AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pGRL0928739922

1RP - 2301

OXY USA INC

4/20/2016

RECEIVED
FEB 03 2010
HOBBSOCD

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 OXY USA	Contact Kelton Beaird
Address 1502 W. Commerce Carlsbad, NM 88220	Telephone No. (O) 575-628-4100
Facility Name State DW #1	Facility Type Tank Battery

Surface Owner State	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	12	18S	33E					LEA

Latitude 32° 45.697' N Longitude 103° 36.948' W

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 15bbls	Volume Recovered 14
Source of Release Test Heater	Date and Hour of Occurrence	Date and Hour of Discovery 9-17-09 @ 9am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Larry Johnson (Left Message)	
By Whom? Kelton Beaird	Date and Hour See above	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

WATER @ 143'

Describe Cause of Problem and Remedial Action Taken.*
The State DW 10 was on test. Due to lack of gas pressure to operate the dump valves, the heater failed to keep up with the dumping of the fluid causing the Heater to overflow. The area affected was around the heater, the oil then ran south off the location onto the lease road. The site was delineated using a backhoe and an air rotary rig. Site ranking is Surface Body of Water – 0 points, Wellhead Protection – 0 points and Groundwater (>100') – 0 points. The total ranking for the site is 0 points.

Describe Area Affected and Cleanup Action Taken.* Oxy USA proposes to excavate 2' of impacted soil from TP1, TP2 and TP3 and excavate 5' of impacted soil from TP4 and TP5 and haul the impacted soil to Lea Land Disposal. A 20 mil poly liner will be installed at 2' at TP1, TP2 and TP3. The excavated area will be backfilled with clean native soil. The site will not be re-seeded since the site is a caliche location for a tank battery. A final report will be submitted at the completion of the project.

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:	OIL CONSERVATION DIVISION	
Printed Name: Kelton Beaird	Approved by ~~District Supervisor~~ ENV ENGINEER: Geoffrey Leking	
Title: HES Specialist	Approval Date: 02/03/10	Expiration Date: 04/05/10
E-mail Address: kelton_beaird@oxy.com	Conditions of Approval: SUBMIT FINAL C-141 BY 04/05/10	Attached ☐ IRP-09-10-2301
Date: 12-9-09		

* Attach Additional Sheets If Necessary

GEOFFS CORY

Remediation Plan

Prepared for
Oxy USA

State DW #1 Spill
Lea County, NM

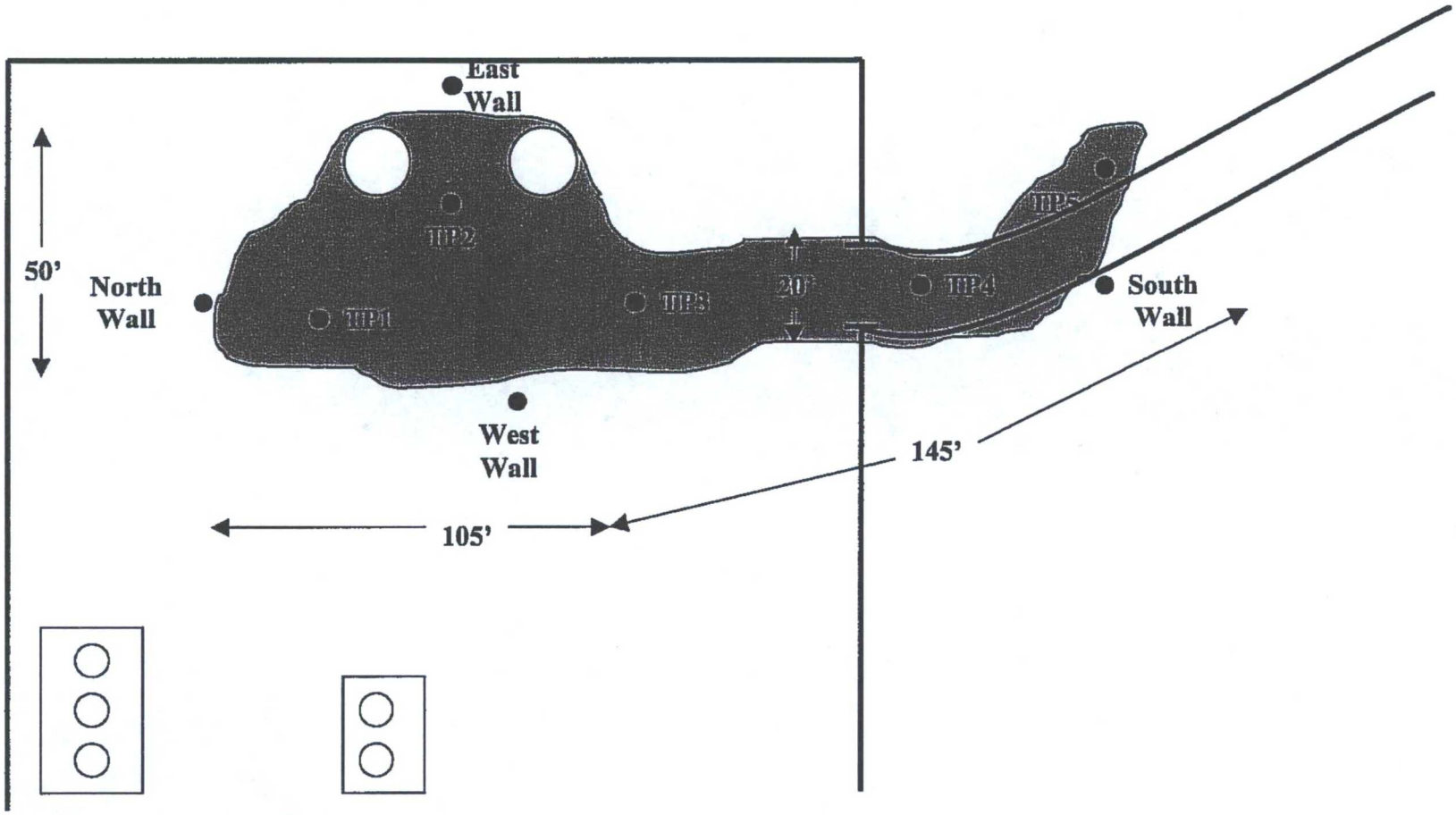
1RP-09-10-2301

Prepared by
Elke Environmental, Inc.
P.O. Box 14167 Odessa, TX 79768
Phone (432) 366-0043 Fax (432) 366-0884

Oxy USA
State DW #1 Battery

N

Plat Map



Elke Environmental, Inc.
P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA **Analyst** Curtis Elam

Site State DW #1 Battery

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP1	9-28-09	Surface	28,310	1,028	31.1	32° 45.697' N 103° 36.948' W
TP1	9-28-09	2'	27,300	1,538	45.7	32° 45.697' N 103° 36.948' W
TP1	9-28-09	4'	18	912	8.5	32° 45.697' N 103° 36.948' W
TP1	9-28-09	6'	20	1,073	7.1	32° 45.697' N 103° 36.948' W
TP1	9-28-09	8'	13	624	10.3	32° 45.697' N 103° 36.948' W
TP1	9-28-09	10'	16	650	13.2	32° 45.697' N 103° 36.948' W
TP1	9-28-09	12'	11	583	7.1	32° 45.697' N 103° 36.948' W
TP1	9-28-09	14'	7	422	3.8	32° 45.697' N 103° 36.948' W
TP1	9-30-09	16'	16	521	1.9	32° 45.697' N 103° 36.948' W
TP1	9-30-09	18'	8	350	2.1	32° 45.697' N 103° 36.948' W
TP1	9-30-09	20'	6	190	1.7	32° 45.697' N 103° 36.948' W
TP2	9-28-09	Surface	22,310	6,105	65.7	32° 45.696' N 103° 36.943' W
TP2	9-28-09	2'	4,650	3,650	31.5	32° 45.696' N 103° 36.943' W
TP2	9-30-09	10'	1,300	1,560	12.1	32° 45.696' N 103° 36.943' W
TP2	9-30-09	15'	180	1,119	13.2	32° 45.696' N 103° 36.943' W
TP2	9-30-09	20'	20	732	4.1	32° 45.696' N 103° 36.943' W
TP2	9-30-09	25'	16	987	3.0	32° 45.696' N 103° 36.943' W

Analyst Notes

Elke Environmental, Inc.
P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA **Analyst** Curtis Elam

Site State DW #1 Battery

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP2	9-30-09	30'	10	1,182	6.9	32° 45.696' N 103° 36.943' W
TP2	9-30-09	35'	13	1,009	4.6	32° 45.696' N 103° 36.943' W
TP2	9-30-09	40'	18	664	8.5	32° 45.696' N 103° 36.943' W
TP2	9-30-09	45'	9	545	7.4	32° 45.696' N 103° 36.943' W
TP2	9-30-09	50'	13	225	1.1	32° 45.696' N 103° 36.943' W
TP3	9-29-09	Surface	8,613	1,563	33.1	32° 45.692' N 103° 36.943' W
TP3	9-29-09	2'	2,580	1,067	15.7	32° 45.692' N 103° 36.943' W
TP3	9-29-09	8'	500	686	9.6	32° 45.692' N 103° 36.943' W
TP3	9-30-09	15'	13	380	3.5	32° 45.692' N 103° 36.943' W
TP3	9-30-09	20'	8	200	2.1	32° 45.692' N 103° 36.943' W
TP4	9-29-09	Surface	31,350	1,921	71.3	32° 45.681' N 103° 36.950' W
TP4	9-29-09	2'	24,460	1,060	34.5	32° 45.681' N 103° 36.950' W
TP4	9-29-09	5'	230	740	18.7	32° 45.681' N 103° 36.950' W
TP4	9-29-09	10'	7	925	2.9	32° 45.681' N 103° 36.950' W
TP4	9-30-09	15'	13	250	3.1	32° 45.681' N 103° 36.950' W
TP5	9-29-09	Surface	14,320	7,315	27.5	32° 45.672' N 103° 36.940' W
TP5	9-29-09	2'	12,940	3,638	33.4	32° 45.672' N 103° 36.940' W

Analyst Notes

Elke Environmental, Inc.
P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA **Analyst** Curtis Elam

Site State DW #1 Battery

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP5	9-29-09	5'	328	350	12.1	32° 45.672' N 103° 36.940' W
TP5	9-30-09	10'	16	200	3.3	32° 45.672' N 103° 36.940' W
North Wall	9-29-09	Surface	35	110	3.5	32° 45.701' N 103° 36.943' W
South Wall	9-29-09	Surface	150	120	9.7	32° 45.675' N 103° 36.950' W
East Wall	9-29-09	Surface	60	80	6.1	32° 45.695' N 103° 36.935' W
West Wall	9-29-09	Surface	380	200	3.0	32° 45.697' N 103° 36.948' W

Analyst Notes

Analytical Report 347080

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy State DW # 1

Oxy State DW # 1

12-OCT-09

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-08-TX), Arizona (AZ0738), 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 (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87428), 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 (T104704400-08-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)
Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),
South Carolina(96031001), Louisiana(04154), Georgia(917)

XENCO Laboratories

ACCREDITED IN ACCORDANCE WITH nelac

12-OCT-09

Project Manager: **Logan Anderson**
Elke Environmental, Inc.
P.O. Box 14167
Odessa, TX 79768

Reference: XENCO Report No: **347080**
Oxy State DW # 1
Project Address: Oxy State DW # 1

Logan Anderson:

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 347080. 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. 347080 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

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 - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

Sample Cross Reference 347080

Elke Environmental, Inc., Odessa, TX

Oxy State DW # 1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP 1 @ 20'	S	Sep-30-09 12:45	20 ft	347080-001
TP 2 @ 50'	S	Sep-30-09 15:00	50 ft	347080-002
TP 3 @ 20'	S	Sep-30-09 15:45	20 ft	347080-003
TP 4 @ 15'	S	Sep-30-09 16:00	15 ft	347080-004
TP 5 @ 10'	S	Sep-30-09 16:30	10 ft	347080-005

CASE NARRATIVE

XENCO Laboratories

Client Name: Elke Environmental, Inc.
Project Name: Oxy State DW # 1

Project ID:	*Oxy State DW # 1*	*Report Date:*	*12-OCT-09*
Work Order Number:	*347080*	*Date Received:*	*10/03/2009*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-775692 Inorganic Anions by EPA 300
None

Batch: LBA-775738 Percent Moisture
None

Batch: LBA-775956 BTEX-MTBE EPA 8021B
SW8021BM

Batch 775956, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 347080-003, -005, -002, -004, -001.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits

CASE NARRATIVE

XENCO Laboratories

Client Name: Elke Environmental, Inc.
Project Name: Oxy State DW # 1

Project ID: *Oxy State DW # 1* *Report Date:* *12-OCT-09*
Work Order Number: *347080* *Date Received:* *10/03/2009*

Batch: LBA-776370 TX1005
SW8015MOD_NM

Batch 776370, C6-C12 Gasoline Range Hydrocarbons recovered above QC limits in the Matrix Spike Duplicate.
Samples affected are: 347080-003, -005, -002, -004, -001.
The Laboratory Control Sample for C6-C12 Gasoline Range Hydrocarbons is within laboratory Control Limits

SW8015MOD_NM

Batch 776370, 1-Chlorooctane, o-Terphenyl recovered below QC limits . Matrix interferences is suspected; QC data is not confirmed by re-analysis
Samples affected are: 347437-001 S,347437-001 SD.

Batch 776370, 1-Chlorooctane, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; QC data is not confirmed by re-analysis
Samples affected are: 347080-002

Certificate of Analysis Summary 347080

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy State DW # 1

Project Id: Oxy State DW # 1
Contact: Logan Anderson
Project Location: Oxy State DW # 1

Date Received in Lab: Sat Oct-03-09 10:57 am
Report Date: 12-OCT-09
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	347080-001		347080-002		347080-003		347080-004		347080-005	
	Field Id:	TP 1 @ 20'		TP 2 @ 50'		TP 3 @ 20'		TP 4 @ 15'		TP 5 @ 10'	
	Depth:	20 ft		50 ft		20 ft		15 ft		10 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-30-09 12:45		Sep-30-09 15:00		Sep-30-09 15:45		Sep-30-09 16:00		Sep-30-09 16:30	
Anions by E300	Extracted:										
	Analyzed:	Oct-05-09 13:38		Oct-05-09 13:38		Oct-05-09 13:38		Oct-05-09 13:38		Oct-05-09 13:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		207	4.38	95.3	4.39	218	8.64	348	8.67	90.0	8.58
BTEX by EPA 8021B	Extracted:	Oct-06-09 10:00		Oct-06-09 10:00		Oct-06-09 10:00		Oct-06-09 10:00		Oct-06-09 10:00	
	Analyzed:	Oct-06-09 17:08		Oct-06-09 17:29		Oct-06-09 17:50		Oct-06-09 18:11		Oct-06-09 18:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Toluene		ND	0.0021	ND	0.0021	ND	0.0021	ND	0.0021	ND	0.0020
Ethylbenzene		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
m,p-Xylenes		ND	0.0021	ND	0.0021	ND	0.0021	ND	0.0021	ND	0.0020
o-Xylene		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Total Xylenes		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Total BTEX		ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Percent Moisture	Extracted:										
	Analyzed:	Oct-06-09 10:38		Oct-06-09 10:38		Oct-06-09 10:38		Oct-06-09 10:38		Oct-06-09 10:38	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.17	1.00	4.25	1.00	2.80	1.00	3.15	1.00	2.07	1.00
TPH By SW8015 Mod	Extracted:	Oct-08-09 10:00		Oct-08-09 10:00		Oct-08-09 10:00		Oct-08-09 10:00		Oct-08-09 10:00	
	Analyzed:	Oct-09-09 07:40		Oct-09-09 08:07		Oct-09-09 08:34		Oct-09-09 09:02		Oct-09-09 09:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.7	17.8	15.7	18.4	15.4	20.8	15.5	ND	15.3
C12-C28 Diesel Range Hydrocarbons		26.4	15.7	93.8	15.7	31.8	15.4	27.8	15.5	31.9	15.3
C28-C35 Oil Range Hydrocarbons		21.5	15.7	17.4	15.7	24.9	15.4	19.5	15.5	22.4	15.3
Total TPH		47.9	15.7	129.0	15.7	75.1	15.4	68.1	15.5	54.3	15.3

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.

Brent Barron, II
Odessa Laboratory Manager

XENCO Laboratories

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 effect the recovery of the spike concentration. This condition could also effect 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 MQL and above the SQL.

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

* Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Oxy State DW # 1

Work Orders : 347080,

Project ID: Oxy State DW # 1

Lab Batch #: 775956 **Sample:** 539827-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/06/09 12:31

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 775956 **Sample:** 539827-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/06/09 12:51

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 775956 **Sample:** 539827-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/06/09 13:34

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 775956 **Sample:** 347080-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/09 17:08

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 775956 **Sample:** 347080-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/09 17:29

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

* 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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Oxy State DW # 1

Work Orders : 347080,

Project ID: Oxy State DW # 1

Lab Batch #: 775956 **Sample:** 347080-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/09 17:50

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 775956 **Sample:** 347080-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/09 18:11

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 775956 **Sample:** 347080-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/09 18:32

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	80-120	

Lab Batch #: 775956 **Sample:** 347080-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/09 19:14

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0335	0.0300	112	80-120	

Lab Batch #: 775956 **Sample:** 347080-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/09 19:35

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

* 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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Oxy State DW # 1

Work Orders : 347080,

Project ID: Oxy State DW # 1

Lab Batch #: 776370 **Sample:** 540098-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/08/09 22:35

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	135	100	135	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 776370 **Sample:** 540098-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/08/09 23:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	42.2	50.0	84	70-135	

Lab Batch #: 776370 **Sample:** 540098-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/08/09 23:31

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	52.3	50.0	105	70-135	

Lab Batch #: 776370 **Sample:** 347080-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/09/09 07:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.9	100	97	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

Lab Batch #: 776370 **Sample:** 347080-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/09/09 08:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	152	100	152	70-135	*
o-Terphenyl	77.2	50.0	154	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Oxy State DW # 1

Work Orders : 347080,

Project ID: Oxy State DW # 1

Lab Batch #: 776370 **Sample:** 347080-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/09/09 08:34

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	54.7	50.0	109	70-135	

Lab Batch #: 776370 **Sample:** 347080-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/09/09 09:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	100	93	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 776370 **Sample:** 347080-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/09/09 09:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.1	100	89	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 776370 **Sample:** 347437-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/09/09 15:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	25.2	100	25	70-135	*
o-Terphenyl	3.22	50.0	6	70-135	*

Lab Batch #: 776370 **Sample:** 347437-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/09/09 16:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	31.6	100	32	70-135	*
o-Terphenyl	13.7	50.0	27	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: Oxy State DW # 1

Work Order #: 347080 **Project ID:** Oxy State DW # 1

Lab Batch #: 775692 **Sample:** 775692-1-BKS **Matrix:** Solid

Date Analyzed: 10/05/2009 **Date Prepared:** 10/05/2009 **Analyst:** LATCOR

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

	BLANK /BLANK SPIKE RECOVERY STUDY					
Anions by E300 **Analytes**	**Blank Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Control Limits %R**	**Flags**
Chloride	ND	10.0	9.84	98	75-125	

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

BS / BSD Recoveries

Project Name: Oxy State DW # 1

Work Order #: 347080 **Project ID:** Oxy State DW # 1

Analyst: ASA **Date Prepared:** 10/06/2009 **Date Analyzed:** 10/06/2009

Lab Batch ID: 775956 **Sample:** 539827-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BTEX by EPA 8021B	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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
Benzene	ND	0.1000	0.0915	92	0.1	0.0898	90	2	70-130	35	
Toluene	ND	0.1000	0.0906	91	0.1	0.0888	89	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0929	93	0.1	0.0899	90	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.2037	102	0.2	0.1968	98	3	70-135	35	
o-Xylene	ND	0.1000	0.0983	98	0.1	0.0952	95	3	71-133	35	

Analyst: BHW **Date Prepared:** 10/08/2009 **Date Analyzed:** 10/08/2009

Lab Batch ID: 776370 **Sample:** 540098-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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	ND	1000	1100	110	1000	1080	108	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	22.0	1000	923	92	1000	886	89	4	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: Oxy State DW # 1

Work Order #: 347080

Lab Batch #: 775692

Project ID: Oxy State DW # 1

Date Analyzed: 10/05/2009

Date Prepared: 10/05/2009

Analyst: LATCOR

QC- Sample ID: 347080-001 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	207	104	304	93	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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Oxy State DW # 1

Work Order # : 347080 **Project ID:** Oxy State DW # 1

Lab Batch ID: 775956 **QC- Sample ID:** 347080-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/06/2009 **Date Prepared:** 10/06/2009 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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
Benzene	ND	0.1044	0.0623	60	0.1044	0.0632	61	1	70-130	35	X
Toluene	ND	0.1044	0.0616	59	0.1044	0.0624	60	1	70-130	35	X
Ethylbenzene	ND	0.1044	0.0593	57	0.1044	0.0605	58	2	71-129	35	X
m,p-Xylenes	ND	0.2089	0.1287	62	0.2089	0.1309	63	2	70-135	35	X
o-Xylene	ND	0.1044	0.0622	60	0.1044	0.0634	61	2	71-133	35	X

Lab Batch ID: 776370 **QC- Sample ID:** 347437-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/09/2009 **Date Prepared:** 10/08/2009 **Analyst:** BEV

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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
C6-C12 Gasoline Range Hydrocarbons	ND	1040	1200	115	1040	1480	142	21	70-135	35	X
C12-C28 Diesel Range Hydrocarbons	23.1	1040	1080	102	1040	1250	118	15	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

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

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

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Oxy State DW # 1

Work Order #: 347080

Lab Batch #: 775692 **Project ID:** Oxy State DW # 1

Date Analyzed: 10/05/2009 **Date Prepared:** 10/05/2009 **Analyst:** LATCOR

QC- Sample ID: 347080-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	207	208	0	20	

Lab Batch #: 775738

Date Analyzed: 10/06/2009 **Date Prepared:** 10/06/2009 **Analyst:** BEV

QC- Sample ID: 346046-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	27.2	29.8	9	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

Environmental Lab of Texas

A Xenco Laboratories Company

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: Logan Anderson
Company Name: Elke environmental
Company Address: 4817 andrews highway
City/State/Zip: odessa Tx 79762
Telephone No: 432-366-6043 Fax No: 432-366-6884
Sampler Signature:
e-mail:

Project Name: ~~Oxy Cotton Draw~~ Oxy State Dsf #1
Project #: ~~Oxy Cotton Draw~~ Oxy State Dsf #1
Project Loc: Oxy State Dsf #1
PO #: Oxy State Dsf #1
Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 347080

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: Soil/Solid	Water	Sludge	Analyze For: 8015M	TPH: 418.1	TPH: TX 1005	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	8021B/5030 or BTEX 8260	TCLP: TCLP VOA	TCLP SVOA	TCLP Metals	TCLP: TOTAL:	RUSH TAT (Pre-Schedule) 24, 48, 72hrs	Standard TAT
01	TP1 @ 20'		20'	9-30-09	12:45		1	✓												—			—					—					—	—
02	TP2 @ 50'		50'	9-30-09	3:00		1	✓												—			—					—					—	—
03	TP3 @ 20'		20'	9-30-09	3:45		1	✓												—			1					—					—	—
04	TP4 @ 15'		15'	9-30-09	4:00		1	✓												—			—					—					—	—
05	TP5 @ 10'		10'	9-30-09	4:30		1	✓												—			—					—					—	—

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	10-3-09	10:36			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Willie Gaston	10/3/09	10:57

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 by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 1.1 4.7 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Environmental

Date/ Time: 10/3/09 10:57

Lab ID # : 347080

Initials: JG

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	(Yes)	No	1.1 °C	
#2 Shipping container in good condition?	(Yes)	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4 Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5 Chain of Custody present?	(Yes)	No		
#6 Sample Instructions complete of Chain of Custody?	(Yes)	No		
#7 Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8 Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11 Containers supplied by ELOT?	(Yes)	No		
#12 Samples in proper container/ bottle?	(Yes)	No	See Below	
#13 Samples properly preserved?	(Yes)	No	See Below	
#14 Sample bottles intact?	(Yes)	No		
#15 Preservations documented on Chain of Custody?	(Yes)	No		
#16 Containers documented on Chain of Custody?	(Yes)	No		
#17 Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18 All samples received within sufficient hold time?	(Yes)	No	See Below	
#19 Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20 VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event