



24 Smith Road, Suite 261  
Midland, Texas 79705  
(432) 684-9600 Fax (432) 684-9608

February 15, 2006

Key Energy Services, Inc  
6 Desta Drive Suite 4400  
Midland, Texas 79705  
Attn: Mr. Jason Henry

Phone: (432) 571-7141

Fax: (432) 571-7173

Re: Work Plan for Site Excavation / Restoration  
State "S" Brine Station  
Section 15, T21S, R37E, Unit Letter E  
Lea County, New Mexico  
3 miles north of Eunice, NM off County Road 207  
Terracon Project Number 94068105

2232425262728

Dear Mr. Henry

Terracon appreciates the opportunity to submit this workplan for the excavation, remediation, and site restoration at the above referenced site. This work plan includes the project information summary, preliminary site investigation review, and scope of services. The attachments include topographic and site maps, sampling data, contact information, NMOCD Form C-141, and photographs of the project site.

#### A. PROJECT INFORMATION SUMMARY

The State "S" Brine Station release site is located approximately 3 miles north of Eunice, New Mexico on Lea County Road 207. The leak occurred on January 26, 2006 and New Mexico Oil Conservation Division (NMOCD) Form C-141 was completed and filed with the Hobbs, New Mexico NMOCD office on January 26, 2006 by Key Energy personnel. The leak site is located on property owned by the Deck Estate.

An estimated 200 barrels of brine water spilled onto the station caliche pad and flowed north-easterly along a lease road and pasture land. Vacuum trucks were utilized to remove approximately 150 barrels of brine water from the road and pasture land. The cause of the spill was reported as equipment failure on the high water level indicator.

Arizona ■ Arkansas ■ California ■ Colorado ■ Georgia ■ Idaho ■ Illinois ■ Iowa ■ Kansas ■ Kentucky ■ Minnesota ■ Missouri  
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RP# 364

## **B. PRELIMINARY SITE INVESTIGATION REVIEW**

In an effort to minimize migration of brine impact to the environment, the decision was made to excavate all visually brine impacted areas in the flow path prior to the initial investigative soil sampling. RWI, Inc. of Hobbs, NM placed a One-Call for excavation and subsequent excavation of the brine impacted soil commenced on January 31, 2006. The visually impacted migration pathway of the spill (approximately two feet in width) through the pasture land was excavated to depths ranging from 18 to 24 inches below ground surface (bgs). Brine impacted soil along the lease road was excavated to depths ranging from six to 18 inches bgs. Approximately 400 cubic yards of brine impacted soil was excavated and transported to Sundance Disposal in Lea County NM.

The web site for the New Mexico Office of the State Engineer was utilized to research the average depth to groundwater in Lea County, T21S, R37E, Sections 9, 10, 11, 14, 15, 16, 21, 22, and 23. There is no recordable groundwater for section 15. The nearest recordable groundwater appears to be in excess of one mile away, to the west (Section 16) and south, (Sections 22 and 23) ranging from 53 to 70 feet bgs in depth. A visual search of the area showed no surface water or wells within a ½ mile radius of the site.

An email was sent to Mr. Paul Sheeley, NMOCD – Hobbs, NM on February 7, 2006 as notice of intent to collect initial investigation samples. There were 21 soil samples collected of the excavated areas with all samples being relinquished to Environmental Lab of Texas for analysis of chlorides using EPA Method 300.0. A site map showing sample locations is included in the attachments.

The laboratory results, from the initial investigative sampling, indicate a chloride content of the soil in the pasture land ranging from 19.7 mg/kg to 16,100 mg/kg. The laboratory results, from the initial investigative sampling, indicate a chloride content along the lease road ranging from 184 mg/kg to 3,090 mg/kg.

## **C. SCOPE OF SERVICES**

### **Excavation**

The initial excavation of impacted soil in the pasture land was to a depth of approximately 18 to 24 inches bgs. These areas are noted as sample points S-1 through S-7 on the site map. Further excavation of impacted soil will consist of removal of the top soil, down to the caliche layer, which appears to be approximately three to four feet bgs. Confirmation samples will be collected prior to backfill activities.

The initial excavation of impacted road base material was to a depth of approximately six to 18 inches bgs. These areas are noted as sample points RS-1 through RS-7 on the site map. Based on laboratory results, areas RS-5 and RS-6 will require further excavation of impacted material. These two areas will be excavated an additional 12 inches (approximate) from current ground level. Confirmation samples will be collected prior to rebuilding of the lease road.

The initial excavation of impacted caliche soil in excavation area #1 was to a depth of approximately 12 to 18 inches bgs. This area is noted as sample points BH-1-1 and BH-2-1 on the site map. Based on laboratory results, this area will require further excavation of impacted material. This area will be excavated to approximately 30 inches bgs. Confirmation samples will be collected prior to backfill activities.

The initial excavation of impacted soil in excavation area #3 was to a depth of approximately three feet bgs. This area is noted as sample points BH-1-3, NW-1-3, WW-1-3, and EW-1-3 on the site map. Based on laboratory results, the north wall (NW-1-3) and the west wall (WW-1-3) will require further excavation of impacted material. The north and west excavation walls will be expanded approximately twelve inches. Confirmation samples will be collected prior to backfill activities.

### **Remediation**

The excavated soil will be transported to Sundance Disposal facility in Lea County, NM for disposition.

### **Site Restoration**

Key will acquire backfill material pursuant to the Deck Estate requirements. The backfill material will be utilized for site restoration of the pasture land and to reconstruct the lease road. The site will be restored, as near possible, to the natural grade of the surrounding area and re-vegetated pursuant to land owner requirements.

### **Sampling Program**

Terracon's soil sampling program will consist of the following:

- Confirmation soil samples of the impacted areas will be collected until the target cleanup level of <1,000 mg/kg chlorides have been achieved.
- Confirmation soil samples of the pasture land, representative of the excavated area, will be collected, not to exceed 1,000 square feet per sample location, prior to backfill.
- Confirmation soil samples from the lease road, representative of the excavated area, will be collected, not to exceed 100 linear feet per sample location, prior to backfill.

- The NMOCD office in Hobbs, NM will be contacted prior to sample collections in the event a representative would like to be on location.

The soil samples collected will be placed in laboratory prepared containers, labeled, and placed on ice in a cooler. The samples and completed chain-of-custody forms will be transported to Environmental Lab of Texas (ELOT), in Odessa, Texas. Samples will analyzed for chlorides, using United States Environmental Protection Agency (EPA) Method 300.0. Laboratory analysis will be performed under standard laboratory turnaround time of 7 to 10 working days.

### **Preparation of Final Report**

Upon completion of site activities and receipt of the laboratory analytical results, a final report will be prepared that will include the following:

- Documentation of field activities;
- Site plan showing pertinent site features;
- Analytical laboratory results;
- Presentation of findings and conclusions.

Terracon is prepared to commence work on this project within 5 working days of authorization by Mr. Jason Henry with Key Energy Services, Inc. in the Midland, TX office. It is anticipated that the field activities will be completed in 10 to 15 days. The standard analytical turnaround time is 7 to 10 working days (expedited turnaround is available at an additional charge). Preliminary verbal results may be available within 24 hours of Terracon's receipt of laboratory analytical reports. The final written report will be available two weeks following Terracon's receipt of final laboratory analytical reporting. This written report will reflect final results, findings and recommendations, and, as such, will take precedence over any verbal reports that Terracon personnel may have provided. All field services will be performed under modified Level D safety personal protective equipment. The analysis, comments and recommendations presented in the written report will be based on the information collected as discussed in this workplan.

### **D. ASSUMPTIONS**

This work plan was prepared based on the following assumptions:

- Key Energy Services, Inc. will provide to Terracon, prior to mobilization, legal right of entry to the site (and other areas if required) to conduct the scope of services.
- Key Energy Services, Inc. will notify Terracon, prior to mobilization, of any restrictions, special site access requirements, or known potentially hazardous conditions at the site (e.g.,

hazardous materials or processes, specialized protective equipment requirements, unsound structural conditions, etc.)

- The One-Call-Notification for Excavation and marking of above and below ground facilities is the responsibility of RWI, Inc. Hobbs, NM. Utilities on private land that are not located by public companies will be located by property owner/operator. It is the responsibility of RWI, Inc. to conduct safe excavation activities around all utilities and according to OSHA guidelines for excavation.
- It is the responsibility of RWI, Inc. to acquire all necessary permits, licenses and documents to haul material from the location site to the Sundance Disposal facility, as needed.
- Work can be performed during normal business hours (Monday through Friday, 7:00 am to 7:00 pm).
- Traffic control services are not required.
- The site is readily accessible by truck.

If any of these assumptions or conditions are not accurate or change during the project, the stated fee is subject to change. Please contact us immediately if you are aware of any inaccuracies in these assumptions and conditions, so we may revise the workplan or fee.

#### **E. GENERAL COMMENTS**

This workplan is valid for 60 days. If this workplan meets with your approval, please sign notification to proceed in accordance with the Master Services Agreement between Key Energy Services, Inc. and Terracon and return a copy via fax at (432) 684-9608 or mail to our Midland Office at 24 Smith Road Suite 261, Midland, Texas 79705.

If you should have any questions or comments regarding this workplan, please contact either of the undersigned.

Sincerely,

**Terracon**



Barrett Bole, P.G.  
Sr. Project Manager  
Midland Office



Clayton McDonald  
Manager of Environmental Services  
Midland Office

Key Energy Services, Inc.  
State "S" Brine Station  
Eunice, Lea County, NM  
Terracon Project #94068105  
February 15, 2006

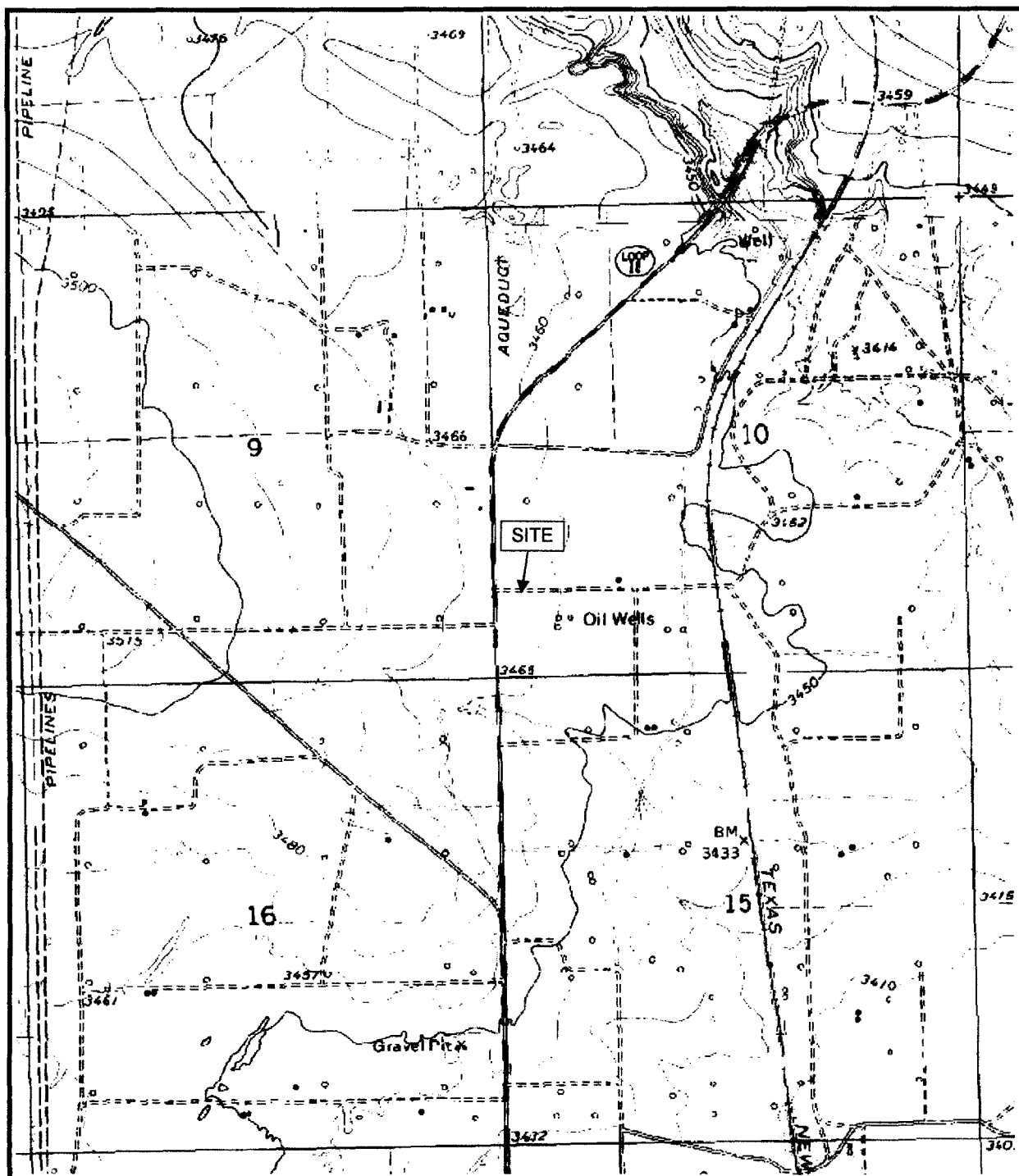
**Terracon**

## CONTACT LIST

Copy 1: Paul Sheeley  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division, District 1  
1625 French Drive  
Hobbs, NM 88240

Copy 2: Dan Gibson  
Key Energy Services, Inc.  
6 Desta Drive, Suite 440  
Midland, Texas 79705  
[dgibson@keyenergy.com](mailto:dgibson@keyenergy.com)

Copy 3: Clay McDonald  
Terracon  
24 Smith Road  
Suite 261  
Midland, TX 79705  
[camcdonald@terracon.com](mailto:camcdonald@terracon.com)



**USGS TOPOGRAPHIC QUADRANGLE MAP**

Eunice, NM

Dated 1977

SCALE: 1" = 2000'

PROJECT NO. 94068105

**Terracon**



**Key Energy Services, Inc**

State "S" Brine Station

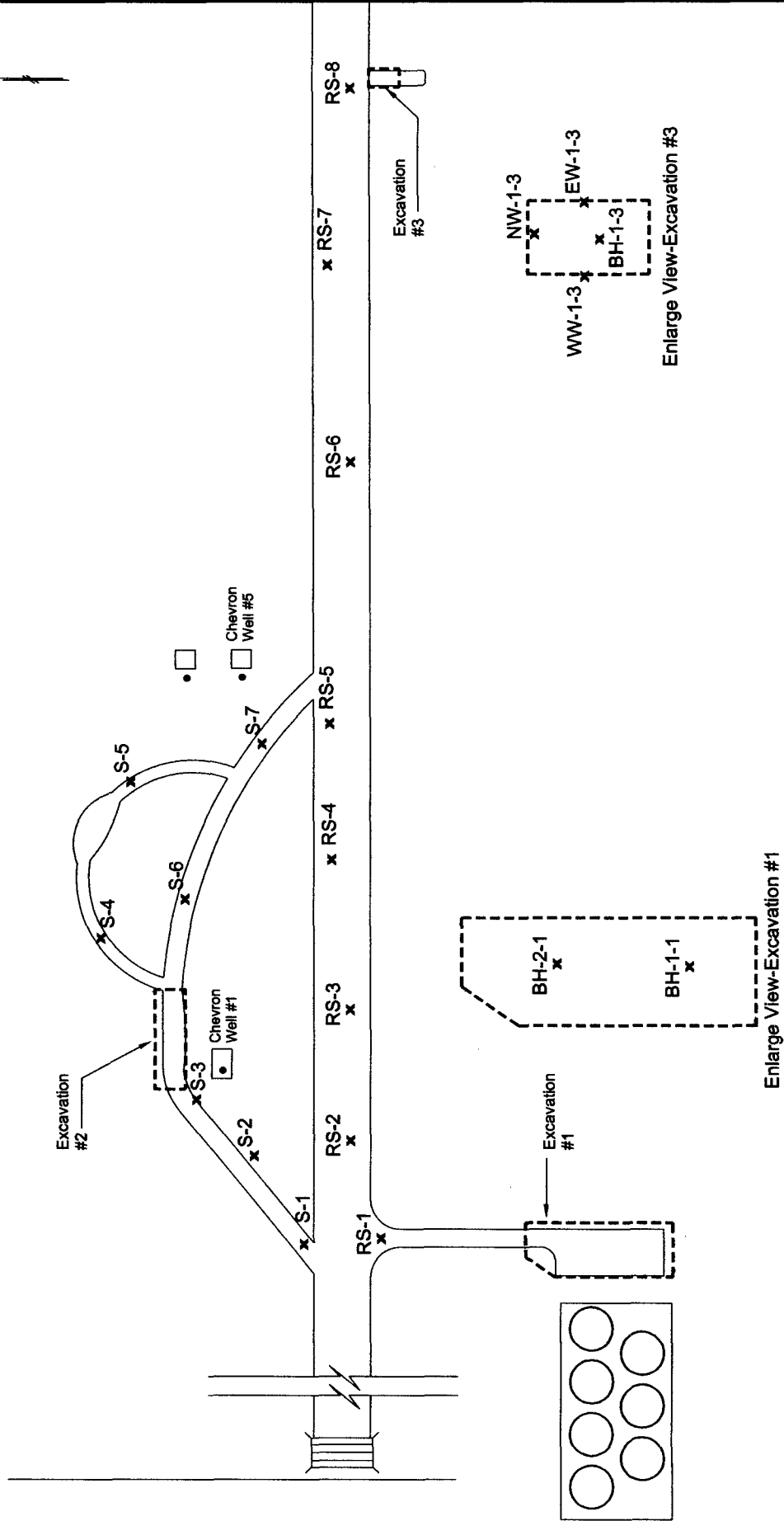
Lea County, New Mexico

Approximately 3 miles North of Eunice NM

**FIGURE 1: TOPOGRAPHIC MAP**



Enlarge View-Excavation #2



KEY ENERGY SERVICES, INC.  
STATE "S" BRINE STATION  
EUNICE, LEA COUNTY, NEW MEXICO

0 50 100 FEET  
APPROXIMATE SCALE

THIS DRAWING SHOULD  
NOT BE USED SEPARATELY  
FROM ORIGINAL REPORT.

**Table 1**

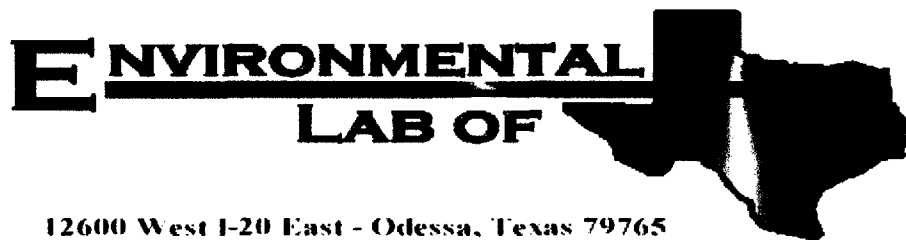
**CONCENTRATIONS OF CHLORIDE IN SOIL**

**Key Energy Services, Inc.  
State "S" Brine Station  
Eunice, Lea County, New Mexico  
Terracon Project Number 94068105**

*All concentrations are in mg/kg*

<b>SAMPLE DATE</b>	<b>SAMPLE LOCATION</b>	<b>EPA 300.0</b>
02/08/06	RS-1	<b>1,030.00</b>
	RS-2	184.00
	RS-3	420.00
	RS-4	547.00
	RS-5	<b>3,090.00</b>
	RS-6	<b>1,510.00</b>
	RS-7	443.00
	RS-8	23.40
	S-1	<b>9,850.00</b>
	S-2	<b>6,960.00</b>
	S-3	<b>5,000.00</b>
	S-4	<b>11,800.00</b>
	S-5	19.70
	BH-1-1	<b>3,370.00</b>
	BH-2-1	<b>1,100.00</b>
	S-6	<b>11,600.00</b>
	S-7	<b>16,100.00</b>
	NW-1-3	<b>6,240.00</b>
	WW-1-3	<b>5,600.00</b>
	EW-1-3	44.10
	BH-1-3	736.00

**CONCENTRATIONS IN BOLD ARE ABOVE THE TARGET CLEANUP  
LEVEL OF <1,000 mg/kg.**



## Analytical Report

**Prepared for:**

Clay McDonald

Terracon Consulting, Inc.

24 Smith Road, Ste. 261

Midland, TX 79705

Project: Key Energy State S Brine Station

Project Number: 94068105

Location: None Given

Lab Order Number: 6B09001

Report Date: 02/10/06

Terracon Consulting, Inc.  
24 Smith Road, Ste. 261  
Midland TX, 79705

Project: Key Energy State S Brine Station  
Project Number: 94068105  
Project Manager: Clay McDonald

Fax: (432) 684-9608

Reported:  
02/10/06 10:12

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RS-1	6B09001-01	Soil	02/08/06 09:45	02/09/06 08:00
RS-2	6B09001-02	Soil	02/08/06 10:45	02/09/06 08:00
RS-3	6B09001-03	Soil	02/08/06 10:50	02/09/06 08:00
RS-4	6B09001-04	Soil	02/08/06 10:55	02/09/06 08:00
RS-5	6B09001-05	Soil	02/08/06 11:00	02/09/06 08:00
RS-6	6B09001-06	Soil	02/08/06 11:05	02/09/06 08:00
RS-7	6B09001-07	Soil	02/08/06 11:10	02/09/06 08:00
RS-8	6B09001-08	Soil	02/08/06 11:15	02/09/06 08:00
S-1	6B09001-09	Soil	02/08/06 09:25	02/09/06 08:00
S-2	6B09001-10	Soil	02/08/06 09:30	02/09/06 08:00
S-3	6B09001-11	Soil	02/08/06 09:36	02/09/06 08:00
S-4	6B09001-12	Soil	02/08/06 09:38	02/09/06 08:00
S-5	6B09001-13	Soil	02/08/06 09:40	02/09/06 08:00
BH-1-1	6B09001-14	Soil	02/08/06 10:00	02/09/06 08:00
BH-2-1	6B09001-15	Soil	02/08/06 10:05	02/09/06 08:00
S-6	6B09001-16	Soil	02/08/06 12:45	02/09/06 08:00
S-7	6B09001-17	Soil	02/08/06 12:50	02/09/06 08:00
NW-1-3	6B09001-18	Soil	02/08/06 13:45	02/09/06 08:00
WW-1-3	6B09001-19	Soil	02/08/06 13:50	02/09/06 08:00
EW-1-3	6B09001-20	Soil	02/08/06 13:55	02/09/06 08:00
BH-1-3	6B09001-21	Soil	02/08/06 14:00	02/09/06 08:00

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Reported:  
02/10/06 10:12

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>RS-1 (6B09001-01) Soil</b>									
Chloride	1030	5.00	mg/kg	10	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>RS-2 (6B09001-02) Soil</b>									
Chloride	184	10.0	mg/kg	20	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>RS-3 (6B09001-03) Soil</b>									
Chloride	420	10.0	mg/kg	20	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>RS-4 (6B09001-04) Soil</b>									
Chloride	547	10.0	mg/kg	20	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>RS-5 (6B09001-05) Soil</b>									
Chloride	3090	50.0	mg/kg	100	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>RS-6 (6B09001-06) Soil</b>									
Chloride	1510	25.0	mg/kg	50	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>RS-7 (6B09001-07) Soil</b>									
Chloride	443	10.0	mg/kg	20	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>RS-8 (6B09001-08) Soil</b>									
Chloride	23.4	5.00	mg/kg	10	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>S-1 (6B09001-09) Soil</b>									
Chloride	9850	200	mg/kg	400	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>S-2 (6B09001-10) Soil</b>									
Chloride	6960	100	mg/kg	200	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>S-3 (6B09001-11) Soil</b>									
Chloride	5000	100	mg/kg	200	EB61003	02/10/06	02/10/06	EPA 300.0	

Environmental Lab of Texas

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Midland TX, 79705

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Project Number: 94068105  
Project Manager: Clay McDonald

Fax: (432) 684-9608

Reported:  
02/10/06 10:12

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>S-4 (6B09001-12) Soil</b>									
Chloride	11800	200	mg/kg	400	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>S-5 (6B09001-13) Soil</b>									
Chloride	19.7	5.00	mg/kg	10	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>BH-1-1 (6B09001-14) Soil</b>									
Chloride	3370	100	mg/kg	200	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>BH-2-1 (6B09001-15) Soil</b>									
Chloride	1100	20.0	mg/kg	40	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>S-6 (6B09001-16) Soil</b>									
Chloride	11600	500	mg/kg	1000	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>S-7 (6B09001-17) Soil</b>									
Chloride	16100	200	mg/kg	400	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>NW-1-3 (6B09001-18) Soil</b>									
Chloride	6240	100	mg/kg	200	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>WW-1-3 (6B09001-19) Soil</b>									
Chloride	5600	100	mg/kg	200	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>EW-1-3 (6B09001-20) Soil</b>									
Chloride	44.1	5.00	mg/kg	10	EB61003	02/10/06	02/10/06	EPA 300.0	
<b>BH-1-3 (6B09001-21) Soil</b>									
Chloride	736	20.0	mg/kg	40	EB61008	02/10/06	02/10/06	EPA 300.0	

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Fax: (432) 684-9608

Reported:  
02/10/06 10:12

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EB61003 - Water Extraction</b>									
<b>Blank (EB61003-BLK1)</b>				Prepared & Analyzed: 02/10/06					
Chloride	ND	0.500	mg/kg						
<b>LCS (EB61003-BS1)</b>				Prepared & Analyzed: 02/10/06					
Chloride	9.20		mg/L	10.0		92.0	80-120		
<b>Calibration Check (EB61003-CCV1)</b>				Prepared & Analyzed: 02/10/06					
Chloride	9.58		mg/L	10.0		95.8	80-120		
<b>Duplicate (EB61003-DUP1)</b>				<b>Source: 6B09001-11</b>		Prepared & Analyzed: 02/10/06			
Chloride	5290	100	mg/kg		5000		5.64	20	
<b>Batch EB61008 - Water Extraction</b>									
<b>Blank (EB61008-BLK1)</b>				Prepared & Analyzed: 02/10/06					
Chloride	ND	0.500	mg/kg						
<b>LCS (EB61008-BS1)</b>				Prepared & Analyzed: 02/10/06					
Chloride	9.22		mg/L	10.0		92.2	80-120		
<b>Calibration Check (EB61008-CCV1)</b>				Prepared & Analyzed: 02/10/06					
Chloride	9.16		mg/L	10.0		91.6	80-120		
<b>Duplicate (EB61008-DUP1)</b>				<b>Source: 6B09001-21</b>		Prepared & Analyzed: 02/10/06			
Chloride	759	20.0	mg/kg		736		3.08	20	

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### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:

*Raland K. Tuttle*

Date:

2/10/2006

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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Page 5 of 5

# Terracon

Consulting Engineers & Scientists

Office Location Midland TXLaboratory: GLT

Address: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

Project Manager Clay McDonaldPO/ISO # Key Energy Services Inc.

Sampler's Name

Sampler's Signature

B. WilkBrandon WilsonProj. No. 94068105 Project Name Key Energy State "S" Brine Station No/Type of Containers 21/4oz. JarsMatrix S Date 7-8-06 Time 09:45 Identifying Marks of Sample(s) RS-1 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 10:45 Identifying Marks of Sample(s) RS-2 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 10:50 Identifying Marks of Sample(s) RS-3 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 10:55 Identifying Marks of Sample(s) RS-4 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 11:00 Identifying Marks of Sample(s) RS-5 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 11:05 Identifying Marks of Sample(s) RS-6 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 11:10 Identifying Marks of Sample(s) RS-7 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 11:15 Identifying Marks of Sample(s) RS-8 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 09:25 Identifying Marks of Sample(s) S-1 VOA 21/4oz. Jars A/G 1 L P/O mlMatrix S Date 7-8-06 Time 09:30 Identifying Marks of Sample(s) S-2 VOA 21/4oz. Jars A/G 1 L P/O mlTurn around time ☐ Normal ☐ 25% Rush ☐ 50% Rush ☒ 100% RushRelinquished by (Signature) B. Wilk Date 7-8-06 Time 09:00 Received by (Signature) Clay McDonald Date 7-8-06 Time 08:00

Relinquished by (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Relinquished by (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

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Relinquished by (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Relinquished by (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received by (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

ANALYSIS  
REQUESTED

Chlorides

Lab use only  
Due Date:Temp. of coolers  
when received: 0.5°

1 2 3 4 5

Page 1 of 3

Lab Sample ID (Lab Use Only)

10807001-01-02-03-04-05-06-07-08-0970

NOTES:

SL - sludge O - Oil

C - Charcoal tube  
P/O - Plastic or otherA - Air Bag  
L - Liquid  
250 ml - Glass wide mouthS - Soil  
SD - Solid  
1 LiterW - Water  
A/G - Amber / Or GlassWM - Wastewater  
VOA - 40 ml vialHouston Office  
11555 City Road, Suite 100  
Houston, Texas 77043  
(713) 690-8989 Fax (713) 690-8787Dallas Office  
8901 Carpenter Freeway, Suite 100  
Dallas, Texas 75247  
(214) 630-1010 Fax (214) 630-7070Fort Worth Office  
2601 Gravel Drive  
Fort Worth, Texas 76118  
(817) 268-8600 Fax (817) 268-8602Austin Office  
5307 Industrial Oaks Blvd # 160  
Austin, Texas 78735  
(512) 442-1122 Fax (512) 442-1181Midland Office  
24 Smith Rd., # 263  
Midland, Texas 79705  
(432) 684-9600 Fax (432) 684-9608

# Terracon

Consulting Engineers & Scientists

Office Location Mallard TXProject Manager Clay McDonaldSampler's Name Branden WilsonPO/SO #: Key Energy Services Inc.Sampler's Signature B. WilsonLaboratory: ELOT

Address: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

ANALYSIS  
REQUESTEDLab use only  
Due Date: \_\_\_\_\_Temp. of coolers  
when received 0.5

1 2 3 4 5

Page 2 of 3

Proj. No.		Project Name		No/Type of Containers				Chlorides	Lab Sample ID (Lab Use Only)			
Matrix	Date	Time	Comp	G	Identifying Marks of Sample(s)	Depth Start	Depth End			VOA	A/G 1 L	250 ml
S	2-8-06	09:36			S-3							6B09001-11
		09:38			S-4							-12
		09:46			S-5							-13
		10:00			BH-1-1							-14
		10:05			BH-2-1							-15
		12:45			S-6							-16
		12:50			S-7							-17
		13:45			NW-1-3							-18
		13:50			WW-1-3							-19
		13:55			EW-1-3							-20

Lab Sample ID (Lab Use Only)

6809001-11  
-12  
-13  
-14  
-15  
-16  
-17  
-18  
-19  
-20

Turn around time ☐ Normal ☐ 25% Rush ☒ 50% Rush ☒ 100% RushRelinquished by (Signature) B. WilsonDate: 2/8/06Time: 08:00Received by: (Signature) Calvin E. 7-20Date: 2-9-06Time: 0800

NOTES:

Relinquished by (Signature) \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Relinquished by (Signature) \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Relinquished by (Signature) \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Matrix WW - WastewaterContainer VOA - 40 ml vial

W - Water

A/G - Amber / Or Glass

SD - Solid

1 Liter

L - Liquid

250 ml

A - Air Bag

Glass wide mouth

C - Charcoal tube

P/O - Plastic or other

SL - sludge

O - Oil

Houston Office

11555 Clay Road, Suite 100

Houston, Texas 77043

(713) 690-8989 Fax (713) 690-8787

Dallas Office

8901 Carpenter Freeway, Suite 100

Dallas, Texas 75247

(214) 610-1010 Fax (214) 610-7070

Fort Worth Office

2601 Gravel Drive

Fort Worth, Texas 76118

(817) 268-8600 Fax (817) 268-8602

Austin Office

5307 Industrial Oaks Blvd. # 160

Austin, Texas 78735

(512) 442-1122 Fax (512) 442-1181

Midland Office

24 Smith Rd. # 261

Midland, Texas 79705

(432) 684-9600 Fax (432) 684-9608

# Terracon

Consulting Engineers & Scientists

Office Location Midland TXProject Manager Clay McDonald

Sampler's Name

Brandon Wilson

Project Name

Key Energy State "S" Brine Station

No/Type of Containers

21 / 4oz. Jars

Identifying Marks of Sample(s)

VOA

AVG

250

P/O

ml

Date

2-8-06

Time

14:00

Matrix

S

Turn around time

14:00

Relinquished by (Signature)

[Signature]

Date

2-9-06

Time

0800

Relinquished by (Signature)

[Signature]

Date

2-9-06

Time

0800

Relinquished by (Signature)

[Signature]

Date

2-9-06

Time

0800

Relinquished by (Signature)

[Signature]

Date

2-9-06

Time

0800Laboratory: GLOT

Address:

Contact:

Phone:

PO/SO #: Key Energy Services Inc.

Sampler's Signature

[Signature]

No/Type of Containers

21 / 4oz. Jars

Identifying Marks of Sample(s)

VOA

AVG

250

P/O

ml

Date

2-8-06

Time

14:00

Matrix

S

Turn around time

14:00

Relinquished by (Signature)

[Signature]

Date

2-9-06

Time

0800

Relinquished by (Signature)

[Signature]

Date

2-9-06

Time

0800

Relinquished by (Signature)

[Signature]

Date

2-9-06

Time

0800

Relinquished by (Signature)

[Signature]

Date

2-9-06

Time

0800

Relinquished by (Signature)

[Signature]0800

ANALYSIS REQUESTED

Chlorides

X

Lab use only

Due Date:

Temp. of coolers  
when received (C): 0.5Page 3 of 3

Lab Sample ID (Lab Use Only)

10B99001-21

Houston Office  
11555 Clay Road, Suite 100  
Houston, Texas 77043  
(713) 690-8989 Fax (713) 690-8787

Dallas Office  
8901 Carpenter Freeway, Suite 100  
Dallas, Texas 75247  
(214) 630-1010 Fax (214) 630-7070

Fort Worth Office  
2601 Gravel Drive  
Fort Worth, Texas 76118  
(817) 268-8600 Fax (817) 268-8602

Austin Office  
5307 Industrial Oaks Blvd. # 160  
Austin, Texas 78735  
(512) 442-1122 Fax (512) 442-1121

Midland Office  
24 Smith Rd., # 261  
Midland, Texas 79705  
(432) 684-9600 Fax (432) 684-9608

**Environmental Lab of Texas**  
**Variance / Corrective Action Report – Sample Log-In**

Client: Terracon

Date/Time: 2/9/06 8:00

Order #: 6809001

Initials: CK

**Sample Receipt Checklist**

Temperature of container/cooler?	Yes	No	0.5 C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	<del>Not present</del>
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/> Yes	No	Not present
Chain of custody present?	<input checked="" type="checkbox"/> Yes	No	
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/> Yes	No	
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/> Yes	No	
Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	No	
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/> Yes	No	
Samples in proper container/bottle?	<input checked="" type="checkbox"/> Yes	No	
Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No	
Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No	
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No	
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/> Yes	No	
All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No	
VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	No	Not Applicable

Other observations:

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**Variance Documentation:**

Contact Person: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_  
 Regarding: \_\_\_\_\_

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Corrective Action Taken:

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**New Mexico Office of the State Engineer**  
**POD Reports and Downloads**

Township:  Range:  Sections:

NAD27 X:  Y:  Zone:  Search Radius:

County:  Basin:  Number:  Suffix:

Owner Name: (First)  (Last)  ☐ Non-Domestic  
☐ Domestic ☐ All

POD / Surface Data Report Avg Depth to Water Report Water Column Report

**AVERAGE DEPTH OF WATER REPORT 02/08/2006**

								(Depth Water in	
								Feet)	
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max
Avg									
CP	21S	37E	16				1	70	70
70									
CP	21S	37E	22				1	53	53
53									
CP	21S	37E	23				1	65	65
65									
CP	21S	37E	23		924000	6600000	1	65	65
65									

Record Count: 4

Key Energy Services, Inc.

State "S" Brine Station

Eunice, Lea County, NM

Excavation activities of spill area on location along flow path



Key Energy Services, Inc.

State "S" Brine Station

Eunice, Lea County, NM

Excavation activities of spill area on location along flow path



↑ E

Key Energy Services, Inc.  
State "S" Brine Station  
Eunice, Lea County, NM

Excavation activities of spill area on location along flow path

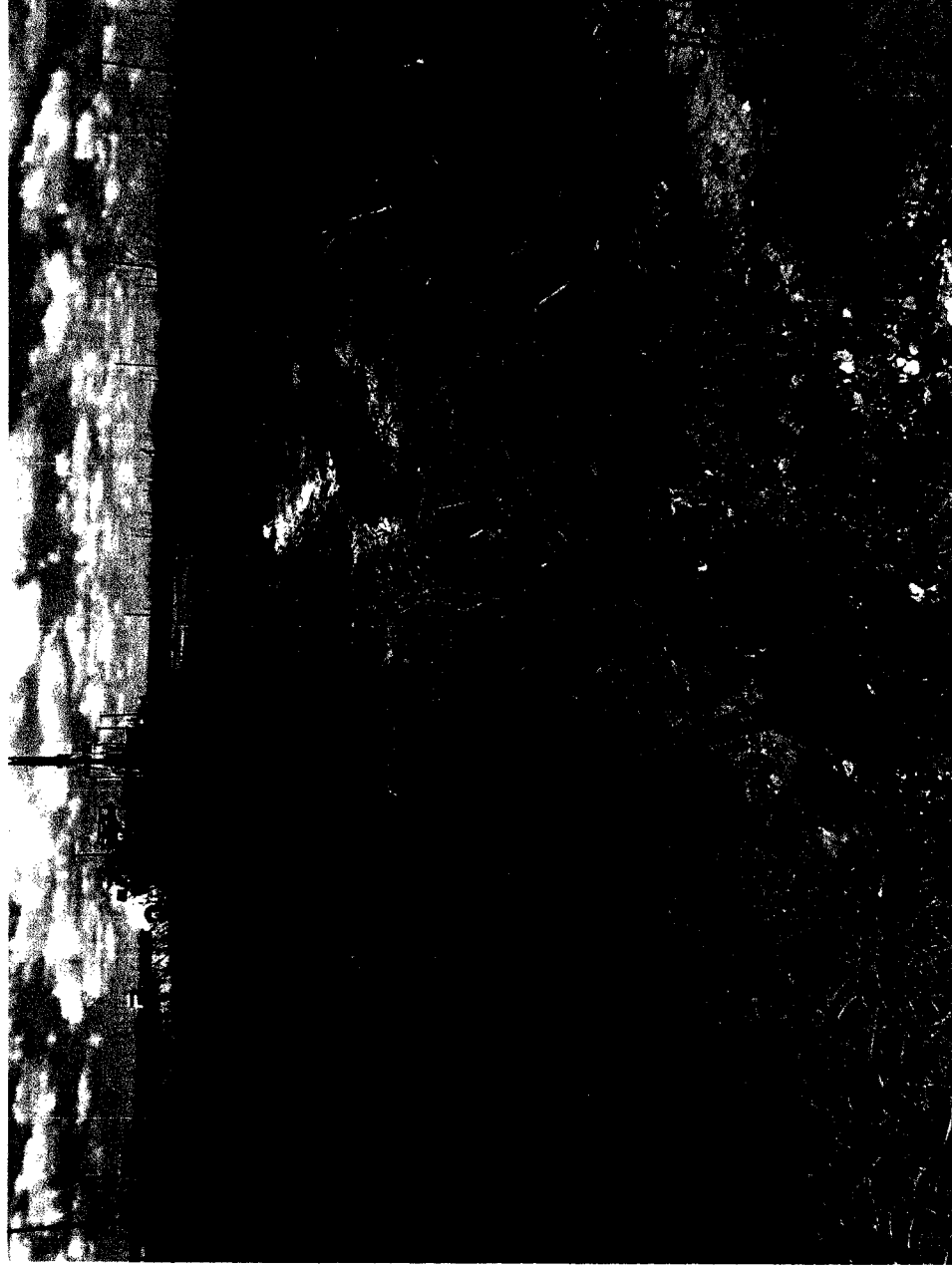


Key Energy Services, Inc.

State "S" Brine Station

Eunice, Lea County, NM

Excavation activities of spill area in pasture land along flow path



↑  
W

Key Energy Services, Inc.  
State "S" Brine Station  
Eunice, Lea County, NM

Excavation activities of spill area in pasture land along flow path



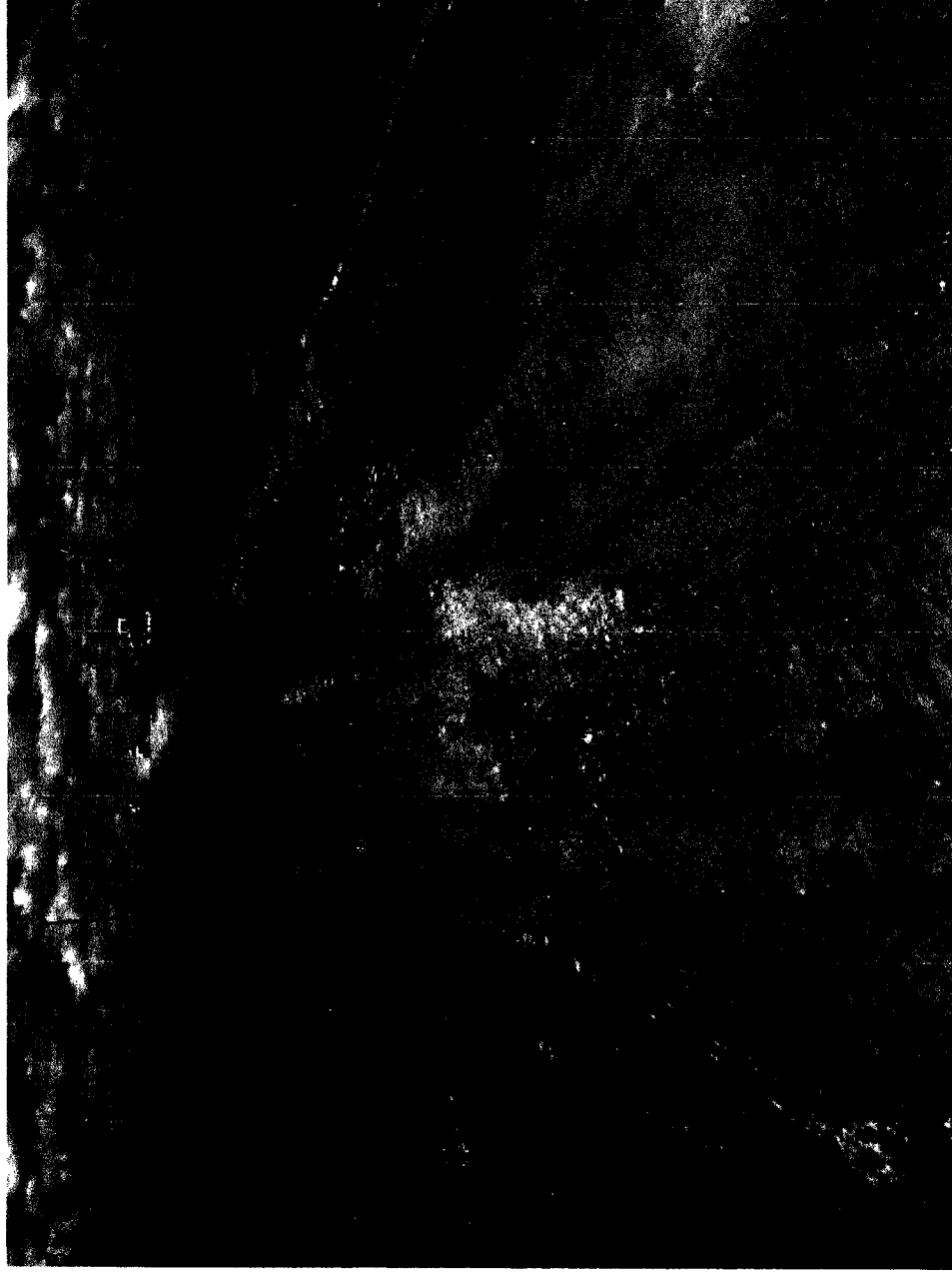
↑  
E

Key Energy Services, Inc.

State "S" Brine Station

Eunice, Lea County, NM

Excavation activities at east end of spill area on roadway



↑  
W

Key Energy Services, Inc.

State "S" Brine Station

Eunice, Lea County, NM

Excavation activities at east end of spill area on roadway



↑  
W

Key Energy Services, Inc.  
State "S" Brine Station  
Eunice, Lea County, NM  
Excavation activities at east end of spill area



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised March 17, 1999

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

Release Notification and Corrective Action

Name of Company <b>KEY ENERGY SERVICE</b>		Contact <b>Sam BLEVINS</b>	
Address <b>2105 AVE O</b>		Telephone No. <b>505-394-2581</b>	
Facility Name <b>KEY ENERGY</b>		Facility Type <b>TRUCKING</b>	
Surface Owner <b>DECK ESTATE</b>	Mineral Owner <b>STATE OF NEW MEXICO</b>	Lease No. <b>#1</b>	

LOCATION OF RELEASE

Unit Letter <b>E</b>	Section <b>15</b>	Township <b>21S</b>	Range <b>37E</b>	Feet from the	North/South Line	Feet from the	East/West Line	County <b>LEA</b>
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NATURE OF RELEASE

Type of Release <b>BRINE SPILL</b>	Volume of Release <b>APPROX 200 BBL</b>	Volume Recovered <b>150 BBL</b>
Source of Release <b>TANK OVERFLOW</b>	Date and Hour of Occurrence <b>1-26-06 700am</b>	Date and Hour of Discovery <b>1-26-06 700am</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>OCD - KEY ENERGY - DECK ESTATE</b>	
By Whom? <b>SAM BLEVINS - EDDY FABELA</b>	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

VALVE WAS SHUT TO TANK LEVEL + ALARM SYSTEM, WHILE EMPLOYEE WAS WORKING ON TANK CONNECTION, EMPLOYEE FAILED TO RE-OPEN VALVE. TANK HAD NO HIGH LEVEL ALARM DUE TO VALVE.

Describe Area Affected and Cleanup Action Taken.\*

DICK UP FLUID WITH VACUUM TRUCK. RWTI WILL CLEAN UP AFFECTED AREA + REPLACE WITH NEW 900' X 5' DOWN ROAD + PAD. CALICHE.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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 <b>Sam Blevins</b>	OIL CONSERVATION DIVISION	
Printed Name: <b>SAM BLEVINS</b>	Approved by District Supervisor: <b>ENRIQUE JOHNSON</b>	
Title: <b>YARD MANAGER</b>	Approval Date: <b>6.5.07</b>	Expiration Date: <b>8.5.07</b>
Date: <b>1-26-06</b>	Phone: <b>394-2581</b>	Conditions of Approval: <b>*</b>
		Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

RP#366

\* FINAL REPORT REQUIRED BY  
NEED DOCUMENTATION SHOWING WHAT  
CONTAMINATION WAS REMOVED +  
ANY THAT IS IN SITU. NEED VERIFICATION  
OF OCD PERSON THAT APPROVED WORK PLAN.