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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

Initial Report X Final Report

Name of Company	Primero Operating, Inc.	Contact	Phelps White
Address	P.O. Box 1433, Roswell, NM 88202	Telephone No.	(575) 626-7660
Facility Name	Eidson #1	Facility Type	Tank Battery

Surface Owner	Primero – Lessee	Mineral Owner	Fee	API No.	30-025-21185

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	26	16S	35E	2310	South	2310	East	Lea

Latitude N 32.89215° **Longitude** W 103.42757°

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release Unknown	Volume Recovered None
Source of Release Produced Water Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 1/25/13
Was Immediate Notice Given? ☐ Yes ☐ No X Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The produced water tank had a hole in the bottom and a Letter of Violation was written on 1/25/13. The water tank was removed from the location. The load line by the North tank was leaking. A soil boring was installed and soil samples were collected in five foot increments, from surface to a depth of 46' below ground surface (bgs). Soil samples were analyzed for chloride concentrations. Chloride concentrations decreased with depth and were reported less than 250 mg/kg at a depth of 45' bgs (93.6 mg/kg). A three foot thick hard rock layer was encountered at a depth of approximately 4.5' to 8' bgs, and an eleven foot hard rock layer was encountered at a depth of approximately 12' to 23' bgs. Groundwater at the location is thought to occur at 55' bgs; however, no indication of groundwater was encountered during the soil boring installation.

Describe Area Affected and Cleanup Action Taken.*
Soil was excavated from a 31' x 37' x 4.5' area surrounding the former produced water tank. A 20 mil plastic liner was placed in the bottom of the excavation (padded under and over with topsoil). Clean caliche was placed above the liner to a depth of 1 foot bgs. Clean topsoil was placed from a depth of 1' bgs to surface. The site was contoured to original conditions. Three feet of soil was removed from below the north load line, and the area was backfilled with clean caliche. Approximately 180 yards of impacted soil was hauled to Gandy Disposal.

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: Phelps White	Approved by Environmental Specialist: Environmental Specialist	
Title: President	Approval Date: 05/30/13	Expiration Date: —
E-mail Address: pwiv@zianet.com	Conditions of Approval: —	Attached ☐ IRP-04-13-2909
Date: 5/7/13 Phone: (575) 626-7660		

* Attach Additional Sheets If Necessary

JUN 04 2013

Crain Environmental

May 7, 2013

approved
Geoffrey Leking
Environmental Specialist
NMOCD-DIST 1
5/30/13

Mr. Geoffrey Leking
Environmental Specialist
Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

Re: Spill Remediation Report, Primero Operating, Inc.,
Eidson #1,
Unit Letter J (NW/4, SE/4), Section 26, Township 16 South, Range 35 East,
Lea County, New Mexico
(Latitude: N 32.89215° / Longitude: W 103.42757°)
1RP # 04-13-2909

Dear Mr. Leking:

Primero Operating, Inc. (Primero) has retained Crain Environmental (CE) to remediate impacts to soil from a leaking produced water tank and load line at the Eidson #1 (Site). The Site is located in the northwest quarter (NW/4) of the southeast quarter (SE/4), Section 26, Township 16 South, Range 35 East, Lea County, New Mexico. A Letter of Violation (LOV) was received by Primero on January 25, 2013. The LOV addressed the leaking produced water tank, fresh oil under the north load line valve, and surplus equipment at the Site. A copy of the LOV is included as Appendix A. A C-141 was submitted to the New Mexico Oil Conservation Division (NMOCD) on April 5, 2013, a copy of which is included as Appendix B. Figure 1 shows the site location.

Based on published literature (1961), well records of the New Mexico State Engineer, and well records of the United States Geological Survey, groundwater occurs at approximately 55 feet bgs in the well located nearest the Site. No domestic water wells are located within 1,000 feet of the site. The NMOCD has established recommended remediation action levels (RRALs) for benzene, total BTEX and TPH resulting from spills of natural gas liquids ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"). Remediation levels for benzene, total BTEX and TPH were calculated using the following NMOCD criteria:

Criteria	Result	Ranking Score
Depth-to-Groundwater	50 - 99 Feet	10
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0
		Total: 10

NOTE: NMOCD TREND MAP DISPLAYED DEPTH TO WATER OF 46'
THEREFORE, RANKING SCORE WOULD BE 20. HOWEVER,
DELINEATION & REMEDIATION SATISFY A 20 RANKING
SITE.

2925 East 17th Street • Odessa, TX 79761
Phone: (432) 530-9797 • Fax: (432) 272-0304

The following RRALs have been assigned based on NMOCD criteria:

Benzene	**10 mg/kg**
Total BTEX	**50 mg/kg**
TPH	**1,000 mg/kg**

Investigation Activities

On February 14, 2013, the produced water tank and ancillary equipment was removed from the Site. On February 19, 2013, a backhoe was utilized to collect soil samples for chloride analysis, from the area beneath the former tank. Soil samples were collected from the surface (SS-2), and at depths of 2 feet (SS-1), 3 feet (SS-3), 4 feet (SS-5) and 5 feet (SS-6) below ground surface (bgs), until a hard rock layer was encountered. One soil sample (SS-4) was also collected from the surface at a background location, approximately 75 feet northwest of the Site. The soil samples were placed in clean glass sample jars, labeled, and delivered to Cardinal Laboratories (Cardinal) of Hobbs, New Mexico for chloride analysis. Table 1 provides a summary of the laboratory results. Figure 2 shows the sample locations and chloride results. Appendix C provides a copy of the laboratory reports and chain of custody documentation. Photographs are included in Appendix D.

Referring to Table 1, chloride concentrations were reported above 250 mg/kg in all samples except the background sample (SS-4 at <16.0 mg/kg). On March 6, 2013, Scarborough Drilling (Scarborough) of Lamesa, Texas, mobilized a drilling rig to the Site in order to collect soil samples at a greater depth. Soil boring BH-1 was drilled at the same location as the previous samples (SS-1, SS-2, SS-3, SS-5 and SS-6). Soil samples from boring BH-1 were collected at depths of 5, 10, 15 and 20 feet bgs, until field chloride tests reported chloride concentrations below 250 mg/kg. Soil samples were also collected from boring BH-2, located 30 feet north of the first boring (BH-1), at the surface and every five (5) feet thereafter, to a depth of 11 feet bgs. All samples were placed in clean glass sample jars, labeled, and transported to Xenco Laboratories (Xenco) of Odessa, Texas for chloride analysis. Table 1 provides a summary of the laboratory results. Figure 2 shows the sample locations and chloride results. Appendix C provides a copy of the laboratory reports and chain of custody documentation. Photographs are included in Appendix D.

Referring to Table 1, even though chloride concentrations decreased with depth, the laboratory did not report any concentrations less than 250 mg/kg in boring BH-1 or BH-2. Soil samples from the BH-2 location reported relatively low chloride concentrations, and deeper drilling was not required by the NMOCD. A Scarborough drilling rig was mobilized to the Site on March 26, 2013, and soil boring BH-1 was re-entered. Soil samples were collected from boring BH-1 beginning at a depth of 25 feet bgs, and every five (5) feet thereafter, to a depth of 46 feet bgs. One additional sample (SS-7) was collected at a depth of 0-6 inches, from the area below the north load line. All samples were labeled, chilled in an ice chest and delivered to Xenco for chloride analysis of the boring BH-1 samples, and BTEX, TPH and chloride analysis of the SS-7 sample. Table 1 provides a summary of the laboratory results. Figure 2 shows the sample locations and laboratory results. Appendix C provides a copy of the laboratory reports and chain of custody documentation. Photographs are included in Appendix D.

Referring to Table 1, chloride concentrations in samples from boring BH-1 decreased with depth until concentrations were reported less than 250 mg/kg at a depth of 45-46 feet bgs (93.6 mg/kg). No signs of groundwater were encountered during drilling. Soil sample SS-7 (below the load line) reported benzene and total BTEX as non-detect, TPH as 2,420 mg/kg, and chloride as 736 mg/kg.

On April 5, 2013, all data collected at the Eidson #1 Site was presented to you. Primero proposed to excavate all moist soil from the area beneath the former produced water tank to a depth of approximately 4.5 to 5 feet bgs, until the hard rock layer was encountered, lining the excavation with a 20 mil plastic liner, and backfilling the excavation with clean soil. Verbal approval of the proposal was granted by you on that date, with written approval following on April 9, 2013. Your approval also addressed the fact that soil would be excavated from below the load line until samples reported concentrations below the NMOCD criteria, or a liner may also be placed under the load line.

Remediation Activities

On April 24, 2013, chloride impacted soil was excavated from a 31 by 37 foot area beneath the former produced water tank, to a depth of approximately 4.5 to 5 feet bgs, until the hard rock layer was encountered. Soil was also excavated from below the north load line, to a depth of three (3) feet bgs. Approximately 180 yards of soil from the excavation was hauled to Gandy Disposal. In order to determine the chloride content of backfill soil, samples of caliche were obtained from a nearby Primero plugged and abandoned well pad (Backfill 1) and from Primero stockpiled soil (Backfill 3) for chloride analysis. Table 1 provides a summary of the laboratory results. Chloride concentrations from sample Backfill 1 were reported as 80 mg/kg, and chloride concentrations from sample Backfill 3 were reported as 1,250 mg/kg. The stockpiled soil (Backfill 3) was not used to backfill the excavation. Appendix C provides a copy of the laboratory reports and chain of custody documentation.

On April 25, 2013, topsoil was placed at the bottom of the excavation prior to the placement of a 20 mil plastic liner. Topsoil was also placed above the liner, before backfilling the excavation to a depth of one (1) foot bgs with clean caliche. A one (1) foot layer of topsoil was added above the caliche to bring the soil to surface grade. A sample of the topsoil (Topsoil), purchased from the landowner, was collected for laboratory analysis of chloride, and a sample (Load Line) was collected from below the load line at a depth of three (3) feet bgs for analysis of TPH, BTEX and chloride. All samples were placed in clean glass sample jars, labeled, chilled in an ice chest and delivered to Cardinal Laboratories. Table 1 provides a summary of the laboratory results. Appendix C provides a copy of the laboratory reports and chain of custody documentation. Appendix D provides photographs of the excavation and the final remediated Site.

The laboratory reported the chloride concentrations of the Top Soil as 32 mg/kg and the Load Line as 304 mg/kg. The concentration of benzene in the Load Line sample was reported as <0.050 mg/kg, and TPH was reported as <20 mg/kg. The area under the load line was backfilled with clean soil.

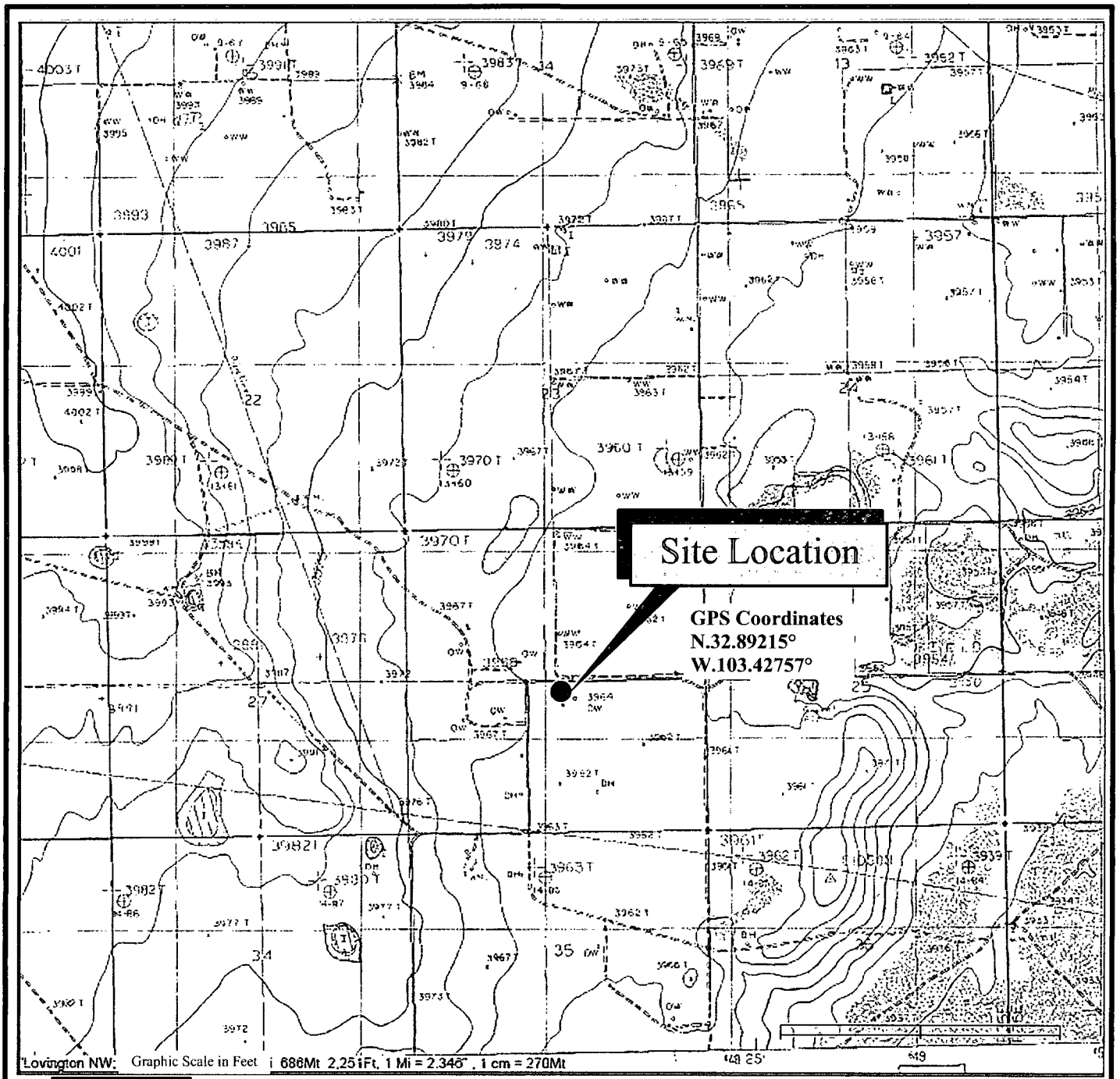
Primero respectfully requests that the Eidson #1 Site be closed by the NMOCD. A final C141 form is included in Appendix E. If you have any questions or need additional information, please call Mr. Phelps White at (575) 626-7660, or myself at (575) 441-7244. We may also be reached by email at pwiv@zianet.com or Cindy.Crain@gmail.com.

Sincerely,
Crain Environmental

Cindy K. Crain, P.G.

cc: Phelps White, Primero

FIGURES



0' 2,251' 4,502'

Scale: 1" =2,251'

QUADRANGLE LOCATION

FIGURE # 1

Lea County, New Mexico

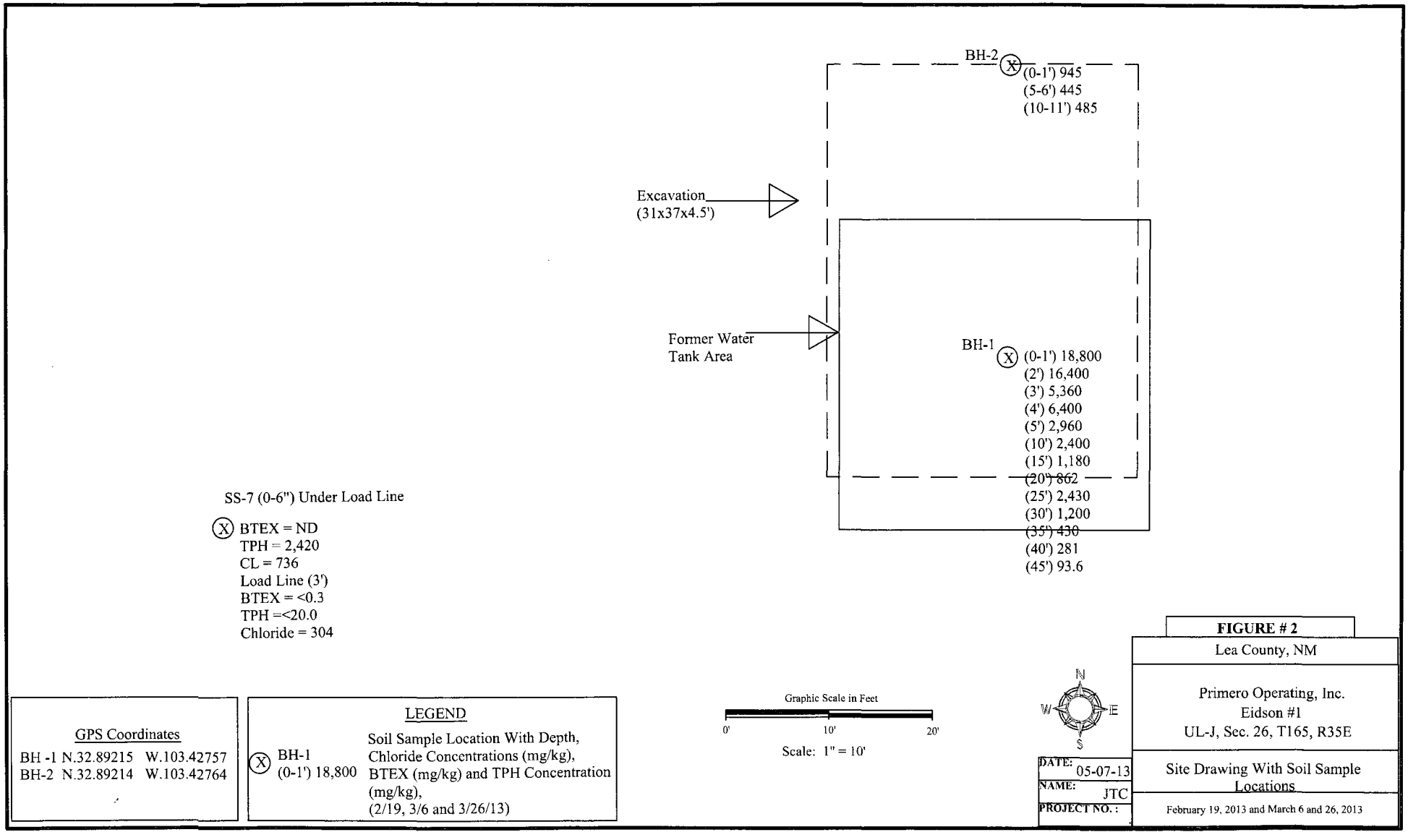
Primero Operating, Inc.

Eidson #1

UL-J, Sec.26, T16S, R35E

Site Drawing

DATE:	05-07-13
NAME:	JTC
PROJECT NO. :	



Crain Environmental • 2925 East 17th Street • Odessa, TX 79761 • Phone: (432) 530-9797 • Fax: (432) 272-0304

TABLE

Table 1:
Summary of Laboratory Analysis of Soil Samples
Primero Operating, Inc., Eidson #1
Unit Letter J, Section 26, Township 16 South, Range 35 East
Lea County, New Mexico

Sample Date	Sample Name	Sample Depth (feet BGS)	Benzene (mg/kg)	Total BTEX (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	Soil Status
WQCC Standard			**10**	**50**	**1000**		
2/19/13	SS-1	2	---	---	---	16,400	Excavated
2/19/13	SS-2	0-6"	---	---	---	18,800	Excavated
2/19/13	SS-3	3	---	---	---	5,360	Excavated
2/19/13	SS-4	Background 0-6"	---	---	---	<16.0	In Situ
2/19/13	SS-5	4	---	---	---	6400	Excavated
2/19/13	SS-6	5	---	---	---	2,960	Excavated
3/6/13	BH-1	5-6	---	---	---	7390	In Situ
3/6/13	BH-1	10-11	---	---	---	2400	In Situ
3/6/13	BH-1	15-16	---	---	---	1180	In Situ
3/6/13	BH-1	20-21	---	---	---	862	In Situ
3/26/13	BH-1	25-26	---	---	---	2430	In Situ
3/26/13	BH-1	30-31	---	---	---	1200	In Situ
3/26/13	BH-1	35-36	---	---	---	430	In Situ
3/26/13	BH-1	40-41	---	---	---	281	In Situ
3/26/13	BH-1	45-46	---	---	---	93.6	In Situ
3/6/13	BH-2	0-1	---	---	---	945	Excavated
3/6/13	BH-2	5-6	---	---	---	445	In Situ
3/6/13	BH-2	10-11	---	---	---	485	In Situ
3/26/13	SS-7 (Loadline)	0-6"	ND	ND	2420	736	Excavated
4/25/13	Loadline	3	<0.050	<0.300	<20	304	In Situ
4/24/13	Backfill 1	---	---	---	---	80	Excavation Backfill
4/24/13	Backfill 3	---	---	---	---	1250	Disposed
4/25/13	Topsoil	---	---	---	---	32	Excavation Backfill

Notes: *3/6/13 and 3/26/13 Samples Analyzed by Xenco Laboratories of Odessa, Texas.*
2/19/13, 4/24/13 and 4/25/13 Samples Analyzed by Cardinal Laboratories, Hobbs, New Mexico.

1. BGS: Below ground surface.
2. mg/kg: Milligrams per kilogram.
3. --- No data available.
4. < Less than the test method detection limit.

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APPENDIX A

LETTER OF VIOLATION

1/29/13

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

SUSANA MARTINEZ
Governor
John H. Bemis
Cabinet Secretary

Jami Bailey
Director
Oil Conservation Division

Response Required – Deadline Enclosed

Field Inspection Program

"Preserving the Integrity of Our Environment"

25-Jan-13

PRIMERO OPERATING INC
PO BOX 1433
ROSWELL NM 88202

LETTER OF VIOLATION - Inspection

Dear Operator:

The following inspection(s) indicate that the well, equipment, location or operational status of the well(s) failed to meet standards of the New Mexico Oil Conservation Division as described in the detail section below. To comply with standards imposed by Rules and Regulations of the Division, corrective action must be taken immediately and the situation brought into compliance. The detail section indicates preliminary findings and/or probable nature of the violation. This determination is based on an inspection of your well or facility by an inspector employed by the Oil Conservation Division on the date(s) indicated.

Please notify the proper district office of the Division, in writing, of the date corrective actions are scheduled to be made so that arrangements can be made to reinspect the well and/or facility.

INSPECTION DETAIL SECTION

EIDSON No.001 J-26-16S-35E **30-025-21185-00-00**

Inspection Date	Type Inspection	Inspector	Violation?	*Significant Non-Compliance?	Corrective Action Due By:	Inspection No.
01/25/2013	Routine/Periodic	Maxey Brown	Yes	No	4/30/2013	iMGB1302540109

Violations
Surface Leaks/Spills
General Housekeeping (Rule 114)

Comments on Inspection: RULE 19.15.29.8. PRODUCED WATER TANK IS LEAKING FROM PATCH AT BOTTOM EDGE OF TANK. NEED TO REPAIR OR REPLACE TANK. CONTACT GEOFFREY LEKING, OCD, HOBBS DISTRICT 1 OFFICE, 575-393-6161 EXT 113, FOR APPROVED CLEANUP PLAN. ALSO NORTH OIL TANK HAS FRESH OIL UNDER LOADLINE VALVE NEXT TO TANK. NEED TO REMOVE SURPLUS EQUIPMENT (HEATER TREATER, PIECE OF FIRE TUBE, MISC JUNK). THIS IS 1ST LETTER OF NON-COMPLIANCE.

APPENDIX B

INITIAL C141 DOCUMENTATION

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

X Initial Report ☐ Final Report

Name of Company	Primero Operating, Inc.	Contact	Phelps White
Address	P.O. Box 1433, Roswell, NM 88202	Telephone No.	(575) 626-7660
Facility Name	Eidson #1	Facility Type	Tank Battery

Surface Owner Primero – Lessee	Mineral Owner Fee	API No. 30-025-21185

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	26	16S	35E	2310	South	2310	East	Lea

Latitude N 32.89215° **Longitude** W 103.42757°

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release Unknown	Volume Recovered None
Source of Release Produced Water Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 1/25/13
Was Immediate Notice Given? ☐ Yes ☐ No X Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The produced water tank had a hole in the bottom and a Letter of Violation was written on 1/25/13. The water tank was removed from the location.

Describe Area Affected and Cleanup Action Taken.*
The produced water tank was located in a 30' x 30' bermed area. A soil boring was installed and soil samples were collected in five foot increments, from surface to a depth of 46' below ground surface (bgs). Soil samples were analyzed for chloride concentrations. Chloride concentrations decreased with depth and were reported less than 250 mg/kg at a depth of 45' bgs (93.6 mg/kg). A three foot thick hard rock layer was encountered at a depth of approximately 4.5' to 8' bgs, and an eleven foot hard rock layer was encountered at a depth of approximately 12' to 23' bgs. Groundwater at the location is thought to occur at 55' bgs; however, no indication of groundwater was encountered during the soil boring installation.

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: Phelps White	Approved by Environmental Specialist: Environmental Specialist
Title: President	Approval Date: 4/5/13 Expiration Date: 6/5/13
E-mail Address: pwiv@zianet.com	Conditions of Approval: SUBMIT FINAL C-141 BY 6/5/13 Attached ☐ IRP-04-13-2909
Date: 4/3/13 Phone: (575) 626-7660	

* Attach Additional Sheets If Necessary

APPENDIX C

ANALYTICAL DATA AND CHAIN OF CUSTODY DOCUMENTATION

CARDINAL Laboratories

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

February 20, 2013

CINDY CRAIN

CRAIN ENVIRONMENTAL

2925 E. 17TH STREET

ODESSA, TX 79761

RE: PRIMERO-EIDSON #1

Enclosed are the results of analyses for samples received by the laboratory on 02/19/13 16:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

CRAIN ENVIRONMENTAL
CINDY CRAIN
2925 E. 17TH STREET
ODESSA TX, 79761
Fax To: (432) 272-0304

Received:	02/19/2013	Sampling Date:	02/19/2013
Reported:	02/20/2013	Sampling Type:	Soil
Project Name:	PRIMERO-EIDSON #1	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SS - 1 (H300454-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16400**	16.0	02/20/2013	ND	448	112	400	3.64	

Sample ID: SS - 2 (H300454-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**18800**	16.0	02/20/2013	ND	448	112	400	3.64	

Sample ID: SS - 3 (H300454-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5360**	16.0	02/20/2013	ND	448	112	400	3.64	

Sample ID: SS - 4 (H300454-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/20/2013	ND	448	112	400	3.64	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

CRAIN ENVIRONMENTAL
CINDY CRAIN
2925 E. 17TH STREET
ODESSA TX, 79761
Fax To: (432) 272-0304

Received:	02/19/2013	Sampling Date:	02/19/2013
Reported:	02/20/2013	Sampling Type:	Soil
Project Name:	PRIMERO-EIDSON #1	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SS - 5 (H300454-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6400**	16.0	02/20/2013	ND	448	112	400	3.64	

Sample ID: SS - 6 (H300454-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2960**	16.0	02/20/2013	ND	448	112	400	3.64	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Crain Environmental	BILL TO	
Project Manager:	Cindy Crain	P.O. #:	
Address:	2925 East 17th St.	Company:	
City:	Odessa State: TX Zip: 79761	Attn:	
Phone #:	(432) 530-4797 Fax #: (432) 272-0304	Address:	Same
Project #:	Project Owner: Chevron	City:	
Project Name:	Primero - Eidson #1	State:	Zip:
Project Location:	Lea Co., NM	Phone #:	
Sampler Name:	Cindy Crain	Fax #:	

ANALYSIS REQUEST: Chlorides

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chlorides
H300454															
1	SS-1	G	1			X							2/19/13	1100	X
2	SS-2	G	1			X							"	1110	X
3	SS-3	G	1			X							"	1120	X
4	SS-4	G	1			X							"	1126	X
5	SS-5	G	1			X							"	1136	X
6	SS-6	G	1			X							"	1147	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits, incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 2/19/13	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Cindy Crain	Time: 1450	Jodi Henson	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Email Results to: Cindy.Crain@gmail.com
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 13°C

Sample Condition: Cool ☐ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

FORM-006
Revision 1.0

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

#26

Analytical Report 458856

for

Crain Environmental

Project Manager: Cindy Crain

Primero-Eidson #1

13-MAR-13

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

13-MAR-13

Project Manager: **Cindy Crain**
Crain Environmental
2925 E 17th St.
Odessa, TX 79761

Reference: XENCO Report No(s): **458856**
Primero-Eidson #1
Project Address: Lea County NM

Cindy Crain:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 458856. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 458856 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,

Debbie Simmons

Debbie Simmons
Project Manager

Sample Cross Reference 458856

Crain Environmental, Odessa, TX

Primero-Eidson #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1	S	03-06-13 09:57	5 - 6 ft	458856-001
BH-1	S	03-06-13 10:00	10 - 11 ft	458856-002
BH-1	S	03-06-13 10:21	15 - 16 ft	458856-003
BH-1	S	03-06-13 10:33	20 - 21 ft	458856-004
BH-2	S	03-06-13 11:02	0 - 1 ft	458856-005
BH-2	S	03-06-13 11:04	5 - 6 ft	458856-006
BH-2	S	03-06-13 11:08	10 - 11 ft	458856-007

CASE NARRATIVE

Client Name: Crain Environmental
Project Name: Primero-Eidson #1

Project ID:
Work Order Number(s): *458856*

Report Date: *13-MAR-13*
Date Received: *03/07/2013*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 458856

Crain Environmental, Odessa, TX

Project Name: Primero-Eidson #1

Project Id:
Contact: Cindy Crain
Project Location: Lea County NM

Date Received in Lab: Thu Mar-07-13 11:18 am
Report Date: 13-MAR-13
Project Manager: Nicholas Straccione

Analysis Requested													
	Lab Id:	458856-001		458856-002		458856-003		458856-004		458856-005		458856-006	
	Field Id:	BH-1		BH-1		BH-1		BH-1		BH-2		BH-2	
	Depth:	5-6 ft		10-11 ft		15-16 ft		20-21 ft		0-1 ft		5-6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-06-13 09:57		Mar-06-13 10:00		Mar-06-13 10:21		Mar-06-13 10:33		Mar-06-13 11:02		Mar-06-13 11:04	
Inorganic Anions by EPA 300/300.1	*Extracted:*	Mar-11-13 10:00		Mar-11-13 10:00		Mar-11-13 10:00		Mar-11-13 10:00		Mar-11-13 10:00		Mar-11-13 10:00	
	Analyzed:	Mar-12-13 01:17		Mar-12-13 01:38		Mar-12-13 02:00		Mar-12-13 02:22		Mar-12-13 03:05		Mar-12-13 03:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7390	218	2400	111	1180	22.1	862	21.6	945	21.3	445	10.3
Percent Moisture	*Extracted:*												
	Analyzed:	Mar-11-13 17:00		Mar-11-13 17:00		Mar-11-13 17:00		Mar-11-13 17:00		Mar-11-13 17:00		Mar-11-13 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		8.11	1.00	10.2	1.00	9.34	1.00	7.57	1.00	6.01	1.00	3.13	1.00

Debbie Simmons
Project Manager

Certificate of Analysis Summary 458856

Crain Environmental, Odessa, TX

Project Name: Primero-Eidson #1

Project Id:
Contact: Cindy Crain
Project Location: Lea County NM

Date Received in Lab: Thu Mar-07-13 11:18 am
Report Date: 13-MAR-13
Project Manager: Nicholas Straccione

Analysis Requested							
	Lab Id:	458856-007					
	Field Id:	BH-2					
	Depth:	10-11 ft					
	Matrix:	SOIL					
	Sampled:	Mar-06-13 11:08					
Inorganic Anions by EPA 300/300.1	*Extracted:*	Mar-11-13 10:00					
	Analyzed:	Mar-12-13 03:49					
	Units/RL:	mg/kg	RL				
Chloride		485	10.4				
Percent Moisture	*Extracted:*						
	Analyzed:	Mar-11-13 17:00					
	Units/RL:	%	RL				
Percent Moisture		3.65	1.00				

Debbie Simmons
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

\+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

BS / BSD Recoveries

Project Name: Primero-Eidson #1

Work Order #: 458856 **Project ID:**

Analyst: AMB **Date Prepared:** 03/11/2013 **Date Analyzed:** 03/12/2013

Lab Batch ID: 908830 **Sample:** 634999-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 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	<2.00	50.0	51.2	102	50.0	52.3	105	2	80-120	20	

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: Primero-Eidson #1

Work Order #: 458856

Lab Batch #: 908830 **Project ID:**

Date Analyzed: 03/12/2013 **Date Prepared:** 03/11/2013 **Analyst:** AMB

QC- Sample ID: 458856-004 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	862	541	1400	99	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

Sample Duplicate Recovery

Project Name: Primero-Eidson #1

Work Order #: 458856

Lab Batch #: 908759 **Project ID:**
Date Analyzed: 03/11/2013 17:00 **Date Prepared:** 03/11/2013 **Analyst:** WRU
QC- Sample ID: 458980-003 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	18.8	18.9	1	20	

Lab Batch #: 908762
Date Analyzed: 03/11/2013 17:00 **Date Prepared:** 03/11/2013 **Analyst:** WRU
QC- Sample ID: 458856-006 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	3.13	3.07	2	20	

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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Cindy Crain
Company Name: Crain Environmental
Company Address: 2925 East 17th Street
City/State/Zip: Odessa, TX 79761
Telephone No: (575) 441-7244 Fax No: (432) 272-0304
Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Primero - Eidson #1
Project #:
Project Loc: Lea County, NM
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 458856

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: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO_4, 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
01	BH-1	5'	6'	3/6/2013	0957		1							X		S				X								X
02	BH-1	10'	11'	3/6/2013	1000		1							X		S				X								X
03	BH-1	15'	16'	3/6/2013	1021		1							X		S				X								X
04	BH-1	20'	21'	3/6/2013	1033		1							X		S				X								X
05	BH-2	0'	1'	3/6/2013	1102		1							X		S				X								X
06	BH-2	5'	6'	3/6/2013	1104		1							X		S				X								X
07	BH-2	10'	11'	3/6/2013	1108		1							X		S				X								X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	3/7/13	1118			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Shawnee Smith	3/7/13	1118

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 10.0 °C

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Crain Environmental

Date/ Time Received: 03/07/2013 11:18:00 AM

Work Order #: 458856

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	10
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**Yes**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**Yes**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**Yes**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:

Checklist completed by: _____ Date: _____

Checklist reviewed by: _____ Date: _____

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Cindy Crain

Company Name: Crain Environmental

Company Address: 2925 East 17th Street

City/State/Zip: Odessa, TX 79761

Telephone No: (575) 441-7244 Fax No: (432) 272-0304

Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Primero - Eidson #1

Project #:

Project Loc: Lea County, NM

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #:

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: 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	BTEX 8021B 5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	BH-1	25	26	3/26/2013	1037		1							X		S					X									X
	BH-1	30	31	3/26/2013	1048		1							X		S					X									X
	BH-1	35	36	3/26/2013	1057		1							X		S					X									X
	BH-1	40	41	3/26/2013	1106		1							X		S					X									X
	BH-1	45	46	3/26/2013	1110		1							X		S					X									X
	SS-7	0	6"	3/26/2013	1130		1	X						X		S	X				X					X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	3/27/13	15:36			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				3/27/13	1536

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 2.0 °C

Analytical Report 460076

for

Crain Environmental

Project Manager: Cindy Crain

Primero-Eidson #1

03-APR-13

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

03-APR-13

Project Manager: **Cindy Crain**
Crain Environmental
2925 E 17th St.
Odessa, TX 79761

Reference: XENCO Report No(s): **460076**
Primero-Eidson #1
Project Address: Lea County NM

Cindy Crain:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 460076. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 460076 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,

Nicholas Straccione
Project Manager

Sample Cross Reference 460076

Crain Environmental, Odessa, TX

Primero-Eidson #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1	S	03-26-13 10:37	25 - 26 ft	460076-001
BH-1	S	03-26-13 10:48	30 - 31 ft	460076-002
BH-1	S	03-26-13 10:57	35 - 36 ft	460076-003
BH-1	S	03-26-13 11:06	40 - 41 ft	460076-004
BH-1	S	03-26-13 11:10	45 - 46 ft	460076-005
SS-7	S	03-26-13 11:30	0 - 6 In	460076-006

CASE NARRATIVE

Client Name: Crain Environmental
Project Name: Primero-Eidson #1

Project ID:
Work Order Number(s): *460076*

Report Date: *03-APR-13*
Date Received: *03/27/2013*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-910129 BTEX by EPA 8021B
SW8021BM

Batch 910129, Ethylbenzene, m_p-Xylenes recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 460076-006.
The Laboratory Control Sample for Ethylbenzene, m_p-Xylenes is within laboratory Control Limits

Certificate of Analysis Summary 460076

Crain Environmental, Odessa, TX

Project Name: Primero-Eidson #1

Project Id:

Contact: Cindy Crain

Project Location: Lea County NM

Date Received in Lab: Wed Mar-27-13 03:36 pm

Report Date: 03-APR-13

Project Manager: Nicholas Straccione

Analysis Requested													
	Lab Id:	460076-001		460076-002		460076-003		460076-004		460076-005		460076-006	
	Field Id:	BH-1		BH-1		BH-1		BH-1		BH-1		SS-7	
	Depth:	25-26 ft		30-31 ft		35-36 ft		40-41 ft		45-46 ft		0-6 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-26-13 10:37		Mar-26-13 10:48		Mar-26-13 10:57		Mar-26-13 11:06		Mar-26-13 11:10		Mar-26-13 11:30	
BTEX by EPA 8021B	*Extracted:*											Mar-28-13 15:10	
	Analyzed:											Mar-29-13 06:33	
	Units/RL:											mg/kg	RL
Benzene												ND	0.00101
Toluene												ND	0.00202
Ethylbenzene												ND	0.00101
m_p-Xylenes												ND	0.00202
o-Xylene												ND	0.00101
Total Xylenes												ND	0.00101
Total BTEX												ND	0.00101
Inorganic Anions by EPA 300/300.1	*Extracted:*	Apr-01-13 10:00		Apr-01-13 10:00		Apr-01-13 10:00		Apr-01-13 10:00		Apr-01-13 10:00		Apr-01-13 10:00	
	Analyzed:	Apr-02-13 01:05		Apr-02-13 01:27		Apr-02-13 01:48		Apr-02-13 02:10		Apr-02-13 02:32		Apr-02-13 02:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2430	42.5	1200	21.1	430	10.4	281	10.5	93.6	4.43	736	40.4
Percent Moisture	*Extracted:*												
	Analyzed:	Mar-28-13 17:25		Mar-28-13 17:25		Mar-28-13 17:25		Mar-28-13 17:25		Mar-28-13 17:25		Mar-28-13 17:25	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.80	1.00	5.31	1.00	3.86	1.00	5.11	1.00	9.78	1.00	1.04	1.00
TPH By SW8015 Mod	*Extracted:*											Mar-29-13 09:10	
	Analyzed:											Mar-29-13 12:08	
	Units/RL:											mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons												ND	15.1
C12-C28 Diesel Range Hydrocarbons												1630	15.1
C28-C35 Oil Range Hydrocarbons												794	15.1
Total TPH												2420	15.1

Nicholas Straccione
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: *Primero-Eidson #1*

Work Orders : 460076, **Project ID:**

Lab Batch #: 910129 **Sample:** 460076-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/29/13 06:33

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

Lab Batch #: 910227 **Sample:** 460076-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/29/13 12:08

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	99.7	99	70-135	
o-Terphenyl	53.5	49.9	107	70-135	

Lab Batch #: 910129 **Sample:** 635830-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/28/13 15:44

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 910227 **Sample:** 635905-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/29/13 11:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	53.5	50.0	107	70-135	

Lab Batch #: 910129 **Sample:** 635830-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/28/13 14:38

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	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.

Form 2 - Surrogate Recoveries

Project Name: Primero-Eidson #1

Work Orders : 460076, **Project ID:**

Lab Batch #: 910227 **Sample:** 635905-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/29/13 10:51

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	61.6	50.1	123	70-135	

Lab Batch #: 910129 **Sample:** 635830-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/28/13 14:55

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 910227 **Sample:** 635905-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 03/29/13 11:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	58.5	50.1	117	70-135	

Lab Batch #: 910129 **Sample:** 459879-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/28/13 19:01

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 910227 **Sample:** 460211-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/29/13 20:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.1	100	95	70-135	
o-Terphenyl	60.3	50.0	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.

Form 2 - Surrogate Recoveries

Project Name: Primero-Eidson #1

Work Orders : 460076,

Project ID:

Lab Batch #: 910129 **Sample:** 459879-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/28/13 19:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	80-120	
4-Bromofluorobenzene	0.0330	0.0300	110	80-120	

Lab Batch #: 910227 **Sample:** 460211-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 03/29/13 21:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	58.8	50.0	118	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.

BS / BSD Recoveries

Project Name: Primero-Eidson #1

Work Order #: 460076 **Project ID:**

Analyst: KEB **Date Prepared:** 03/28/2013 **Date Analyzed:** 03/28/2013

Lab Batch ID: 910129 **Sample:** 635830-1-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	<0.000994	0.0994	0.0899	90	0.101	0.0950	94	6	70-130	35	
Toluene	<0.00199	0.0994	0.0840	85	0.101	0.0939	93	11	70-130	35	
Ethylbenzene	<0.000994	0.0994	0.0804	81	0.101	0.0873	86	8	71-129	35	
m_p-Xylenes	<0.00199	0.199	0.163	82	0.201	0.176	88	8	70-135	35	
o-Xylene	<0.000994	0.0994	0.0877	88	0.101	0.0975	97	11	71-133	35	

Analyst: AMB **Date Prepared:** 04/01/2013 **Date Analyzed:** 04/01/2013

Lab Batch ID: 910455 **Sample:** 636033-1-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	<2.00	50.0	49.0	98	50.0	49.1	98	0	80-120	20	

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

BS / BSD Recoveries

Project Name: Primero-Eidson #1

Work Order #: 460076
Analyst: KEB
Lab Batch ID: 910227
Sample: 635905-1-BKS
Units: mg/kg

Date Prepared: 03/29/2013
Batch #: 1

Project ID:
Date Analyzed: 03/29/2013
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	<15.0	1000	972	97	1000	985	99	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1060	106	1000	1070	107	1	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: Primero-Eidson #1

Work Order #: 460076

Lab Batch #: 910455 **Project ID:**

Date Analyzed: 04/01/2013 **Date Prepared:** 04/01/2013 **Analyst:** AMB

QC- Sample ID: 459989-001 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	437	250	689	101	80-120	

Lab Batch #: 910455

Date Analyzed: 04/02/2013 **Date Prepared:** 04/01/2013 **Analyst:** AMB

QC- Sample ID: 460076-006 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	736	1010	1730	98	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: Primero-Eidson #1

Work Order # : 460076 **Project ID:**

Lab Batch ID: 910129 **QC- Sample ID:** 459879-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/28/2013 **Date Prepared:** 03/28/2013 **Analyst:** KEB

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	<0.00110	0.110	0.0860	78	0.109	0.0852	78	1	70-130	35	
Toluene	<0.00220	0.110	0.0869	79	0.109	0.0821	75	6	70-130	35	
Ethylbenzene	<0.00110	0.110	0.0777	71	0.109	0.0719	66	8	71-129	35	X
m_p-Xylenes	<0.00220	0.220	0.154	70	0.219	0.146	67	5	70-135	35	X
o-Xylene	<0.00110	0.110	0.0868	79	0.109	0.0806	74	7	71-133	35	

Lab Batch ID: 910227 **QC- Sample ID:** 460211-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 03/29/2013 **Date Prepared:** 03/29/2013 **Analyst:** KEB

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	<16.2	1080	1010	94	1080	1020	94	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.2	1080	1120	104	1080	1140	106	2	70-135	35	

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

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

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

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

Sample Duplicate Recovery

Project Name: Primero-Eidson #1

Work Order #: 460076

Lab Batch #: 910141 **Project ID:**

Date Analyzed: 03/28/2013 17:25 **Date Prepared:** 03/28/2013 **Analyst:** WRU

QC- Sample ID: 460041-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture **Analyte**	**Parent Sample Result [A]**	**Sample Duplicate Result [B]**	**RPD**	**Control Limits %RPD**	**Flag**
Percent Moisture	7.43	7.04	5	20	

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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Cindy Crain

Company Name: ~~Crain Environmental~~

Company Address: 2925 East 17th Street

City/State/Zip: Odessa, TX 79761

Telephone No: (575) 441-7244 Fax No: (432) 272-0304

Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Primero - Eidson #1

Project #:

Project Loc: Lea County, NM

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 460076

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	8015M	TPH: TX 1005	TPH: 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
01	BH-1	25	26	3/26/2013	1037		1							X		S							X									X
02	BH-1	30	31	3/26/2013	1048		1							X		S							X									X
03	BH-1	35	36	3/26/2013	1057		1							X		S							X									X
04	BH-1	40	41	3/26/2013	1106		1							X		S							X									X
05	BH-1	45	46	3/26/2013	1110		1							X		S							X									X
06	SS-7	0	6"	3/26/2013	1130		1	X						X		S			X				X					X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Cindy Crain	3/27/13	15:30			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				3/27/13	15:30

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 2.0 °C

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Crain Environmental

Date/ Time Received: 03/27/2013 03:36:00 PM

Work Order #: 460076

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6 *Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**Yes**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**Yes**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**Yes**
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**Yes**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:

Checklist completed by: _____ Date: _____

Checklist reviewed by: _____ Date: _____

CARDINAL Laboratories

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

April 24, 2013

CINDY CRAIN

CRAIN ENVIRONMENTAL

2925 E. 17TH STREET

ODESSA, TX 79761

RE: EIDSON #1

Enclosed are the results of analyses for samples received by the laboratory on 04/24/13 14:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

CRAIN ENVIRONMENTAL
CINDY CRAIN
2925 E. 17TH STREET
ODESSA TX, 79761
Fax To: (432) 272-0304

Received:	04/25/2013	Sampling Date:	04/25/2013
Reported:	04/30/2013	Sampling Type:	Soil
Project Name:	EIDSON #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	LEA COUNTY, NM		

Sample ID: TOP SOIL (H300977-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	04/26/2013	ND	400	100	400	0.00	

Sample ID: LOAD LINE (H300977-02)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/29/2013	ND	2.18	109	2.00	0.709	
Toluene*	<0.100	0.100	04/29/2013	ND	1.96	98.2	2.00	0.399	
Ethylbenzene*	<0.050	0.050	04/29/2013	ND	2.14	107	2.00	0.0330	
Total Xylenes*	<0.150	0.150	04/29/2013	ND	6.18	103	6.00	1.28	
Total BTEX	<0.300	0.300	04/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL *104 %* *89.4-126*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	04/26/2013	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/27/2013	ND	171	85.5	200	11.1	
DRO >C10-C28	<10.0	10.0	04/27/2013	ND	164	82.0	200	13.4	

Surrogate: 1-Chlorooctane *92.1 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *103 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	Crain Environmental	P.O. #:	
Project Manager:	Cindy Crain	Company:	
Address:	2925 East 17th St.	Attn:	
City:	Odessa, State: TX Zip: 79761	Address:	Same
Phone #:	(432) 530-9797 Fax #: (432) 272-0304	City:	
Project #:	Project Owner: Primero Operating	State:	Zip:
Project Name:	Eidson #1	Phone #:	
Project Location:	Lea Co., NM	Fax #:	
Sampler Name:	Cindy Crain		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides
H300972															
1	Backfill 1	G	1			X							4/24/13	1057	X
2	Backfill 3	G	1			X							4/24/13	1135	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Cindy Crain	Date: 4/24/13 Time: 2:45	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	25°c	Sample Condition Cool: ☐ Yes ☒ No Intact: ☒ Yes ☐ No	CHECKED BY: (Initials) CH

REMARKS:
Email Results to: Cindy.Crain@gmail.com.
575-441-7244 verbals

FORM-006
Revision 1.0

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

#54

CARDINAL Laboratories

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

April 30, 2013

CINDY CRAIN

CRAIN ENVIRONMENTAL

2925 E. 17TH STREET

ODESSA, TX 79761

RE: EIDSON #1

Enclosed are the results of analyses for samples received by the laboratory on 04/25/13 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

CRAIN ENVIRONMENTAL
CINDY CRAIN
2925 E. 17TH STREET
ODESSA TX, 79761
Fax To: (432) 272-0304

Received:	04/25/2013	Sampling Date:	04/25/2013
Reported:	04/30/2013	Sampling Type:	Soil
Project Name:	EIDSON #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Amanda Ponce
Project Location:	LEA COUNTY, NM		

Sample ID: TOP SOIL (H300977-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	04/26/2013	ND	400	100	400	0.00	

Sample ID: LOAD LINE (H300977-02)

BTEX 8021B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/29/2013	ND	2.18	109	2.00	0.709	
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Total Xylenes*	<0.150	0.150	04/29/2013	ND	6.18	103	6.00	1.28	
Total BTEX	<0.300	0.300	04/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *89.4-126*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	04/26/2013	ND	400	100	400	0.00	

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Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/27/2013	ND	171	85.5	200	11.1	
DRO >C10-C28	<10.0	10.0	04/27/2013	ND	164	82.0	200	13.4	

Surrogate: 1-Chlorooctane *92.1 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *103 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Crain Environmental	BILL TO	
Project Manager:	Cindy Crain	P.O. #:	
Address:	2925 E. 17th St.	Company:	
City:	Odessa State: TX Zip: 79761	Attn:	
Phone #:	(575) 441-7244 Fax #: (432) 272-0304	Address:	Same
Project #:	Project Owner: Primero Operating	City:	
Project Name:	Eidson #1	State: Zip:	
Project Location:	Lea Co., NM	Phone #:	
Sampler Name:	Cindy Crain	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chloride	TPH 8015M	BTEX 8021B										
H30977																										
1	Top Soil	C	1			X					X		4/25/13	1233	X											
2	Load Line	G	1			X					X		4/25/13	1238	X	X	X									

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Cindy Crain	Date: 4/25/13 Time: 1425	Received By:	
Relinquished By:	Date: 4/25/13 Time: 2:25 pm	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-0.8 · C #26	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials)

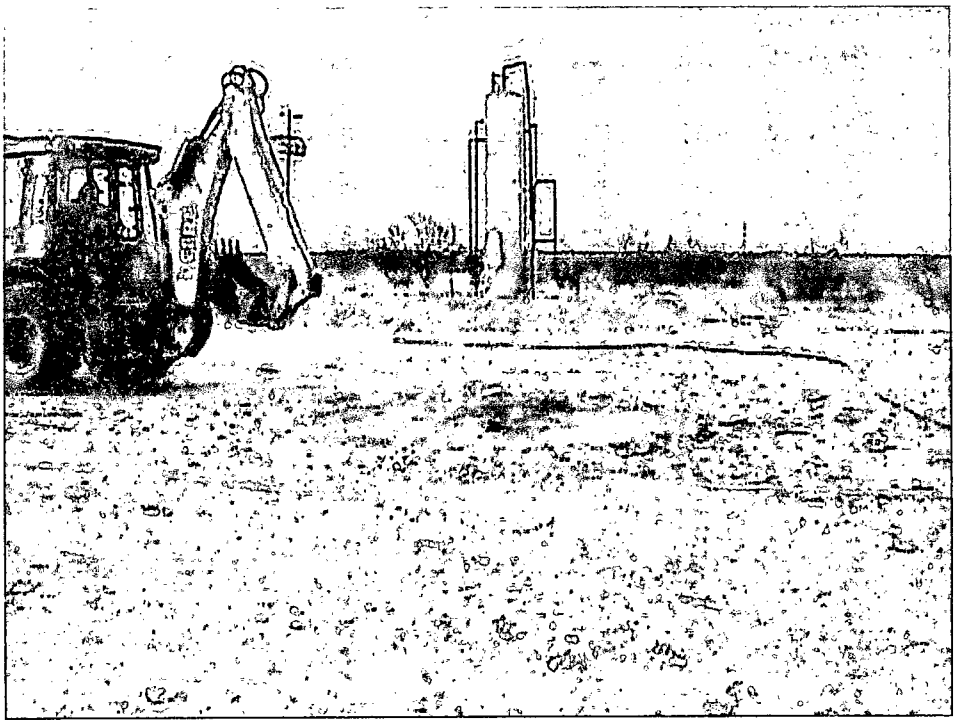
Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

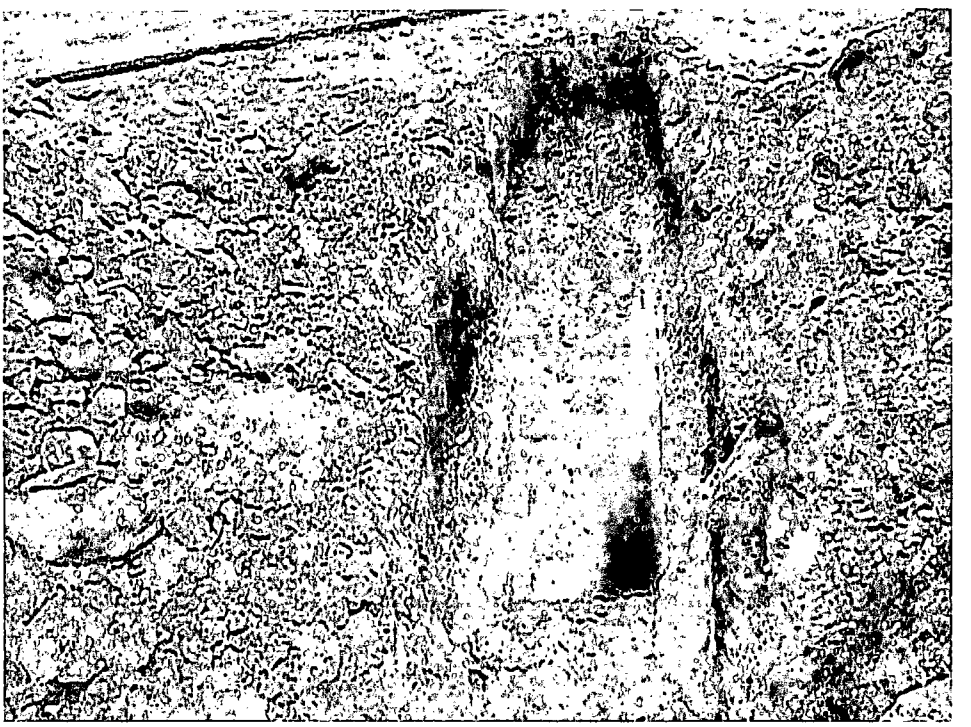
APPENDIX D

PHOTOGRAPHS

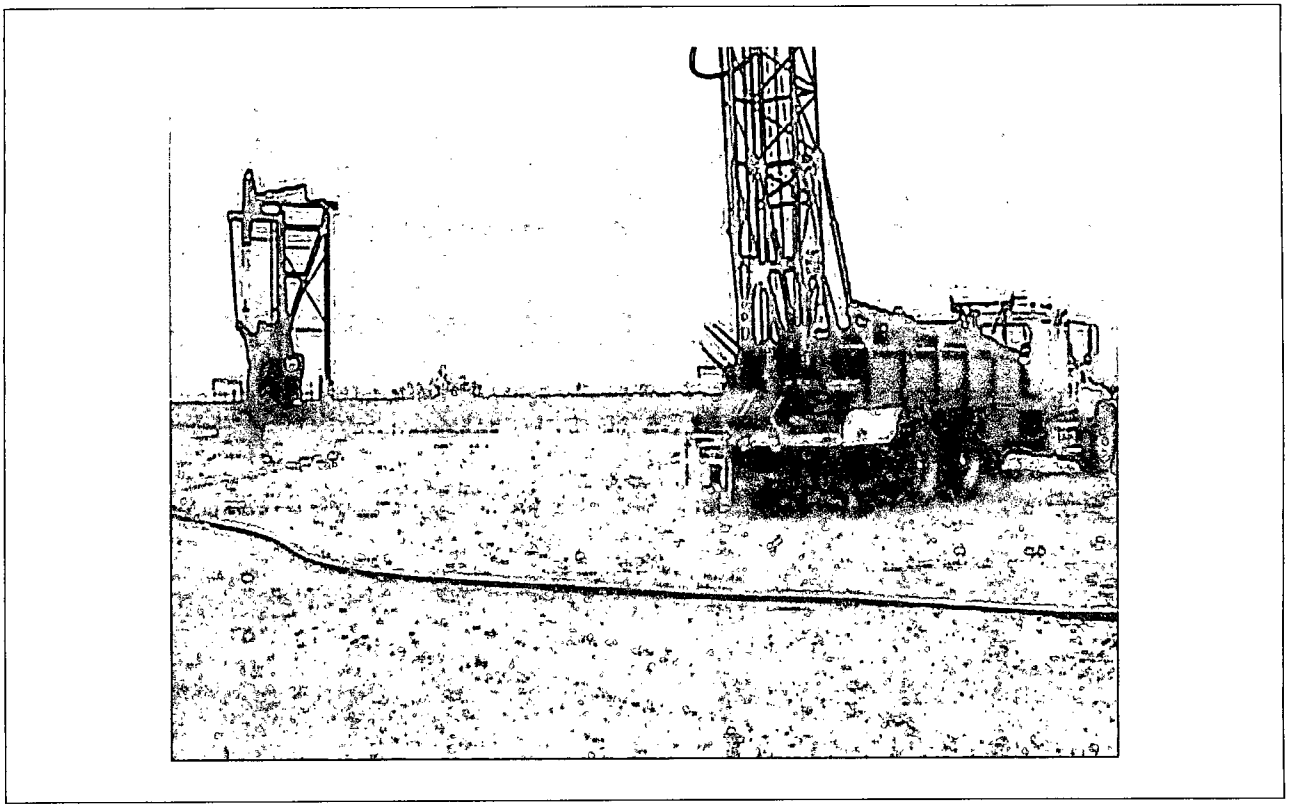
PRIMERO, EIDSON #1



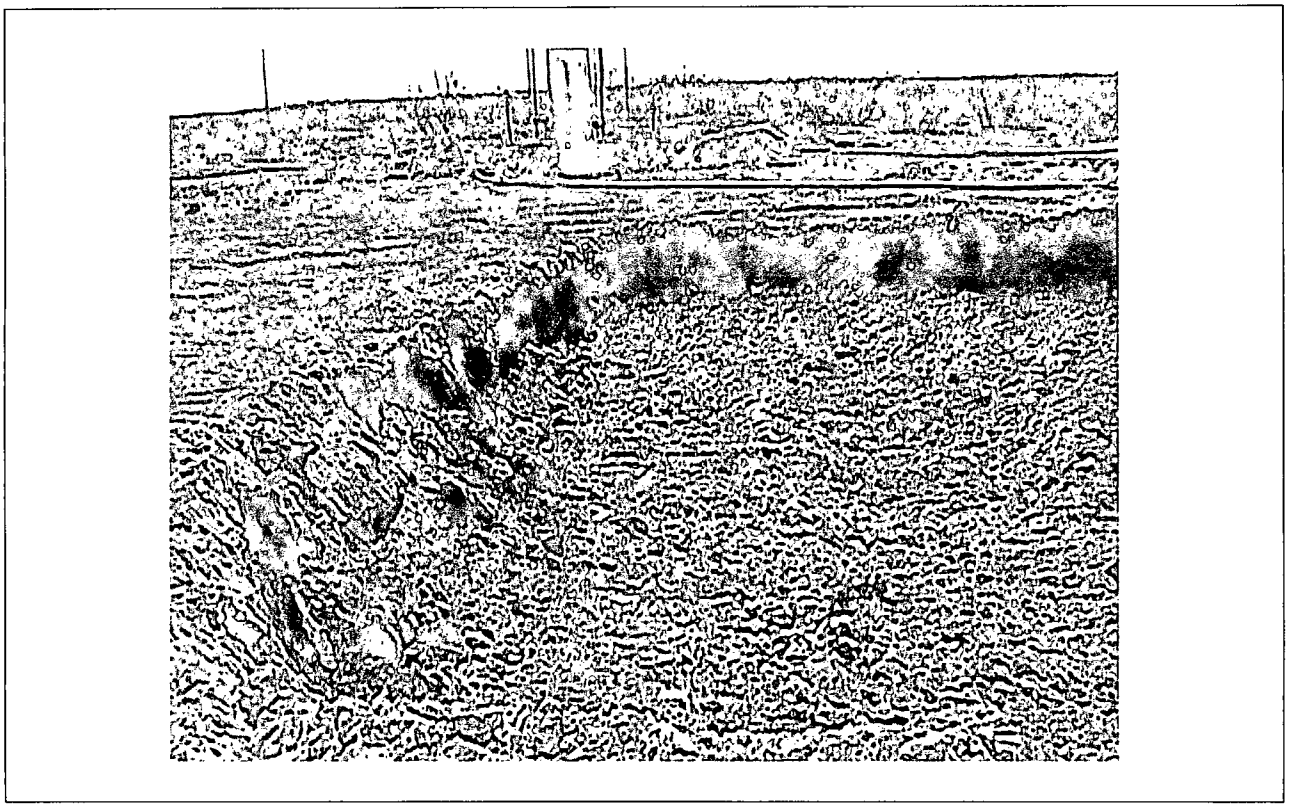
Former Produced Water Tank Location.



Trench for sample collection (SS-1, SS-2, SS-3, SS-5 and SS-6).

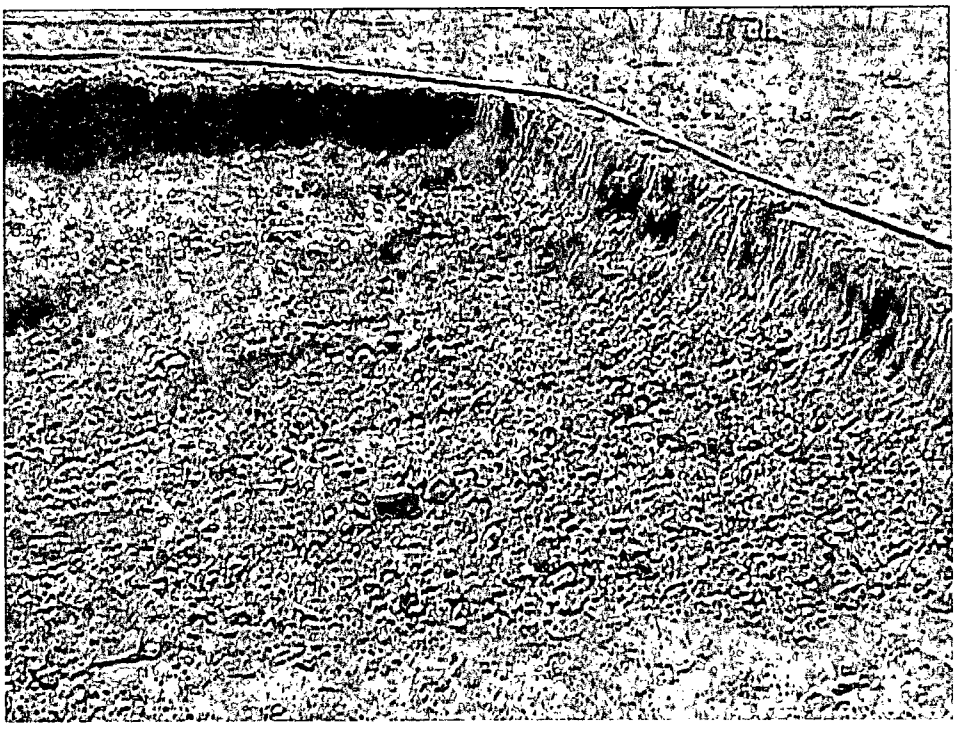


Installation of soil boring BH-1.

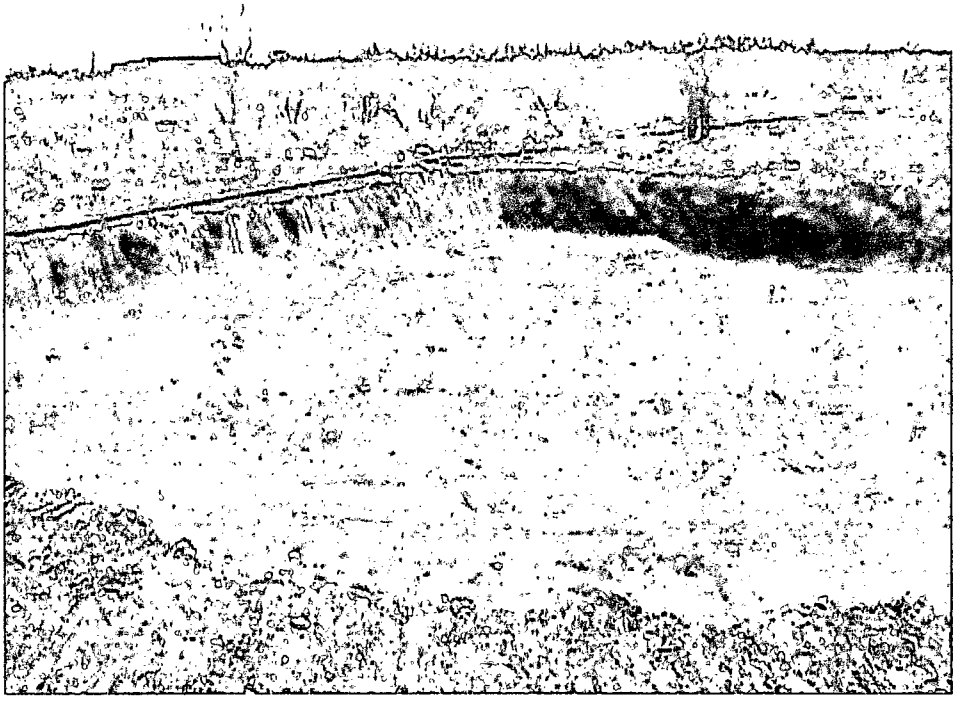


South half of excavated area.

PRIMERO, EIDSON #1

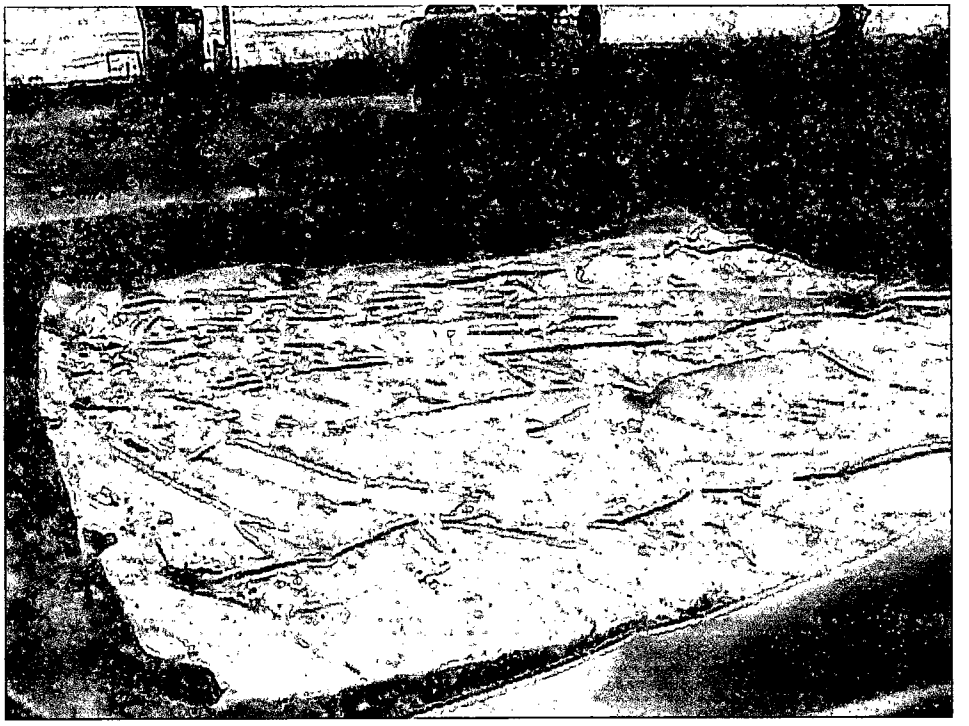


North half of excavated area.

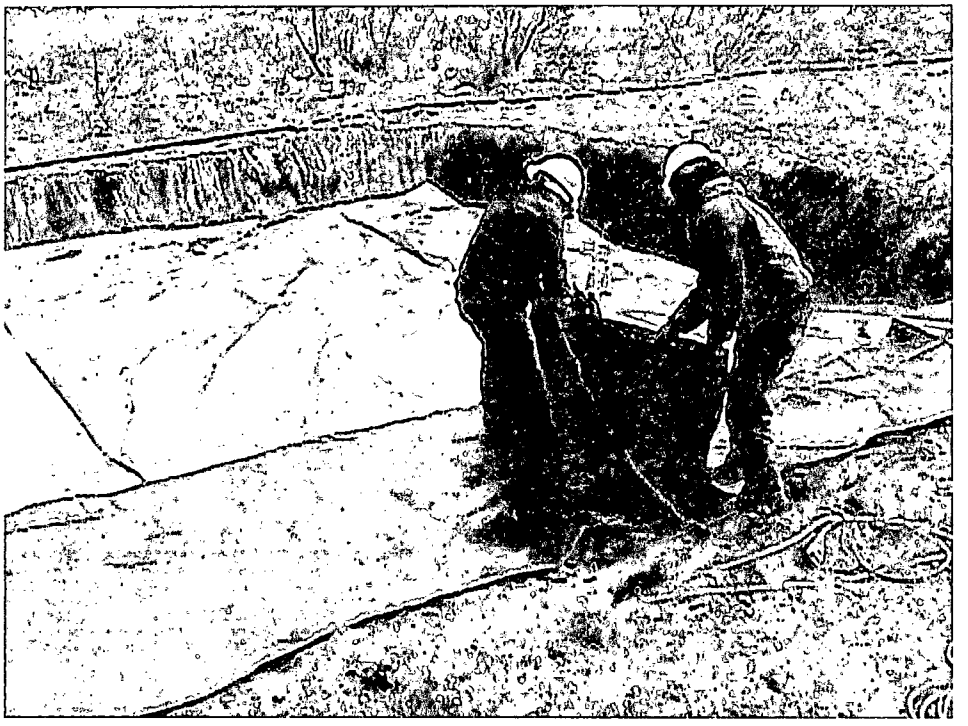


Top soil in bottom of excavation prior to liner.

PRIMERO, EIDSON #1

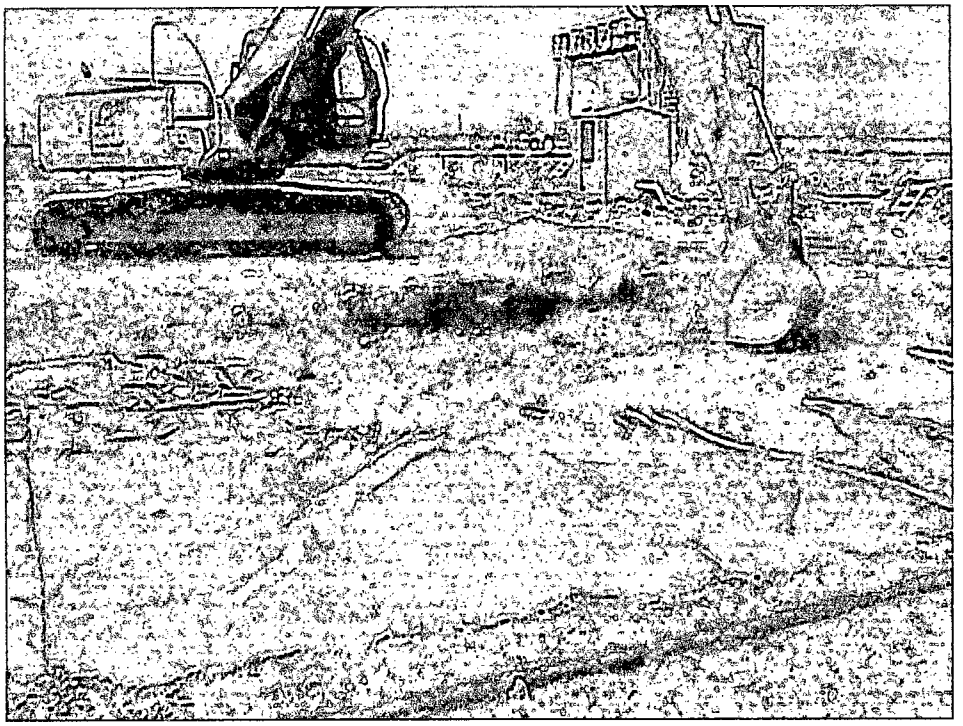


Installation of 20 mil liner.

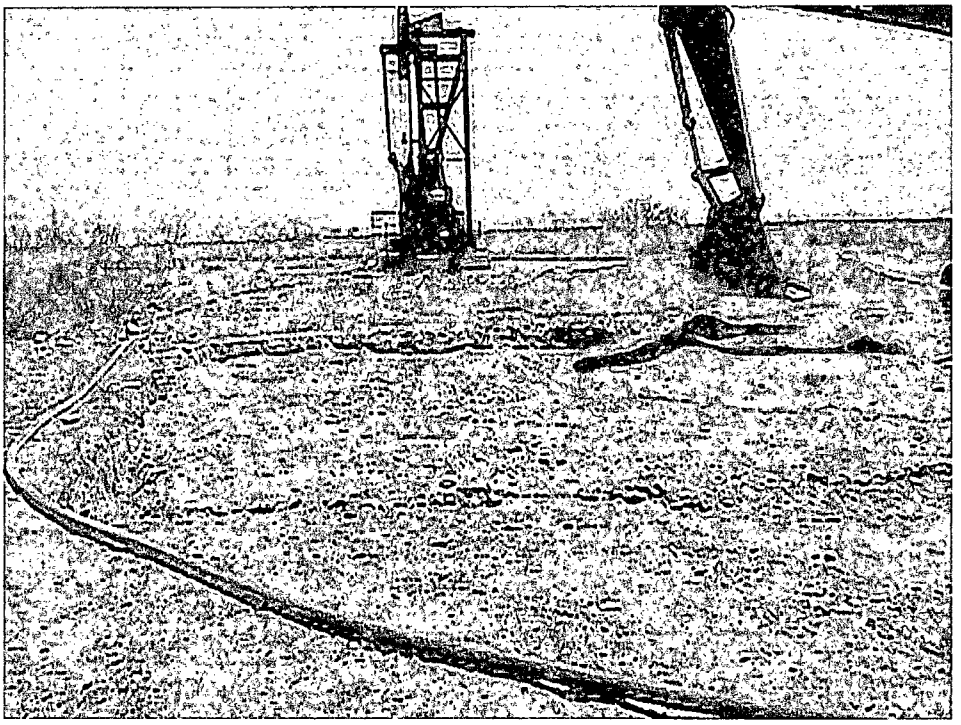


Installation of 20 mil liner.

PRIMERO, EIDSON #1

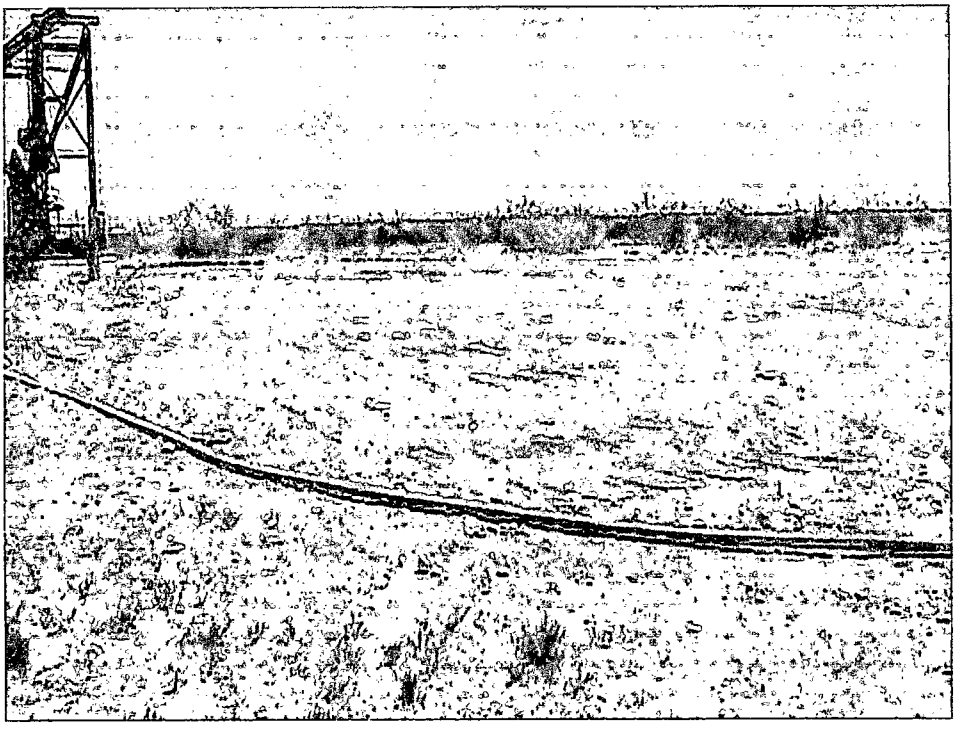


Placement of top soil over liner.

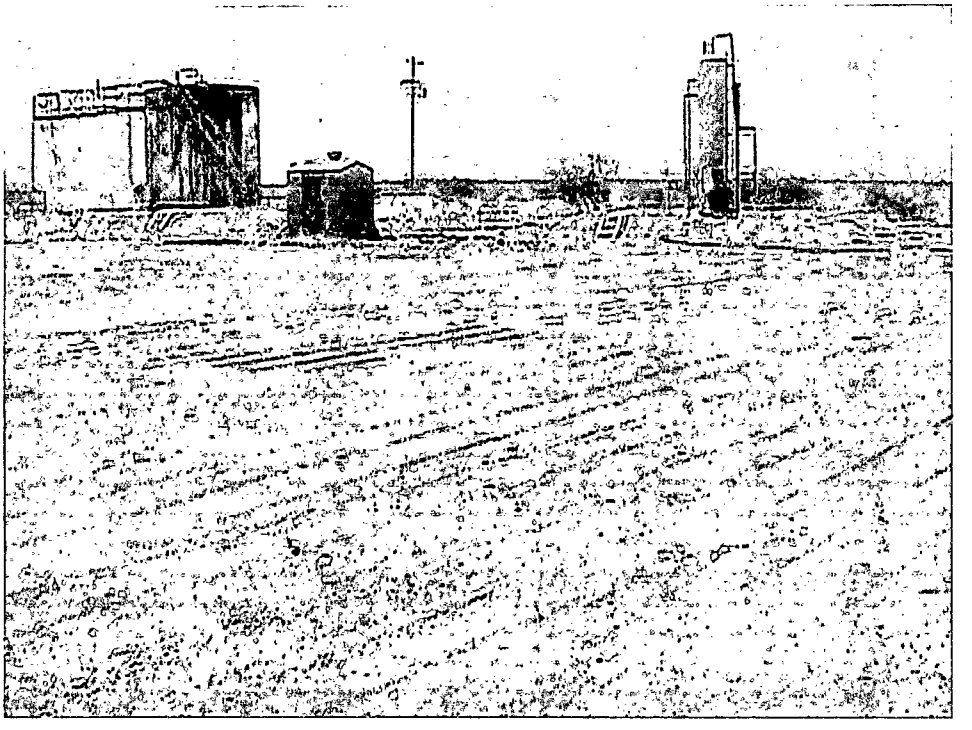


Caliche in place and placement of one foot of top soil to surface.

PRIMERO, EIDSON #1



Remediated area (view to east).



Remediated area (view to west).

APPENDIX E

FINAL C141 FORM