyzed:         Jun-14-18 19:08         Jun-14-18 19:26           Units/RL:         mg/kg         RL         mg/kg         RL           <0.00201	Field Id:         BH01 A         BH01 B         BH01 C           Depth:         7- ft         10.5- ft         12.5- ft           Matrix:         SOIL         SOIL         SOIL         SOIL           Sampled:         Jun-13-18 09:50         Jun-13-18 10:30         Jun-13-18 1           Extracted:         Jun-14-18 16:00         Jun-14-18 10:30         Jun-14-18 1           Analyzed:         Jun-14-18 19:08         Jun-14-18 19:26         Jun-14-18 18           Units/RL:         mg/kg         RL         mg/kg         RL         mg/kg           <0.00201	Field Id:         BH01 A         BH01 B         BH01 C           Depth:         7- ft         10.5- ft         12.5- ft           Matrix:         SOIL         SOIL         SOIL           Sampled:         Jun-13-18 09:50         Jun-13-18 10:30         Jun-13-18 11:15           Extracted:         Jun-14-18 16:00         Jun-14-18 16:00         Jun-14-18 16:00           Analyzed:         Jun-14-18 19:08         Jun-14-18 19:26         Jun-14-18 19:44           Units/RL:         mg/kg         RL         mg/kg         RL         mg/kg         RL           <0.00201	Field Id:         BH01 A         BH01 B         BH01 C           Depth:         7- ft         10.5- ft         12.5- ft           Matrix:         SOIL         SOIL         SOIL           Sampled:         Jun-13-18 09:50         Jun-13-18 10:30         Jun-13-18 11:15           Extracted:         Jun-14-18 16:00         Jun-14-18 16:00         Jun-14-18 16:00           Analyzed:         Jun-14-18 19:08         Jun-14-18 19:26         Jun-14-18 19:44           Units/RL:         mg/kg         RL         mg/kg         RL           -         -0.00201         -0.00201         -0.00199         -0.00290         -0.00200           -         -0.00201         -0.00201         -0.00199         -0.00199         -0.00200         -0.00200           -         -0.00201         -0.00201         -0.00199         -0.00199         -0.00200         -0.00200           -         -0.00402         -0.00402         -0.00199         -0.00199         -0.00200         -0.00200           -         -0.00201         -0.00199         -0.00199         -0.00200         -0.00200           -         -0.00201         -0.00199         -0.00199         -0.00200         -0.00200           -         -0.0	Field Id:         BH01 A         BH01 B         BH01 C           Depth:         7- ft         10.5- ft         12.5- ft           Matrix:         SOIL         SOIL         SOIL           Sampled:         Jun-13-18 09:50         Jun-13-18 10:30         Jun-13-18 11:15           Extracted:         Jun-14-18 16:00         Jun-14-18 16:00         Jun-14-18 19:44           Analyzed:         Jun-14-18 19:08         Jun-14-18 19:26         Jun-14-18 19:44           Units/RL:         mg/kg         RL         mg/kg         RL           wg/kg         RL         mg/kg         RL         mg/kg         RL           -0.00201         0.00201         <0.00199         0.00199         <0.00200         0.00200           -0.00201         0.00201         <0.00199         0.00199         <0.00200         0.00200           -0.00201         0.00201         <0.00199         0.00199         <0.00200         0.00200           -0.00201         0.00201         <0.00199         <0.00200         0.00200           -0.00201         0.00201         <0.00199         <0.00200         0.00200           -0.00201         0.00201         <0.00199         <0.00200         0.00200           -0.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Weamer

Jessica Kramer Project Assistant





#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

06.14.18 14.30

06.15.18 12.00

Sample Id: **BH01 A** Matrix: Soil Date Received:06.14.18 14.00

Lab Sample Id: 589277-001 Date Collected: 06.13.18 09.50 Sample Depth: 7 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

. . . .

Tech: SCM % Moisture:

Analyst: SCM Date Prep:
Seq Number: 3053433

Basis: Wet Weight

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 1290
 24.6
 mg/kg
 06.14.18 18.51
 5

Analytical Method: TPH by SW8015 Mod

ARM

JUM

Prep Method: TX1005P

Wet Weight

Basis:

% Moisture:

Date Prep:

Seq Number: 3053586

Tech:

Analyst:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	06.15.18 14.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	331	15.0		mg/kg	06.15.18 14.06		1
Oil Range Hydrocarbons (ORO)	PHCG2835	24.0	15.0		mg/kg	06.15.18 14.06		1
Total TPH	PHC635	355	15.0		mg/kg	06.15.18 14.06		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	83	%	70-135	06.15.18 14.06		
o-Terphenyl		84-15-1	88	%	70-135	06.15.18 14.06		





## LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Sample Id: **BH01 A** Matrix: Soil Date Received:06.14.18 14.00

Lab Sample Id: 589277-001 Date Collected: 06.13.18 09.50 Sample Depth:7 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 06.14.18 16.00 Basis: Wet Weight

Seq Number: 3053603

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	06.14.18 19.08	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	06.14.18 19.08	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	06.14.18 19.08	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	06.14.18 19.08	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	06.14.18 19.08	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	06.14.18 19.08	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	06.14.18 19.08	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	101	%	70-130	06.14.18 19.08		
1,4-Difluorobenzene		540-36-3	108	%	70-130	06.14.18 19.08		





Wet Weight

#### LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

06.14.18 14.30

Soil Matrix: Date Received:06.14.18 14.00 Sample Id: BH01 B

Date Prep:

Lab Sample Id: 589277-002 Sample Depth: 10.5 ft Date Collected: 06.13.18 10.30

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Basis:

Tech: SCM % Moisture:

Seq Number: 3053433

Analyst:

Tech:

SCM

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 212 4.94 mg/kg 06.14.18 18.56

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P ARM

% Moisture:

JUM Analyst: Basis: Wet Weight 06.15.18 12.00 Date Prep:

Seq Number: 3053586

Parameter	Cas Number	Result	$\mathbf{RL}$		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	06.15.18 15.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	126	15.0		mg/kg	06.15.18 15.06		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	06.15.18 15.06	U	1
Total TPH	PHC635	126	15.0		mg/kg	06.15.18 15.06		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	75	%	70-135	06.15.18 15.06		
o-Terphenyl		84-15-1	79	%	70-135	06.15.18 15.06		





Wet Weight

## LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Soil Date Received:06.14.18 14.00 BH01 B Matrix: Sample Id:

Lab Sample Id: 589277-002 Date Collected: 06.13.18 10.30 Sample Depth: 10.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Date Prep:

Basis:

% Moisture:

06.14.18 16.00

Seq Number: 3053603

ALJ

ALJ

Tech:

Analyst:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	06.14.18 19.26	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	06.14.18 19.26	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	06.14.18 19.26	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	06.14.18 19.26	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	06.14.18 19.26	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	06.14.18 19.26	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	06.14.18 19.26	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	93	%	70-130	06.14.18 19.26		
1,4-Difluorobenzene		540-36-3	101	%	70-130	06.14.18 19.26		





Wet Weight

#### LT Environmental, Inc., Arvada, CO

06.14.18 14.30

Golden 8 Federal 1

Soil BH01 C Matrix: Date Received:06.14.18 14.00 Sample Id:

Lab Sample Id: 589277-003 Sample Depth: 12.5 ft Date Collected: 06.13.18 11.15

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Date Prep:

Basis:

Tech: SCM % Moisture:

Seq Number: 3053433

Analyst:

Tech:

SCM

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	107	5.00	mg/kg	06.14.18 19.02		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P ARM

% Moisture:

JUM Analyst: Basis: Wet Weight Date Prep: 06.15.18 12.00

Seq Number: 3053586

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	06.15.18 15.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	258	15.0		mg/kg	06.15.18 15.27		1
Oil Range Hydrocarbons (ORO)	PHCG2835	17.1	15.0		mg/kg	06.15.18 15.27		1
Total TPH	PHC635	275	15.0		mg/kg	06.15.18 15.27		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	92	%	70-135	06.15.18 15.27		
o-Terphenyl		84-15-1	99	%	70-135	06.15.18 15.27		





## LT Environmental, Inc., Arvada, CO

Golden 8 Federal 1

Sample Id: BH01 C Matrix: Soil Date Received:06.14.18 14.00

Lab Sample Id: 589277-003 Date Collected: 06.13.18 11.15 Sample Depth: 12.5 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

% Moisture:

Analyst: ALJ Date Prep: 06.14.18 16.00 Basis: Wet Weight

Seq Number: 3053603

ALJ

Tech:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	06.14.18 19.44	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	06.14.18 19.44	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	06.14.18 19.44	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/kg	06.14.18 19.44	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	06.14.18 19.44	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	06.14.18 19.44	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	06.14.18 19.44	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	109	%	70-130	06.14.18 19.44		
1,4-Difluorobenzene		540-36-3	103	%	70-130	06.14.18 19.44		



## **Flagging Criteria**



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample BLK Method Blank

**BKS/LCS** Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate MS Matrix Spike MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Flag

Flag

Flag



#### QC Summary 589277

#### LT Environmental, Inc.

Golden 8 Federal 1

**Analytical Method: Inorganic Anions by EPA 300** 

Seq Number: 3053433

Matrix: Solid

Prep Method: E300P

Date Prep: 06.14.18

LCS Sample Id: 7656636-1-BKS LCSD Sample Id: 7656636-1-BSD 7656636-1-BLK MB Sample Id:

LCS LCS %RP RPD Spike LCSD LCSD Limits Units Analysis **Parameter** Result Amount Result %Rec Result %Rec D Limit Date Chloride < 5.00 257 103 257 103 90-110 0 20 06.14.18 12:29 250 mg/kg

**Analytical Method: Inorganic Anions by EPA 300** 

Seq Number: 3053433

Parent Sample Id:

588898-002

Matrix: Soil

MS Sample Id: 588898-002 S

Prep Method: E300P

Date Prep: 06.14.18

MSD Sample Id: 588898-002 SD

MS MS %RP RPD Units **Parent** Spike MSD MSD Limits Analysis **Parameter** Flag Limit Result %Rec Date Result Amount Result %Rec D Chloride 321 250 558 95 559 95 90-110 0 20 mg/kg 06.14.18 17:57

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3053433

Matrix: Soil

Prep Method: E300P

Date Prep: 06.14.18

Parent Sample Id: 589043-001 MS Sample Id: 589043-001 S

MSD Sample Id: 589043-001 SD

**Parent** Spike MS MS MSD MSD Limits %RP RPD Units Analysis **Parameter** D Limit Result Amount Result %Rec Result %Rec Date

Chloride 2 06.14.18 12:46 7 35 247 270 106 264 104 90-110 20 mg/kg

TPH by SW8015 Mod Analytical Method:

3053586 Seq Number:

MB Sample Id: 7656745-1-BLK Matrix: Solid

Prep Method: TX1005P

Date Prep: 06.15.18 LCS Sample Id: 7656745-1-BKS LCSD Sample Id: 7656745-1-BSD

RPD MB LCS LCS %RP Units Analysis Spike LCSD LCSD Limits **Parameter** Result Limit Date Result Amount %Rec Result %Rec D Gasoline Range Hydrocarbons (GRO) 20 06.15.18 13:26 <15.0 1000 837 84 847 85 70-135 mg/kg 06.15.18 13:26 Diesel Range Organics (DRO) 827 83 854 85 70-135 3 20 <15.0 1000 mg/kg

MB MB LCS LCS LCSD LCSD Limits Units Analysis Surrogate Flag Flag Date %Rec Flag %Rec %Rec 109 06.15.18 13:26 1-Chlorooctane 80 107 70-135 % 06.15.18 13:26 o-Terphenyl 84 86 83 70-135 %

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) |[D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result = MS/LCS Result  $\mathbf{C}$ = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec Seq Number:

Parent Sample Id:

MB Sample Id:

Flag



#### **QC Summary** 589277

#### LT Environmental, Inc.

Golden 8 Federal 1

Analytical Method: TPH by SW8015 Mod

3053586 589277-001

Matrix: Soil

Prep Method: TX1005P

Date Prep: 06.15.18

MSD Sample Id: 589277-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	820	82	871	87	70-135	6	20	mg/kg	06.15.18 14:26	
Diesel Range Organics (DRO)	331	999	1140	81	1160	83	70-135	2	20	mg/kg	06.15.18 14:26	

MS Sample Id: 589277-001 S

Surrogate	MS %Rec	MS Flag	MSD MSD %Rec Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		102	70-135	%	06.15.18 14:26
o-Terphenyl	54	**	90	70-135	%	06.15.18 14:26

Analytical Method: BTEX by EPA 8021B

3053603 Seq Number:

7656667-1-BLK

Matrix: Solid

LCS Sample Id: 7656667-1-BKS

Prep Method: SW5030B

Date Prep: 06.14.18

LCSD Sample Id: 7656667-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date
Benzene	< 0.00200	0.100	0.0941	94	0.0871	87	70-130	8	35	mg/kg	06.14.18 17:19
Toluene	< 0.00200	0.100	0.101	101	0.0930	93	70-130	8	35	mg/kg	06.14.18 17:19
Ethylbenzene	< 0.00200	0.100	0.0993	99	0.0925	93	70-130	7	35	mg/kg	06.14.18 17:19
m,p-Xylenes	< 0.00401	0.200	0.208	104	0.194	97	70-130	7	35	mg/kg	06.14.18 17:19
o-Xylene	< 0.00200	0.100	0.106	106	0.0910	91	70-130	15	35	mg/kg	06.14.18 17:19

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		92		99		70-130	%	06.14.18 17:19
4-Bromofluorobenzene	89		100		122		70-130	%	06.14.18 17:19

Analytical Method: BTEX by EPA 8021B

Seq Number: 3053603 Parent Sample Id:

Matrix: Soil 588822-002 MS Sample Id: 588822-002 S Prep Method: SW5030B Date Prep: 06.14.18

MSD Sample Id: 588822-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.100	0.0578	58	0.0661	65	70-130	13	35	mg/kg	06.14.18 17:55	X
Toluene	< 0.00201	0.100	0.0592	59	0.0663	66	70-130	11	35	mg/kg	06.14.18 17:55	X
Ethylbenzene	< 0.00201	0.100	0.0519	52	0.0592	59	70-130	13	35	mg/kg	06.14.18 17:55	X
m,p-Xylenes	< 0.00402	0.201	0.107	53	0.120	60	70-130	11	35	mg/kg	06.14.18 17:55	X
o-Xylene	< 0.00201	0.100	0.0520	52	0.0572	57	70-130	10	35	mg/kg	06.14.18 17:55	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		97		70-130	%	06.14.18 17:55
4-Bromofluorobenzene	106		123		70-130	%	06.14.18 17:55

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100\*(C-A) / BRPD = 200\* | (C-E) / (C+E) | [D] = 100\* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result

C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

Setting the Standard since 1990 ABORATORIES ABORATORIES

		Dallas Texas (214-902-0300)	Stafford, Texas (281-240-4200)
	www.xenco.com	Midland, Texas (432-704-5251)	San Antonio, Texas (210-509-3334)
Analytical Information	Xenco Quote # Xenco Job # 2	1	Phoenix, Arizona (480-355-0900)
Matrix Codes	0		

Stafford,Texas (281-240-4200) Dallas Texas (214-902-0300)	San Antonio, Texas (210-509-3334) Midland, Texas (432-704-5251)	nix, Arizona (480-355-0900
	www.xenco.com	nco Job#
Client / Reporting Information	Project Information	THE PROPERTY OF THE PROPERTY O
ompany Name / Branch: LT Environmental, Inc Permian Office	Project Name/Number: 3 No. 8 February	
ompany Address:	0 50	0)80
3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705	19705 NM ZRD-3612	RC
:mail: Phone No:	Invoice To:  XTO Energy - Kyle   ittrell	) <i>0</i> ,
\baker@LTEnv.com (432) 704-5178	5178	30
	PO Number	
that I a	Civilizati	e
- Carrie Carrie Coll		1 A
C	Collection Number of preserved bottles	(M
No. Field ID / Point of Collection	Depth Date Time Matrix bottles HCI NaCH/Zn Accetate HNO3 12SO4 NACH NACH NACH NACH NACH NACH NACH NACH	BTE) TPH (Chlo
BHOIA	06/2/18 9:50 8 1	X X X X
2 BHO. B	10:30	
3 BHOIC	51:11 1 1	\(\frac{1}{2}\)
4		
5		
0		
7		
00		
9		
10		
Turnaround Time ( Business days)	Data Deliverable Information	Notes:
Same Day TAT 5 Day TAT	Level II Std QC Level IV (Full Data Pkg /raw data)	
Next Day EMERGENCY	Level III Std QC+ Forms TRRP Level IV	
2 Day EMERGENCY Contract TAT	Level 3 (CLP Forms) UST / RG -411	
3 Day EMERGENCY	TRRP Checklist	
TAT Starts Day received by Lab, if received by 5:00 pm	5:00 pm	FED-EX / UPS: Tracking #
Relinguished by Sampler:	COMMENTED BELOW EACH TIME SAMPLES CHANGE POSSESS Repetyor By: Repetyor By: Repetyor By:	Date Time:
Relinguished by:	Date Time: Received By: Relinquished By:	Date Time: Received By:
Relinquished by:	1	Preserved where applicable On jee Cooler Temp. Thermo, Corr. Factor

6/13/2018



#### After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.

2. Fold the printed page along the horizontal line.

3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 06/14/2018 02:00:00 PM

Work Order #: 589277

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used: R8

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		3.5	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping contain	er/ cooler?	N/A	
#5 Custody Seals intact on sample bottles?		N/A	
#6*Custody Seals Signed and dated?		N/A	
#7 *Chain of Custody present?		Yes	
#8 Any missing/extra samples?		No	
#9 Chain of Custody signed when relinquished	ed/ received?	Yes	
#10 Chain of Custody agrees with sample la	pels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	
#13 Samples properly preserved?		Yes	
#14 Sample container(s) intact?		Yes	
#15 Sufficient sample amount for indicated to	est(s)?	Yes	
#16 All samples received within hold time?		Yes	
#17 Subcontract of sample(s)?		N/A	
#18 Water VOC samples have zero headspa	ice?	N/A	

* Must be	completed for after-hours de	elivery of samples prior to plac	ing in the refrigerator
Analyst:		PH Device/Lot#:	
	Checklist completed by:	Bright Tol	Date: <u>06/14/2018</u>
	Checklist reviewed by:	Jessica Kramer  Jessica Kramer	Date: <u>06/14/2018</u>

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

CONDITIONS

Action 3171

#### **CONDITIONS**

Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	3171
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
bbillings	Deferral for nKMW1035646177 approved, until P&A of location or major modification	7/23/2021