

**Stephens & Johnson Operating Company
North of 82
Section 1, Township 15 South, Range 37 East
Lea County, New Mexico**

Work Plan

July 28, 2009



Prepared for:

**Stephens & Johnson Operating Company
811 Sixth Street, Suite 300
Wichita Falls, Texas 76301-2509**

By:

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

I. Background

Safety & Environmental Solutions, Inc. (SESI) was engaged by Stephens & Johnson Operating Company to perform a site assessment of the area located in Section 1, Township 15 South, and Range 37 East in Lea County, New Mexico. The subject area was impacted by the spillage of an undetermined amount of produced water from an injection line associated with production in the area on September 10, 2001. The remediation for this site was initiated in July 2003, however this site has been dormant for several years.

II. Surface and Ground Water

The nearest groundwater of record with the New Mexico State Engineer's Office is in Section 2 of Township 15 South, Range 37 East. According to measurements taken February 18, 1966, the depth to water in this well is 40 feet.

III. Soils

The soils in the area are predominantly sand and sandy loam.

IV. Work Performed

On May 12, 2009 Safety & Environmental Solutions, Inc was onsite to retrieve samples. Samples were retrieved at a depth of six (6) feet throughout the bottom and sides of the excavation. All samples were transported under Chain of Custody to Ana-Lab of Kilgore Texas for analysis. The samples were analyzed for Chlorides (EPA Method 300.00).

The results of the analysis are as follows:

DATE	ID	Cl ⁻ (mg/kg)
5/12/09	#1	17300
5/12/09	#2	1220
5/12/09	#3	218
5/12/09	#4	4530
5/12/09	#5	15700
5/12/09	#6	3770
5/12/09	EW	4140
5/12/09	SW #1	7520
5/12/09	SW #2	6200
5/12/09	SW #3	7670
5/12/09	SW #4	30.5
5/12/09	NW #1	8010
5/12/09	NW #2	14800
5/12/09	NW #3	14600
5/12/09	NW #4	2600
5/12/09	WW	21100

The results of the sampling indicated the chloride levels to be elevated in the bottom and all of the sides of the excavation with the exception of the south wall #3.

V. Action Plan

Closure

It is recommended that the site be excavated horizontally until the chloride concentrations are no greater than 250 ppm. An additional one (1) to two (2) feet will be removed from the bottom of the excavation. The excavated soil will be taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal facility. The bottom and sides of the excavation will be sampled at the final excavation depths. The samples collected will be properly preserved and transported with Chain of Custody to Cardinal Laboratories, of Hobbs, New Mexico, for testing. Laboratory samples will be analyzed for Chlorides (EPA method 300.00). The analytical results will document the level of Chlorides left in place.

After the excavation is complete, a 40 mil plastic liner will be installed in the bottom of the excavation to prevent surface waters or future spills from coming into contact with the chloride left in place under the liner. Clean soil will be used to backfill the excavation and the site returned to natural grade. The location will be reseeded by the landowner's specifications.

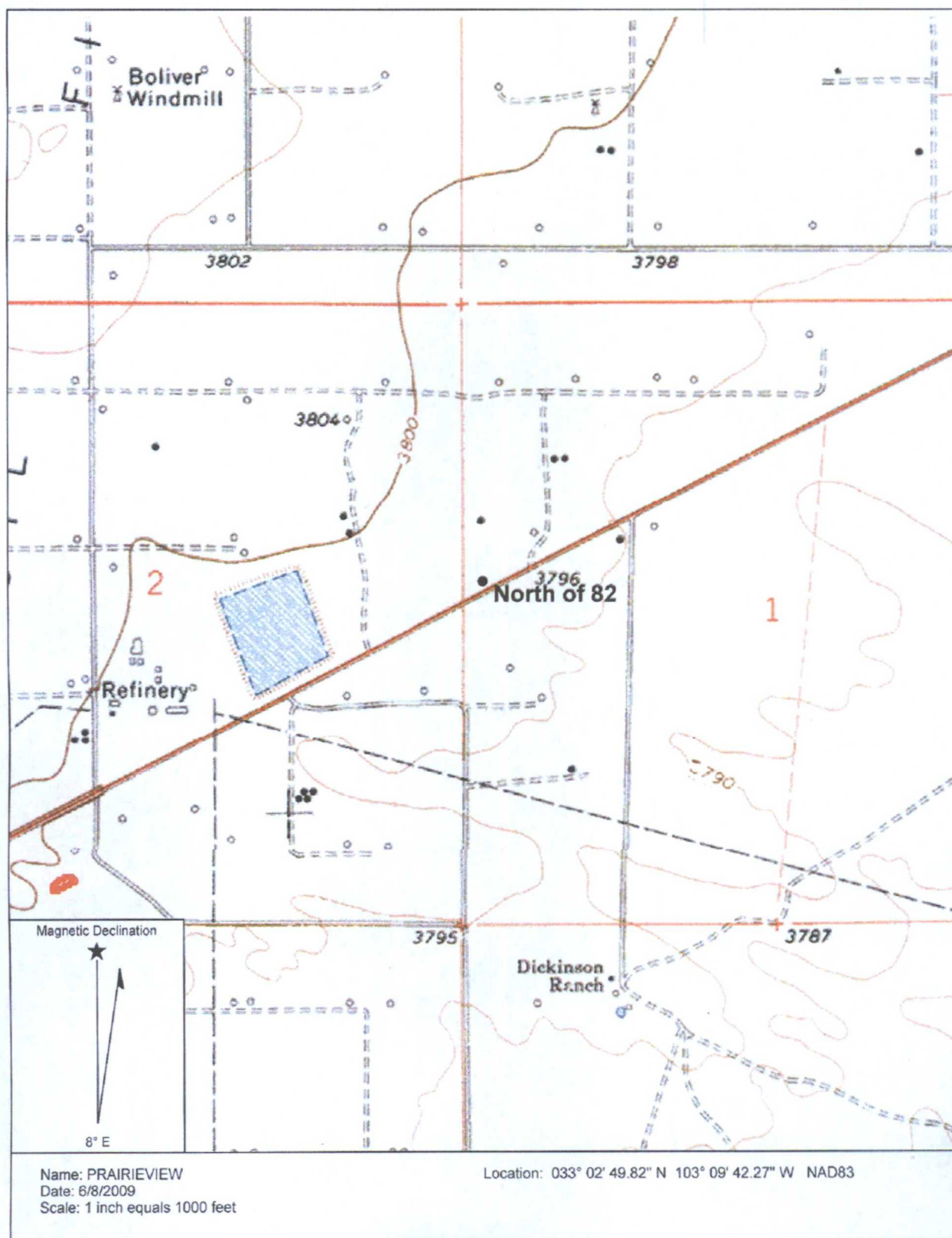
After completion of the delineation, a report of the findings and an appropriate work plan will be filed with the New Mexico Oil Conservation Division (NMOCD).

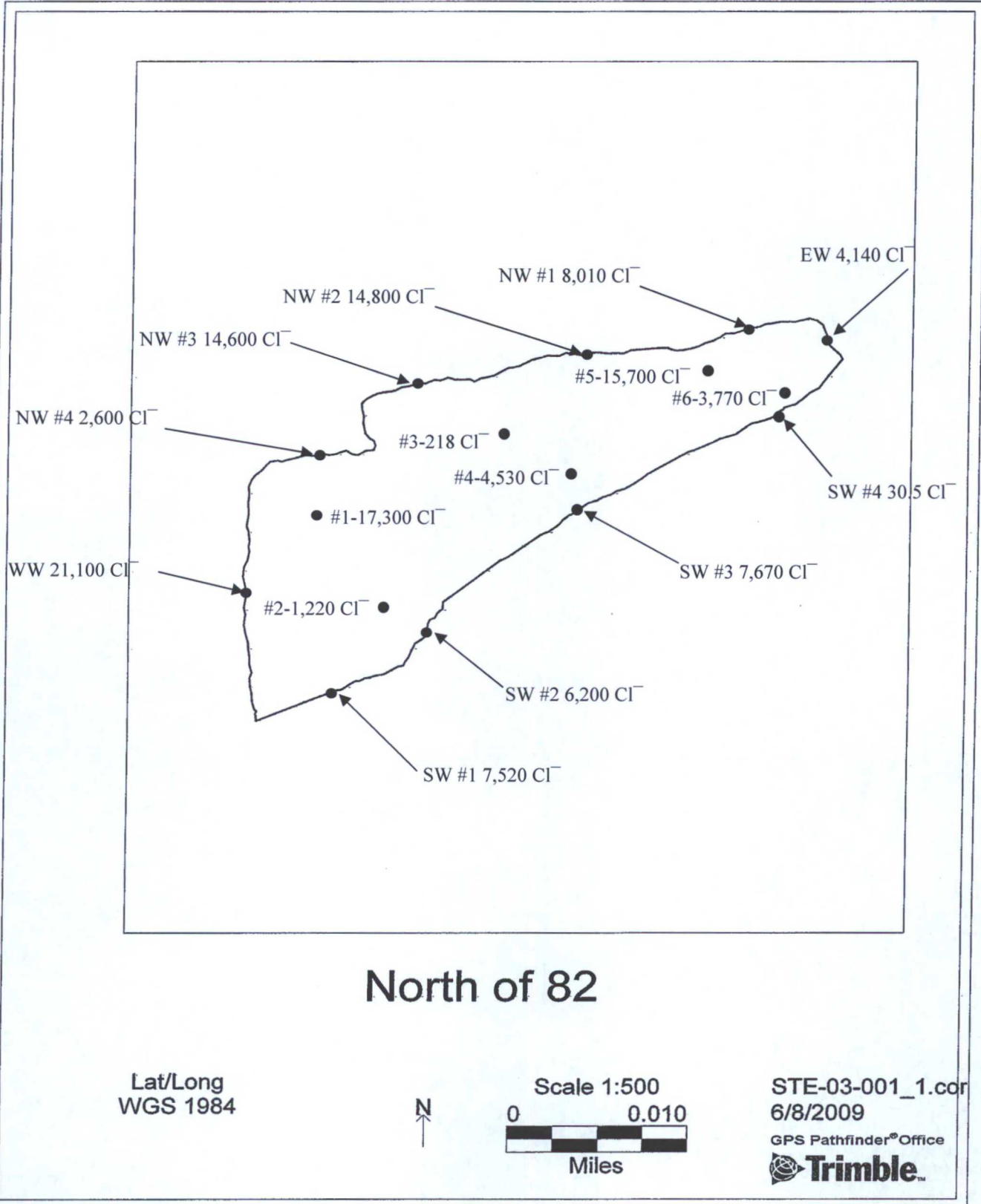
VI. Figures & Appendices

Figure 1 - Vicinity Map

Figure 2 - Site Plan

Appendix A – Analytical Results







Analytical Results

Report To

Brian Cuellar
Safety & Environmental Solutio
703 E. Clinton
Hobbs, NM 88240

Report Table of Contents

Account

SESF

Project

442482

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442482_r99_09_CoC_SESF_1_of_1	Ana-Lab CoC SESF 442482_1_of_1	3
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0-17025 # 0637-01



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Results

Accredited	Parameter	Results	Units	RL	Flags	CAS	Bottle
101309	#1	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	14:45	
SW-846 9056		Analyzed: GDG	05/15/2009	1838	QCgroup	318119	
AN	Chloride (water extractable)	17300	mg/kg	3000		02	
101310	#2	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	14:47	
SW-846 9056		Analyzed: GDG	05/15/2009	1856	QCgroup	318119	
AN	Chloride (water extractable)	1220	mg/kg	60.0		02	
101311	#3	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	14:49	
SW-846 9056		Analyzed: GDG	05/15/2009	1913	QCgroup	318119	
AN	Chloride (water extractable)	218	mg/kg	30.0		02	
101312	#4	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	15:02	
SW-846 9056		Analyzed: GDG	05/15/2009	1931	QCgroup	318119	
AN	Chloride (water extractable)	4530	mg/kg	300		02	
101313	#5	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	15:04	
SW-846 9056		Analyzed: GDG	05/15/2009	1948	QCgroup	318119	
AN	Chloride (water extractable)	15700	mg/kg	1500		02	
101314	#6	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	15:06	
SW-846 9056		Analyzed: GDG	05/15/2009	2006	QCgroup	318119	
AN	Chloride (water extractable)	3770	mg/kg	300		02	

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Results

Accredited	Parameter	Results	Units	RL	Flags	CAS	Bottle
101315	#EW	Received: 05/14/2009					
Soil		Collected by: I Kincaid		Affiliation:	Safety & Environment	05/12/2009	15:10
SW-846 9056		Analyzed: GDG	05/15/2009	2024	QCgroup	318119	
AN	Chloride (water extractable)	4140	mg/kg	300			02
101316	SW#1	Received: 05/14/2009					
Soil		Collected by: I Kincaid		Affiliation:	Safety & Environment	05/12/2009	15:12
SW-846 9056		Analyzed: GDG	05/15/2009	2041	QCgroup	318119	
AN	Chloride (water extractable)	7520	mg/kg	300			02
101317	SW#2	Received: 05/14/2009					
Soil		Collected by: I Kincaid		Affiliation:	Safety & Environment	05/12/2009	15:14
SW-846 9056		Analyzed: GDG	05/15/2009	2059	QCgroup	318119	
AN	Chloride (water extractable)	6200	mg/kg	300			02
101318	SW#3	Received: 05/14/2009					
Soil		Collected by: I Kincaid		Affiliation:	Safety & Environment	05/12/2009	15:16
SW-846 9056		Analyzed: GDG	05/15/2009	2117	QCgroup	318119	
AN	Chloride (water extractable)	7670	mg/kg	300			02
101319	SW#4	Received: 05/14/2009					
Soil		Collected by: I Kincaid		Affiliation:	Safety & Environment	05/12/2009	15:18
SW-846 9056		Analyzed: GDG	05/15/2009	2152	QCgroup	318119	
AN	Chloride (water extractable)	30.5	mg/kg	6.00			02
101320	NW#1	Received: 05/14/2009					
Soil		Collected by: I Kincaid		Affiliation:	Safety & Environment	05/12/2009	15:22
SW-846 9056		Analyzed: GDG	05/15/2009	2209	QCgroup	318119	
AN	Chloride (water extractable)	8010	mg/kg	300			02

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Results

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Results

Accredited	Parameter	Results	Units	RL	Flags	CAS	Bottle
101321	NW#2	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	15:24	
SW-846 9056		Analyzed: GDG	05/15/2009	2227	QCgroup	318119	
AN	Chloride (water extractable)	14800	mg/kg	600		02	
101322	NW#3	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	15:26	
SW-846 9056		Analyzed: GDG	05/15/2009	2245	QCgroup	318119	
AN	Chloride (water extractable)	14600	mg/kg	600		02	
101323	NW#4	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	15:28	
SW-846 9056		Analyzed: GDG	05/15/2009	2302	QCgroup	318119	
AN	Chloride (water extractable)	2600	mg/kg	150		02	
101324	WW	Received: 05/14/2009					
Soil		Collected by: I Kincaid	Affiliation:	Safety & Environment	05/12/2009	15:30	
SW-846 9056		Analyzed: GDG	05/18/2009	0917	QCgroup	318119	
AN	Chloride (water extractable)	21100	mg/kg	300		02	

Sample Preparation

101309	#1	Received: 05/14/2009					
SW-846 9056		Analyzed: GDG	05/15/2009	1430	QCgroup	318001	
AN	Water Extract-Ion Chromatography	40/4	grams			01	

101310	#2	Received: 05/14/2009					
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Sample Preparation

101310 #2

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009 1430 QCgroup 318001

AN Water Extract-Ion Chromatography 40/4 grams 01

101311 #3

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009 1430 QCgroup 318001

AN Water Extract-Ion Chromatography 40/4 grams 01

101312 #4

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009 1430 QCgroup 318001

AN Water Extract-Ion Chromatography 40/4 grams 01

101313 #5

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009 1430 QCgroup 318001

AN Water Extract-Ion Chromatography 40/4 grams 01

101314 #6

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009 1430 QCgroup 318001

AN Water Extract-Ion Chromatography 40/4 grams 01

101315 #EW

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009 1430 QCgroup 318001

AN Water Extract-Ion Chromatography 40/4 grams 01

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Sample Preparation

101322 NW#3

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009

1430

QCgroup

318001

AN

Water Extract-Ion Chromatography

40/4

grams

01

101323 NW#4

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009

1430

QCgroup

318001

AN

Water Extract-Ion Chromatography

40/4

grams

01

101324 WW

Received: 05/14/2009

SW-846 9056

Analyzed: GDG 05/15/2009

1430

QCgroup

318001

AN

Water Extract-Ion Chromatography

40/4

grams

01

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Qualifiers:

We report results on an 'As Received' or wet basis unless marked 'Dry Weight'. Unless otherwise noted, testing was performed at Ana-lab's corporate laboratory that holds the following Federal and State certificates: Texas Department of Health Lead Firm Certificate 2110076, EPA National Lead Laboratory Accreditation Program #637.01, US Consumer Product Safety Commission #1095, US Department of Agriculture Soil Import Permit S-37592, Texas Commission on Environmental Quality Drinking Water Laboratory Certificate TX219, Texas Commission on Environmental Quality NELAP T104704201-06-TX, Oklahoma Department of Environmental Quality Drinking Water Certification Lab ID# D9913, EPA Lab Number TX00063, USEPA Approved Perchlorate Testing Lab, USEPA UCMR2 Approved Lab, Oklahoma Department of Environmental Quality Laboratory Certificate 8125, Arkansas Department of Environmental Quality Certification #03-070-0, Louisiana Department of Environmental Quality Laboratory Certification (NELAP, LELAP) #02008, Louisiana Department of Health and Hospitals Drinking Water (NELAP) # LA030020, US Department of Energy Approved, State of Kansas Department of Health and Environment Waste Water and Solid/Hazardous Waste Cert. E-10365, Alabama Department of Environmental Management Drinking Water #41540. Ana-Lab is also accredited to the international ISO-17025 standard by the American Association for Laboratory Accreditation (A2LA Certificate # 0637-01). The Accredited column designates accreditation by U -- UCMR2 (EPA), A -- A2LA, N -- NELAC, or Z -- not covered under one of these scopes of accreditation.

These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of Ana-Lab Corp. Unless otherwise specified, these test results meet the requirements of NELAC.

RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number.

C. H. Whiteside

C. H. Whiteside, Ph.D., President



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Quality Control

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Project

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Hobbs, NM 88240

518119 I Soil SW-846 9056

Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	Out	File
Chloride (water extractable)	318001	ND	0.0534	0.300	mg/kg		0000840797

CCV

Parameter	Reading	Known	Units	Recover%	Limits%	Out	File
Chloride (water extractable)	10.1	10.0	mg/kg	101	90.0 - 110		0000840799
Chloride (water extractable)	10.2	10.0	mg/kg	102	90.0 - 110		0000840796
Chloride (water extractable)	10.2	10.0	mg/kg	102	90.0 - 110		0000840798
Chloride (water extractable)	10.2	10.0	mg/kg	102	90.0 - 110		0000840812
Chloride (water extractable)	10.2	10.0	mg/kg	102	90.0 - 110		0000840822
Chloride (water extractable)	10.2	10.0	mg/kg	102	90.0 - 110		0000840825
Chloride (water extractable)	10.3	10.0	mg/kg	103	90.0 - 110		0000840823

LCS

Parameter	PrepSet	Reading	Known	Units	Recover%	Limits	File	Out
Chloride (water extractable)	318001	0.948	1.00	mg/kg	94.8	90.0 - 110	0000840800	

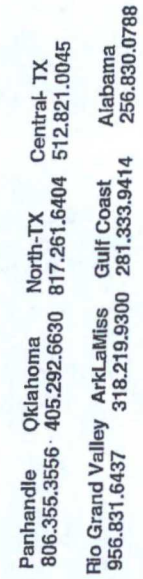
LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chloride (water extractable)	318001	0.948	1.09	1.00	90.0 - 110	94.8	109	mg/kg	13.9	20.0

RPD is Relative Percent Difference: $\text{abs}(r1-r2) / \text{mean}(r1,r2) * 100\%$

Recover% is Recovery Percent: $\text{result} / \text{known} * 100\%$





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[illegible]

Samples Received on Ice? ☐ Yes ☒ No
Cooler/Sample Secure? ☒ Yes ☐ No
Requested TAT 4 ~~Routing~~ 34
Method of Shipment ☐ Bus ☒ FedEx ☐ Lone Star ☐ UPS
Tracking or Shipping Number 115 920782
☐ 2 Day ☐ next day
☐ Hand delivered ☐ DHL ☐ other
#comments 003689 ☒

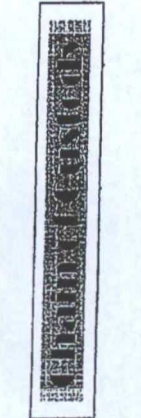
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Panhandle Oklahoma North-TX Central-TX
 806.355.3556 405.292.6630 817.261.6404 512.821.0045
 Rio Grand Valley Ark-La-Miss Gulf Coast Alabama
 956.831.6437 318.219.9300 281.333.9414 256.830.0788



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Report to:

Company name: <u>SESE</u>		Project- Name / Location <u>Stevens & Johnson B.N. of 82</u>		Analysis Requested	
Address: <u>203 E Clinton</u>		Billing (if different)			
City	State	City	State	City	State
Phone	Zip	Phone	Zip	Phone	Zip
Fax	City	Fax	City	Fax	City
Sampler Signature	Printed Name	Affiliation	PO Number	Comments	
Lab Number	Date	Time	Matrix	# of Containers	
10319	5/12/9	1510	Soil	1	
320	5/22	1522			Comp/Grab
321	5/24	1524			Comp/Grab
322	5/26	1526			Comp/Grab
323	5/28	1528			Comp/Grab
324	5/30	1530			Comp/Grab
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398					Comp/Grab
399					Comp/Grab
400					Comp/Grab

☒ Samples Received on Ice? ☐ No ☒ Yes
☐ Cooler/Sample Secure? ☒ Yes ☐ No
 Requested TAT 4 day
 Method of Shipment ☐ Bus ☒ FedEx ☐ Lone Star ☐ UPS ☐ Hand delivered ☐ DHL ☐ other ☐ #comments
 Tracking or Shipping Number 19754210748
☐ 2 Day ☐ 3 day ☐ next day
25c
003689
003233
003532
003688