

1R - 427-17

## REPORTS

DATE:

July 10, 2007

*RICE*  
Operating Company

**EME Sarah Phillips EOL  
Remediation Project**

/R-427-17



Whole Earth Environmental  
2103 Arbor Cove  
Katy, TX 77494  
281.394.2050  
whearth@msn.com



**Whole Earth Environmental, Inc.**

19606 San Gabriel Houston, Tx. 77084  
Tel: 281.492.7077 Fax: 281.646.8996  
whearth@iamerica.net

July 10, 2007

Rice Operating Company  
122 West Taylor  
Hobbs, NM 88240

Attn: Carolyn Haynes

Dear Carolyn:

Enclosed, please find three hard copy binders and CD's documenting the completion of the surface remediation phase of the EME Sarah Phillips EOL site south of Monument, New Mexico.

Thank you again for the opportunity of working with you.

Warmest regards,

Mike Griffin  
President  
Whole Earth Environmental, Inc.



## **Executive Summary**

### **Location**

The site is located approximately one mile southeast of monument, New Mexico on fee land in Unit K, Section 33, Township 19-S, Range 37-E.

### **Site History**

The EME Sarah Phillips EOL (end of line) site is situated adjacent to an Amerada Hess battery that has been dismantled and removed prior to 2002.

### **Previous Site Investigations**

The initial investigation occurred on November 3<sup>rd</sup>, 2003 by excavating to a depth of approximately 14' below ground surface (bgs). Upon discovery, the site was initially field tested for VOC's and chlorides and found to contain no detectable hydrocarbon involvement but elevated chlorides undiminished in concentration to the 14' excavation depth. The initial junction box disclosure report was submitted to the NMOCD on December 30, 2003.

Further vertical and lateral delineation of the site occurred on November 16, 2005 through a series of 18' vertical excavations which revealed that the contaminant plume was essentially vertical in profile covering an area of approximately 12' in diameter and presumably extending to the groundwater. A monitor well was advanced on October 6, 2006 at the center of the contaminant plume and found elevated chlorides and non-detectable BTEX concentrations within the groundwater at a depth of 28' bgs.

The attached boring log describes the soil profile as sandy with thin bands of sandy clay and unconsolidated caliche.

### **Remediation**

In accordance with the approved remediation plan, PR-77, the area of 120' X 100' was gridded on 20' centers and composite soil samples were collected to a depth at each grid point to a depth of 0-24' bgs. The soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico for electrical conductivity testing. The test results were incorporated into Surfer and a histogram developed to determine the true areal extent of contamination and the location of any "hot spots" within the tested grid.



Two such "hot spots" were discovered to the north and northeast of the monitor well and were excavated to depths between 6-10' bgs. with a total of 60 cubic yards of the material sent to commercial disposal at Sundance Services. The two areas were backfilled with fresh topsoils. The entire 120' X 100' area was excavated to a minimum depth of 4' bgs and a geosynthetic clay liner, (.75lb./sq. ft. Denefix EC) was set in place at the 4' depth.

The area was backfilled with the excavated soils mixed with four tons of organics and 108 cubic yards of fresh soils. The area was finally re-contoured, compacted, watered and seeded with native grasses.

Rice Operating will continue to monitor the quality of the groundwater quarterly and will report the results annually to the NMOCD until final closure.



## **Exhibit Index**

1. Satellite View of Location – Zoom out
2. Satellite View of Location – Zoom in
3. Geocoordinate Survey Map of Monitor Wells
4. E.M. Survey Histogram
5. E.M. Survey Contour Map
6. E.M. Survey Q.C. Data
7. Photo of Site Prior to Remediation
8. Photo of Excavation Detail
9. Photo of Bentonite Mat
10. Photo of Mat Installation
11. Photo of Organics Staged for Mixing
12. Photo of Final Contouring
13. Photo of Final Contouring
14. Photo Detail of Watering
15. Photo of Seeding & Disking Activities
16. MW-1 Boring Log





K-33-1 Sarah  
Phillips EOL

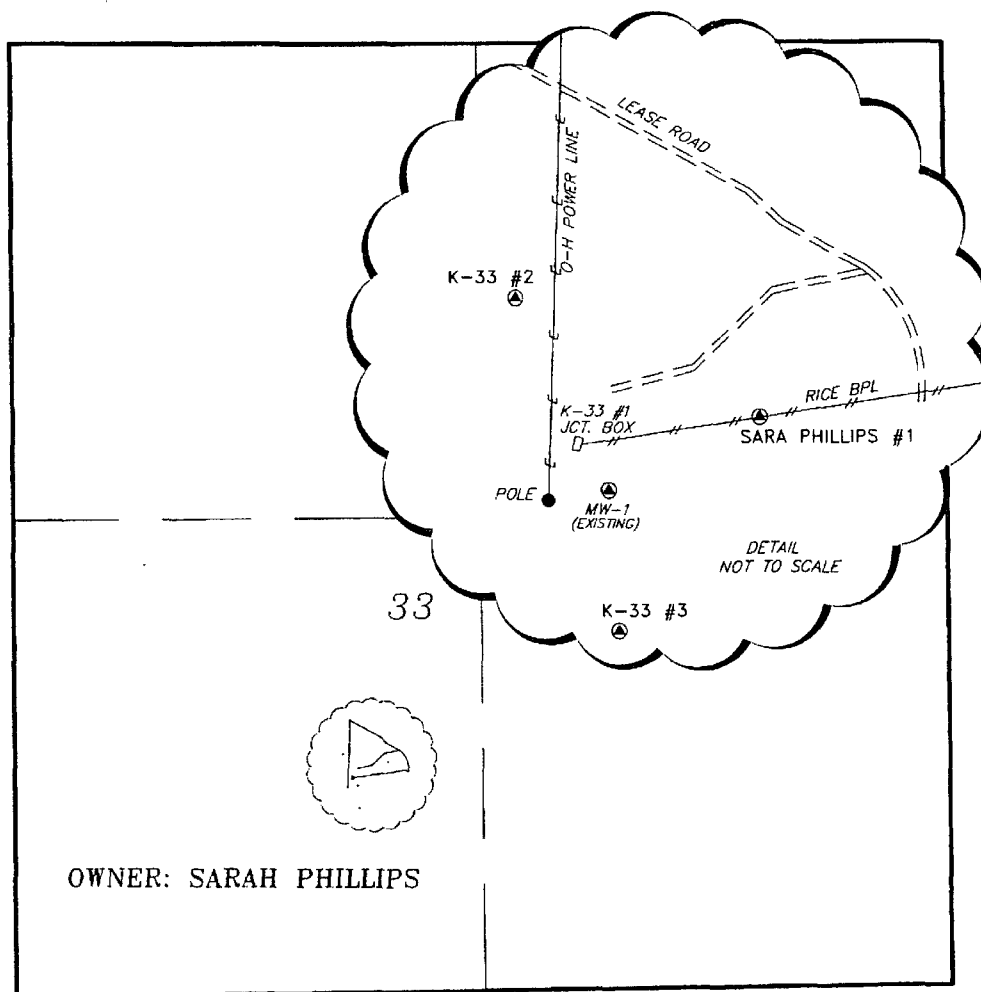
K-33 Battery

Image © 2005 DigitalGlobe

© 2005 Google



SECTION 33, TOWNSHIP 19 SOUTH, RANGE 37 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



OWNER: SARAH PHILLIPS

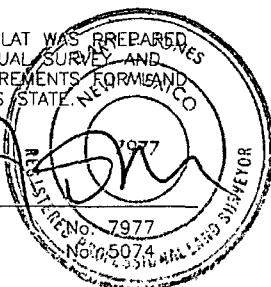
NEW MEXICO STATE PLANE COORDINATES (NAD83)  
TOP CASING

NOTE:  
ELEVATIONS ARE ON BLACK MARK  
ON NORTH SIDE OF PVC CASING.

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	TOP CASING	GROUND
SARA PHILLIPS #1	588405.631	872331.319	N 32°36'46.7"	W 103°15'30.2"	3563.07'	3560.80'
K-33 #1	588339.470	872191.720	N 32°36'46.1"	W 103°15'31.8"	3563.86'	3560.50'
K-33 #2	588512.766	872105.535	N 32°36'47.8"	W 103°15'32.8"	3562.84'	3560.15'
K-33 #3	588213.537	872201.136	N 32°36'44.8"	W 103°15'31.7"	3562.87'	3560.75'

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED  
FROM FIELD NOTES OF AN ACTUAL SURVEY AND  
MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND  
SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES N.M. P.S.  
TEXAS P.L.S.



**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

80 0 80 160 FEET

**RICE OPERATING COMPANY**

REF: MONITOR WELLS

MONITOR WELLS LOCATED IN  
SECTION 33, TOWNSHIP 19 SOUTH, RANGE 37 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

W.O. Number: 17231 Drawn By: K. GOAD

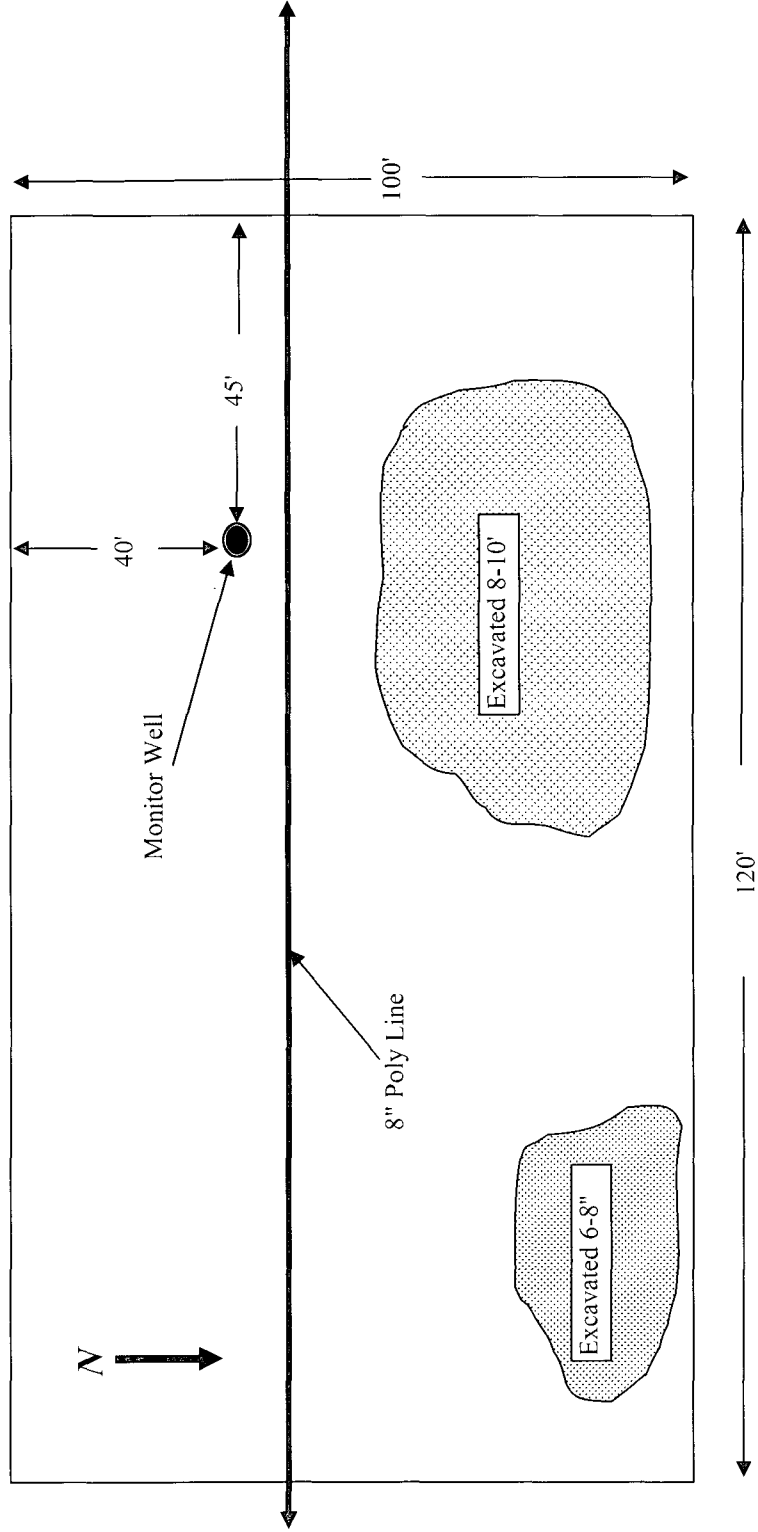
Date: 10-18-2006 Disk: KJG - RC17231.DWG

Survey Date: VARIES

Sheet 1 of 1 Sheets

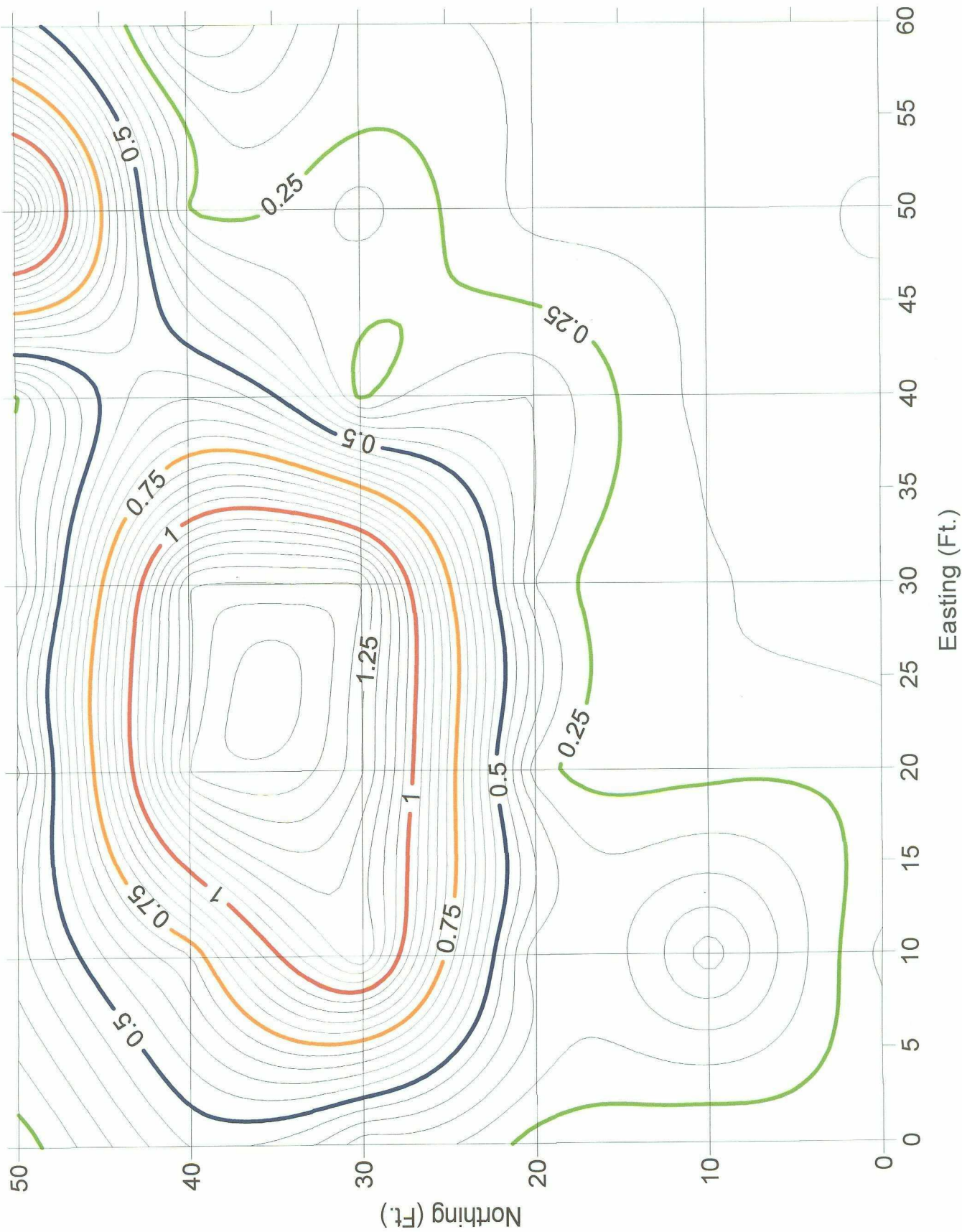


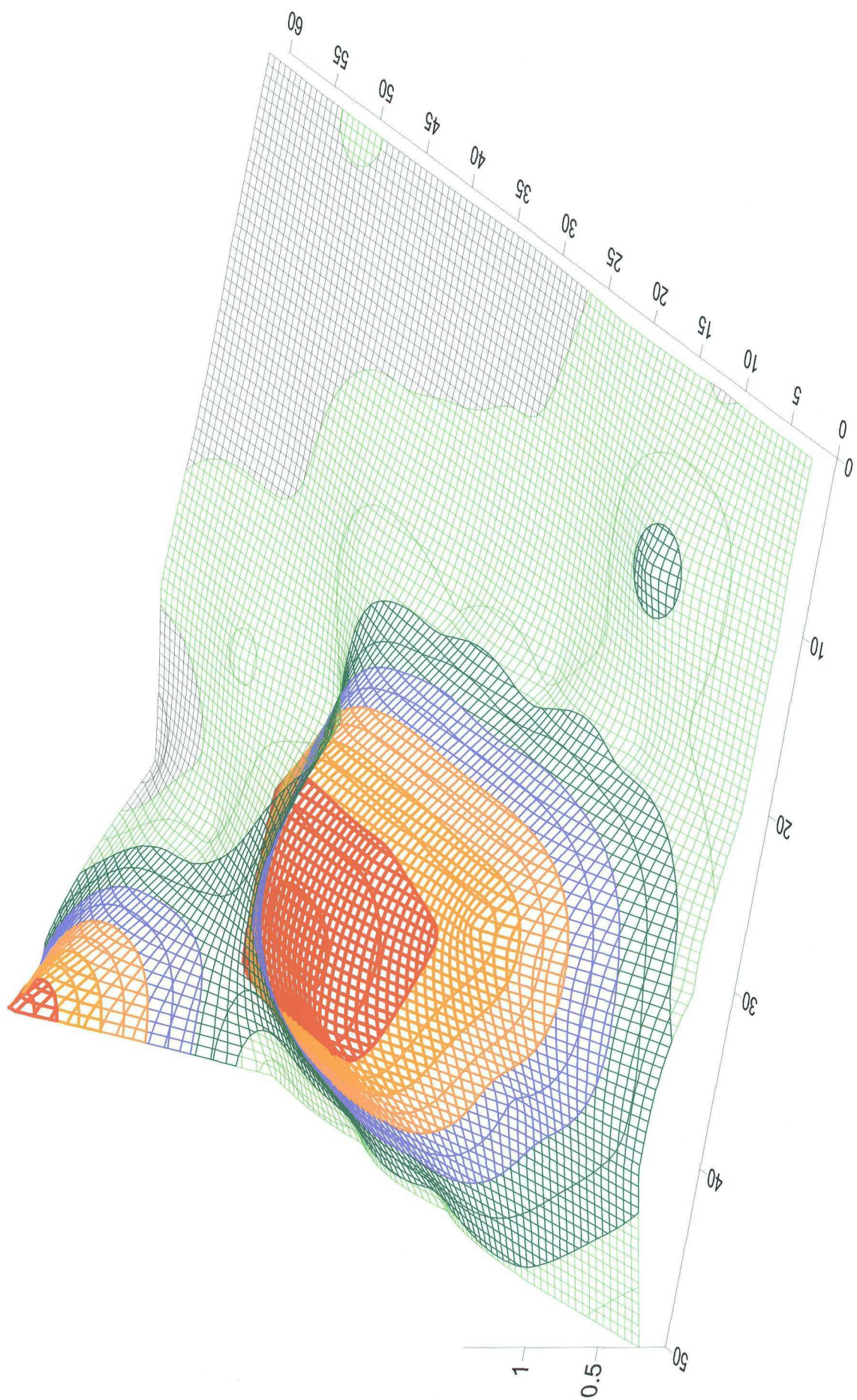
EME Sarah Phillips EOL  
Excavation & Remediation Area





Sarah Phillips EOL Initial Electrical Conductivities 1:1 by weight (mmhos/cm)







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# Gridding Report

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Sat Jun 09 14:06:22 2007

Elapsed time for gridding: 0.06 seconds

## Data Source

Source Data File Name: C:\Documents and Settings\Griffin\Desktop\Sarah Phillips Surface  
E.C. Values.dat  
X Column: A  
Y Column: B  
Z Column: C

## Data Counts

Active Data: 42  
Original Data: 42  
Excluded Data: 0  
Deleted Duplicates: 0  
Retained Duplicates: 0  
Artificial Data: 0  
Superseded Data: 0

## Univariate Statistics

---

	X	Y	Z
<hr/>			
Minimum:	0	0	0.034
25%-tile:	10	10	0.205
Median:	30	30	0.244
75%-tile:	50	40	0.454
Maximum:	60	50	1.43
Midrange:	30	25	0.732
Range:	60	50	1.396
Interquartile Range:	40	30	0.249
Median Abs. Deviation:	20	20	0.059
Mean:	30	25	0.42316666666667
Trim Mean (10%):	30	25	0.38907894736842
Standard Deviation:	20	17.078251276599	0.38264716538164
Variance:	400	291.66666666667	0.1464188531746

Coef. of Variation:  
Coef. of Skewness:

0.90424694458048  
1.6954610631589

## Inter-Variable Correlation

	X	Y	Z
X:	1.000	0.000	-0.124
Y:		1.000	0.399
Z:			1.000

## Inter-Variable Covariance

	X	Y	Z
X:	400	0	-0.94952380952381
Y:		291.66666666667	2.6091666666667
Z:			0.1464188531746

## Planar Regression: $Z = AX + BY + C$

### Fitted Parameters

	A	B	C
Parameter Value:	-0.0023738095238095	0.0089457142857143	0.27073809523809
Standard Error:	0.0027830071011254	0.0032591241996054	0.12925690958387

### Inter-Parameter Correlations

	A	B	C
A:	1.000	0.000	-0.646
B:		1.000	0.630
C:			1.000

### ANOVA Table

Source	df	Sum of Squares	Mean Square	F
Regression:	2	1.0749836238095	0.53749181190477	4.1308
Residual:	39	5.0746082095238	0.13011815921856	
Total:	41	6.1495918333333		

Coefficient of Multiple Determination ( $R^2$ ): 0.17480568677464

## Nearest Neighbor Statistics

	Separation	Delta Z
Minimum:	10	0.002
25%-tile:	10	0.03
Median:	10	0.145
75%-tile:	10	0.51
Maximum:	10	1.189
Midrange:	10	0.5955
Range:	0	1.187
Interquartile Range:	0	0.48
Median Abs. Deviation:	0	0.136
Mean:	10	0.3132380952381
Trim Mean (10%):	10	0.28371052631579
Standard Deviation:	0	0.37938363606073
Variance:	0	0.14393194331066
Coef. of Variation:	0	1.2111669743501
Coef. of Skewness:	0	1.209766563191
Root Mean Square:	10	0.49198582054674
Mean Square:	100	0.24205004761905

## Complete Spatial Randomness

Lambda:	0.014
Clark and Evans:	2.3664319132398
Skellam:	369.45129606216

## Exclusion Filtering

Exclusion Filter String: Not In Use

## Duplicate Filtering

Duplicate Points to Keep: First  
X Duplicate Tolerance: 7.1E-006  
Y Duplicate Tolerance: 5.9E-006

No duplicate data were found.

## Breakline Filtering

Breakline Filtering: Not In Use

## Gridding Rules

Gridding Method: Kriging  
Kriging Type: Point

Polynomial Drift Order: 0  
Kriging std. deviation grid: no

### Semi-Variogram Model

Component Type: Linear  
Anisotropy Angle: 0  
Anisotropy Ratio: 1  
Variogram Slope: 1

### Search Parameters

No Search (use all data): true

## Output Grid

Grid File Name: C:\Documents and Settings\Griffin\Desktop\Sarah Phillips Surface  
E.C. Values.grd  
Grid Size: 84 rows x 100 columns  
Total Nodes: 8400  
Filled Nodes: 8400  
Blanked Nodes: 0

### Grid Geometry

X Minimum: 0  
X Maximum: 60  
X Spacing: 0.60606060606061

Y Minimum: 0  
Y Maximum: 50  
Y Spacing: 0.60240963855422

### Grid Statistics

Z Minimum: 0.037457340548715  
Z 25%-tile: 0.2175078754232  
Z Median: 0.32290485205698

Z 75%-tile:	0.63008305837143
Z Maximum:	1.4216670538446
Z Midrange:	0.72956219719665
Z Range:	1.3842097132959
Z Interquartile Range:	0.41257518294823
Z Median Abs. Deviation:	0.13137950700155
Z Mean:	0.47571541451669
Z Trim Mean (10%):	0.44467794729449
Z Standard Deviation:	0.34116651302494
Z Variance:	0.11639458960959
Z Coef. of Variation:	0.71716514246559
Z Coef. of Skewness:	1.2586765372011
Z Root Mean Square:	0.58540562451891
Z Mean Square:	0.34269974521838



Detail of Area Prior  
to Remediation







Detail of Excavation



Detail of Liner Installation



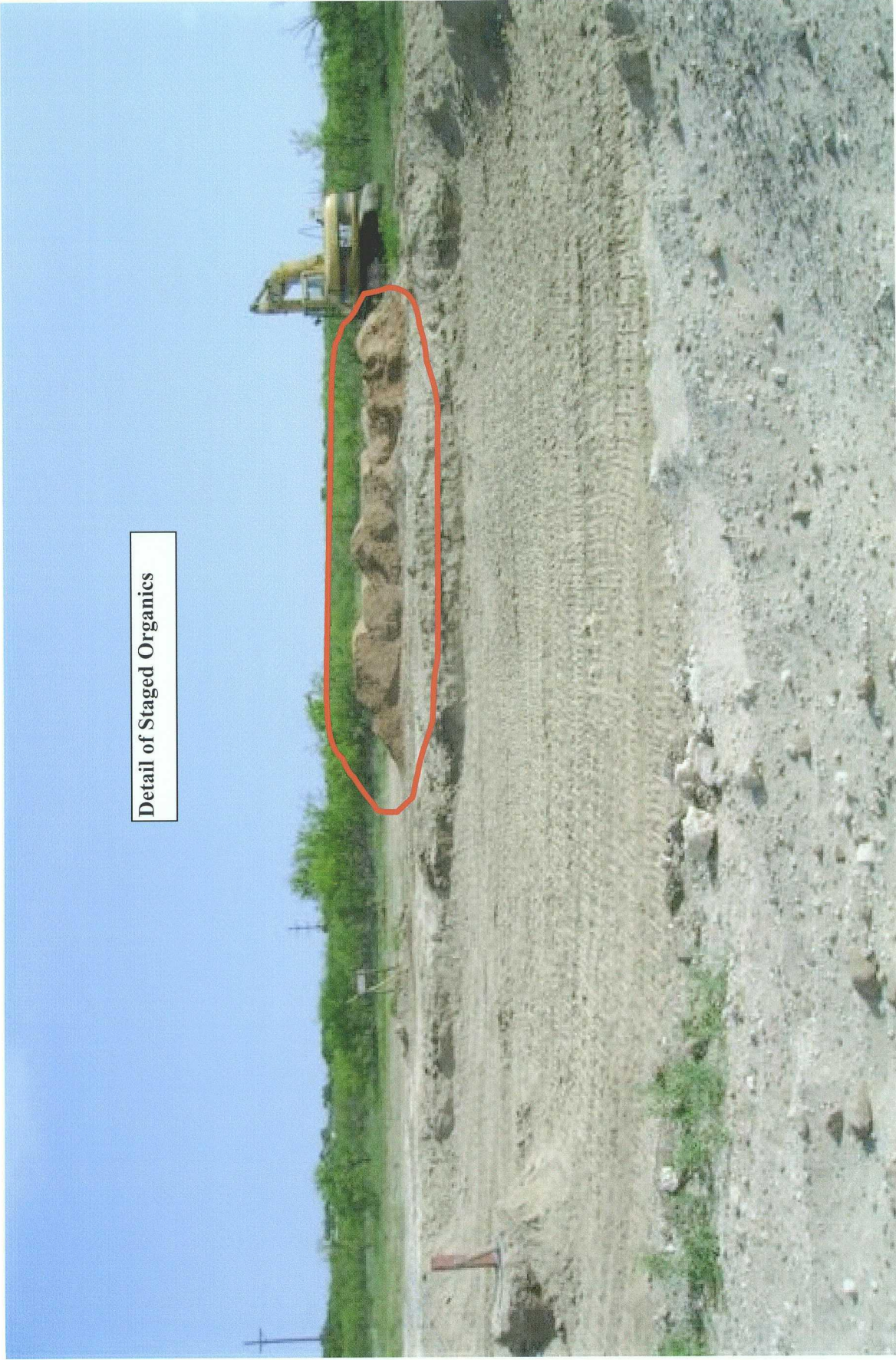


**Detail of Bentofix Geosynthetic  
Bentonite Liner Installation**

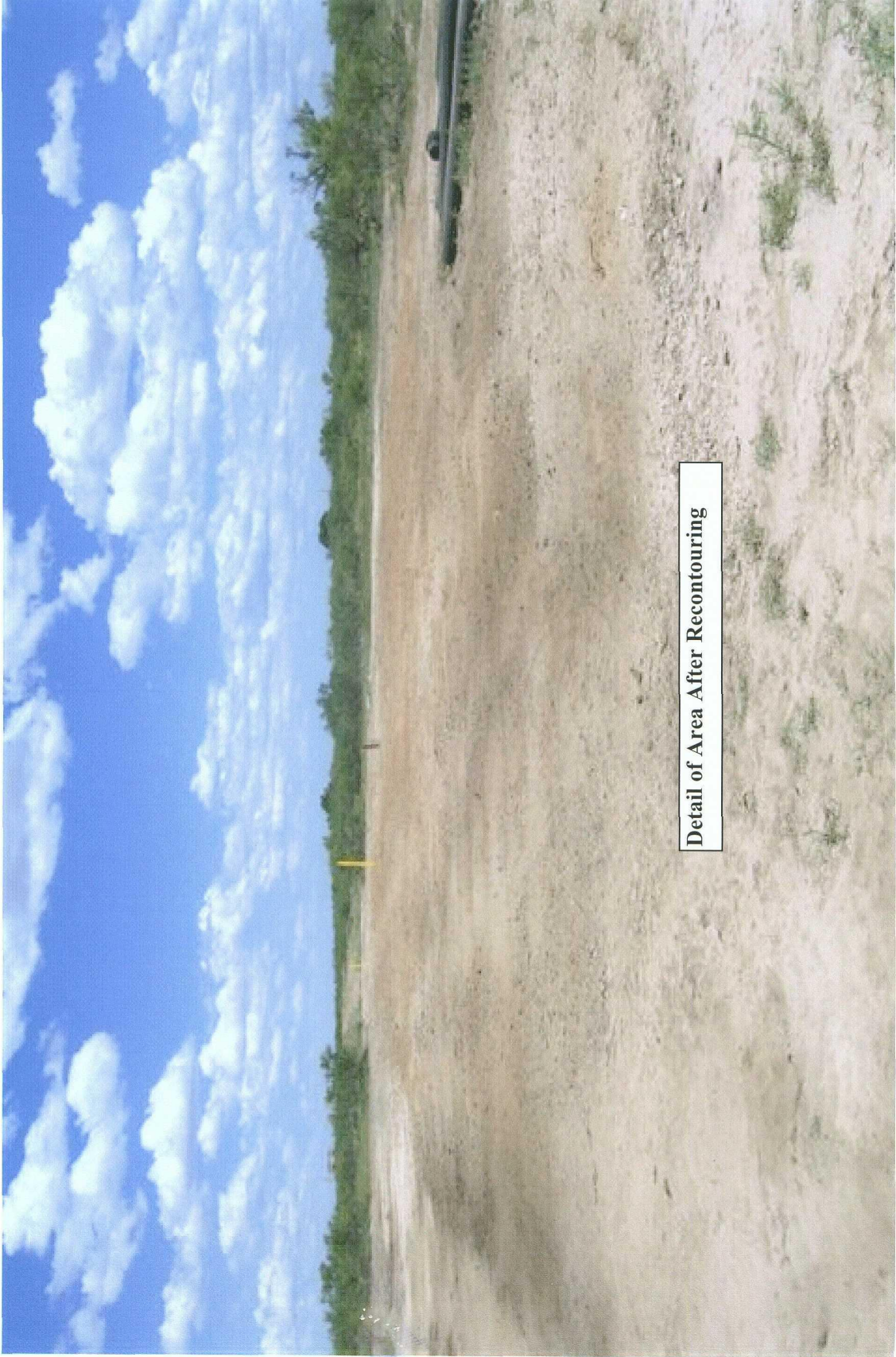




Detail of Staged Organics

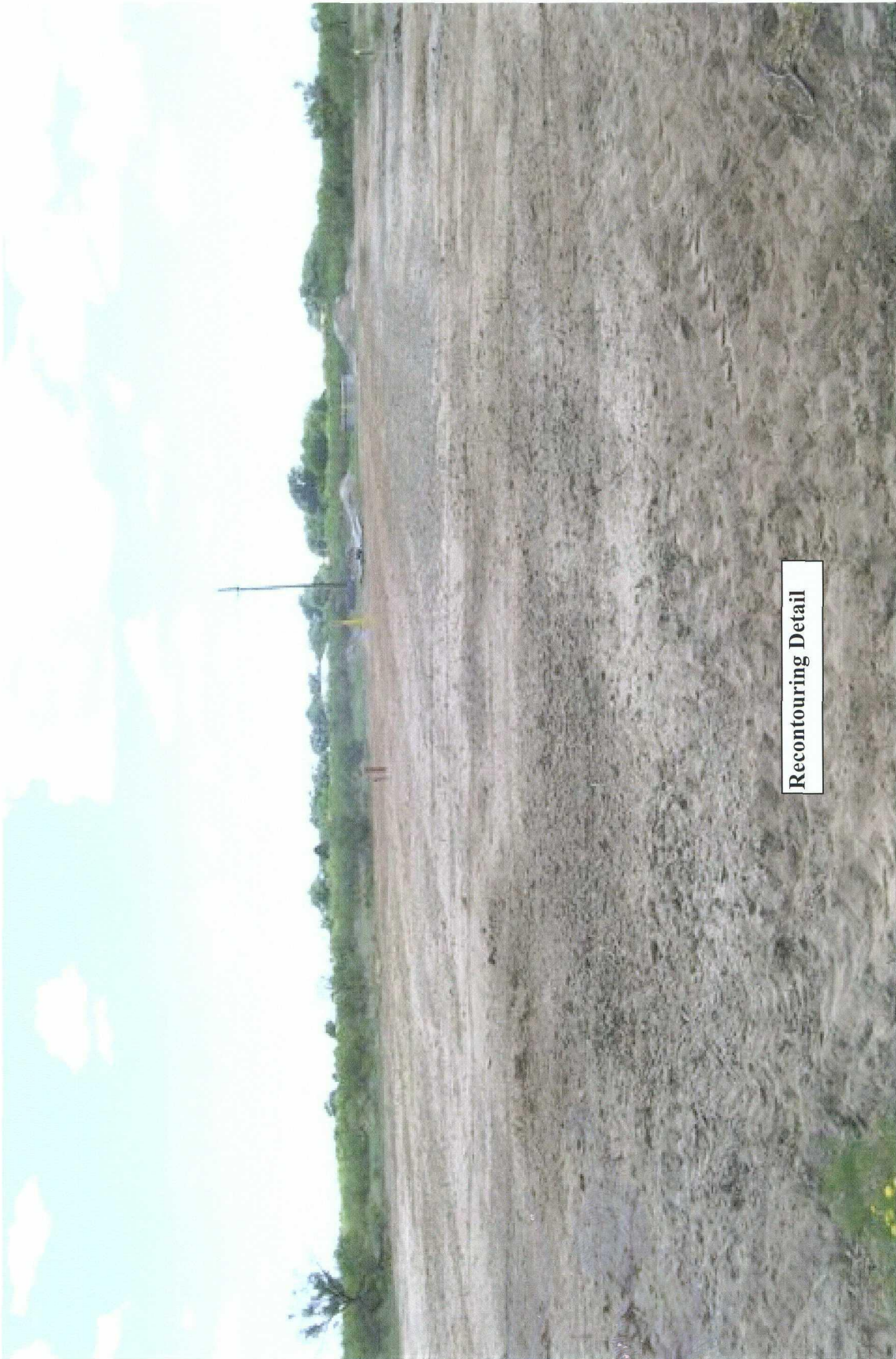






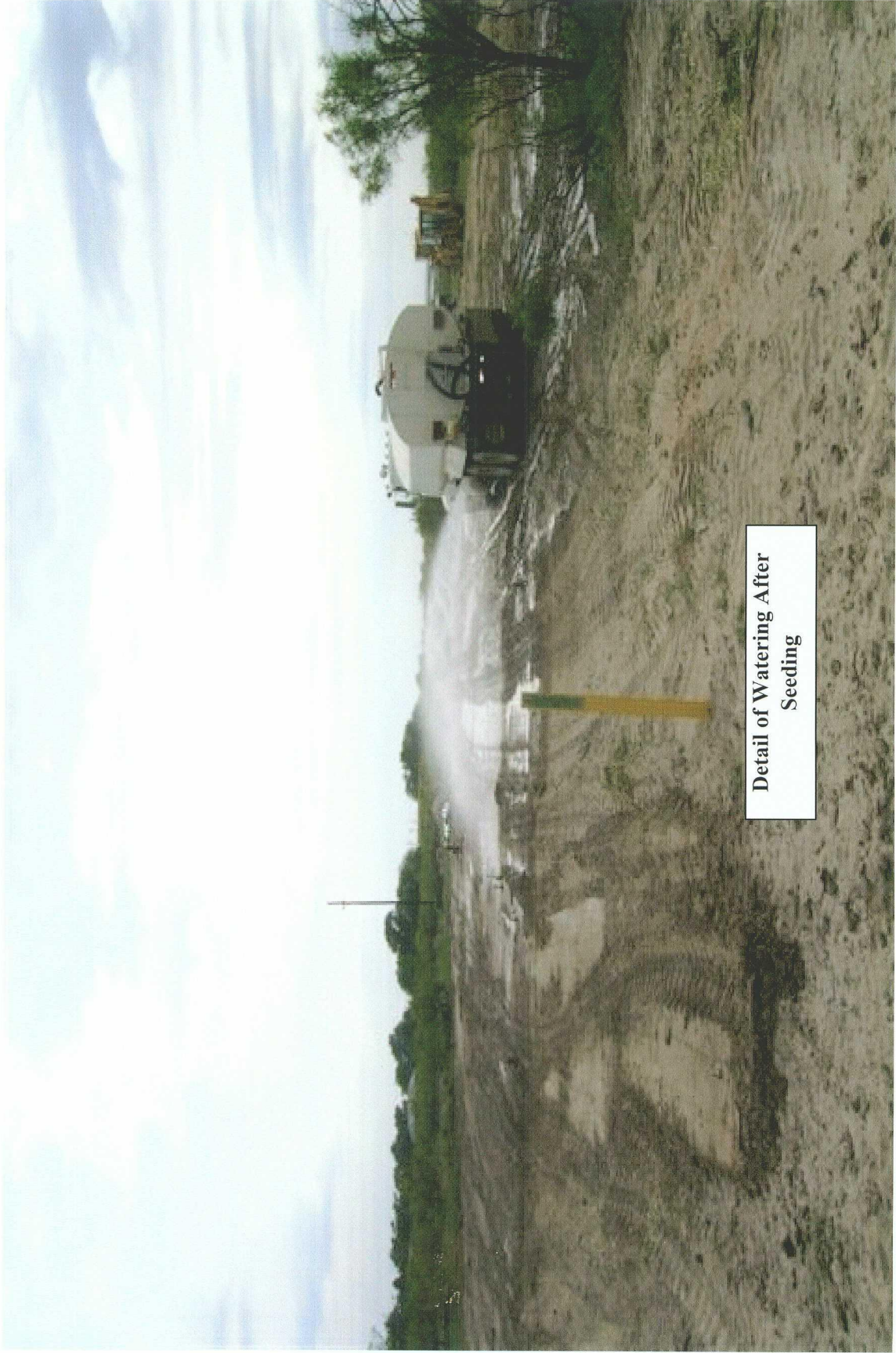
Detail of Area After Recontouring





Recontouring Detail





Detail of Watering After  
Seeding





Seeding & Disking Detail

## Log of Boring Sarah Phillips EOL

Rice Operating Co.  
122 West Taylor  
Hobbs, NM 88240  
Contact: Mike Griffin  
Job#: RICEWEL.SAR.06

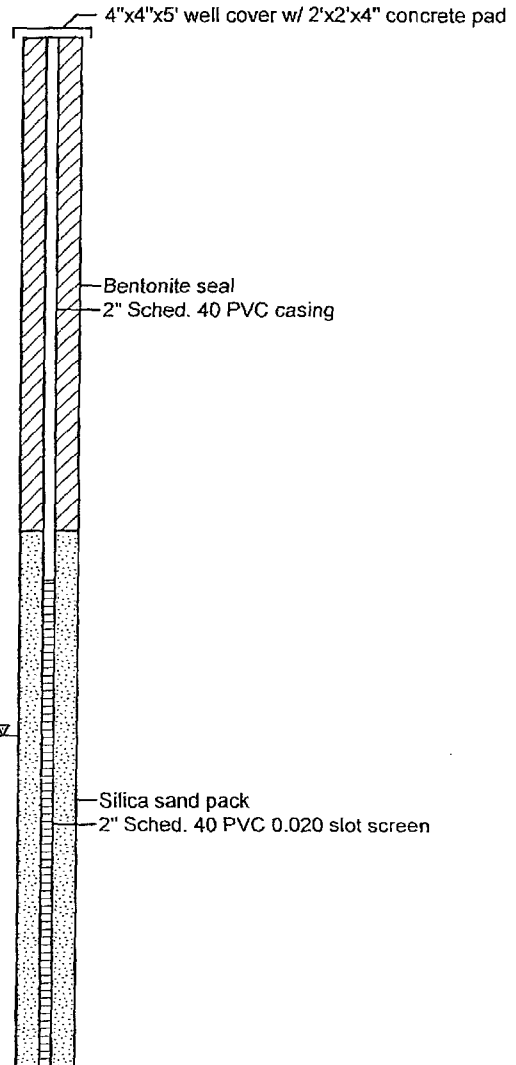
Date : 10-06-06  
Drill Start : 0800  
Drill End : 1130  
Boring Location : East of MW K33-1  
Site Location : Sarah Phillips EOL, Monument, NM

Auger Type : 4 1/4 Hollow Stem  
Logged By : Mort Bates

Depth in Feet	GRAPHIC	USCS	DESCRIPTION
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0			Silty clay w/ caliche, loose, tan, dry
5	CL		
10	SM		Silty sand w/ caliche, loose, tan, dry
15	CL		Sandy clay, loose, tan, dry
20			Caliche, firm, light tan, dry
25			
30	SM		Silty sand, soft, light tan, wet
35			
40	CL		Clay, stiff, reddish tan, wet.

Total depth 42'  
Water level 28.35'





## **Protocol**

This section contains a copy of PR-79, the remediation protocol approved for this project/





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**Remediation Protocol  
Rice Operating Company  
Sarah Phillips Project  
Lea County, New Mexico**

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**1.0 Purpose**

This protocol is to provide a detailed outline of the steps to be employed in the remediation of the Rice Operating (ROC) EME Sarah Phillips EOL (end of line) site situated in Lea County, New Mexico within Unit K, Section 33, T19S, R37E.

**2.0 Scope**

This protocol is site specific for the Sarah Phillips remediation project.

**3.0 Preliminary**

Prior to any field operations, Whole Earth Environmental shall conduct the following activities:

**3.1 Client Review**

3.1.1 Whole Earth shall meet with ROC designees to review this protocol and make any requested modifications or alterations.

3.1.2 Upon preliminary client approval, this protocol will be submitted to the Sante Fe and Hobbs offices of the New Mexico Oil Conservation Division for approval.

3.1.2 Changes to this protocol will be documented and submitted for final review by Rice Operating Company prior to the initiation of actual field work.

**4.0 Safety**

4.1 Prior to work on the site, Whole Earth shall obtain the location and phone numbers of the nearest emergency medical treatment facility. We will review all safety related issues with the appropriate ROC personnel, sub-contractors and exchange phone numbers.

4.2 A tailgate safety meeting shall be held and documented each day. All sub-contractors must attend and sign the daily log-in sheet.

4.3 Anyone allowed on to location must be wearing sleeved shirts, steel toed boots, and long pants. Each vehicle must be equipped with two way communication capabilities.

## **5.0 Remediation Procedure**

5.1 The area of interest will be investigated by Whole Earth personnel to determine the areal extent of contamination. Soil samples will be collected in accordance with WEQP-77 and analyzed for conductivity and pH in accordance with WEQP-12 and WEQP-13.

5.2 Based upon the survey results, the surface soils will be excavated to a maximum depth of four feet below ground surface with the excavated materials being placed immediately beside the excavated area. The sides of the excavation will be tested for electrical conductivity on a five point composite basis per side. An EC value of <8 mmhos/cm on a 1:1 basis is considered acceptable. If soils within the sidewalls exhibit higher numbers, excavation will continue until the values fall within the <8 mmhos/cm acceptance value.

5.3 The bottom of the excavation will be compacted to remove all sharp protrusions, and provide a smooth surface for applying bentonite matting.

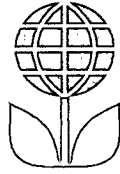
5.4 Sections of .75 lb/sq. ft. Denefix EC bentonite matting will be applied to the bottom of the excavations and watered to fill all voids.

5.5 The excavated soils will be tested for fertility and amended as necessary with nitrogen, potassium, phosphorus and organic matter to provide a fertile matrix. Once mixed, the soils will be placed within the excavations, lightly compacted and seeded with native grasses.

## **6.0 Closure Report**

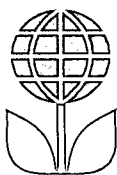
At the conclusion of the project, Whole Earth shall prepare a closure report which shall contain the following minimum information:

- Photographs of the affected area location prior to excavation
- Plat map showing the detailed dimensions of the affected area and surrounding features
- Colormetric graphs showing the lateral spread of conductive soils
- Photographs of the site at the point of maximum excavation
- Photographs of the site during installation of the bentonite liner
- Photographs of the site after final remediation
- Laboratory analytical fertility results for the backfill materials prior to remediation
- MSDS of all amendments used in the soil remediation



## **Procedures**

This section contains a copy of QP-77, the sample collection procedure employed on this project.



QP-77

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## WHOLE EARTH ENVIRONMENTAL QUALITY PROCEDURE

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### Procedure for Obtaining Soil Samples for Transportation to a Laboratory

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Completed By:                      Approved By:                      Effective Date:    /    /

---

#### 1.0 Purpose

This procedure outlines the methods to be employed when obtaining soil samples to be taken to a laboratory for analysis.

#### 2.0 Scope

This procedure is to be used when collecting soil samples intended for ultimate transfer to a testing laboratory.

#### 3.0 Preliminary

3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the soil. The shipment should include a Certificate of Compliance from the manufacturer of the collection bottle or vial and a Serial Number for the lot of containers. Retain this Certificate for future documentation purposes.

3.2 If collecting TPH, BTEX, RCRA 8 metals, cation / anions or O&G, the sample jar may be a clear 4 oz. container with Teflon lid. If collecting PAH's, use an amber 4 oz. container with Teflon lid.

#### 4.0 Chain of Custody

4.1 Prepare a Sample Plan. The plan will list the number, location and designation of each planned sample and the individual tests to be performed on the sample. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.

4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

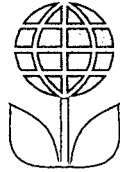
- 4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label). Affix the labels to the jars.

### **5.0 Sampling Procedure**

- 5.1 Go to the sampling point with the sample container. If not analyzing for ions or metals, use a trowel to obtain the soil. Do not touch the soil with your bare hands. Use new latex gloves with each sample to help minimize any cross-contamination. Try to avoid collecting rocks or vegetation.
- 5.2 Pack the soil tightly into the container leaving the top slightly domed. Screw the lid down tightly. Enter the time of collection onto the sample collection jar label.
- 5.3 Place the sample directly on ice for transport to the laboratory.
- 5.4 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

### **6.0 Documentation**

- 6.1 The testing laboratory shall provide the following minimum information:
- A. Client, Project and sample name.
  - B. Signed copy of the original Chain of Custody Form including data on the time the sample was received by the lab.
  - C. Results of the requested analyses
  - D. Test Methods employed
  - E. Quality Control methods and results



## **Laboratory Analytical Results**

This section contains a copy the chain of custody, laboratory analytical results and quality control information for soil samples processed during this project.



# ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**ANALYTICAL RESULTS FOR  
WHOLE EARTH ENVIRONMENTAL  
ATTN: MIKE GRIFFIN  
2103 ARBOR COVE  
KATY, TX 77494**

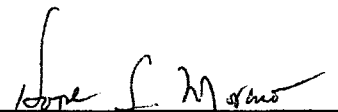
Receiving Date: 06/04/07  
Reporting Date: 06/06/07  
Project Owner: NOT GIVEN  
Project Name: SARAH PHILLIPS  
Project Location: MONUMENT, NM

Analysis Date: 06/06/07  
Sampling Date: 06/04/07  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AB  
Analyzed By: AB

LAB NO.	SAMPLE ID	Conductivity (uS/cm)
H12696-1	A-20	1426
H12696-2	A-40	203
H12696-3	A-60	298
H12696-4	A-80	202
H12696-5	A-100	312
H12696-6	A-120	213
H12696-7	A-0	438
H12696-8	B-0	266
H12696-9	B-20	263
H12696-10	B-40	532
Quality Control		1386
True Value QC		1413
% Recovery		98.1
Relative Percent Difference		4.4

METHOD:	120.1
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Note: Analyses performed on 1:1 w:v aqueous extracts.

  
Chemist

06-06-07  
Date

H12696A WEE

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 client for 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 thirty (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.





# ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
WHOLE EARTH ENVIRONMENTAL  
ATTN: MIKE GRIFFIN  
2103 ARBOR COVE  
KATY, TX 77494

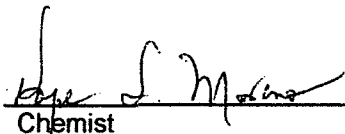
Receiving Date: 06/04/07  
Reporting Date: 06/06/07  
Project Owner: NOT GIVEN  
Project Name: SARAH PHILLIPS  
Project Location: MONUMENT, NM

Analysis Date: 06/06/07  
Sampling Date: 06/04/07  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AB  
Analyzed By: AB

LAB NO.	SAMPLE ID	Conductivity (uS/cm)
H12696-11	B-60	904
H12696-12	B-80	4200
H12696-13	B-100	872
H12696-14	B-120	458
H12696-15	C-0	246
H12696-16	C-20	269
H12696-17	C-40	211
H12696-18	C-60	3070
H12696-19	C-80	4120
H12696-20	C-100	1381
Quality Control		1386
True Value QC		1413
% Recovery		98.1
Relative Percent Difference		4.4

METHOD:	120.1
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Note: Analyses performed on 1:1 w:v aqueous extracts.

  
Chemist

06-06-07  
Date

H12696B WEE

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 client for 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 thirty (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.



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
WHOLE EARTH ENVIRONMENTAL  
ATTN: MIKE GRIFFIN  
2103 ARBOR COVE  
KATY, TX 77494

Receiving Date: 06/04/07  
Reporting Date: 06/06/07  
Project Owner: NOT GIVEN  
Project Name: SARAH PHILLIPS  
Project Location: MONUMENT, NM

Analysis Date: 06/06/07  
Sampling Date: 06/04/07  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AB  
Analyzed By: AB

LAB NO.	SAMPLE ID	Conductivity (uS/cm)
H12696-21	C-120	323
H12696-22	D-0	146
H12696-23	D-20	208
H12696-24	D-40	377
H12696-25	D-60	435
H12696-26	D-80	334
H12696-27	D-100	288
H12696-28	D-120	251
H12696-29	E-0	191
H12696-30	E-20	167
Quality Control		1386
True Value QC		1413
% Recovery		98.1
Relative Percent Difference		4.4

METHOD:	120.1
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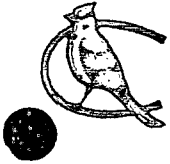
Note: Analyses performed on 1:1 w:v aqueous extracts.

  
Chemist

06-06-07  
Date

H12696C WEE

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# ARDINAL LABORATORIES

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ANALYTICAL RESULTS FOR  
WHOLE EARTH ENVIRONMENTAL  
ATTN: MIKE GRIFFIN  
2103 ARBOR COVE  
KATY, TX 77494

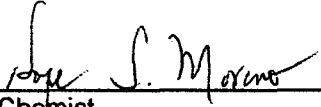
Receiving Date: 06/04/07  
Reporting Date: 06/06/07  
Project Owner: NOT GIVEN  
Project Name: SARAH PHILLIPS  
Project Location: MONUMENT, NM

Analysis Date: 06/06/07  
Sampling Date: 06/04/07  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AB  
Analyzed By: AB

LAB NO.	SAMPLE ID	Conductivity (uS/cm)
H12696-31	E-40	180
H12696-32	E-60	183
H12696-33	E-80	275
H12696-34	E-100	551
H12696-35	E-120	195
H12696-36	F-0	136
H12696-37	F-20	163
H12696-38	F-40	192
H12696-39	F-60	170
H12696-40	F-80	230
Quality Control		1386
True Value QC		1413
% Recovery		98.1
Relative Percent Difference		4.4

METHOD:	120.1
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Note: Analyses performed on 1:1 w:v aqueous extracts.

  
Chemist

06-06-07  
Date

H12696D WEE

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Receiving Date: 06/04/07  
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Project Owner: NOT GIVEN  
Project Name: SARAH PHILLIPS  
Project Location: MONUMENT, NM

Analysis Date: 06/06/07  
Sampling Date: 06/04/07  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AB  
Analyzed By: AB

LAB NO.	SAMPLE ID	Conductivity (uS/cm)
H12696-41	F-100	157
H12696-42	F-120	210
H12696-43	NBG	232
H12696-44	SBG	162
H12696-45	EBG	209
H12696-46	WBG	219
Quality Control		1386
True Value QC		1413
% Recovery		98.1
Relative Percent Difference		4.4

METHOD:	120.1
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Note: Analyses performed on 1:1 w:v aqueous extracts.

**Chemist**

Date \_\_\_\_\_

H12696E WEE

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