

Cimarex Energy Company

**Gadwell 18, Federal Com 3
Section 18, T25S, R27E
Eddy County, New Mexico**

Sampling Report/Work Plan

October 7, 2013



Prepared for:

**Cimarex Energy Company
2020 West Bender Street
Hobbs, New Mexico 88240**

By:

**Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240
(575) 397-0510**

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I. Company Contacts

Representative	Company	Telephone	E-mail
Terry Ainsworth	Cimarex Energy Co.	575-390-1388	tainsworth@cimarex.com
David Davis	SESI	575-397-0510	ddavis@sesi-nm.com

II. Background

Safety and Environmental Solutions, Inc. (SESI) was engaged by Cimarex Energy Company to perform site assessment of a release area at the Gadwall 18 Federal Com 3 located in Section 18 of Township 25 South, Range 27 East, Eddy County, New Mexico.

According to the C-141 dated November 24, 2012, the source of the release was due to illegal dumping. The dumping was found on the NW corner of the location.

III. Surface and Ground Water

The nearest groundwater of record is approximately 3.6 miles south west of the site. The New Mexico Office of State Engineer record is in Section 22 Range 26 East and Township 25 South. The reported depth was 118 feet below ground surface (BGS).

IV. Characterization

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). Based on the ranking criteria presented below, the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 5,000 ppm Total Petroleum Hydrocarbons (TPH).

Depth to Ground Water:			
(Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	20 points	
	50 feet to 99 feet	10 points	
	>100 feet	0 points	X
Wellhead Protection Area:			
(Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources)	Yes	20 points	
	No	0 points	X
Distance to Surface Water:			
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	20 points	
	200 feet to 1000 feet	10 points	
	>1000 feet	0 points	X
RANKING SCORE (TOTAL POINTS)			0

V. Work Performed

On November 28, 2012, SESI met with Terry Ainsworth at the Gadwell 18, Fed. Com. 3 to discuss plans for cleaning up a chloride spill at the edge of the location. Mr. Ainsworth had the spill area fenced off for protection against wildlife or livestock contamination. The location and impacted areas were mapped out utilizing a Trimble Juno 3B.

Mr. Ainsworth requested, all sides of the berm be field screened for chloride contamination. The sides were found to have elevated chloride levels.

On November 29, 2012, SESI was onsite to collect soil samples on the four berms sides that surround the location.

Samples obtained from the location were properly packaged, preserved and transported under chain of custody to Cardinal Laboratories and analyzed for Chlorides (EPA Method SM4500CI-B). The results of the laboratory analysis are shown in the table below:

Sample Date: 11/29/12	Sample ID	Cl (mg/kg)
Lab ID:		
H202941-01	North 1	1360
H202941-02	North 3	144
H202941-03	East 2	48.0
H202941-04	East 4	64.0
H202941-05	South 1	<16.0
H202941-06	South 3	<16.0
H202941-07	West 2	32.0
H202941-08	West 4	336

From December 3 through December 11, 2012, SESI representative was onsite with dirt contractor to excavate the spill and transport contaminated soil to Lea Land for disposal. Approximately a total of 660 tons of contaminated soil was transported. Ms. Terry Gregston (BLM representative) made a couple of site visits during this process

On December 10, 2012, samples were taken from the side and bottom of the excavation, properly packaged, preserved and transported under chain of custody to Cardinal Laboratories for analysis for Chlorides (EPA Method SM4500CI-B). The results of the laboratory analysis are shown in the table below:

Sample Date: 12/10/12	Sample ID	Cl (mg/kg)
Lab ID:		
H202989-01	North Wall - West	512
H202989-02	North Wall - Central	224
H202989-03	North Wall - East	448
H202989-04	West Wall - North	48.0
H202989-05	West Wall - South	48.0
H202989-06	East Wall - South	48.0
H202989-07	East Wall - North	128
H202989-08	South Wall - West	<16.0
H202989-09	South Wall - Central	240
H202989-10	South Wall - East	464
H202989-11	Bottom - West	400
H202989-12	Bottom - Central	1760
H202989-13	Bottom - East	480

VI. Action Plan

The excavated area will be slightly domed and a 20 mil geo-membrane liner will be installed to prevent migration of the contamination. The area will then be backfilled to grade with like soils and contoured to match the surrounding area. The location is to be downsized to the required dimensions and the material from the downsizing may be used for backfill of the excavation and for use at other locations.

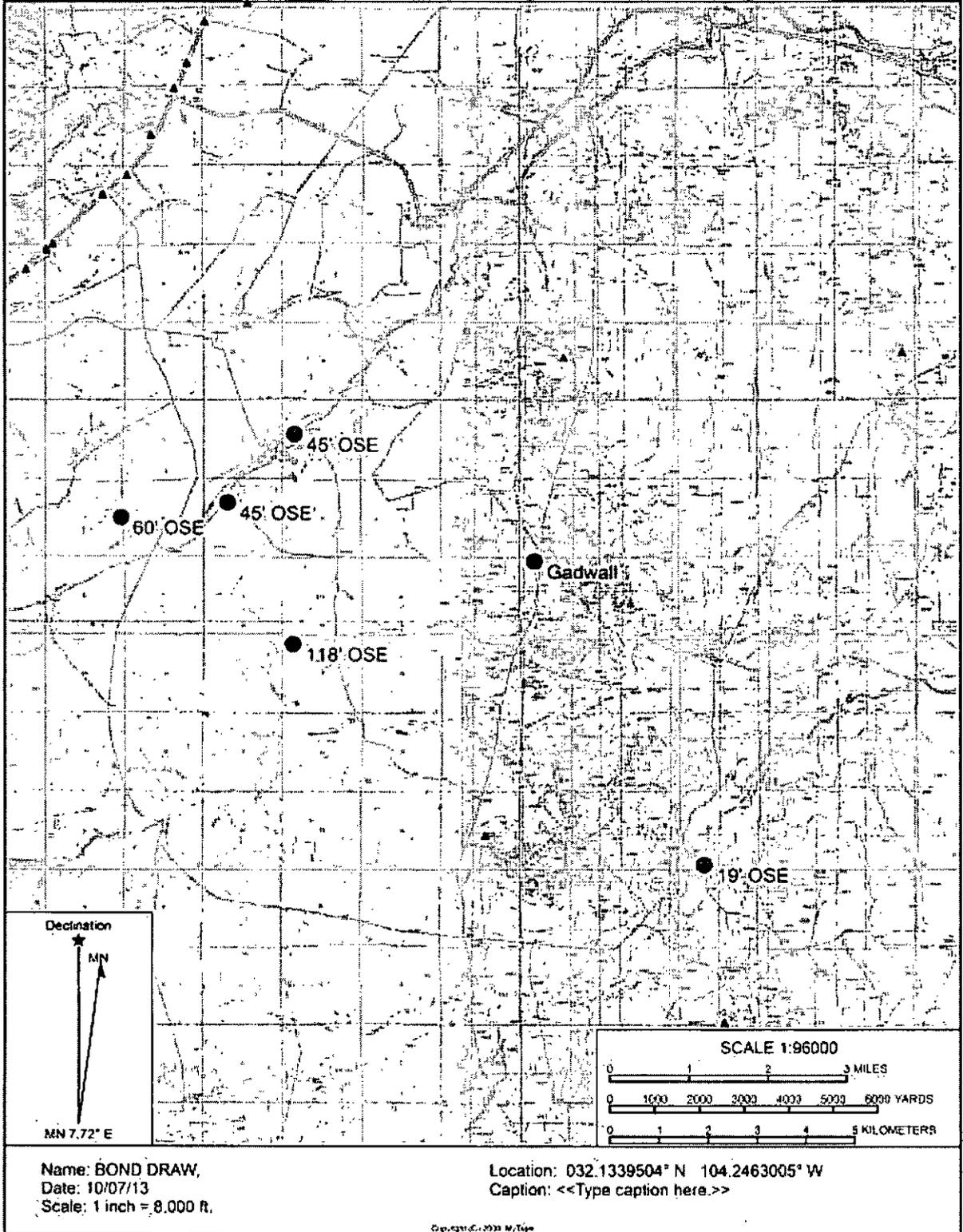
VII. Figures & Appendices

Figure 1 – Vicinity Map

Figure 2 – Site Plan

Appendix A – Analytical Results

Figure 1
Vicinity Map



Name: BOND DRAW,
 Date: 10/07/13
 Scale: 1 inch = 8,000 ft.

Location: 032.1339504° N 104.2463005° W
 Caption: <<Type caption here.>>

**Figure 2
Site Plan**



Google Earth

© 2005 USDA Farm Service Agency
2005/03/09 10:00

Image Date: 2/20/05

Image Path: img\04_21_05\191.mxd, 1/20/05

Appendix A

Analytical Results



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

December 13, 2012

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: GADWELL, 18, FED. COM. 3

Enclosed are the results of analyses for samples received by the laboratory on 12/07/12 @ 8:40.

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/fieldqa/lab_accred_certif.html.

Cardinal Laboratories is accredited 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,

Celest D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 161 E. HAWLAND • MOORE, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388.

Received: 12/07/2012
Reported: 12/13/2012
Project Name: GADWELL, 18, FED. COM. 3
Project Number: CIM-12-053
Project Location: EDDY COUNTY, NM

Sampling Date: 11/29/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Hanson

Sample ID: SOUTH 1 (H202941-03)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/12/2012	ND	448	112	400	3.64	

Sample ID: SOUTH 3 (H202941-05)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	12/12/2012	ND	448	112	400	3.64	

Sample ID: WEST 2 (H202941-07)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/12/2012	ND	445	112	400	3.64	

Sample ID: WEST 4 (H202941-08)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	12/12/2012	ND	448	112	400	3.64	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: 100% of all samples are analyzed using the most current methods as approved by EPA, and are subject to the current state of the art. All data, including QC, is reported for the most current method used. All data is subject to change if the method is updated. All data is subject to change if the method is updated. All data is subject to change if the method is updated. All data is subject to change if the method is updated.

Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



PHONE (375) 983-2326 • 103 E. MARLAND • MORRIS, NM 88240

Notes and Definitions

- NO Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 4°C or below.
- *** Insufficient time to reach temperature.
- Chloride by 2445000-B does not require samples be received at or below 4°C
- Samples reported on an as received basis (ARB) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

NOTE: Samples and Storage: Cardinal's facility and chain of custody comply with 2002 2002G, except based on 2002G or 2002, and are listed in the manual and by other methods. All data, including from the laboratory and any other source, shall be retained until such time as to verify and maintain by Cardinal unless they are otherwise specified in the laboratory manual. It is the user's responsibility to maintain a chain of custody, including proper labeling, storage, transportation, date of use, or date of release to state, to jurisdiction, officer or institution, along with all or partial to the jurisdiction or 2002 specified in Cardinal. Location of whether from 2002 or 2002, upon use of 2002 shall remain of laboratory. Please refer only to the original handwritten notes. This report shall not be reproduced except in full with approval of Cardinal Laboratories.

Ceiley D. Koene

Ceiley D. Koene, Lab Director/Quality Manager

ARDINAL LABORATORIES
 101 East Maryland, Hobbs, NM 88401
 (505) 393-2328 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

ARDINAL LABORATORIES
 Project Name: **Safety & Environmental Solutions, Inc.**
 Project Manager: **Rob Allen**
 Address: **703 East Clinton**
 City: **Hobbs** State: **NM** Zip: **88240**
 Phone #: **575-397-0510** Fax #: **575-393-4388**
 Project #: **CIA-12-053** Project Director: **Clarence**
 Project Name: **Eastwell 10 Field Camp 3**
 Project Location: **Field Camp 3**
 Sample Name: **Uncontaminated**

Lab ID: **H20294**

Lab ID	Sample I.D.	MATRIX										DATE	TIME	
		CONTAMINANTS	GROUNDWATER	SOIL	SLUDGE	CHEN:	ACIDBASE	CHEN:	CR/COOL	CHEN:	OTHER:			
1	North 1												11-27-12	12:00
2	North 2												11-27-12	12:10
3	East 1												11-28-12	15:36
4	East 2												11-28-12	15:30
5	South 1												11-28-12	13:50
6	South 2												11-28-12	14:00
7	West 1												11-28-12	15:00
8	West 2												11-28-12	15:00

Received By: **David Jensen**
 Date: **11-27-12** Time: **15:40**
 Signature: *[Signature]*

Uncovered By: (Circle One) Other: **DAJ**
 Sampler - UPS - Bus - Other:

1 - Confirma cannot accept verbal changes. Please fax written changes to 575-393-2476.



PHONE (875) 393-2326 • 101 S. MARLAND • MORGAN, NM 88240

December 18, 2012

Bob Allen
Safety & Environmental Solutions
703 East Clinton
Mogha, NM 88240

RE: GADWELL 18 - FED. COM #3

Enclosed are the results of analyses for samples received by the laboratory on 12/13/12 - 8:32.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and soil 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/accrtd_certif.html.

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

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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
Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
 Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

Received:	12/13/2012	Sampling Date:	12/10/2012
Reported:	12/18/2012	Sampling Type:	Soil
Project Name:	GADWELL 18 - FED. COM #3	Sampling Condition:	Cool & Intact
Project Number:	CIN-12-052	Sample Received By:	Jodi Hanson
Project Location:	EDDY COUNTY, NM		

Sample ID: NORTH WALL - WEST (H202989-01)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	612	16.0	12/17/2012	ND	416	104	400	3.92		

Sample ID: NORTH WALL - CENTRAL (H202989-02)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	12/17/2012	ND	416	104	400	3.92		

Sample ID: NORTH WALL - EAST (H202989-03)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	12/17/2012	ND	416	104	400	3.92		

Sample ID: WEST WALL - NORTH (H202989-04)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/17/2012	ND	416	104	400	3.92		

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*=Accredited Analyte.

QUALITY SYSTEM: Accuracy and Precision: Cardinal's results and client's analysis results for any tests analyzed whether listed or not, shall be based on the internal audit for these tests. All data, including those for methods and any other tests necessary, shall be derived from a single source in writing and reported in Cardinal under every 100 tests after completion of the applicable system. In no event shall Cardinal be liable for retention of unreported analytical results, unless otherwise indicated. Use of this or other testing by other, or otherwise, outside of Cardinal's testing shall be at the discretion of the client. Cardinal is not responsible for the performance of the methods described in Cardinal's reports of analysis and does not warrant any of the data listed herein or otherwise. Results shown only in this report are the only results reported by Cardinal Laboratories.

Coley D. Koene

 Coley D. Koene, Lab Director/Quality Manager



PHONE (575) 293-2326 • 100 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Safety & Environmental Solutions
 Bob Allen
 703 East Clinton
 Hobbs NM; 88240
 Fax To: (575) 393-4388

Received: 12/13/2012 Sampling Date: 12/11/2012
 Reported: 12/18/2012 Sampling Type: Soil
 Project Name: GADWELL 18 - FED. COM #3 Sampling Condition: Cool & Intact
 Project Number: CIM-12-052 Sample Received By: Joel Henson
 Project Location: EDDY COUNTY, NM

Sample ID: WEST WALL - SOUTH (H202989-05)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/17/2012	ND	416	104	400	3.92		

Sample ID: EAST WALL - SOUTH (H202989-06)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/17/2012	ND	416	104	400	3.92		

Sample ID: EAST WALL - NORTH (H202989-07)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	328	16.0	12/17/2012	ND	416	104	400	3.92		

Sample ID: SOUTH WALL - WEST (H202989-08)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	< 16.0	16.0	12/17/2012	ND	416	104	400	3.92		

Sample ID: SOUTH WALL - CENTRAL (H202989-09)

Chloride, SM4500C-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	12/17/2012	ND	416	104	400	3.92		

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* - Accredited Analyte

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Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



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

Analytical Results Form

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 12/13/2012 Sampling Date: 12/11/2012
Reported: 12/18/2012 Sampling Type: Soil
Project Name: GADWELL 18 - FED. COM #3 Sampling Condition: Cool & Intact
Project Number: CIM-12-052 Sample Received By: Jack Henson
Project Location: EDDY COUNTY, NM

Sample ID: SOUTH WALL - EAST (H202989-10)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row for Chloride, 5M4590C-B, mg/kg, Analyzed By: AP. Result: 464, Reporting Limit: 16.0, Analyzed: 12/17/2012, Method Blank: ND, BS: 416, % Recovery: 104, True Value QC: 400, RPD: 3.92.

Sample ID: BOTTOM - WEST (H202989-11)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row for Chloride, 5M4590C-B, mg/kg, Analyzed By: AP. Result: 400, Reporting Limit: 16.0, Analyzed: 12/17/2012, Method Blank: ND, BS: 416, % Recovery: 104, True Value QC: 400, RPD: 3.92.

Sample ID: BOTTOM - CENTRAL (H202989-12)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row for Chloride, 5M4590C-B, mg/kg, Analyzed By: AP. Result: 1760, Reporting Limit: 16.0, Analyzed: 12/17/2012, Method Blank: ND, BS: 416, % Recovery: 104, True Value QC: 400, RPD: 3.92.

Sample ID: BOTTOM - EAST (H202989-13)

Table with 10 columns: Analyte, Result, Reporting Limit, Analyzed, Method Blank, BS, % Recovery, True Value QC, RPD, Qualifier. Row for Chloride, 5M4590C-B, mg/kg, Analyzed By: AP. Result: 490, Reporting Limit: 16.0, Analyzed: 12/17/2012, Method Blank: ND, BS: 416, % Recovery: 104, True Value QC: 400, RPD: 3.92.

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*=Accredited Analyte.

Small disclaimer text regarding laboratory procedures and accreditation.

Handwritten signature of Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES
 191 East Main Street, Hobbs, NM 88240
 (505) 291-2175 Fax (505) 291-2471

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1-2

Company Name: Baker & Environmental Solutions, Inc.		P.O. #		ANALYSIS REQUEST										
Project Manager: Bob Allen		Quantity: Sample												
Address: 703 East Clinton		City: Hobbs, NM, Zip: 88240												
Phone #: 575-387-0510 Fax #: 575-383-4388		Address:												
Project #: L10-12-052 Project Owner: City of NM		City: Edinburg, TX												
Project Name: Crude Oil - 15 - Col. Con. 3		State: TX												
Project Location: Edinburg, TX		Phone #:												
Sample Name: DAVID RAIN		P.O. #:												
Lab I.D.:	Sample I.D.:	PERMISSION TO COMP.:	DATE:	TIME:										
102028	1	1	12-10-12	14:52										
	2	1	12-10-12	14:40										
	3	1	12-11-12	15:30										
	4	1	12-11-12	07:15										
	5	1	12-11-12	07:35										
	6	1	12-11-12	13:40										
	7	1	12-11-12	13:40										
	8	1	12-11-12	14:00										
	9	1	12-11-12	14:20										
	10	1	12-11-12	14:35										

collected

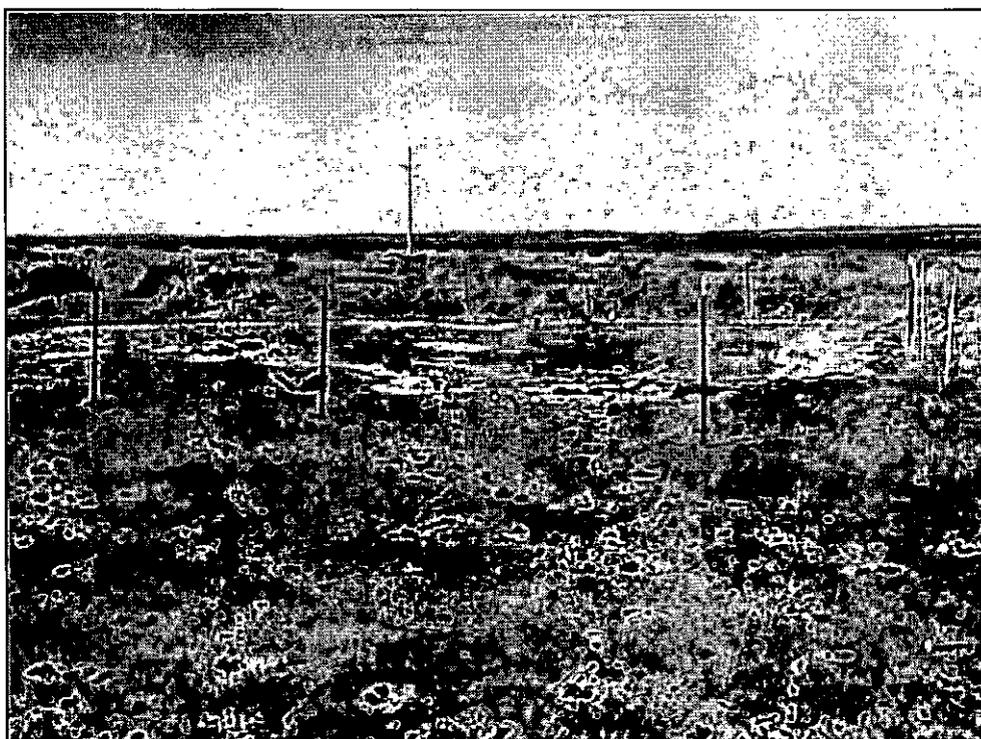
Signature: *David Davis* Date: *12-10-12* Signature: *Will Jensen* Date: *12-10-12*

Delivered By: *David Davis* Signature: *Will Jensen* Phone: *575-390-8371*

1. Card#111 correct except verbal changes. Please fax written changes to 515-153-8871.

7726

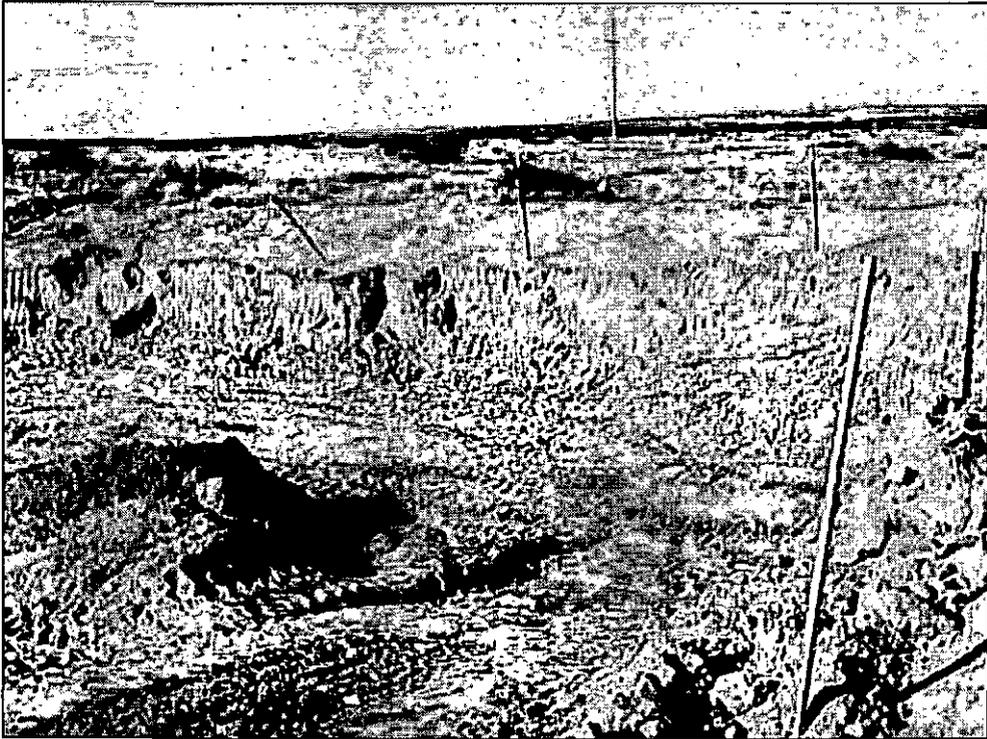
Appendix B
Site Photographs



Facing north fenced off spill area



Facing northeast



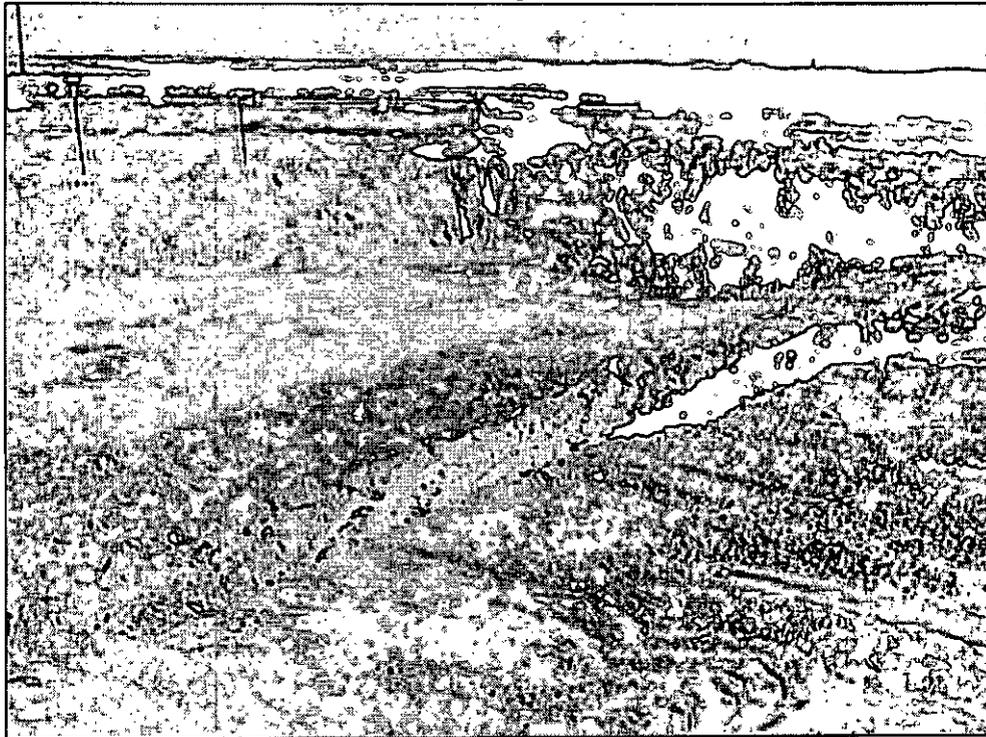
Facing north excavated area



Facing west excavated area



East facing west



North facing south