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

nMCB1005336396
30-015-28924

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company – Linn Operating 269324	Contact – Albert Valero
Address – 2651 JBS Parkway Bldg 4 Suite F	Telephone No. – 432-366-1557
Facility Name – C A Russell Battery (CARussell #19)	Facility Type – Battery

Surface Owner - BLM	Mineral Owner	Lease No. 30-015-28924 (C A Russell #19)

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	18	17S	31E					Eddy

RECEIVED
MAY 17 2010
NMOCD ARTESIA

Latitude 32° 50.291' N **Longitude** 103° 54.335' W

NATURE OF RELEASE

Type of Release - Oil	Volume of Release– 20 to 25 bbls	Volume Recovered – 20 bbls
Source of Release – Oil Tank (Overflowed)	Date and Hour of Occurrence – 2/19/10	Date and Hour of Discovery – 2/19/10 7:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Kimberly Wilson (NMOCD)	
By Whom? Robert Aranda	Date and Hour – 2/19/10 @ 3:17pm	
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.* Electrical failure on circulating pump causing to shutdown, timer broken causing tank to overfill, allowing approx. 20 to 25 bbls to overflow. Spill was contained within the firewall. Initial sampling of the spill was completed on 2-25-10 by hand. The delineation was completed on 3-2-10 and 3-3-10. Site ranking criteria is as follows: Wellhead Protection – 0 points, Surface body of Water – 0 points and Groundwater (>200') – 0 points. Total ranking for the site is 0 points. The RAL's for the site will be TPH – 5,000ppm; Chloride – 250ppm and BTEX – 100ppm (using field vapor headspace measurement).

Describe Area Affected and Cleanup Action Taken.* All impacted soil was excavated vertically and horizontally until the RAL's were met 2' – 5.5' . The impacted soil was hauled to Lea Land Disposal. Clean native soil was hauled to the site and backfilled into the excavation. The site was not re-vegetated since it was a caliche location for a battery. Attached is a final report of the remediation at the site.

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: Albert Valero	OIL CONSERVATION DIVISION
Printed Name: Albert Valero	Approved by Signed By: Mike Bratcher
Title: Foreman	Approval Date: MAY 17 2010 Expiration Date: N/A
E-mail Address: AVALERO@LinnEnergy.com	Conditions of Approval: N/A Attached ☐
Date: 05-14-10 Phone: 432-213-1281	

* Attach Additional Sheets If Necessary

2RP-392

Closure Report Attached

Closure Report

Prepared for
Linn Operating

C A Russell Battery
Eddy County, NM

2RP - 392

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

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768
Phone (432) 366-0043 Fax (432) 366-0884

May 14, 2010

New Mexico Oil Conservation Division
Mr. Mike Bratcher
1301 West Grand Ave.
Artesia, New Mexico 88210

Re: Linn Operating – CA Russell Battery
UL 'B' Sec. 18 T17S R31E Eddy County
2RP-392

Mr. Mike Bratcher,

Elke Environmental was contracted by Linn Operating to complete the remediation of the leak at the CA Russell Battery. A delineation of the site was completed using a backhoe on 3/3/10. Attached is a plat map, field analytical and lab confirmations for the site.

As per the approved plan the area inside the battery was excavated to 2' bgs and re-evaluated. Test Point 2 and Test Point 3 were then excavated an additional 1' to a final depth of 3' bgs. The area around Test Point 4 was excavated to a final depth of 2.5' bgs and Test Point 5 was excavated to 5.5' bgs. Lab samples were then obtained from each Test Point and evaluated for BTEX. All impacted soil was hauled to LEA Land for disposal and clean native soil was hauled to the site for backfill.

Immediately following the spill, Linn Operating removed approximately 6" bgs of impacted material from the CA Russell Battery and moved it to the CA Russell #19. Once the impacted material was removed, a five point composite was obtained from were the pile had been placed. A lab sample was obtained and the confirmation is also attached to this report. If you have any questions about the enclosed report please contact me at the office.

Sincerely,

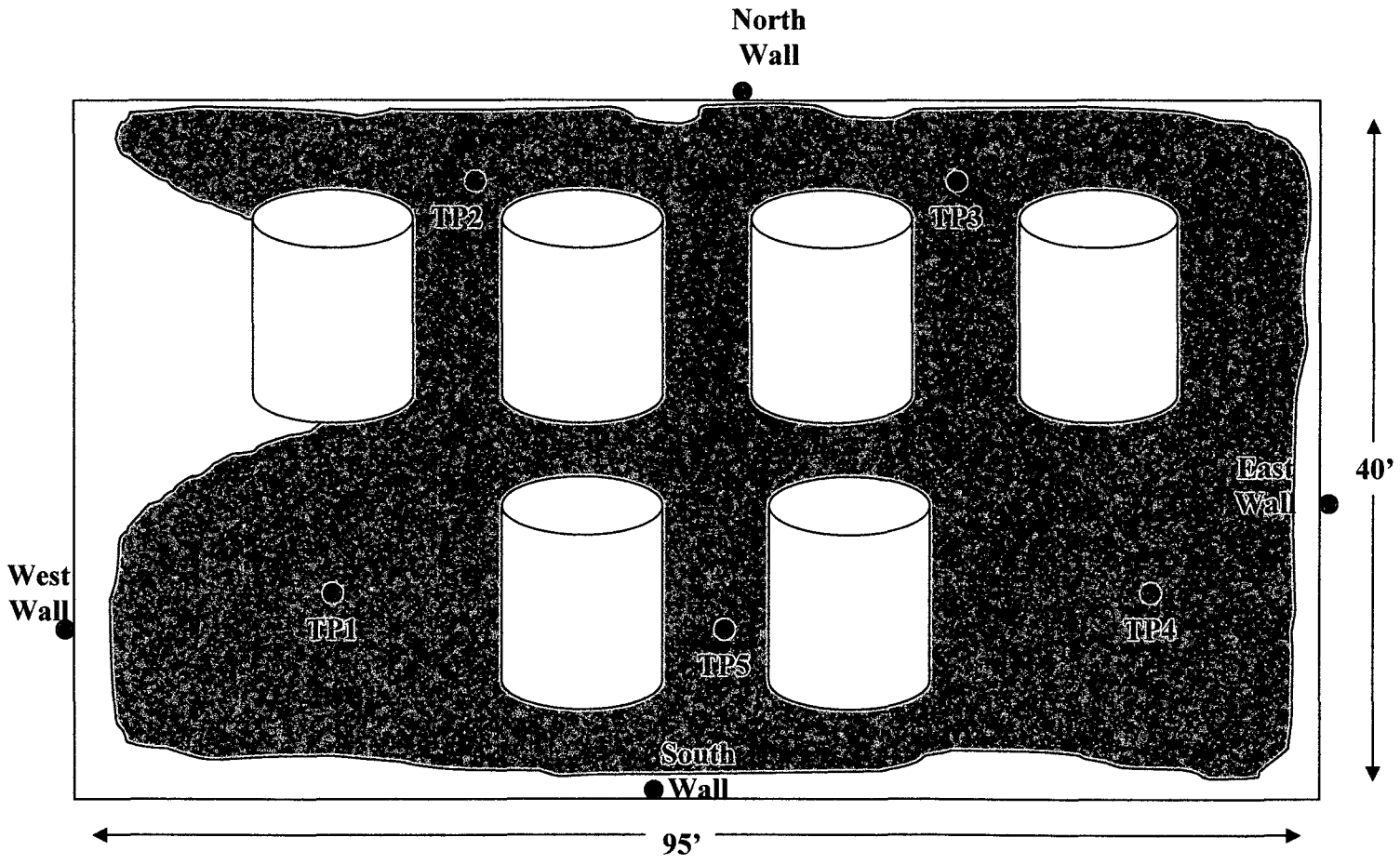
Bobby Steadham

Cc: 1 – Elke Environmental, Inc. File
3 – Albert Valero (Linn Operating)

Linn Operating
C A Russell Battery
Eddy County, NM

N

Plat Map



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

Field Analytical Report Form

Client Linn Operating **Analyst** Bobby Steadham

Site C A Russell Battery

Sample ID	Date	Depth	418.1 TPH / PPM	Cl / PPM	PID / PPM	GPS
TP1	2-25-10	6"	6,450	175	1,055	32° 50.291' N 103° 54.335' W
TP1	2-25-10	1' 6"	1,004	169	219	32° 50.291' N 103° 54.335' W
TP1	3-3-10	3' 6"	1,278	239	119	32° 50.291' N 103° 54.335' W
TP1	3-3-10	4' 6"	1,295	509	106	32° 50.291' N 103° 54.335' W
TP1	3-3-10	5' 6"	465	1,075	13.5	32° 50.291' N 103° 54.335' W
TP1	3-3-10	6' 6"	6	1,762	8.7	32° 50.291' N 103° 54.335' W
TP1	3-3-10	7' 6"		1,876	6.4	32° 50.291' N 103° 54.335' W
TP1	3-3-10	8' 6"		1,423	4.5	32° 50.291' N 103° 54.335' W
TP1	3-3-10	9' 6"		1,687	3.7	32° 50.291' N 103° 54.335' W
TP1	3-3-10	10' 6"		2,377	4.8	32° 50.291' N 103° 54.335' W
TP1	3-3-10	11' 6"		1,966	5.2	32° 50.291' N 103° 54.335' W
TP1	3-3-10	12' 6"		871	3.1	32° 50.291' N 103° 54.335' W
TP1	3-3-10	13' 6"	11	256	2.0	32° 50.291' N 103° 54.335' W
TP2	2-25-10	6"	15,410	184	1,635	32° 50.294' N 103° 54.335' W
TP2	2-25-10	1' 6"	400	79	717	32° 50.294' N 103° 54.335' W
TP2	3-2-10	2' 6"	167	122	95.0	32° 50.294' N 103° 54.335' W

Analyst Notes

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

Field Analytical Report Form

Client Linn Operating **Analyst** Bobby Steadham

Site C A Russell Battery

Sample ID	Date	Depth	418.1 TPH / PPM	Cl / PPM	PID / PPM	GPS
TP3	2-25-10	6"	19,580	92	1,514	32° 50.296' N 103° 54.328' W
TP3	2-25-10	1' 6"	976	117	926	32° 50.296' N 103° 54.328' W
TP3	3-2-10	2' 6"	1,276	173	1,186	32° 50.296' N 103° 54.328' W
TP3	3-2-10	3' 6"	127	118	277	32° 50.296' N 103° 54.328' W
TP3	3-2-10	5'	14	114	47.9	32° 50.296' N 103° 54.328' W
TP4	2-25-10	6"	22,150	119	1,305	32° 50.294' N 103° 54.323' W
TP4	2-25-10	1' 6"	12,850	119	1,118	32° 50.294' N 103° 54.323' W
TP4	3-2-10	2' 6"	487	200	384	32° 50.294' N 103° 54.323' W
TP4	3-2-10	3' 6"	587	119	113	32° 50.294' N 103° 54.323' W
TP4	3-2-10	4' 6"	1,250	109	76.3	32° 50.294' N 103° 54.323' W
TP4	3-2-10	5' 6"	682	141	41.1	32° 50.294' N 103° 54.323' W
TP5	2-25-10	6"	22,000	176	1,341	32° 50.292' N 103° 54.331' W
TP5	2-25-10	1' 6"	1,250	129	1,304	32° 50.292' N 103° 54.331' W
TP5	3-2-10	2' 6"	1,690	247	529	32° 50.292' N 103° 54.331' W
TP5	3-2-10	3'	10,190	449	457	32° 50.292' N 103° 54.331' W

Analyst Notes

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

Field Analytical Report Form

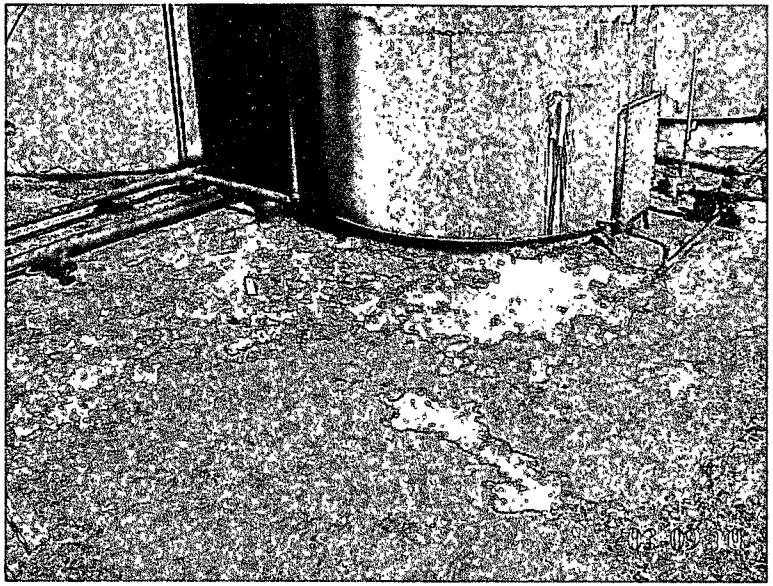
Client Linn Operating **Analyst** Bobby Steadham

Site C A Russell Battery

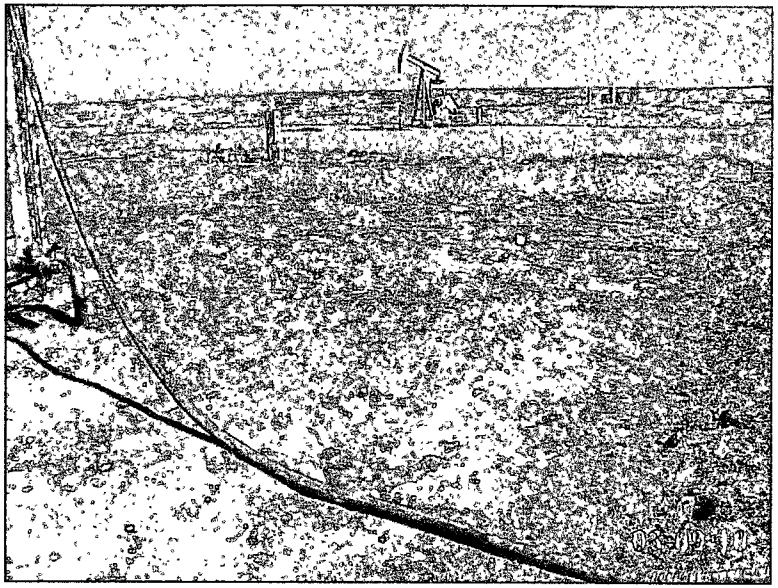
Sample ID	Date	Depth	418.1 TPH / PPM	Cl / PPM	PID / PPM	GPS
TP5	3-2-10	3' 6"	3,660	569	104	32° 50.292' N 103° 54.331' W
TP5	3-2-10	5'	32	773	41.0	32° 50.292' N 103° 54.331' W
TP5	3-2-10	5' 6"		703		32° 50.292' N 103° 54.331' W
TP5	3-3-10	6'		860		32° 50.292' N 103° 54.331' W
TP5	3-3-10	8'	16	235	54.5	32° 50.292' N 103° 54.331' W
North Wall	3-3-10	5'	27	209	11.1	32° 50.297' N 103° 54.330' W
East Wall	3-3-10	5'	16	149	10.8	32° 50.296' N 103° 54.318' W
South Wall	3-3-10	5'	31	259	7.0	32° 50.288' N 103° 54.331' W
West Wall	3-3-10	5'	369	271	29.0	32° 50.291' N 103° 54.340' W

Analyst Notes

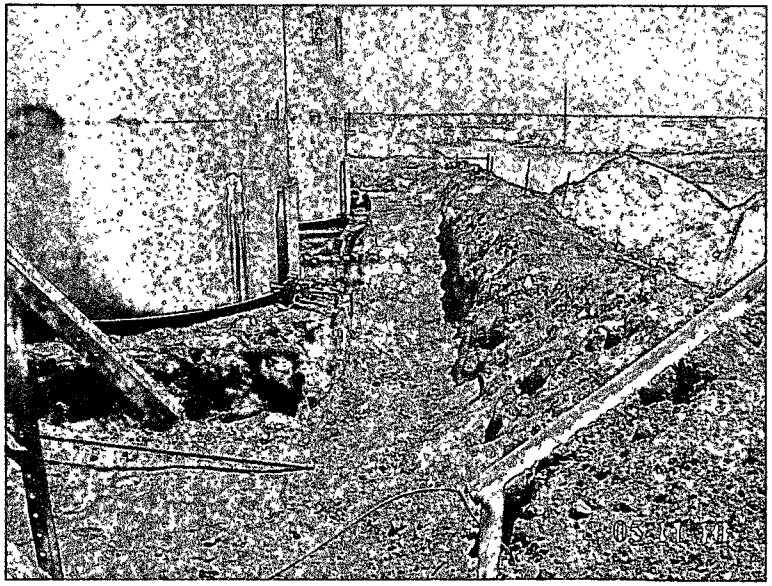
Linn Operating – C A Russell Batery



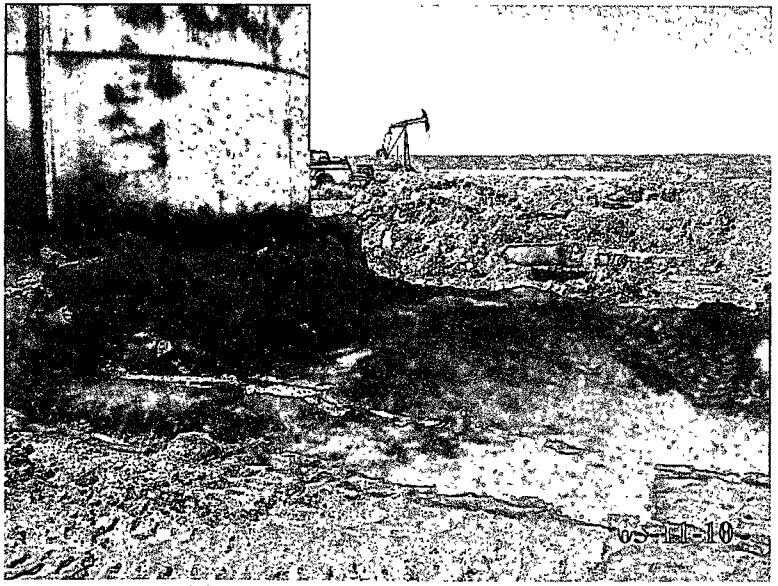
Area of test point 4 before excavation



East side of battery before excavation

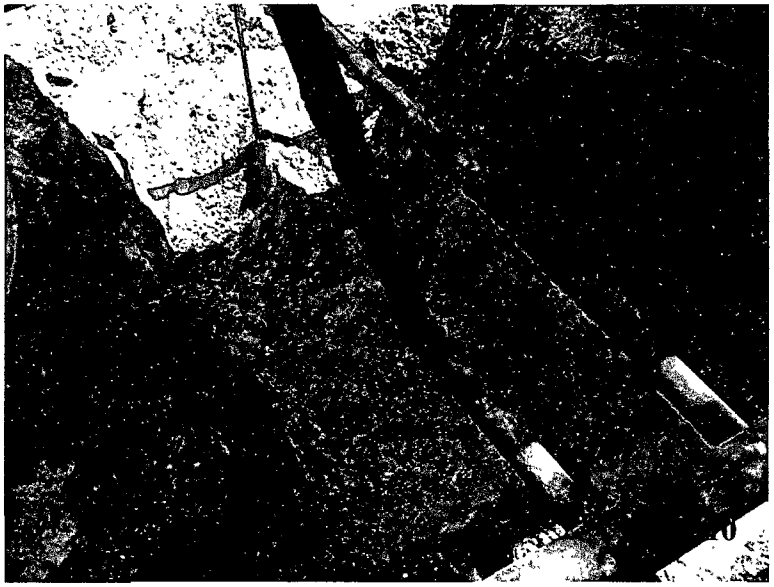


South end of battery after excavation



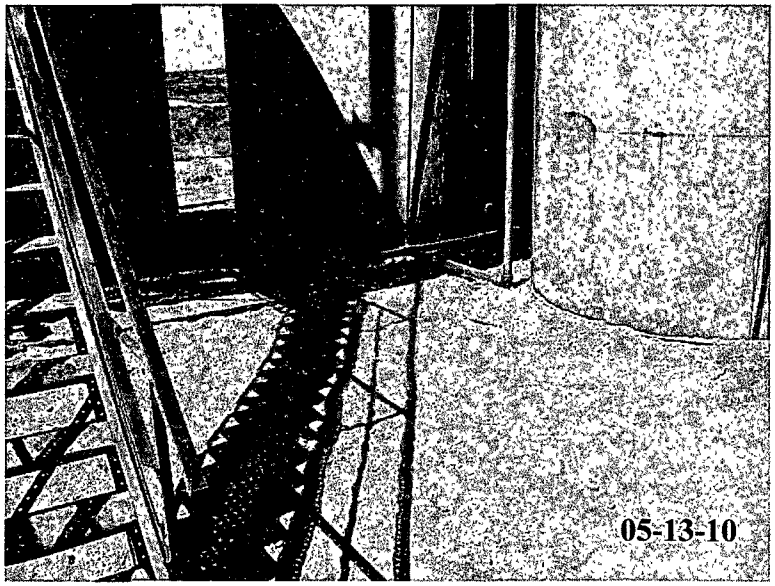
East side of battery after excavation

Linn Operating – C A Russell Battery

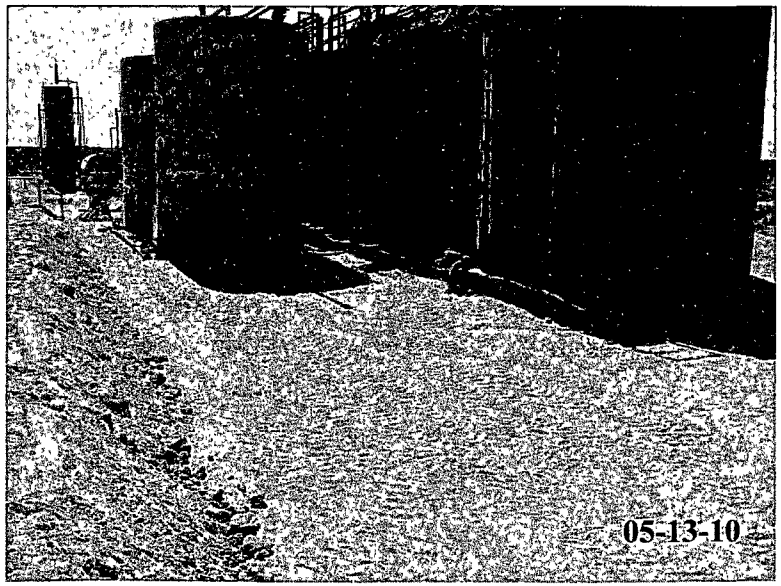


Test point 5 after excavation

North end of battery after excavation



Test point 1 after backfill



East end of battery after backfill

Analytical Report 364388

for

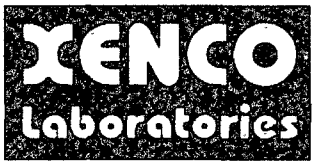
Elke Environmental, Inc.

Project Manager: Logan Anderson

Linn Operating

CA Russel Battery

09-MAR-10



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-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 (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-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)

09-MAR-10

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

Reference: XENCO Report No: **364388**
Linn Operating
Project Address: CA Russel Battery

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 364388. 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. 364388 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 364388

Elke Environmental, Inc., Odessa, TX

Linn Operating

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP1 @ 162"	S	Mar-03-10 17:00	162 In	364388-001
TP2 @ 30"	S	Mar-02-10 11:00	30 In	364388-002
TP3 @ 60"	S	Mar-02-10 15:00	60 In	364388-003
TP4 @ 66"	S	Mar-02-10 15:00	66 In	364388-004
TP5 @ 96"	S	Mar-03-10 12:00	96 In	364388-005

Project ID: *CA Russel Battery* *Report Date:* *09-MAR-10*
Work Order Number: *364388* *Date Received:* *03/04/2010*

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-796849 Percent Moisture
AD2216A
Batch 796849, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.
Samples affected are: 364388-004, -001, -002, -003, -005.

Batch: LBA-797069 TPH By SW8015 Mod
None

Batch: LBA-797091 Anions by E300
None

Certificate of Analysis Summary 364388

Elke Environmental, Inc., Odessa, TX

Project Name: Linn Operating

Project Id: CA Russel Battery
Contact: Logan Anderson
Project Location: CA Russel Battery

Date Received in Lab: Thu Mar-04-10 02:39 pm
Report Date: 09-MAR-10
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	364388-001		364388-002		364388-003		364388-004		364388-005	
	Field Id:	TP1 @ 162"		TP2 @ 30"		TP3 @ 60"		TP4 @ 66"		TP5 @ 96"	
	Depth:	162 In		30 In		60 In		66 In		96 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-03-10 17:00		Mar-02-10 11:00		Mar-02-10 15:00		Mar-02-10 15:00		Mar-03-10 12:00	
Anions by E300	***Extracted:***										
	Analyzed:	Mar-09-10 09:11		Mar-09-10 09:11		Mar-09-10 09:11		Mar-09-10 09:11		Mar-09-10 09:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		ND	4.23	97.4	9.46	67.6	8.74	480	17.6	143	9.25
Percent Moisture	***Extracted:***										
	Analyzed:	Mar-05-10 17:00		Mar-05-10 17:00		Mar-05-10 17:00		Mar-05-10 17:00		Mar-05-10 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		ND	1.00	11.2	1.00	3.91	1.00	4.65	1.00	9.22	1.00
TPH By SW8015 Mod	***Extracted:***	Mar-08-10 09:30		Mar-08-10 09:30		Mar-08-10 09:30		Mar-08-10 09:30		Mar-08-10 09:30	
	Analyzed:	Mar-08-10 14:44		Mar-08-10 15:12		Mar-08-10 15:39		Mar-08-10 16:06		Mar-08-10 16:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.1	ND	16 8	ND	15.6	ND	15.7	ND	16.5
C12-C28 Diesel Range Hydrocarbons		22.0	15.1	47.6	16.8	ND	15.6	130	15.7	16.9	16.5
C28-C35 Oil Range Hydrocarbons		ND	15.1	ND	16.8	ND	15.6	39.9	15.7	ND	16.5
Total TPH		22.0	15.1	47 6	16.8	ND	15.6	170	15.7	16.9	16.5

Brent Barron, II
Odessa Laboratory Manager

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: Linn Operating

Work Orders : 364388,

Project ID: CA Russel Battery

Lab Batch #: 797069 **Sample:** 552365-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/08/10 13:22

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	57.3	50.0	115	70-135	

Lab Batch #: 797069 **Sample:** 552365-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/08/10 13:49

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	58.1	50.1	116	70-135	

Lab Batch #: 797069 **Sample:** 552365-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/08/10 14:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	101	100	70-135	
o-Terphenyl	59.7	50.3	119	70-135	

Lab Batch #: 797069 **Sample:** 364388-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/08/10 14:44

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	56.4	50.0	113	70-135	

Lab Batch #: 797069 **Sample:** 364388-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/08/10 15:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.3	99.6	90	70-135	
o-Terphenyl	53.5	49.8	107	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: Linn Operating

Work Orders : 364388,

Project ID: CA Russel Battery

Lab Batch #: 797069 **Sample:** 364388-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/08/10 15:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	60.2	50.0	120	70-135	

Lab Batch #: 797069 **Sample:** 364388-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/08/10 16:06

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.9	106	70-135	
o-Terphenyl	63.5	50.0	127	70-135	

Lab Batch #: 797069 **Sample:** 364388-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/08/10 16:33

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	64.5	50.0	129	70-135	

Lab Batch #: 797069 **Sample:** 364388-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/09/10 00:11

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.6	103	70-135	
o-Terphenyl	58.4	49.8	117	70-135	

Lab Batch #: 797069 **Sample:** 364388-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/09/10 00:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.8	106	70-135	
o-Terphenyl	60.3	49.9	121	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: Linn Operating

Work Order #: 364388 **Project ID:** CA Russel Battery

Lab Batch #: 797091 **Sample:** 797091-1-BKS **Matrix:** Solid

Date Analyzed: 03/09/2010 **Date Prepared:** 03/09/2010 **Analyst:** LATCOR

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

Anions by E300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
			BLANK /BLANK SPIKE RECOVERY STUDY			
Chloride	ND	10.0	9.93	99	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: Linn Operating

Work Order #: 364388
Analyst: BEV
Lab Batch ID: 797069
Sample: 552365-1-BKS
Units: mg/kg

Date Prepared: 03/08/2010
Batch #: 1

Project ID: CA Russel Battery
Date Analyzed: 03/08/2010
Matrix: Solid

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	ND	1000	902	90	1000	904	90	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	775	78	1000	991	99	24	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: Linn Operating

Work Order #: 364388

Lab Batch #: 797091

Project ID: CA Russel Battery

Date Analyzed: 03/09/2010

Date Prepared: 03/09/2010

Analyst: LATCOR

QC- Sample ID: 364388-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	ND	101	107	106	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: Linn Operating

Work Order # : 364388 **Project ID:** CA Russel Battery

Lab Batch ID: 797069 **QC- Sample ID:** 364388-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/09/2010 **Date Prepared:** 03/08/2010 **Analyst:** BEV

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
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**
C6-C12 Gasoline Range Hydrocarbons	ND	1040	926	89	1040	965	93	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1040	843	81	1040	796	77	6	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

Sample Duplicate Recovery

Project Name: Linn Operating

Work Order #: 364388

Lab Batch #: 797091 **Project ID:** CA Russel Battery

Date Analyzed: 03/09/2010 **Date Prepared:** 03/09/2010 **Analyst:** LATCOR

QC- Sample ID: 364388-001 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	ND	ND	NC	20	

Lab Batch #: 796849

Date Analyzed: 03/05/2010 **Date Prepared:** 03/05/2010 **Analyst:** WRU

QC- Sample ID: 364467-001 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	5.01	8.93	56	20	F

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: P O Box 14167
City/State/Zip: Odessa, TX 79768
Telephone No: 432-366-0043
Fax No: 432-366-0884
Sampler Signature:
e-mail: la_elkeenv@yahoo.com

Project Name: LINN OPERATING
Project #:
Project Loc: CA RUSSEL BATTERY
PO #:
Report Format: ☑ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 364398

Analyze For:
TCLP:
TOTAL:

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: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 / 8015A	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or 8TEX 8260	RCI	N.O.R.M.				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	TP1 @ 12"		12"	3/3/10	5:Pm			X								S	X			X											X
02	TP2 @ 30"		30"	3/2/10	11:00AM			X								S	X			X											X
03	TP3 @ 60"		60"	3/2/10	3:00Pm			X								S	X			X											X
04	TP4 @ 66"		66"	3/2/10	3:00 Pm			X								S	X			X											X
05	TP5 @ 96"		96"	3/2/10	12:00Pm			X								S	X			X											X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	3/4/10	2:39			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Fann	Date 3.4.10	Time 14:39

Laboratory Comments:
VOCs Free of Headspace? Y N
Custody seals on container(s) Y N
Sample Hand Delivered by Sampler/Client Rep. ? Y N
by Courier? UPS DHL FedEx Lone Star
4079155
Temperature Upon Receipt: 5.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Env.

Date/ Time: 3.4.10 14:39

Lab ID # : 364388

Initials: AL

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	5.6 °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

Analytical Report 372363

for

Elke Environmental, Inc.

Project Manager: Curtis Elam

Linn Operating

13-MAY-10

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-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 (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-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)

13-MAY-10

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

Reference: XENCO Report No: **372363**
Linn Operating
Project Address: CA Russell Battery

Curtis Elam:

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 372363. 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. 372363 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 372363

Elke Environmental, Inc., Odessa, TX

Linn Operating

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP1 @ 2'	S	May-11-10 16:30	2 ft	372363-001
TP2 @ 3'	S	May-11-10 17:20	3 ft	372363-002
TP3 @ 3'	S	May-11-10 17:30	3 ft	372363-003
TP4 @ 2.5'	S	May-11-10 17:15	2.5 ft	372363-004
TP5 @ 5.5'	S	May-11-10 16:45	5.5 ft	372363-005

Project ID:
Work Order Number: 372363

Report Date: 13-MAY-10
Date Received: 05/12/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-806237 BTEX by EPA 8021B
SW8021BM

Batch 806237, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 372363-001,372363-002,372363-005,372363-004.
4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 372363-002.

SW8021BM

Batch 806237, Benzene, o-Xylene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 372363-001, -005, -003, -004, -002.
The Laboratory Control Sample for Benzene, o-Xylene is within laboratory Control Limits

Batch: LBA-806326 Percent Moisture
None

Batch: LBA-806333 Percent Moisture
None

Certificate of Analysis Summary 372363

Elke Environmental, Inc., Odessa, TX

Project Name: Linn Operating

Project Id:
Contact: Curtis Elam
Project Location: CA Russell Battery

Date Received in Lab: Wed May-12-10 08:27 am
Report Date: 13-MAY-10
Project Manager: Brent Barron, II

Analysis Requested											
	Lab Id:	372363-001		372363-002		372363-003		372363-004		372363-005	
	Field Id:	TP1 @ 2'		TP2 @ 3'		TP3 @ 3'		TP4 @ 2.5'		TP5 @ 5.5'	
	Depth:	2 ft		3 ft		3 ft		2.5 ft		5.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-11-10 16:30		May-11-10 17:20		May-11-10 17:30		May-11-10 17:15		May-11-10 16:45	
BTEX by EPA 8021B	***Extracted:***	May-12-10 09:00		May-12-10 09:00		May-12-10 09:00		May-12-10 09:00		May-12-10 09:00	
	Analyzed:	May-12-10 14:08		May-12-10 14:30		May-12-10 14:53		May-12-10 15:15		May-12-10 15:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.0011	ND	0.0011	ND	0.0011	ND	0.0012	ND	0.0011
Toluene		ND	0.0023	ND	0.0021	ND	0.0021	ND	0.0023	0.0077	0.0022
Ethylbenzene		0.0029	0.0011	0.0088	0.0011	ND	0.0011	ND	0.0012	0.0293	0.0011
m,p-Xylenes		0 0090	0.0023	0.0233	0.0021	ND	0.0021	ND	0.0023	0.0482	0.0022
o-Xylene		0.0017	0.0011	0.0244	0.0011	ND	0.0011	ND	0.0012	0.0450	0.0011
Total Xylenes		0.0107	0.0011	0.0477	0.0011	ND	0.0011	ND	0.0012	0.0932	0.0011
Total BTEX		0.0136	0.0011	0.0565	0.0011	ND	0.0011	ND	0.0012	0.1302	0.0011
Percent Moisture	***Extracted:***										
	Analyzed:	May-12-10 17:00		May-12-10 17:00		May-12-10 17:00		May-12-10 17:00		May-12-10 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		11.7	1.00	6.29	1.00	5.72	1.00	14.0	1.00	9.63	1.00

Brent Barron, II
Odessa Laboratory Manager

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: Linn Operating

Work Orders : 372363,

Project ID:

Lab Batch #: 806237 **Sample:** 563081-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/12/10 12:38

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 806237 **Sample:** 563081-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/12/10 13:46

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0240	0.0300	80	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 806237 **Sample:** 372363-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/12/10 14:08

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0231	0.0300	77	80-120	*
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 806237 **Sample:** 372363-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/12/10 14:30

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0227	0.0300	76	80-120	*
4-Bromofluorobenzene	0.0418	0.0300	139	80-120	*

Lab Batch #: 806237 **Sample:** 372363-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/12/10 14:53

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	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: Linn Operating

Work Orders : 372363,

Project ID:

Lab Batch #: 806237 **Sample:** 372363-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/12/10 15:15

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 806237 **Sample:** 372363-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/12/10 15:37

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0206	0.0300	69	80-120	*
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 806237 **Sample:** 372311-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/12/10 22:20

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	

Lab Batch #: 806237 **Sample:** 372311-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/12/10 22:42

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	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.

Blank Spike Recovery

Project Name: Linn Operating

Work Order #: 372363 **Project ID:**

Lab Batch #: 806237 **Sample:** 563081-1-BKS **Matrix:** Solid

Date Analyzed: 05/12/2010 **Date Prepared:** 05/12/2010 **Analyst:** ASA

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

BTEX by EPA 8021B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
			BLANK /BLANK SPIKE RECOVERY STUDY			
Benzene	ND	0.1000	0.1016	102	70-130	
Toluene	ND	0.1000	0.1021	102	70-130	
Ethylbenzene	ND	0.1000	0.1031	103	71-129	
m,p-Xylenes	ND	0.2000	0.2046	102	70-135	
o-Xylene	ND	0.1000	0.1038	104	71-133	

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

Form 3 - MS / MSD Recoveries

Project Name: Linn Operating

Work Order # : 372363 **Project ID:**

Lab Batch ID: 806237 **QC- Sample ID:** 372311-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 05/12/2010 **Date Prepared:** 05/12/2010 **Analyst:** ASA

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021B **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**
Benzene	ND	0.1163	0.0867	75	0.1160	0.0792	68	9	70-130	35	X
Toluene	ND	0.1163	0.0884	76	0.1160	0.0809	70	9	70-130	35	
Ethylbenzene	ND	0.1163	0.0918	79	0.1160	0.0844	73	8	71-129	35	
m,p-Xylenes	ND	0.2326	0.1832	79	0.2321	0.1693	73	8	70-135	35	
o-Xylene	ND	0.1163	0.0873	75	0 1160	0.0806	69	8	71-133	35	X

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

Sample Duplicate Recovery

Project Name: Linn Operating

Work Order #: 372363

Lab Batch #: 806326 **Project ID:**

Date Analyzed: 05/12/2010 **Date Prepared:** 05/12/2010 **Analyst:** WRU

QC- Sample ID: 372311-001 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	14.0	14.3	2	20	

Lab Batch #: 806333

Date Analyzed: 05/12/2010 **Date Prepared:** 05/12/2010 **Analyst:** WRU

QC- Sample ID: 372363-003 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	5.72	5.72	0	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~~ Curtis Elkin
Company Name: Elke Environmental
Company Address: P O Box 14167
City/State/Zip: Odessa, TX 79768
Telephone No: 432-366-0043 Fax No: 432-366-0884
Sampler Signature:

Project Name: Linn Operating
Project #:
Project Loc: CA Russell Battery
PO #:
Report Format: ☑ Standard ☐ TRRP ☐ NPDES
e-mail: [redacted]elkeenv@yahoo.com

(lab use only)
ORDER #: 372363

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: DW=Drinking Water SL=Sludge	GW=Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 72 hrs	Standard TAT
1	TP1 @ 2'		2'	5/11/10	4:30Pm		1	X								S										X				X	
2	TP2 @ 3'		3'	5/11/10	5:20Pm		1	X								S										X				X	
3	TP3 @ 3'		3'	5/11/10	5:30Pm		1	X								S										X				X	
4	TP4 @ 2.5'		2.5'	5/11/10	5:15Pm		1	X								S										X				X	
5	TP5 @ 5.5'		5.5'	5/11/10	4:46Pm		1	X								S										X				X	

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	5/12/10	7:15Am		5/12/10	7:15Am
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
	5/12/10	8:27Am	Jeanne Fitch	05-12-10	0827

Laboratory Comments:
[redacted]
VOCs Free of Headspace? Y N
[redacted] Y N
Custody seals on container(s) Y N
[redacted] Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 0.6 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Environmental

Date/ Time: 05-12-10 @ 0827

Lab ID #: 372363

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	0.6 °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

Analytical Report 372581

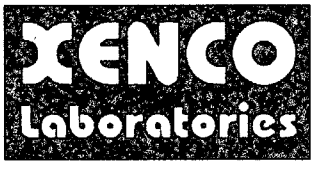
for

Elke Environmental, Inc.

Project Manager: Bobby Steadham

Linn Operating

14-MAY-10



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-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 (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-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL00449):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295)

14-MAY-10

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

Reference: XENCO Report No: **372581**
Linn Operating
Project Address: CA Russell Battery

Bobby Steadham:

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 372581. 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. 372581 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 372581

Elke Environmental, Inc., Odessa, TX

Linn Operating

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
5 Point Composite	S	May-12-10 17:30		372581-001

CASE NARRATIVE

Client Name: Elke Environmental, Inc.
Project Name: Linn Operating

Project ID:
Work Order Number: 372581

Report Date: 14-MAY-10
Date Received: 05/13/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-806404 Percent Moisture
AD2216A
Batch 806404, Percent Moisture RPD is outside the QC limit. This is most likely due to sample non-homogeneity.
Samples affected are: 372581-001.

Batch: LBA-806510 Inorganic Anions by EPA 300/300.1
None

Batch: LBA-806541 TPH By SW8015 Mod
None

Batch: LBA-806579 BTEX by EPA 8021B
SW8021BM

Batch 806579, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 372581-001 D,372581-001.
4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 372581-001 D,372581-001.

Certificate of Analysis Summary 372581

Elke Environmental, Inc., Odessa, TX

Project Name: Linn Operating

Project Id:
Contact: Bobby Steadham
Project Location: CA Russell Battery

Date Received in Lab: Thu May-13-10 08:12 am
Report Date: 14-MAY-10
Project Manager: Brent Barron, II

Analysis Requested								
	Lab Id:	372581-001						
	Field Id:	5 Point Composite						
	Depth:							
	Matrix:	SOIL						
	Sampled:	May-12-10 17:30						
BTEX by EPA 8021B	*Extracted:*	May-14-10 09.00						
	Analyzed:	May-14-10 10:14						
	Units/RL:	mg/kg	RL					
Benzene		ND	0.0107					
Toluene		0.2113	0.0214					
Ethylbenzene		0.9353	0.0107					
m,p-Xylenes		1.436	0.0214					
o-Xylene		0.7653	0.0107					
Total Xylenes		2.201	0 0107					
Total BTEX		3.348	0.0107					
Inorganic Anions by EPA 300/300.1	*Extracted:*							
	Analyzed:	May-13-10 09·47						
	Units/RL:	mg/kg	RL					
Chloride		488	53.5					
Percent Moisture	*Extracted:*							
	Analyzed:	May-13-10 09:00						
	Units/RL:	%	RL					
Percent Moisture		6.59	1.00					
TPH By SW8015 Mod	*Extracted:*	May-13-10 13:40						
	Analyzed:	May-13-10 17:33						
	Units/RL:	mg/kg	RL					
C6-C12 Gasoline Range Hydrocarbons		444	75.2					
C12-C28 Diesel Range Hydrocarbons		1730	75.2					
C28-C35 Oil Range Hydrocarbons		122	75.2					
Total TPH		2296	75.2					

Brent Barron, II
Odessa Laboratory Manager

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: Linn Operating

Work Orders : 372581,

Project ID:

Lab Batch #: 806579 **Sample:** 563266-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/14/10 09:07

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 806579 **Sample:** 563266-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/14/10 09:52

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 806579 **Sample:** 372581-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/10 10:14

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0201	0.0300	67	80-120	**
4-Bromofluorobenzene	0.0602	0.0300	201	80-120	**

Lab Batch #: 806579 **Sample:** 372581-001 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/10 11:23

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0202	0.0300	67	80-120	**
4-Bromofluorobenzene	0.0596	0.0300	199	80-120	**

Lab Batch #: 806541 **Sample:** 563242-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/13/10 16:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.9	99.9	100	70-135	
o-Terphenyl	45.3	50.0	91	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: Linn Operating

Work Orders : 372581, **Project ID:**

Lab Batch #: 806541 **Sample:** 563242-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/13/10 16:31

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	48.4	50.0	97	70-135	

Lab Batch #: 806541 **Sample:** 563242-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/13/10 17:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	99.8	91	70-135	
o-Terphenyl	50.4	49.9	101	70-135	

Lab Batch #: 806541 **Sample:** 372581-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/13/10 17:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	100	97	70-135	
o-Terphenyl	52.3	50.2	104	70-135	

Lab Batch #: 806541 **Sample:** 372653-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/10 00:39

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	50.9	50.2	101	70-135	

Lab Batch #: 806541 **Sample:** 372653-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/14/10 01:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	100	87	70-135	
o-Terphenyl	43.0	50.2	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.

Blank Spike Recovery

Project Name: Linn Operating

Work Order #: 372581 **Project ID:**

Lab Batch #: 806579 **Sample:** 563266-1-BKS **Matrix:** Solid

Date Analyzed: 05/14/2010 **Date Prepared:** 05/14/2010 **Analyst:** ASA

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

BTEX by EPA 8021B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
			BLANK /BLANK SPIKE RECOVERY STUDY			
Benzene	ND	0.1000	0.0989	99	70-130	
Toluene	ND	0.1000	0.1001	100	70-130	
Ethylbenzene	ND	0.1000	0.1027	103	71-129	
m,p-Xylenes	ND	0.2000	0.2048	102	70-135	
o-Xylene	ND	0.1000	0.1018	102	71-133	

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: Linn Operating

Work Order #: 372581 **Project ID:**

Analyst: LATCOR **Date Prepared:** 05/13/2010 **Date Analyzed:** 05/13/2010

Lab Batch ID: 806510 **Sample:** 806510-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

Inorganic Anions by EPA 300/300.1	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
Chloride	ND	10.0	9.36	94	10	9.47	95	1	80-120	20	

Analyst: BEV **Date Prepared:** 05/13/2010 **Date Analyzed:** 05/13/2010

Lab Batch ID: 806541 **Sample:** 563242-1-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	999	1040	104	1000	1080	108	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	999	742	74	1000	1020	102	32	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: Linn Operating

Work Order #: 372581
Lab Batch #: 806510
Project ID:
Date Analyzed: 05/13/2010
Date Prepared: 05/13/2010
Analyst: LATCOR
QC- Sample ID: 372507-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	26400	20800	45600	92	80-120	

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: Linn Operating

Work Order # : 372581 **Project ID:**

Lab Batch ID: 806541 **QC- Sample ID:** 372653-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 05/14/2010 **Date Prepared:** 05/13/2010 **Analyst:** BEV

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
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**
C6-C12 Gasoline Range Hydrocarbons	86.8	1070	1390	122	1070	1180	102	16	70-135	35	
C12-C28 Diesel Range Hydrocarbons	75.7	1070	1020	88	1070	968	83	5	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

Sample Duplicate Recovery

Project Name: Linn Operating

Work Order #: 372581

Lab Batch #: 806579 **Project ID:**

Date Analyzed: 05/14/2010 **Date Prepared:** 05/14/2010 **Analyst:** ASA

QC- Sample ID: 372581-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

BTEX by EPA 8021B	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Benzene	ND	ND	NC		
Toluene	0.2113	0.2631	22		
Ethylbenzene	0.9353	1.138	20		
m,p-Xylenes	1.436	1.677	15		
o-Xylene	0.7653	0.9194	18		

Lab Batch #: 806510

Date Analyzed: 05/13/2010 **Date Prepared:** 05/13/2010 **Analyst:** LATCOR

QC- Sample ID: 372507-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300/300.1	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	26400	26500	0	20	

Lab Batch #: 806404

Date Analyzed: 05/13/2010 **Date Prepared:** 05/13/2010 **Analyst:** JLG

QC- Sample ID: 372507-001 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	ND	2.96	NC	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: Bobby Steadham
Company Name: Elke Environmental
Company Address: P O Box 14167
City/State/Zip: Odessa, TX 79768
Telephone No: 432-366-0043 Fax No: 432-366-0884
Sampler Signature:

Project Name: LINN OPERATING
Project #:
Project Loc: CA Russell Battery
PO #:
Report Format: ☑ Standard ☐ TRRP ☐ NPDES
e-mail: bs_elkeenv@yahoo.com

(lab use only)
ORDER #: 372581

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # 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: TOTAL: TPH: 418.1 (8015) 80188	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX (8021b 5030 or BTEX 8260)	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
1	5 Point Composite		N/A	5/12/10	5:30pm		1	X								S	X			X					X				X	

Special Instructions:

Laboratory Comments:
VOCs Free of Headspace? Y N
Custody seals on container(s) Y N
Sample Hand Delivered by Sampler/Client Rep. ? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 0.6 °C

Relinquished by:	Date	Time	Received by:	Date	Time
	5/13/10	8:12			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jeanne Fitch	05-13-10	0812

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Environmental

Date/ Time: 05-13-10 @ 0812

Lab ID #: 372581

Initials: JMF

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	0.6 °C	
#2	Shipping container in good condition?	Yes	No	(N/A)	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present (N/A)	
#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

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

CA RUSSELL #19 0

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Linn 269324	Contact ALBERT VALERO
Address Route 1 13694 Loviington HWY	Telephone No. 575-677-2327
Facility Name C.A. Russel Battery	Facility Type Oil Prod.

Surface Owner	Mineral Owner	Lease No.

API # 30-015-28924 0

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	18	17	31E					Eddy

Latitude 32° 50' 17.1" Longitude 103° 34' 19.98"

NATURE OF RELEASE

Type of Release Oil	Volume of Release 20-25 BBL Volume Recovered 20
Source of Release Oil Tank overfilled	Date and Hour of Occurrence 2/9 Date and Hour of Discovery
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Kimberly Wilson-(OCD) 02/09/10 7:00 AM
By Whom? Robert Aranda C. 1:10pm	Date and Hour 02-09-10 @ 3:17 PM
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. NO

If a Watercourse was Impacted, Describe Fully.* NO

Describe Cause of Problem and Remedial Action Taken.*
An electrical failure on Circ pump to shut down timer broken. Causing tank to over fill, , allowing approximately 20 to 25 bbls

Describe Area Affected and Cleanup Action Taken.* Oil did not breach firewalls, spill was Contained with in fire wall. Clean all Soil and remediate Contamination.

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: Albert Valero	OIL CONSERVATION DIVISION
Printed Name: Albert Valero	Approved by District Supervisor: Signed By Bryan Arrendo
Title: Foreman	Approval Date: FEB 22 2010 Expiration Date:
E-mail Address: AVALERO@LINNENERGY.COM	Conditions of Approval: Attached ☐
Date: 02/10/2010 Phone: 432-213-1281	

* Attach Additional Sheets If Necessary

REMEDIATION per OCD Rules and Guidelines. SUBMIT REMEDIATION PROPOSAL BY: 3/22/2010

nMLB1005336396

pMLB1005339200

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Jon Goldstein
Cabinet Secretary

Jim Noel
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

Linn Operating Inc.
Route 13694 Lovington Hwy
Artesia, NM 88210
ATTN: Albert Valero

February 22, 2010

Reference: CA Russell 019 Btry API: 30-015-28294 B-18-17S-31E Eddy County, New Mexico

Operator,

The New Mexico Oil Conservation Division District 2 Office (OCD) is in receipt of an initial report Form C-141 reporting a release of produced fluids at or near the above referenced well site. The release reportedly occurred on or about February 9, 2010. Please submit a corrective action work plan proposal (plan) for remediation, removal and/or clean up of contaminants that may be present at this site. The plan is to be formulated based on **vertical and horizontal delineation** of contamination, site ranking, and OCD rules, regulations and guidelines.

A publication is available to you on the OCD website to aid in formulation of this plan. The publication may be found as follows:

http://www.emnrd.state.nm.us/ocd

Click on each of the following items as they appear:

- Publications
- Environmental Handbook
- Miscellaneous Guidelines
- Remediation of Leaks, Spills and Releases

Please submit this plan to the OCD District 2 Office not later than **March 22, 2010**. Please include any remedial or clean up actions that may have already been performed.

Clean up/remediation requirements may be subject to other federal, state, local laws and/or regulations.

Sincerely,

Mike Bratcher
NMOCD District 2
1301 W. Grand Ave.
Artesia, NM 88210
575-748-1283 Ext.108
mike.bratcher@state.nm.us

2RP-392

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 – Linn Operating	Contact – Albert Valero
Address – 2651 JBS Parkway Bldg 4 Suite F	Telephone No. – 432-366-1557
Facility Name – C A Russell Battery	Facility Type – Battery

Surface Owner - BLM	Mineral Owner	Lease No. 30-015-28924 (C A Russell #19)

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	18	17S	31E					Eddy

Latitude 32° 50.291' N **Longitude** 103° 54.335' W

NATURE OF RELEASE

Type of Release - Oil	Volume of Release– 20 to 25 bbls	Volume Recovered – 20 bbls
Source of Release – Oil Tank (Overflowed)	Date and Hour of Occurrence – 2/19/10	Date and Hour of Discovery – 2/19/10 7:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Kimberly Wilson (NMOCD)	
By Whom? Robert Aranda	Date and Hour – 2/19/10 @ 3:17pm	
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.* Electrical failure on circulating pump causing to shutdown, timer broken causing tank to overfill, allowing approx. 20 to 25 bbls to overflow. Spill was contained within the firewall. Initial sampling of the spill was completed on 2-25-10 by hand. The delineation was completed on 3-2-10 and 3-3-10. Attached is a plat map and field analytical of the delineation.

Describe Area Affected and Cleanup Action Taken.* Site ranking for the site is as follows: Wellhead Protection – 0 points, Surface body of Water – 0 points and Groundwater (>200') - 0 points. Total ranking for the site is 0 points. The RAL's for the site will be TPH – 5,000ppm; Chloride – 250ppm and BTEX – 100ppm (using field vapor headspace measurement). Linn Operating proposes to excavate 18" of impacted soil and haul to an OCD Approved disposal. A 20 mil poly liner will be installed at 18" with a 4 oz. Geotextile Liner above and below the poly liner. After installation of the liner, clean native soil will be backfilled into the excavation. A final report with lab confirmations 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: Logan Anderson	Approved by District Supervisor:	
Title: Consultant	Approval Date:	Expiration Date:
E-mail Address: la_elkeenv@yahoo.com	Conditions of Approval:	Attached ☐
Date: 3-1-10 Phone: 432-366-0043		

* Attach Additional Sheets If Necessary

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768
Phone (432) 366-0043 Fax (432) 366-0884

April 6, 2010

New Mexico Oil Conservation Division
Mr. Mike Bratcher
1301 West Grand Ave.
Artesia, New Mexico 88210

Re: Linn Operating – C A Russell Battery
UL 'B' Sec. 18 T17S R31E Eddy County
2RP-392

Mr. Mike Bratcher,

E.L.K.E Environmental proposes to excavate test points one, two, three and four to a dept of two foot and test point five to a depth of three foot. The excavated soil will be hauled off and replaced with clean native soil or caliche. E.L.K.E will sample the bottom of the excavation at the time the proposed depth is reached. Lab analysis will be preformed to prove B-Tex is below RAL's . The excavation will continue until the bottom samples reflect results satisfactory to the OCD.

Curtis Elam.

Email from OCD CA Russell Battery.txt

From: Curtis Elam [ce_elkeenv@yahoo.com]
Sent: Wednesday, May 05, 2010 4:03 PM
To: elkeenv@aol.com
Subject: FWD: CA Russell Battery

Sent from my Verizon Wireless mobile phone

------Original Message------
From: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
To: <dfrick@linnenergy.com>
Cc: <ce_elkeenv@yahoo.com>
Date: Wed, Apr 7, 3:05 PM -0600
Subject: CA Russell Battery

Reference: Linn Operating - CA Russell 019 (Battery) Well API:-30-015-28294 B-18-17s-31e Eddy County, New Mexico - OCD reference number: 2RP-392

ATTN: Daniel Frick, Linn Operating

Mr. Frick,

The New Mexico Oil Conservation Division (OCD) is in receipt of a proposal for remediation of the tank battery located just East of the above referenced well site. Remedial actions are required due to a release of produced fluids that occurred at the battery site on or about February 9, 2010. The remediation proposal, dated March 1, 2010, was submitted to OCD by your contractor, Elke Environmental, Inc. Subsequently, an amendment to the original proposal, dated April 6, 2010, has been received by OCD.

The proposal, as amended, is approved with the following conditions/stipulations:

Notify OCD 48 hours prior to commencement of activities.

Notify OCD 48 hours prior to obtaining samples where analyses of samples obtained are to be submitted to OCD.

Contaminated material that was excavated from the battery site and is currently stockpiled on the CA Russell 19 well site is to be hauled to disposal. Confirmation samples are to then be obtained from the stockpile area and submitted for lab analysis.

Remediation project is to be completed, and, a closure report with a form C-141 marked Final Report submitted to OCD, not later than May 15, 2010.

Conditions of approval may be subject to modification as site conditions warrant.

Like approval by BLM as applicable.

It was noted during OCD inspection that one of the storage tanks in this battery has an approximate " size hole in the lower third portion of the tank. The hole was plugged with a piece of wood.

Be advised that this approval does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, this approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, please contact me.

Mike Bratcher

NMOCD District 2

1301 W. Grand AvE.

Artesia, NM 88210

575-748-1283 Ext.108

mike.bratcher@state.nm.us