Environmental & Safety Solutions, Inc.

Electronic Correspondence

August 18, 2017

Ms. Olivia Yu
Environmental Specialist, District I
Oil Conservation Division, EMNRD
Olivia.yu@state.nm.us

Re: Replacement Closure Report – 1RP-2770
Legacy Reserves Jalmat Yates Unit #17
Legal: Unit C, Sec 18, T25S R37E, 660' FNL, 1,980' FWL, Lea County, NM
Lattitude/Longitude: 32.135787/ -103.203931
Etech Proj. Number: 164-2830-000
Depth to Groundwater: 115 feet - Chevron/Texaco Lea County Depth to Groundwater Map
Value provided by NMOCD, District 1
Release Type: Crude Oil and Produced Water

Contaminants of Concern (COCs)	Threshold Levels
TPH	5000 mg/kg
Benzene	10 mg/kg
BTEX	50 mg/kg
Chloride	500 mg/kg

Dear Olivia:

Etech Environmental & Safety Solutions, Inc. (Etech) is submitting the following corrective action plan on the aforementioned site for your review and approval.

Background

On May 19, 2011, a release of crude oil and produced water was discovered in the pasture land approximately three hundred (300) feet north of the Legacy Reserves, Jalmat Yates Unit #17. The source of the release was a hole in a two (2) inch steel flowline. The fluid flowed north from the release point following the lease road, then flowed eastward and pooled in the pasture.

Corrective Action Performed

The pooled area at the release point at the west terminus of the release, the flow path (north and east), and the pooled area at the east terminus of the release were excavated. Field testing for chloride concentrations indicated that chloride concentrations were steadily reducing from surface to approximately twelve (12) feet below ground surface ((bgs), approximately 800 mg/kg at 12 feet bgs). At this point the chloride concentrations began to elevate. Excavation of the pooled areas continued until the limits of our ability to excavate were reached. The pooled areas at this point were approximately twenty-two (22) feet bgs. Soil samples collected from the bottom of the excavation ranged in chloride concentration from 1,200 to 2,000 mg/kg. Remediation limits were excavate to 500 mg/kg and delineate to 250 mg/kg.

Per approval by the NMOCD, two (2) soil borings were advanced to forty (40) feet bgs, each at the edge of the down gradient side of the pooled areas. Soil samples were collected at two (2) foot intervals and field screened for chloride concentrations. The soil samples were then sent for laboratory analysis for chloride with instructions to perform successive analysis until a continuous ten (10) foot interval had been analyzed where the chloride concentrations were 250 mg/kg or less.

The results of the analysis determined there were no elevated levels of chloride from twenty-four (24) to thirty-two (32) feet bgs at SB1 and from twenty-four (24) to forty-eight (48) feet bgs at SB2 (See Table 1, Summary of Delineation Sampling Analytical Results below). Samples collected and analyzed of the sidewalls from the spill flow path and pooled areas determined that the areas have been excavated to acceptable levels (See Table 2, Summary of Remediation Sampling Analytical Results below).

All impacted soils (4,780 cubic yards) were removed from the site, transported, and disposed of at Sundance Services. Per NMOCD approval of October 5, 2011, and based upon the analytical data and the site conditions, the pooled areas at the site were backfilled with clean fill material to a depth of ten (10) feet bgs where a twenty (20) mil poly liner was installed and the areas backfilled to surface and contoured. The spill flow path was backfilled to surface.

Table 1
Summary of Delineation Sampling Analytical Results

Sample ID	Depth	Date	C6-C12	>C12-C28	>C28-C35	Total TPH (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	Chlorides (mg/kg)
SB 1	24’	9/1/16	NA	NA	NA	NA	NA	NA	80.0
SB 1	26’	9/1/16	NA	NA	NA	NA	NA	NA	80.0
SB 1	28’	9/1/16	NA	NA	NA	NA	NA	NA	48.0
SB 1	30’	9/1/16	NA	NA	NA	NA	NA	NA	64.0
SB 1	32’	9/1/16	NA	NA	NA	NA	NA	NA	64.0
SB 2	24’	9/1/16	NA	NA	NA	NA	NA	NA	160
SB 2	26’	9/1/16	NA	NA	NA	NA	NA	NA	160
SB 2	28’	9/1/16	NA	NA	NA	NA	NA	NA	256
SB 2	30’	9/1/16	NA	NA	NA	NA	NA	NA	208
SB 2	32’	9/1/16	NA	NA	NA	NA	NA	NA	256
SB 2	34’	9/1/16	NA	NA	NA	NA	NA	NA	272
SB 2	36’	9/1/16	NA	NA	NA	NA	NA	NA	320
SB 2	38’	9/1/16	NA	NA	NA	NA	NA	NA	304
SB 2	40’	9/1/16	NA	NA	NA	NA	NA	NA	288

NA denotes not analyzed

Table 2
Summary of Remediation Sampling Analytical Results

Sample ID	Date	C6-C12	>C12-C28	>C28-C35	Total TPH (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	Chlorides (mg/kg)
WTEW	9/2/16	ND	43.3	ND	43.3	NA	NA	263
ETEW	9/2/16	ND	ND	ND	ND	NA	NA	226
ETWW	9/2/16	ND	ND	ND	ND	NA	NA	10.6
WTWW	9/2/16	ND	ND	ND	ND	NA	NA	ND

NTNW #1	9/2/16	ND	ND	ND	ND	NA	NA	7.78
NTSW #1	9/2/16	ND	ND	ND	ND	NA	NA	207
NTSW #2	9/2/16	ND	ND	ND	ND	NA	NA	486
NTNW #2	9/2/16	ND	ND	ND	ND	NA	NA	503
NTNW #3	9/2/16	ND	ND	ND	ND	NA	NA	276
NTSW #3	9/2/16	ND	ND	ND	ND	NA	NA	614

ND denotes no analytical detection.
NA denotes not analyzed

Conclusion

Based on the analytical results and the field activities conducted, Etech does not recommend any further corrective action activities regarding this release. The initial and final C-141 forms and the NMOCD approval email for the liner installation and excavation backfilling dated October 5, 2011 are included in Attachment A, a site diagram and sample location map is included in Attachment B, photographic documentation of field activities are included in Attachment C, and the laboratory reports of the analytical results are included in Attachment D.

Respectfully:

Geoff Leking,
Project Manager
Etech Environmental & Safety Solutions, Inc.

Attachment A
Initial and Final C-141 Forms
NMOCD Approval Email of Liner Installation and Excavation Backfilling

HOBBS OCD

MAY 23 2011

RECEIVED

District I
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
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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Legacy Reserves Operating LP	Contact	Berry Johnson
Address	P.O. Box 10848 Midland,TX 79702	Telephone No.	432-689-5219
Facility Name	Jalmat Yates Unit #17	Facility Type	Oil

Surface Owner: Greg Fulfer	Mineral Owner	Lease No. 309054

LOCATION OF RELEASE

API #30-025-11648-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	18	25S	37E	660	North	1980	West	Lea

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release: oil & water		Volume of Release: 50 bbls	Volume Recovered: 0
Source of Release: 2" steel flowline		Date and Hour of Occurrence: 5/19	Date and Hour of Discovery: 5/19/11 10 AM
Was Immediate Notice Given? ☒ Yes ☒ No ☐ Not Required		If YES, To Whom? Land Owner - Greg Fulfer OCD - Jeff Leking	
By Whom? Tommy Hill - Berry Johnson		Date and Hour: 5/19/2011 - 4 PM	
Was a Watercourse Reached? ☐ Yes ☒ No		If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

GW@115'

Describe Cause of Problem and Remedial Action Taken.*

Property bought from COG. Well was in test & result was low. Found leak in pasture from old 2" flowline. Will replace with 2" SDR 7 poly. We S/I well & notified land owner & OCD.

Describe Area Affected and Cleanup Action Taken.*

Pasture land approx. 20' wide x 150' long, then ran 600' down cow trail x 2' wide. Fenced area off & contacted E-Tech Environmental for remediation plans.

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.

Signature: Berry Johnson

Printed Name: Berry Johnson

Title: Production Superintendent

E-mail Address:

Date: 05/20/11 Phone: 432-689-5200

OIL CONSERVATION DIVISION

Approved by ~~District Supervisor~~ ENV SPECIALIST: Jeff Leking

Approval Date: 05/24/11 Expiration Date: 07/25/11

Conditions of Approval: SUBMIT FINAL C-141 BY 07/25/11

Attached ☐

IRP-12-11-2770

* Attach Additional Sheets If Necessary

JAN 03 2012

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Legacy Reserves Operating LP	Contact Steven Dittman
Address P.O. 10848 Midland, TX 79702	Telephone No. 432-312-4757
Facility Name Jalmat Yates Unit #17	Facility Type Oil

Surface Owner Greg Fulfer	Mineral Owner	API No. 30-025-11648-00-00

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	18	25S	37E	660	North	1,980	West	Lea

Latitude 32.135787° **Longitude** -103.203931° NAD83

NATURE OF RELEASE

Type of Release Oil and water	Volume of Release 50 bbls	Volume Recovered 0
Source of Release 2" steel flowline	Date and Hour of Occurrence 5/19/2011	Date and Hour of Discovery 5/19/2011-10:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Land Owner – Greg Fulfer NMOCD – Geoff Leking	
By Whom? Tommy Hill – Berry Johnson	Date and Hour 5/19/2011 – 4:00 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Property bought from COG. Well was in test and result was low. Found leak in pasture from old 2" steel flowline. Will replace with 2 SDR 7 poly. We S/I well and notified land owner and NMOCD. Depth to ground water one hundred fifteen (115) feet below ground surface (bgs).

Describe Area Affected and Cleanup Action Taken.*
Pasture land approximately twenty (20) feet wide x one hundred fifty (150) feet long, then ran six hundred (600) feet x two (2) feet wide down cow trail. Fenced area off and contacted Etech Environmental for remediation plan. Remediation plan was generated and work performed. Pooled areas at the release point at the west terminus of the release flow path, and at the east terminus of the release flow path were excavated to twenty-two (22) feet bgs. The release flow path in the pasture was excavated to six (6) to twelve (12) feet bgs. All impacted soils (4,780 cubic yards) were removed from the site, transported, and disposed of at Sundance Services. Per NMOCD approval of October 5, 2011, and based upon the analytical data and the site conditions, the pooled areas at the site were backfilled with clean fill material to a depth of ten (10) feet bgs where a twenty (20) mil poly liner was installed and the areas backfilled to surface and contoured. The spill flow path was backfilled to surface.

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.

Signature: Steven Dittman	OIL CONSERVATION DIVISION
Printed Name: Steven Dittman	Approved by Environmental Specialist:
Title: Production Foreman	Approval Date: / Expiration Date:
E-mail Address: sdittman@legacylp.com	Conditions of Approval: / Attached ☐
Date: 8/17/17 Phone: 432-312-4757	

* Attach Additional Sheets If Necessary

From: Leking, Geoffrey R, EMNRD
To: Fred Holmes
Subject: RE: Legacy Reserves - Jalmont Yates Analysis & Proposed Closure
Date: Wednesday, October 05, 2011 4:36:25 PM

Fred

The OCD-District 1 concurs with the statements presented in the email below. The company may go ahead and backfill and emplace the liners as specified. Then the topping backfill should be emplaced. Thank you.

Geoffrey Leking
Environmental Engineer
NMOCD-Hobbs
1625 N. French Drive
Hobbs, NM 88240
Office: (575) 393-6161 Ext. 113
Cell: (575) 399-2990
email: geoffreyr.leking@state.nm.us

From: Fred Holmes [mailto:fred@etechenv.com]
Sent: Wednesday, October 05, 2011 2:17 PM
To: Leking, Geoffrey R, EMNRD
Subject: Legacy Reserves - Jalmont Yates Analysis & Proposed Closure

Geoff:

To refresh you on this site. There was a release of oil and produced water from the Legacy Reserves, Jalmont Yates Well #17. The spill originated in the west end at a Flowline, followed the lease road north, then moved eastward and pooled in pasture land. The pooled area at the release point (west) the pathway (north and east) and the pooled area at the end point (east) were excavated. The pooled areas were excavated and the chlorides were steadily reducing from surface to approximately 12' below ground level ((bgl) (approximately 800 at 12 feet)). At this point the chlorides began to elevate. We continued to excavate the pooled areas until we reached the limits of our ability to excavate. The pooled areas at this point were approximately 22 feet bgl. Sample collected from the bottom of the excavation ranged from 1,200 – 2,000 mg/kg. Remediation limits were excavate to 500 mg/kg/ delineate to 250 mg/kg.

As per our discussion, we advanced two (2) soil borings to 40 feet bgl, each at the edge on the down gradient side of the pooled areas. Samples were collected at two foot intervals and field screened for chlorides. The samples were then sent for laboratory analysis for chlorides with instructions to perform successive analysis until a continuous 10 foot interval had been analyzed where the chlorides were 250 mg/kg or less.

The results of the analysis determined there were no elevated levels of chlorides from 24 -32 ' on

SB1 and from 24 - 48' on SB2. Samples collected and analyzed of the sidewall samples from the spill path and pooled areas determined that the area has been excavated to acceptable levels.

A summary of the analytical results along with a sample location map and the analytical results is attached.

Proposed Corrective Action

Currently, all impacted soils (4780 Cubic Yards) have been removed from the site transported and disposed of at Sundance. Etech proposes that based upon the analytical data and the current site conditions, the pooled areas at the site be backfilled with clean fill material to a depth of 10' bgl where a 20 mil poly liner will be installed and the areas backfilled to surface and contoured. The spill pathway will be backfilled to surface. When these activities are complete, a closure report will be submitted including a final C-141.

If this is acceptable, would you please reply to this email with your concurrence.

Thank you for all of your assistance on this matter.

Fred Holmes
Etech Environmental & Safety Solutions, Inc.
P.O. Box 8469
Midland, Texas 79708-8469
Phone: 432-563-2200
Fax: 432-563-2213
E-mail: fred@etechenv.com

Attachment B
Site Diagram and Sample Location Map

Jalmat Yates Unit #17

TN
MN (7.4°E)

Scale 1 : 800
1" = 66.7 ft
Data Zoom 18-0

Attachment C
Photograph Log

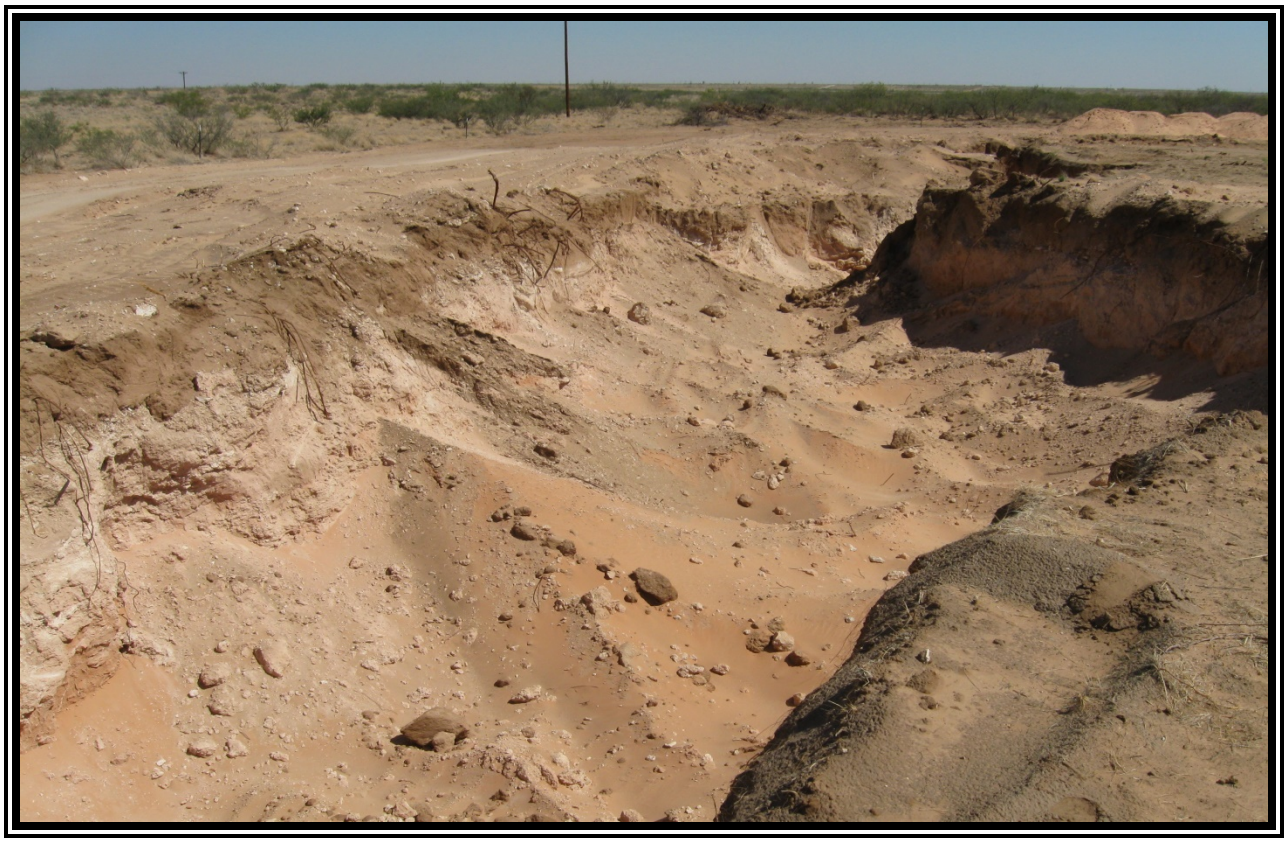
View of release point at west terminus of release prior to excavation.

View of release following the lease road to the north prior to excavation.

View of the release flow path in the pasture prior to excavation.

View of east terminus of the release prior to excavation.

View of the west terminus of the release after excavation.



View of release following the lease road north after excavation.

View of release flow path in the pasture after excavation.

View of east terminus of the release after excavation.

View of the west terminus of the release after installation of liner.

View of the west terminus of the release after backfill emplaced over liner.

View of east terminus of the release after installation of liner.

View of east terminus of the release after backfill emplaced over liner.

Attachment D
Analytical Results

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 06, 2011

FRED HOLMES

ETECH Environmental & Safety Solutions, Inc.

P. O. BOX 8469

MIDLAND, TX 79708

RE: JALMOT YATES #17

Enclosed are the results of analyses for samples received by the laboratory on 09/02/11 16:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
FRED HOLMES
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received:	09/02/2011	Sampling Date:	09/01/2011
Reported:	09/06/2011	Sampling Type:	Soil
Project Name:	JALMOT YATES #17	Sampling Condition:	** (See Notes)
Project Number:	164-2830	Sample Received By:	Jodi Henson
Project Location:	JAL, NM		

Sample ID: SB-1 (24') (H101882-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-1 (26') (H101882-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-1 (28') (H101882-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-1 (30') (H101882-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/06/2011	ND	448	112	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
FRED HOLMES
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received:	09/02/2011	Sampling Date:	09/01/2011
Reported:	09/06/2011	Sampling Type:	Soil
Project Name:	JALMOT YATES #17	Sampling Condition:	** (See Notes)
Project Number:	164-2830	Sample Received By:	Jodi Henson
Project Location:	JAL, NM		

Sample ID: SB-1 (32') (H101882-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/06/2011	ND	448	112	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Etech Env. & Safety Solutions, Inc.	**BILL TO**	
Project Manager:	Fred Holmes	**P.O. #:**	2830
Address:	P.O. Box 8469	**Company:**	Etech
City:	Midland **State:** TX **Zip:** 79708	**Attn:**	Fred Holmes
Phone #:	432-563-2200 **Fax #:** 432-563-2213	**Address:**	PO Box 8469
Project #:	164-2830 **Project Owner:** Legacy	**City:**	Midland
Project Name:	Jalmot Yates #17	**State:** TX **Zip:**	79708
Project Location:	Jal New Mexico	**Phone #:**	432-563-2200
Sampler Name:	Shane	**Fax #:**	432-563-2213

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST													
Lab I.D.	**Sample I.D.**	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH (8015)	TPH Ext (TX 1005)	Chlorides											
H101882-1	SB-1 (24')	G	1			X							9/1/2011	1036			X											
2	SB-1 (26')	G	1			X							9/1/2011	1038			X											
3	SB-1 (28')	G	1			X							9/1/2011	1040			X											
4	SB-1 (30')	G	1			X							9/1/2011	1043			X											
5	SB-1 (32')	G	1			X							9/1/2011	1045			X											
6	SB-1 (34')	G	1			X							9/1/2011	1047			X											
7	SB-1 (36')	G	1			X							9/1/2011	1050			X											
8	SB-1 (38')	G	1			X							9/1/2011	1052			X											
9	SB-1 (40')	G	1			X							9/1/2011	1056			X											

Sampler Relinquished: Shane	Date: 9/2/11 Time: 1:37 pm CST	**Received By:**		
Relinquished By:	Date: 9/2/11 Time: 4:30	**Received By:** Jodi Henson		
Delivered By: (Circle One)	Temp.	Sample Condition Cool	Intact	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	25°c	☐ Yes ☑ No	☑ Yes ☐ No	AH

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:
Analyze the first 5 samples for Cl. If Cl are 250 mg/kg or less, stop. If not continue until there are ten continuous feet of sample with Cl of 250 mg/kg or less.

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

#26

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 06, 2011

FRED HOLMES

ETECH Environmental & Safety Solutions, Inc.

P. O. BOX 8469

MIDLAND, TX 79708

RE: JALMOT YATES #17

Enclosed are the results of analyses for samples received by the laboratory on 09/02/11 16:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
FRED HOLMES
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received:	09/02/2011	Sampling Date:	09/01/2011
Reported:	09/06/2011	Sampling Type:	Soil
Project Name:	JALMOT YATES #17	Sampling Condition:	** (See Notes)
Project Number:	164-2830	Sample Received By:	Jodi Henson
Project Location:	JAL, NM		

Sample ID: SB-2 (24') (H101883-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-2 (26') (H101883-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-2 (28') (H101883-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-2 (30') (H101883-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	09/06/2011	ND	448	112	400	3.64	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ETECH Environmental & Safety Solutions, Inc.
FRED HOLMES
P. O. BOX 8469
MIDLAND TX, 79708
Fax To: (432) 563-2213

Received:	09/02/2011	Sampling Date:	09/01/2011
Reported:	09/06/2011	Sampling Type:	Soil
Project Name:	JALMOT YATES #17	Sampling Condition:	** (See Notes)
Project Number:	164-2830	Sample Received By:	Jodi Henson
Project Location:	JAL, NM		

Sample ID: SB-2 (32') (H101883-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-2 (34') (H101883-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-2 (36') (H101883-07)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	09/06/2011	ND	448	112	400	3.64	

Sample ID: SB-2 (38') (H101883-08)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	09/06/2011	ND	400	100	400	7.69	

Sample ID: SB-2 (40') (H101883-09)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: HM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	09/06/2011	ND	400	100	400	7.69	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Etech Env. & Safety Solutions, Inc.			**BILL TO**	
Project Manager:	Fred Holmes			**P.O. #:**	2830
Address:	P.O. Box 8469			**Company:**	Etech
City:	Midland	**State:** TX	**Zip:** 79708	**Attn:**	Fred Holmes
Phone #:	432-563-2200	**Fax #:**	432-563-2213	**Address:**	PO Box 8469
Project #:	164-2830	**Project Owner:**	Legacy	**City:**	Midland
Project Name:	Jalmot Yates #17			**State:** TX	**Zip:** 79708
Project Location:	Jal New Mexico			**Phone #:**	432-563-2200
Sampler Name:	Shane			**Fax #:**	432-563-2213

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	**Sample I.D.**	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH (8015)	TPH Ext (TX 1005)	Chlorides
H101883																	
1	SB-2 (24')	G	1			X							9/1/2011	1109			X
2	SB-2 (26')	G	1			X							9/1/2011	1112			X
3	SB-2 (28')	G	1			X							9/1/2011	1114			X
4	SB-2 (30')	G	1			X							9/1/2011	1116			X
5	SB-2 (32')	G	1			X							9/1/2011	1121			X
6	SB-2 (34')	G	1			X							9/1/2011	1118			X
7	SB-2 (36')	G	1			X							9/1/2011	1124			X
8	SB-2 (38')	G	1			X							9/1/2011	1127			X
9	SB-2 (40')	G	1			X							9/1/2011	1133			X

Sampler Relinquished:	**Date:** 9/2/11	**Received By:**		
	Time: 1:37 CST			
Relinquished By:	**Date:** 9/2/11	**Received By:**		
	Time: 4:30			
Delivered By: (Circle One)	**Temp.**	**Sample Condition** Cool	Intact	**CHECKED BY: (Initials)**
Sampler - UPS - Bus - Other:	25°C	☐ Yes ☑ No	☑ Yes ☐ No	

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS:
Analyze the first 5 samples for Cl. If Cl are 250 mg/kg or less, stop. If not continue until there are ten continuous feet of sample with Cl of 250 mg/kg or less are found.

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

#26

Analytical Report 427304

for

Etech Environmental & Safety Solutions, Inc

Project Manager: Darren Harris

Jalmet Yates # 17

164-002830-000

19-SEP-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

19-SEP-11

Project Manager: **Darren Harris**
Etech Environmental & Safety Solutions, Inc
12800 E. Hwy 80 W.
Odessa, TX 79765

Reference: XENCO Report No: **427304**
Jalmet Yates # 17
Project Address: Jal, NM

Darren Harris:

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 427304. 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. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. 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. 427304 will be filed for 60 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,

Brent Barron II
Odessa Laboratory Manager

Sample Cross Reference 427304

Etech Environmental & Safety Solutions, Inc, Odessa, TX

Jalmet Yates # 17

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WTEW	S	09-02-11 12:15		427304-001
ETEW	S	09-02-11 12:05		427304-002
ETWW	S	09-02-11 12:00		427304-003
WTWW	S	09-02-11 12:10		427304-004
NTNW # 1	S	09-02-11 11:30		427304-005
NTSW # 1	S	09-02-11 11:45		427304-006
NTSW # 2	S	09-02-11 11:30		427304-007
NTNW # 2	S	09-02-11 11:35		427304-008
NTNW # 3	S	09-02-11 11:40		427304-009
NTSW # 3	S	09-02-11 11:50		427304-010

CASE NARRATIVE

Client Name: Etech Environmental & Safety Solutions, In

Project Name: Jalmet Yates # 17

Project ID:	*164-002830-000*	*Report Date:*	*19-SEP-11*
Work Order Number:	*427304*	*Date Received:*	*09/09/2011*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-870315 TPH by SW8015 Mod
SW8015MOD_NM

Batch 870315, o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 611531-1-BLK,427304-007,427304-010,427304-003.

Certificate of Analysis Summary 427304

Etech Environmental & Safety Solutions, Inc, Odessa, TX

Project Name: Jalmet Yates # 17

Project Id: 164-002830-000
Contact: Darren Harris
Project Location: Jal, NM

Date Received in Lab: Fri Sep-09-11 09:45 am
Report Date: 19-SEP-11
Project Manager: Brent Barron II

Analysis Requested													
	Lab Id:	427304-001		427304-002		427304-003		427304-004		427304-005		427304-006	
	Field Id:	WTEW		ETEW		ETWW		WTWW		NTNW # 1		NTSW # 1	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-02-11 12:15		Sep-02-11 12:05		Sep-02-11 12:00		Sep-02-11 12:10		Sep-02-11 11:30		Sep-02-11 11:45	
Anions by E300	***Extracted:***												
	Analyzed:	Sep-11-11 19:03		Sep-11-11 19:03		Sep-11-11 19:03		Sep-11-11 19:03		Sep-11-11 19:03		Sep-11-11 19:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		263	8.55	226	4.26	10.6	4.29	ND	4.20	7.78	4.23	207	8.51
Percent Moisture	***Extracted:***												
	Analyzed:	Sep-09-11 11:15		Sep-09-11 11:15		Sep-09-11 11:15		Sep-09-11 11:15		Sep-09-11 11:15		Sep-09-11 11:15	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		1.73	1.00	1.52	1.00	2.03	1.00	ND	1.00	ND	1.00	1.31	1.00
TPH By SW8015 Mod	***Extracted:***	Sep-09-11 13:50		Sep-13-11 16:15		Sep-13-11 16:15		Sep-13-11 16:15		Sep-13-11 16:15		Sep-13-11 16:15	
	Analyzed:	Sep-12-11 06:33		Sep-19-11 13:30		Sep-19-11 13:51		Sep-19-11 14:12		Sep-19-11 14:33		Sep-19-11 14:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.2	ND	15.2	ND	15.3	ND	15.0	ND	15.1	ND	15.2
C12-C28 Diesel Range Hydrocarbons		43.3	15.2	ND	15.2	ND	15.3	ND	15.0	ND	15.1	ND	15.2
C28-C35 Oil Range Hydrocarbons		ND	15.2	ND	15.2	ND	15.3	ND	15.0	ND	15.1	ND	15.2
Total TPH		43.3	15.2	ND	15.2	ND	15.3	ND	15.0	ND	15.1	ND	15.2

Brent Barron II
Odessa Laboratory Manager

Final 1.000

Certificate of Analysis Summary 427304

Etech Environmental & Safety Solutions, Inc, Odessa, TX

Project Name: Jalmet Yates # 17

Project Id: 164-002830-000
Contact: Darren Harris
Project Location: Jal, NM

Date Received in Lab: Fri Sep-09-11 09:45 am
Report Date: 19-SEP-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	427304-007		427304-008		427304-009		427304-010			
	Field Id:	NTSW # 2		NTNW # 2		NTNW # 3		NTSW # 3			
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Sep-02-11 11:30		Sep-02-11 11:35		Sep-02-11 11:40		Sep-02-11 11:50			
Anions by E300	***Extracted:***										
	Analyzed:	Sep-11-11 19:03		Sep-11-11 19:03		Sep-11-11 19:03		Sep-11-11 19:03			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		486	8.59	503	8.62	276	8.51	614	8.59		
Percent Moisture	***Extracted:***										
	Analyzed:	Sep-09-11 11:15		Sep-09-11 11:15		Sep-09-11 11:15		Sep-09-11 11:15			
	Units/RL:	%	RL	%	RL	%	RL	%	RL		
Percent Moisture		2.16	1.00	2.50	1.00	1.35	1.00	2.26	1.00		
TPH By SW8015 Mod	***Extracted:***	Sep-13-11 16:15		Sep-13-11 16:15		Sep-13-11 16:15		Sep-13-11 16:15			
	Analyzed:	Sep-19-11 15:15		Sep-19-11 15:36		Sep-19-11 15:57		Sep-19-11 16:18			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		ND	15.4	ND	15.4	ND	15.3	ND	15.3		
C12-C28 Diesel Range Hydrocarbons		ND	15.4	ND	15.4	ND	15.3	ND	15.3		
C28-C35 Oil Range Hydrocarbons		ND	15.4	ND	15.4	ND	15.3	ND	15.3		
Total TPH		ND	15.4	ND	15.4	ND	15.3	ND	15.3		

Brent Barron II
Odessa Laboratory Manager

Final 1.000

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 quantiation 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.

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

+ Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Jalmet Yates # 17

Work Orders : 427304,

Project ID: 164-002830-000

Lab Batch #: 869691 **Sample:** 427304-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/12/11 06:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.1	99.9	92	70-135	
o-Terphenyl	44.5	50.0	89	70-135	

Lab Batch #: 870315 **Sample:** 427304-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 13:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	67.1	50.0	134	70-135	

Lab Batch #: 870315 **Sample:** 427304-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 13:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	69.6	50.1	139	70-135	**

Lab Batch #: 870315 **Sample:** 427304-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 14:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	61.5	50.0	123	70-135	

Lab Batch #: 870315 **Sample:** 427304-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 14:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	155	200	78	70-135	
o-Terphenyl	95.0	100	95	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Jalmet Yates # 17

Work Orders : 427304,

Project ID: 164-002830-000

Lab Batch #: 870315 **Sample:** 427304-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 14:54

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	220	200	110	70-135	
o-Terphenyl	133	99.9	133	70-135	

Lab Batch #: 870315 **Sample:** 427304-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 15:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	68.7	50.2	137	70-135	**

Lab Batch #: 870315 **Sample:** 427304-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 15:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	64.5	50.1	129	70-135	

Lab Batch #: 870315 **Sample:** 427304-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 15:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	151	201	75	70-135	
o-Terphenyl	94.1	100	94	70-135	

Lab Batch #: 870315 **Sample:** 427304-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/19/11 16:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.9	110	70-135	
o-Terphenyl	71.6	50.0	143	70-135	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Jalmet Yates # 17

Work Orders : 427304, **Project ID:** 164-002830-000

Lab Batch #: 869691 **Sample:** 611195-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/11/11 19:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.6	99.5	79	70-135	
o-Terphenyl	42.1	49.8	85	70-135	

Lab Batch #: 870315 **Sample:** 611531-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/19/11 12:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.9	119	70-135	
o-Terphenyl	77.6	50.0	155	70-135	**

Lab Batch #: 869691 **Sample:** 611195-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/11/11 18:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	100	89	70-135	
o-Terphenyl	45.6	50.2	91	70-135	

Lab Batch #: 870315 **Sample:** 611531-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/19/11 12:47

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	99.7	111	70-135	
o-Terphenyl	63.5	49.9	127	70-135	

Lab Batch #: 869691 **Sample:** 611195-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/11/11 18:44

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	100	94	70-135	
o-Terphenyl	43.3	50.1	86	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Jalmet Yates # 17

Work Orders : 427304,

Project ID: 164-002830-000

Lab Batch #: 869691 **Sample:** 427262-008 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/12/11 07:06

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	41.6	50.0	83	70-135	

Lab Batch #: 869691 **Sample:** 427262-008 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/12/11 07:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	100	98	70-135	
o-Terphenyl	46.9	50.1	94	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Blank Spike Recovery

Project Name: Jalmet Yates # 17

Work Order #: 427304 **Project ID:** 164-002830-000

Lab Batch #: 870315 **Sample:** 611531-1-BKS **Matrix:** Solid

Date Analyzed: 09/19/2011 **Date Prepared:** 09/13/2011 **Analyst:** JAH

Reporting Units: mg/kg **Batch #:** 1

BLANK /BLANK SPIKE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
C6-C12 Gasoline Range Hydrocarbons	<15.0	997	804	81	70-135	
C12-C28 Diesel Range Hydrocarbons	<15.0	997	942	94	70-135	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Final 1.000

BS / BSD Recoveries

Project Name: Jalmet Yates # 17

Work Order #: 427304 **Project ID:** 164-002830-000

Analyst: BRB **Date Prepared:** 09/11/2011 **Date Analyzed:** 09/11/2011

Lab Batch ID: 869667 **Sample:** 869667-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.840	20.0	21.9	110	20.0	21.9	110	0	75-125	20	

Analyst: BBH **Date Prepared:** 09/09/2011 **Date Analyzed:** 09/11/2011

Lab Batch ID: 869691 **Sample:** 611195-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.1	1000	851	85	1000	869	87	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.1	1000	712	71	1000	728	73	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Jalmet Yates # 17

Work Order #: 427304

Lab Batch #: 869667 **Project ID:** 164-002830-000

Date Analyzed: 09/11/2011 **Date Prepared:** 09/11/2011 **Analyst:** BRB

QC- Sample ID: 427256-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	19100	4830	24200	106	75-125	

Lab Batch #: 869667

Date Analyzed: 09/11/2011 **Date Prepared:** 09/11/2011 **Analyst:** BRB

QC- Sample ID: 427304-005 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	7.78	101	99.8	91	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: Jalmet Yates # 17

Work Order # : 427304 **Project ID:** 164-002830-000

Lab Batch ID: 869691 **QC- Sample ID:** 427262-008 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/12/2011 **Date Prepared:** 09/09/2011 **Analyst:** BBH

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
C6-C12 Gasoline Range Hydrocarbons	<15.7	1040	1020	98	1050	978	93	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.7	1040	804	77	1050	808	77	0	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000

Sample Duplicate Recovery

Project Name: Jalmet Yates # 17

Work Order #: 427304

Lab Batch #: 869667 **Project ID:** 164-002830-000

Date Analyzed: 09/11/2011 19:03 **Date Prepared:** 09/11/2011 **Analyst:** BRB

QC- Sample ID: 427256-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	19100	18800	2	20	

Lab Batch #: 869627

Date Analyzed: 09/09/2011 11:15 **Date Prepared:** 09/09/2011 **Analyst:** BRB

QC- Sample ID: 427302-002 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.57	1.41	11	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Darren Harris

Company Name: Etech Environmental & Safety Solutions, Inc.

Company Address: PO Box 8469

City/State/Zip: Midland, Texas 79708

Telephone No: 432-563-2200 Fax No: 432-563-2213

Sampler Signature:

e-mail: darren@etechenv.com

Project Name: Jalmat Yates #17

Project #: 164-002830-000

Project Loc: Jal NM

PO #: 164002830.000

Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 427304

LAB # (lab use only)	FIELD CODE	Sample Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For (TCLP): TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	N.O.R.M.	TDS, Bromide	Chlorides	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	WTEW		9/2/11	12:15		X								S	X										X		X
02	ETEW		9/2/11	12:05		X								S	X										X		X
03	ETWW		9/2/11	12:00		X								S	X										X		X
04	WTWW		9/2/11	12:10		X								S	X										X		X
05	NTNW #1		9/2/11	11:30		X								S	X										X		X
06	NTSW #1		9/2/11	11:45		X								S	X										X		X
07	NTSW #2		9/2/11	11:30		X								S	X										X		X
08	NTNW #2		9/2/11	11:35		X								S	X										X		X
09	NTNW #3		9/2/11	11:40		X								S	X										X		X
10	NTSW #3		9/2/11	11:50		X								S	X										X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	9/9/11	9:45			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea Cruz	9.9.11	9:45

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier?. UPS DHL FedEx Lone Star

4 oz glass

Temperature Upon Receipt: 2.6 °C

XENCO Laboratories	XENCO Laboratories Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa	Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Etech Env.

Date/Time: 9.9.11 9:45

Lab ID # : 427303

Initials: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	~~Water~~	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	~~Yes~~ AE	No		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	Yes	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No	N/A	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	2.6 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis