1R - 242

REPORTS

DATE:

2000

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
(210) 680-3763 FAX

April 26, 2000

Mr. Randall Dunn
SID RICHARDSON GASOLINE COMPANY
P. O. Box 1226
Jal, New Mexico 88252

Re: Closure Report
J. Anthony Ranch Historical Release Site JAR-3
Unit Letter A, Section 36, Township 25 South, Range 37 East
Lea County, New Mexico
Job No. 960001-20

Dear Mr. Dunn:

Transmitted with this letter is the Closure Report for the Sid Richardson Gasoline Company J. Anthony Ranch Historical Release Site JAR-3. The site is located approximately 2 miles southwest of State Highway 205 and Whitworth Drive near Jal, Lea County, New Mexico.

Please contact me at (210) 680-3767 if you have any questions.

Respectfully,

Theresa Nix

Theresa Nix
Project Manager

Enclosure

cc: William C. Olson, OCD Santa Fe
Chris Williams, OCD Hobbs

tln\p:\sidrichardson\960001\closures\rclosureJAR3.doc

5309 Wurzbach, Suite 100
San Antonio, Texas 78238
(210) 680-3767
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CLOSURE REPORT

SID RICHARDSON GASOLINE COMPANY
J. ANTHONY RANCH HISTORICAL RELEASE SITE JAR-3
UNIT LETTER A, SECTION 36
TOWNSHIP 25 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

PREPARED FOR:

SID RICHARDSON GASOLINE COMPANY
P. O. Box 1226
Jal, New Mexico 88252

Mr. Randall Dunn

PREPARED BY:

KEI

Theresa Nix
Project Manager

Michael J. Lewis, P.E.
Senior Engineer

KEI Job No. 960001-20

April 26, 2000

TABLE OF CONTENTS

PURPOSE AND SCOPE

The objective of the site closure activities was to obtain closure for the site based on New Mexico Oil Conservation Division (OCD) regulations. The following activities were performed to achieve this objective:

- determination of closure standards
- removal of impacted soil
- characterization of removed impacted soil
- off-site disposal of impacted soil
- sampling remaining soils to verify closure levels
- backfilling the excavation with clean soil
- planting grass seed and irrigating to re-establish vegetative growth

SITE BACKGROUND

The Sid Richardson Gasoline Company (SRGC), J. Anthony Ranch release site JAR-3, is located 2 miles southwest of State Highway 205 and Whitworth Drive near Jal, Lea County, New Mexico. The site is located in Unit Letter A, Section 36, Township 25 South, Range 37 East. A site location map is presented as FIG. 1.

The landowner notified SRGC of the area that would not sustain vegetative growth. According to the landowner, the release occurred approximately 25 years ago.

SRGC collected a soil sample from the site on April 26, 1999. The sample was submitted to Trace Analysis Inc. for determination of total petroleum hydrocarbons (TPH) and chloride concentrations. Laboratory results indicated a TPH concentration of 6,720 mg/kg and a chloride concentration of 34 mg/kg. The laboratory report is presented in APPENDIX A.

SRGC contracted KEI to determine vertical and horizontal extent, to confirm maximum TPH concentration, and to determine site closure concentrations. Site details are presented on FIG. 2.

CLOSURE ACTIVITIES

CLOSURE STANDARDS

The New Mexico OCD Guidelines for Remediation of Leaks, Spills, and Releases contains the standard criteria for remediation activities. A ranking analysis for the site was performed to determine appropriate soil remediation levels. The ranking analysis is as follows:

Depth to Ground Water	Greater Than 100 Feet	0 Points
Well Head Protection	Greater Than 1000 Feet to Water Source Greater Than 200 Feet to Private Water Source	0 Points
Surface Water Body	Greater Than 1000 Feet	0 Points
	Total Ranking Score	**0 Points**

Depth to ground water was confirmed by an actual reading obtained at a cathodic ground bed well located approximately 200 yards south of the site. Based on the total ranking score, the closure objectives for this site for concentrations of benzene, BTEX, and TPH in soil are summarized below.

CONSTITUENT	CLOSURE CONCENTRATIONS (mg/kg)
BENZENE	10
BTEX	50
TPH	5,000

INITIAL INVESTIGATION

On June 14, 1999, 4 soil borings were advanced using a hand auger to obtain soil samples for vertical and horizontal delineation of the impacted area. A photo-ionization detector (PID) was utilized to evaluate the impact at selected intervals in each boring. The PID readings for each boring are presented in the following table.

BORING ID	DEPTH (feet)	PID READING (ppm)
B-1	0.5	4.1
	2.0	17.7
	4.0	13.6
	5.0	ND
B-2	0.5	0.8
	2.0	1.2
B-3	0.5	2.4
	2.0	1.2
B-4	0.5	2.8
	2.0	0.8

Soil samples obtained from boring B-1 at 2 feet and 5 feet below ground surface were also submitted to Xenco Laboratories, Inc. in San Antonio, Texas. The samples were each analyzed for total petroleum hydrocarbons (TPH) concentrations using EPA Method 418.1. The results are presented in the table below.

SAMPLE LOCATION	DEPTH (feet)	TPH CONCENTRATION (mg/kg)
B-1	2.0	2,100
B-1	5.0	<10.0

A composite sample obtained from boring B-1 was submitted to Xenco Laboratories for determination of chloride, sulfate, ammonia-nitrogen, and sulfide concentrations using EPA Methods 300.0, 350.2, and 376.2. The ammonia-nitrogen and sulfides concentrations were below laboratory reporting limits. The chloride and sulfate concentrations are presented in the following table.

SAMPLE LOCATION	CHLORIDE CONCENTRATION (mg/kg)	SULFATE CONCENTRATION (mg/kg)
B-1	30	4,530

A background sample was obtained from an unaffected area in the site vicinity and submitted to Xenco Laboratories for determination of chloride, sulfate, ammonia-nitrogen, and sulfide concentrations using EPA Methods 300.0, 350.2, and 376.2. The ammonia-nitrogen and sulfide concentrations were below laboratory reporting limits. The chloride and sulfate concentrations are presented in the following table.

SAMPLE LOCATION	CHLORIDE CONCENTRATION (mg/kg)	SULFATE CONCENTRATION (mg/kg)
Background	5	39

Analytical results from the soil samples are summarized in TABLE I. Soil analytical reports are presented in APPENDIX A.

EXCAVATION, BACKFILL, AND DISPOSAL

The maximum TPH concentration obtained during the soil boring investigation was 2,100 mg/kg, which is below closure concentration for the site. However, the landowner required removal of all stained or discolored soil and replacement with soil capable of sustaining vegetative growth.

The stained surface soils were excavated on August 13, 1999 using a front loader to remove surface sands to reveal the impacted area. The Sid Richardson Gasoline Company's 4 inch gas pipeline was buried at an approximate depth of 3 feet below ground surface. A backhoe was used to excavate around the pipeline to a maximum depth of 8 feet. The remainder of the impacted soils were removed with the front loader. Excavated soil was stockpiled on-site pending transport to the disposal site. The measurements of the excavation and soils removed are summarized below:

MEASUREMENT	VALUE
Length	25 feet
Width	20 feet
Excavated Area	Approximately 500 square feet
Maximum Depth	Approximately 8 feet
Volume Disposed	Approximately 100 cubic yards
Fresh Soil Hauled to Site	Approximately 100 cubic yards
Assumed Depth to Water	185 feet

Permission was obtained from the Oil Conservation Division to use the excavated soil for fill material at the Sid Richardson Shoals Compressor site since the soil did not exceed closure concentrations. Prior to using the soil for berm fill material at the Shoals Compressor site, a composite sample was obtained from all the soils that had been hauled to the site. The sample was submitted to Environmental Lab of Texas, Inc. for determination of TPH

concentration using EPA Method 418.1. The TPH concentration is presented in the following table.

SAMPLE LOCATION	TPH CONCENTRATION (mg/kg)
Shoals Compressor Site	<10

Analytical results from the soil sample is summarized in TABLE I. Soil analytical reports are presented in APPENDIX A.

Native silty sand soil from an unaffected borrow pit area of the J. Anthony Ranch was obtained from the landowner and used to backfill the excavation site. On August 18, 1999, approximately 100 yards of soil was used to backfill the excavation. Site photographs are presented in APPENDIX B.

CONFIRMATION SAMPLING

One composite confirmation soil sample was obtained from the excavation floor and sidewalls on August 13, 1999. Several random grab samples were composited into a plastic container and analyzed with a PID instrument. The PID reading was non-detectable.

The composite sample was placed into a glass container provided by the laboratory and submitted to Environmental Labs of Texas, Inc. for determination of Total Petroleum Hydrocarbon (TPH) concentration using EPA Method 418.1 and sulfates concentrations using EPA Method SW846-9038. The concentration results are presented below:

SOIL CONSTITUENT	TPH (mg/kg)	SULFATES (mg/kg)
Bottom	ND	1,358

Soil analytical results are summarized in TABLE I. Soil analytical reports are presented in APPENDIX A. The soil sample location and result is presented on FIG. 2.

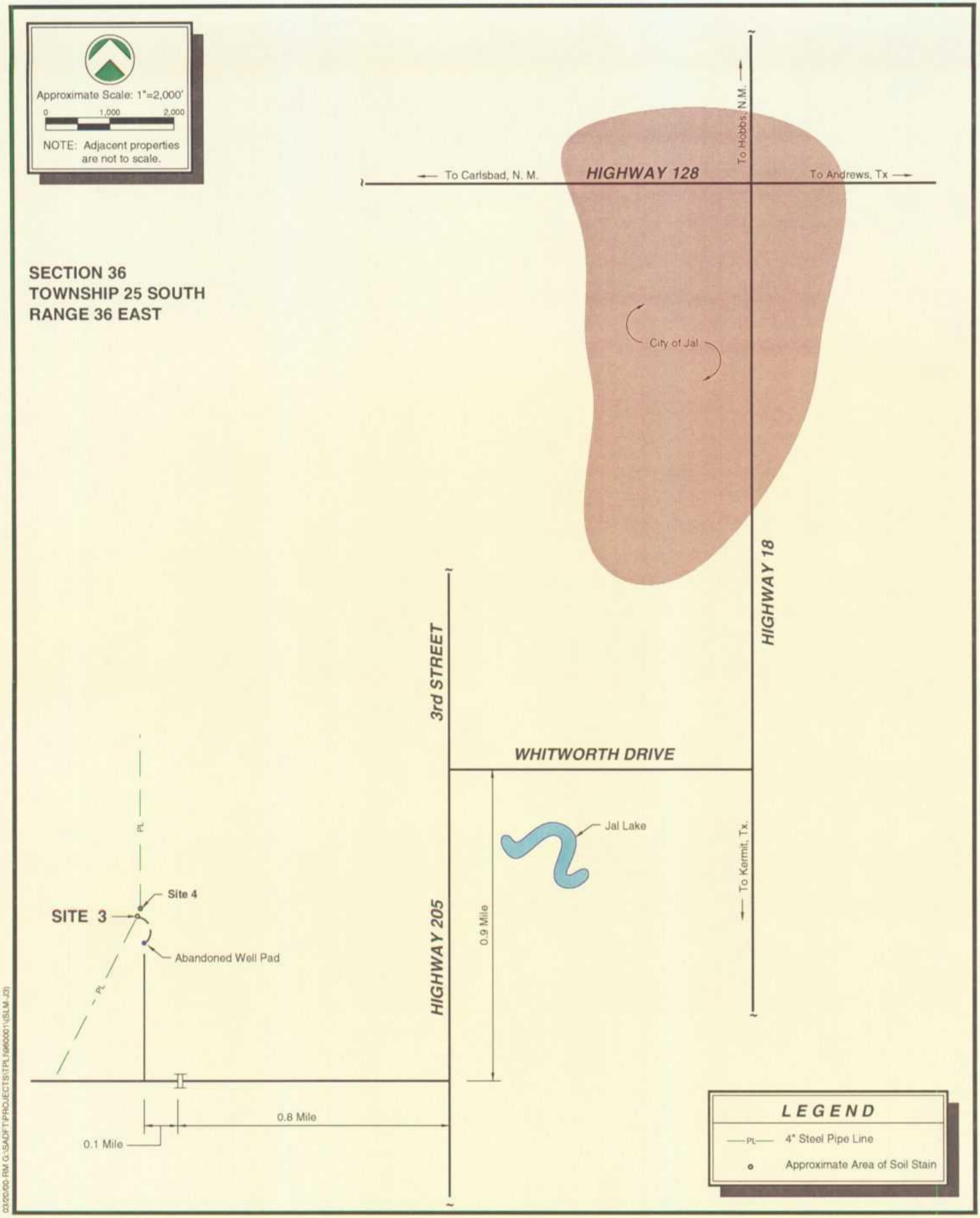
CLOSURE SUMMARY

The following can be summarized from field and laboratory data:

- soil impacted by Sid Richardson Gasoline Company's release was excavated, stockpiled, and disposed off-site.

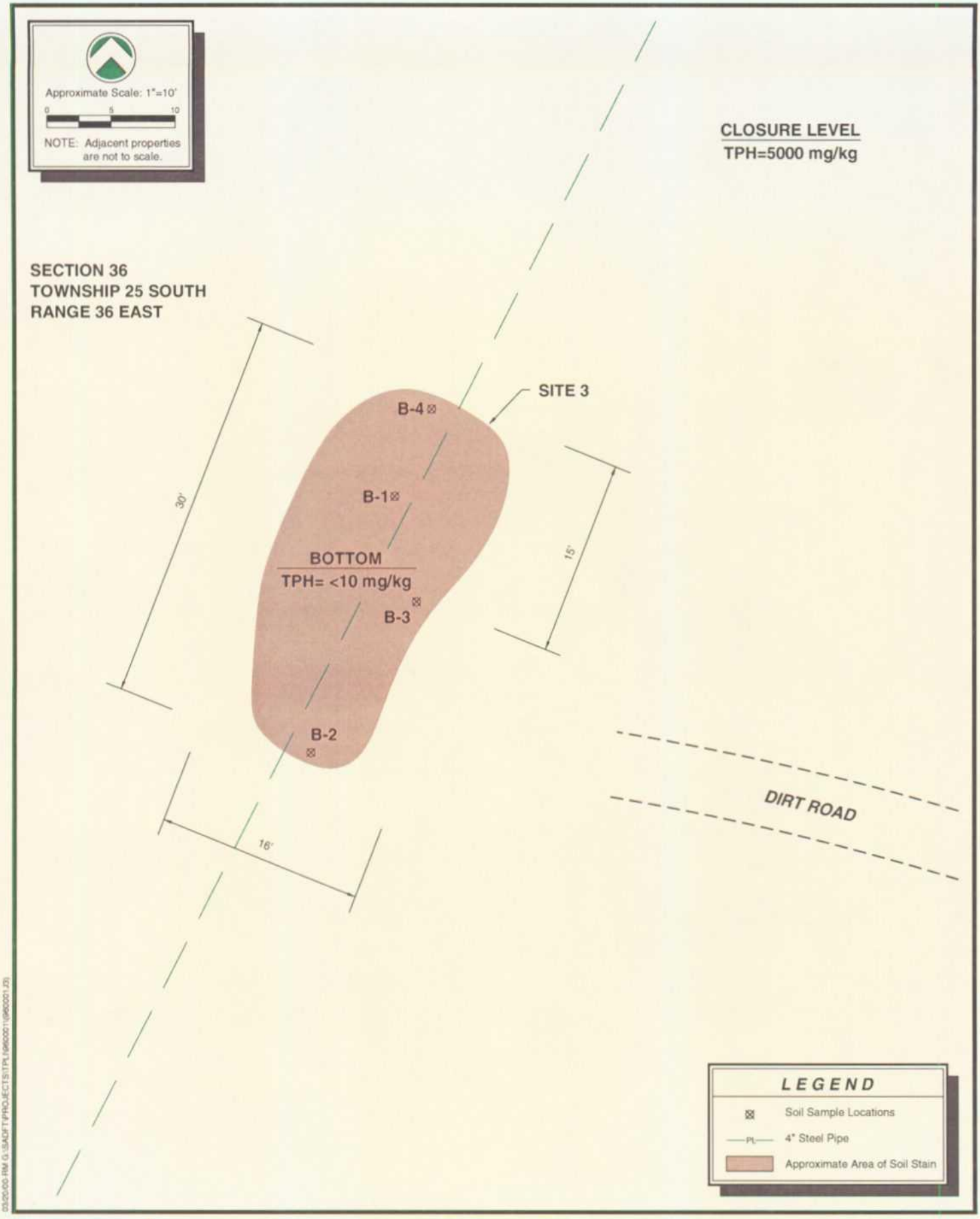
Based on activities completed at the site, Sid Richardson Gasoline Company requests that this release site be closed under OCD regulations.

Figures



02/20/00 RM G:\SADFT\PROJECTS\TPL\960001\SLM_J3)

k·e·i	SITE LOCATION MAP	960001-20-0
	J. ANTHONY RANCH - SITE 3 LEA COUNTY, NEW MEXICO	FIG 1



k·e·i	*SITE DETAILS*	960001-20-0
	J. ANTHONY RANCH - SITE 3 LEA COUNTY, NEW MEXICO	FIG 2

Tables

GENERAL NOTES

ND - Indicates PID reading of 0.0.

--- - Indicates sample was not analyzed for constituent listed.

Method detection/reporting limits:

TPH	-	10 mg/kg
Chloride	-	20 mg/kg
Sulfate	-	20 mg/kg
Ammonia-Nitrogen	-	4.0 mg/kg
Sulfide	-	5.0 mg/kg

Laboratory test methods:

TPH	-	EPA Method 418.1
Chloride	-	EPA Method 300.0
Sulfate	-	EPA Method 300.0 and SW846-9038
Ammonia-Nitrogen	-	EPA Method 350.2
Sulfide	-	EPA Method 376.2

TABLE I

SUMMARY OF LABORATORY RESULTS - SOIL
J. ANTHONY RANCH
HISTORICAL RELEASE SITE JAR-3

SAMPLE LOCATION	SAMPLE DATE	DEPTH (feet)	PID READING (ppm)	TPH (mg/kg)	CHLORIDE (mg/kg)	SULFATE (mg/kg)	AMMONIA-NITROGEN (mg/kg)	SULFIDE (mg/kg)
BACKGROUND	06/14/99	**	—	—	5	39	<4.0	<5.0
B-1	06/14/99	0.5	4.1	—	—	—	—	—
B-1	06/14/99	2.0	17.7	2,100	—	—	—	—
B-1	06/14/99	4.0	13.6	—	—	—	—	—
B-1	06/14/99	5.0	ND	<10.0	—	—	—	—
B-2	06/14/99	0.5	0.8	—	—	—	—	—
B-2	06/14/99	2.0	1.2	—	—	—	—	—
B-3	06/14/99	0.5	2.4	—	—	—	—	—
B-3	06/14/99	2.0	1.2	—	—	—	—	—
B-4	06/14/99	0.5	2.8	—	—	—	—	—
B-4	06/14/99	2.0	0.8	—	—	—	—	—
B-1	06/14/99	COMPOSITE	—	—	30	4,530	<4.0	<5.0
EXCAVATION BOTTOM	08/13/99	COMPOSITE	ND	<10	—	1,358	—	—
SHOALS COMPRESSOR	10/28/99	COMPOSITE	ND	<10	—	—	—	—

Appendix A

ANALYTICAL REPORT -92394

for

KEI Consultants, Ltd.

Project Manager: S. Grover

Project Name: Sid Richardson

Project Id: 910107-1-0

June 28, 1999

XENCO Laboratories

HOUSTON - DALLAS - SAN ANTONIO

11381 Meadowglen Lane Suite L * Houston, Texas 77082-2647
Phone (281) 589-0692 Fax (281) 589-0695

XENCO Laboratories

11381 Meadowglen Suite L
Houston, Texas 77082-2647
(281) 589-0692 Fax: (281) 589-0695
Houston - Dallas - San Antonio - Latin America

June 28, 1999

Project Manager: S. Grover
KEI Consultants, Ltd.
5309 Wurzbach Rd. Suite 100
San Antonio, TX 78238

Reference: **XENCO Report No.: -92394**
Project Name: Sid Richardson
Project ID: 910107-1-0
Project Address: Jal, N.M.

Dear S. Grover:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with XENCO Chain of Custody Number -92394.r All results being reported to you apply only to the samples analyzed, properly identified with a Laboratory ID number. This letter documents the official transmission of the contents of the report and validates the information contained within.

All the results for the quality control samples passed thorough examination. Also, all parameters for data reduction and validation checked satisfactorily. In view of this, we are able to release the analytical data for this report within acceptance criteria for accuracy, precision, completeness or properly flagged.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 3 years in our archives and after that time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in COC No. -92394r will be filed for 60 days, and after that time they will be properly disposed of without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

XENCO operates under the A2LA guidelines. Our Quality System meets ISO/IEC Guide 25 requirements which is strictly implemented and enforced through our standard QA/QC procedures.

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Sincerely,

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

ANALYTICAL CHAIN OF CUSTODY REPORT
CHRONOLOGY OF SAMPLES

KEI Consultants, Ltd.

Project ID: 910107-1-0
Project Manager: S. Grover
Project Location: Jal, N.M.

Project Name: Sid Richardson

XENCO COC#: -92394
Date Received in Lab: Jun 15, 1999 11:30 by SE
XENCO contact : Carlos Castro/Debbie Simmons

	Field ID	Lab. ID	Method Name	Method ID	Units	Turn Around	Date and Time: Sample Collected	Date and Time: Addition Requested	Date and Time: Extraction	Date and Time: Analysis
1	Jar 4,1	92394-001	Anions	EPA 300.0	mg/kg	7 days	Jun 14, 1999 10:47		Jun 25, 1999 by AO	Jun 25, 1999 14:17 by AO
2			Sulfide	EPA 376.2	mg/kg	7 days	Jun 14, 1999 10:47		Jun 23, 1999 by IF	Jun 23, 1999 15:30 by IF
3			Ammonia-N	EPA 350.2	mg/kg	7 days	Jun 14, 1999 10:47		Jun 21, 1999 by IF	Jun 21, 1999 14:45 by IF
4	Jar 4,2	92394-002	Anions	EPA 300.0	mg/kg	7 days	Jun 14, 1999 10:36		Jun 25, 1999 by AO	Jun 25, 1999 14:37 by AO
5			Sulfide	EPA 376.2	mg/kg	7 days	Jun 14, 1999 10:36		Jun 23, 1999 by IF	Jun 23, 1999 15:50 by IF
6			Ammonia-N	EPA 350.2	mg/kg	7 days	Jun 14, 1999 10:36		Jun 21, 1999 by IF	Jun 21, 1999 15:15 by IF
7	Jar 3,1	92394-003	Anions	EPA 300.0	mg/kg	7 days	Jun 14, 1999 09:08		Jun 25, 1999 by AO	Jun 25, 1999 14:47 by AO
8			Sulfide	EPA 376.2	mg/kg	7 days	Jun 14, 1999 09:08		Jun 23, 1999 by IF	Jun 23, 1999 16:00 by IF
9			Ammonia-N	EPA 350.2	mg/kg	7 days	Jun 14, 1999 09:08		Jun 21, 1999 by IF	Jun 21, 1999 15:30 by IF
10	4,1,2,0	92394-004	TPH	EPA 418.1	mg/kg	7 days	Jun 14, 1999 09:36		Jun 16, 1999 by ML	Jun 16, 1999 10:52 by ML
11	4,1,5,0	92394-005	TPH	EPA 418.1	mg/kg	7 days	Jun 14, 1999 10:14		Jun 16, 1999 by ML	Jun 16, 1999 10:56 by ML
12	3,1,2,0	92394-006	TPH	EPA 418.1	mg/kg	7 days	Jun 14, 1999 10:05		Jun 16, 1999 by ML	Jun 16, 1999 11:00 by ML
13	3,1,5,0	92394-007	TPH	EPA 418.1	mg/kg	7 days	Jun 14, 1999 08:22		Jun 16, 1999 by ML	Jun 16, 1999 11:04 by ML

XENCO Laboratories

CERTIFICATE OF ANALYSIS SUMMARY -92394

KEI Consultants, Ltd.

Project ID: 910107-1-0
Project Name: Sid Richardson
Project Manager: S. Grover
Project Location: Jal, N.M.

Date Received in Lab : Jun 15, 1999 11:30
Date Report Faxed: Jun 28, 1999
XENCO contact : Carlos Castro/Debbie Simmons

Analysis Requested	*Lab ID:* / *Field ID:* / *Depth:* / *Matrix:* / *Sampled:*	92394 001 Jar 4,1 Solid 06/14/99 10:47	92394 002 Jar 4,2 Solid 06/14/99 10:36	92394 003 Jar 3,1 Solid 06/14/99 09:08	92394 004 4,1,2,0 Solid 06/14/99 09:36	92394 005 4,1,5.0 Solid 06/14/99 10:14	92394 006 3,1,2,0 Solid 06/14/99 10:05
Anions by Ion Chromatography **EPA 300.0**	*Analyzed:* *Units:*	06/25/99 mg/kg R.L.	06/25/99 mg/kg R.L.	06/25/99 mg/kg R.L.			
Chloride		5 (4)	42 (20)	30 (20)			
Sulfate		39 (4)	8360 (40)	4530 (20)			
Ammonia-Nitrogen **EPA 350.2**	*Analyzed:* *Units:*	06/21/99 mg/kg R.L.	06/21/99 mg/kg R.L.	06/21/99 mg/kg R.L.			
Ammonia-Nitrogen		< 4.0 (4.0)	14.0 (4.0)	< 4.0 (4.0)			
Sulfide, Colorimetric **EPA 376.2**	*Analyzed:* *Units:*	06/23/99 mg/kg R.L.	06/23/99 mg/kg R.L.	06/23/99 mg/kg R.L.			
Sulfide		< 5.0 (5.0)	< 5.0 (5.0)	< 5.0 (5.0)			
Total Petroleum Hydrocarbons **EPA 418.1**	*Analyzed:* *Units:*				06/16/99 mg/kg R.L.	06/16/99 mg/kg R.L.	06/16/99 mg/kg R.L.
Total Petroleum Hydrocarbons					7100 (1000)	16.0 (10.0)	2100 (1000)

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

CERTIFICATE OF ANALYSIS SUMMARY -92394

KEI Consultants, Ltd.

Project ID: 910107-1-0
Project Name: Sid Richardson
Date Received in Lab : Jun 15, 1999 11:30
Project Manager: S. Grover
Date Report Faxed: Jun 28, 1999
Project Location: Jal, N.M.
XENCO contact : Carlos Castro/Debbie Simmons

Analysis Requested	*Lab ID:*	92394 007					
	Field ID:	3,1,5,0					
	Depth:						
	Matrix:	Solid					
	Sampled:	06/14/99 08:22					
Total Petroleum Hydrocarbons EPA 418.1	*Analyzed:*	06/16/99	R.L.				
	Units:	mg/kg					
Total Petroleum Hydrocarbons		< 10.0	(10.0)				

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 19A10B09

EPA 300.0 Anions by Ion Chromatography

Date Validated: Jun 28, 1999 12:15
Date Analyzed: Jun 25, 1999 14:17

Analyst: AO
Matrix: Solid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 92394- 001	[A] Sample Result	[B] Duplicate Result	[C]	[D] QC	[E] LIMITS	[F]
Parameter			Detection Limit	Relative Difference	Relative Difference	Qualifier
	mg/kg	mg/kg	mg/kg	%	%	
Chloride	4.7	4.4	4.0	6.6	20.0	
Sulfate	38.9	41.6	4.0	6.7	20.0	

Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 19A10B09

EPA 300.0 Anions by Ion Chromatography

Date Validated: Jun 28, 1999 12:15
Date Analyzed: Jun 25, 1999 11:43

Analyst: AO
Matrix: Solid

BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY

Parameter	[A] Blank Result mg/kg	[B] Blank Spike Result mg/kg	[C] Blank Spike Duplicate Result mg/kg	[D] Blank Spike Amount mg/kg	[E] Detection Limit mg/kg	Blank Limit Relative Difference %	[F] QC Spike Relative Difference %	[G] QC Blank Spike Recovery %	[H] QC B.S.D. Recovery %	[I] Blank Spike Recovery Range %	[J] Qualifier
Chloride	< 0.20	10.90	10.90	10.00	0.20	20.0	0.0	109.0	109.0	70-125	
Sulfate	< 0.20	10.90	10.50	10.00	0.20	20.0	3.7	109.0	105.0	70-125	

Spike Relative Difference [F] = 200*(B-C)/(B+C)
Blank Spike Recovery [G] = 100*(B-A)/[D]
B.S.D. = Blank Spike Duplicate
B.S.D. Recovery [H] = 100*(C-A)/[D]
N.D. = Below detection limit or not detected
All results are based on MDL and validated for QC purposes

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 19A20A89

EPA 350.2 Ammonia- Nitrogen

Date Validated: Jun 22, 1999 12:10
Date Analyzed: Jun 21, 1999 14:45

Analyst: IF
Matrix: Solid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 92394- 001	[A] Sample Result	[B] Duplicate Result	[C]	[D] QC	[E] LIMITS	[F]
Parameter			Detection Limit	Relative Difference	Relative Difference	Qualifier
	mg/kg	mg/kg	mg/kg	%	%	
Ammonia-Nitrogen	< 4.00	< 4.00	4.00	N.C	25.0	

Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 19A20A89

EPA 350.2 Ammonia- Nitrogen

Date Validated: Jun 22, 1999 12:10
Date Analyzed: Jun 21, 1999 14:00

Analyst: IF
Matrix: Solid

	BLANK SPIKE ANALYSIS						
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
	Blank	Blank Spike	Blank		QC	LIMITS	
Parameter	Result	Result	Spike Amount	Detection Limit	Blank Spike Recovery	Recovery Range	Qualifier
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	
Ammonia-Nitrogen	< 4.00	9.52	10.00	4.00	95.2	70-125	

Blank Spike Recovery [E] = 100*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 19A12C25

EPA 376.2 Sulfide, Colorimetric

Date Validated: Jun 24, 1999 10:15
Date Analyzed: Jun 23, 1999 15:30

Analyst: IF
Matrix: Solid

	MATRIX DUPLICATE ANALYSIS					
Q.C. Sample ID 92394- 001	[A] Sample Result	[B] Duplicate Result	[C]	[D] QC	[E] LIMITS	[F]
Parameter			Detection Limit	Relative Difference	Relative Difference	Qualifier
	mg/kg	mg/kg	mg/kg	%	%	
Sulfide	< 5.00	< 5.00	5.00	N.C	20.0	

Relative Difference [D] = 200*(B-A)/(B+A)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 19A12C25

EPA 376.2 Sulfide, Colorimetric

Date Validated: Jun 24, 1999 10:15
Date Analyzed: Jun 23, 1999 15:00

Analyst: IF
Matrix: Solid

	BLANK SPIKE ANALYSIS						
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
					QC	LIMITS	
Parameter	Blank Result	Blank Spike Result	Blank Spike Amount	Detection Limit	Blank Spike Recovery	Recovery Range	Qualifier
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	
Sulfide	< 5.00	932	971	5.00	96.0	70-125	

Blank Spike Recovery [E] = 100*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 19A30A67

EPA 418.1 Total Petroleum Hydrocarbons

Date Validated: Jun 16, 1999 15:00
Date Analyzed: Jun 16, 1999 10:08

Analyst: ML
Matrix: Solid

	BLANK SPIKE ANALYSIS						
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
					QC	LIMITS	
Parameter	Blank Result	Blank Spike Result	Blank Spike Amount	Detection Limit	Blank Spike Recovery	Recovery Range	Qualifier
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	
Total Petroleum Hydrocarbons	< 10.00	182	201	10.00	90.5	65-135	

Blank Spike Recovery [E] = 100*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

Certificate Of Quality Control for Batch : 19A30A67

EPA 418.1 Total Petroleum Hydrocarbons

Date Validated: Jun 16, 1999 15:00
Date Analyzed: Jun 16, 1999 10:32

Analyst: ML
Matrix: Solid

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY										
Q.C. Sample ID 92392- 003	[A] Sample Result	[B] Matrix Spike Result	[C] Matrix Spike Duplicate Result	[D] Matrix Spike Amount	[E] Detection Limit	Matrix Limit Relative Difference	[F] QC Spike Relative Difference	[G] QC Matrix Spike Recovery	[H] QC M.S.D. Recovery	[I] Matrix Spike Recovery Range	[J] Qualifier
Parameter	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	%	
Total Petroleum Hydrocarbons	< 10.00	173	156	201	10.00	30.0	10.3	86.1	77.6	65-135	

Spike Relative Difference [F] = 200*(B-C)/(B+C)
Matrix Spike Recovery [G] = 100*(B-A)/[D]
M.S.D. = Matrix Spike Duplicate
M.S.D. Recovery [H] = 100*(C-A)/[D]
N.D. = Below detection limit or not detected
All results are based on MDL and validated for QC purposes

Eddie L. Clemons, II
QA/QC Manager

XENCO Laboratories

☐ 11381 Meadowglen, Suite L, Houston TX 77082 281-589-0692
☑ 5309 Wurzbach Road, Suite 104, San Antonio, TX 78238 210-509-3334
☐ 11078 Morrison Road, Suite D, Dallas, TX 75229 972-481-9999

ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

On-LINE Help & Technical Services at XENCO.com

22378

Company COC No: 307 Work Order No: Page 1 of 1

Company: K-E-I	Phone: 1-(210) 680-3767
Project Name: Sid Richardson ☐ Previously done at XENCO	Project ID: 910107-1-0
Location: Jal, N.M.	
Project Manager (PM): S. Grover	Project Director (PD):
Fax Results to ☑ PM and / or	Fax: 1-(210)-680-3763
Invoice to ☐ Accounting ☐ Include Invoice with Final Report Attn PM ☐ Invoice must have a P.O Bill to:	
Quote No.	P.O No 910107-1-0 ☐ Call for a P.O.
Special DLs (RR I RR II DW QAPP See Lab PM Call Proj. PM)	
Specifications	
Sampler Name: Rusty Sauvie	Signature: Rusty Sauvie

Lab Only: 92394 -SM

TAT: 5h 12h 20h 24h 48h 3d 5d 7d 14d 21d Standard TAT is 10 Working Days unless otherwise agreed in writing. But often reported in 5-7 Working Days

Lab Only Additions: From: / Rcv by: / Date

	Sample ID	Sampling Date	Time	Depth ft' in" m	Matrix A F S W	Composite	Grab	# Containers	Container Size	Type	Preservatives
1	Jar 4,1	6-14-99	10:47		S		X	1	8oz	GC	C4
2	Jar 4,2	6-14-99	10:36			X		1	8oz	GC	C4
3	Jar 3,1	6-14-99	09:08			X		1	8oz	GC	C4
4	4,1,2.0	6-14-99	09:36				X	1	4oz	GA	C4
5	4,1,5.0	6-14-99	10:14				X	1	4oz	GA	C4
6	3,1,2.0	6-14-99	10:05				X	1	4oz	GA	C4
7	3,1,5.0	6-14-99	08:22				X	1	4oz	GA	C4
8											
9											
10											

BTEX by 8020 8021 8260 / BTEX-MTBE by 8020 8021 8260 / TPH by TX1005 (418) 8015GRO 8015DRO 8015JetF / PAHs by 8270 8100 8310 / METALS by 6010 8RCRA Tot Pb TCLP8 13PP 23TAL See List / VOAs by 8260 624 BTEX MTBE PPs TCL See List Call PM / SVOAs by 8270 625 PAHs BN&A TCL PPs See List Call PM / Chlorides / Sulphides / Sulphates / Amonia

TAT 5h 12h 20h 24h 48h 3d 5d 7d (10d) 14d 21d / Addn: PAH above mg/L W. mg/Kg S Highest Hit / Hold Analysis

Remarks: Any Questions Call Tony Sauvie @ (505)-631-2495

Via UPS #754900370

Relinquished by (Initials and Signature)	Relinquished to (Initials and Signature)	Date & Time
1 RS Rusty Sauvie		
2		
3	Lab: Stacy Rice	6/15/99 11:30

Total Containers per COC:

Rush TATs Fax Due: Final Fax Due:

Final Report Data Package Due Date:

Rush Charges are Pre-Approved upon Requesting them. All Terms Apply

Preservatives - Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO4 pH<2 (N), NaOH+Asbc Acid (NAA), ZnAc+NaOH (ZA), (Cool,<4C) (C4), None (N), See Label (SL), Other (O) _____

SIZE: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (V), 1L (1), 500ml (.5), Tedlar Bag (B), Wipe (W), Other _____ **TYPE** Glass Amb (GA), Glass Clear (GC), Plastic (P), Other (O) _____

ENVIRONMENTAL LAB OF TEXAS, INC.

"Don't Treat Your Soil Like Dirt"

KEI
ATTN: MR TONY SAVOIE
P.O. BOX 1030
JAL, NEW MEXICO 88252
FAX: 505-395-3476

Sample Type: Soil
Sample Condition: Intact/ Iced
Project #: 980001-1-0
Project Name: Sid Richardson J.A.R.
Project Location: 2 mi. South of Jal, N.M.

Sampling Date: 10/28/98
Receiving Date: 10/28/98
Analysis Date: 10/28/98

ELT#	FIELD CODE	TPH (mg/kg)
21117	980001-1-0 Shoals Comp.	<10

% INSTRUMENT ACCURACY	98
% EXTRACTION ACCURACY	95
BLANK	<10

METHODS: EPA 418.1

Roland K. Tuttle

10-28-98
Date

12600 West I-20 East • Odessa, Texas 79765 • (915) 563-1800 • Fax (915) 563-1713

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

KEI
ATTN: MR. TONY SAVOIE
P.O. BOX 735
JAL, NEW MEXICO 88252
FAX: 505-395-3476

Sample Type: Soil
Sample Condition: Intact/ Iced
Project #: Sid Richardson
Project Name: Jay Anthony Ranch
Project Location: Jal, N.M.

Sampling Date: 08/13/99
Receiving Date: 08/13/99
Analysis Date: 08/14/99

ELT#	FIELD CODE	TPH (mg/kg)	Sulfates (mg/kg)
19197	Jar 3	<10	1358
19198	Jar 4	<10	5560
	% INSTRUMENT ACCURACY	101	107
	% EXTRACTION ACCURACY	106	*
	BLANK	<10	<1

METHODS: EPA 418.1, SW846-9038

Raland K. Tuttle

8-15-99
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Tony Savoie
Phone #: 395-2776
FAX #: 395-5476

Company Name & Address: KEI P.O. Box 1030 Jal, N.M. 88252

Project #: 960001-1-0
Project Name: J.A.R. Sid Richardson

Project Location: 2 mi. South of Jal, N.M.
Sampler Signature: Rusty Savoie

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8020/5030	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TOS	PCI
21117	960001-1-0 Comp Shoals Composite	1	802		✓						✓			10/28	9:00a		✓						

Relinquished by:	Date:	Time:	Received by:
Rusty Savoie	10/28/99	9:30 a.m.	Tony Savoie
Tony Savoie	10/28/99	11:00 a.m.	[signature]
			Received by Laboratory:

REMARKS:

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
SID RICHARDSON GASOLINE CO.
Attention: Randall Dunn
6105 Commerce
Jal, NM 88252

May 4, 1999
Receiving Date: 04/24/99
Sample Type: Soil
Project #: JAR042198
Project Loc: Lea County, NM

Sampling Date: 04/21/99
Sample Condition: I & C
Sample Received by: VW
Project Name: J. Anthony Ranch

TA#	FIELD CODE	CHLORIDE (mg/kg)
T123419	JAR Loc 1 Comp.	5.0
T123420	JAR Loc 2 Comp.	<4.0
T123421	JAR Loc 3 Comp.	34
T123422	JAR Loc 4 Comp.	270
T123423	JAR Loc 5 Comp.	38
T123424	JAR Loc 6 Comp.	<4.0
T123425	JAR Loc 7 Comp.	<4.0
T123426	JAR Loc 8 Comp.	<4.0
T123427	JAR Loc 9 Comp.	710
T123428	JAR Loc 10 Comp.	<8.0
ICV		503
CCV		494
REPORTING LIMIT		2.0
RPD		0
% Extraction Accuracy		110
% Instrument Accuracy		101
PREP DATE		04/30/99
ANALYSIS DATE		04/30/99

METHODS: EPA SM 4500 Cl-B
CHEMIST: JS
CHLORIDE SPIKE: 2000 mg/kg CHLORIDE
CHLORIDE CV: 500 mg/L CHLORIDE

Director, Dr. Blair Leftwich

5-4-99
Date

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Randall Dunn
Sid Richardson Gasoline Co.
Box 1226
Jal, NM 88252

Report Date: 4/27/99

Project Number: JAR012199
Project Name: J. Anthony Ranch
Project Location: Lea County NM

Order ID Number: 99042406

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
123409	JAR Loc 12 Comp	Soil	4/21/99	15:25	4/24/99
123410	JAR Loc 13 Comp	Soil	4/21/99	15:29	4/24/99
123411	JAR Loc 14 Comp	Soil	4/21/99	15:32	4/24/99
123412	JAR Loc 15 Comp	Soil	4/21/99	15:36	4/24/99
123413	JAR Bkgr 1 Comp	Soil	4/21/99	13:14	4/24/99
123414	JAR Bkgr 2 Comp	Soil	4/21/99	15:17	4/24/99
123415	JAR Bkgr 3 Comp	Soil	4/21/99	15:40	4/24/99
123416	JAR Bkfill Comp	Soil	4/21/99	9:15	4/24/99
123417	Jar Loc 20 Comp	Soil	4/21/99	14:25	4/24/99
123418	Jar Loc 21 Comp	Soil	4/21/99	14:15	4/24/99
123419	JAR Loc 1 Comp	Soil	4/21/99	12:15	4/24/99
123420	JAR Loc 2 Comp	Soil	4/21/99	12:30	4/24/99
123421	JAR Loc 3 Comp	Soil	4/21/99	12:40	4/24/99
123422	JAR Loc 4 Comp	Soil	4/21/99	14:45	4/24/99
123423	JAR Loc 5 Comp	Soil	4/21/99	13:02	4/24/99
123424	JAR Loc 6 Comp	Soil	4/21/99	13:42	4/24/99
123425	JAR Loc 7 Comp	Soil	4/21/99	13:55	4/24/99
123426	JAR Loc 8 Comp	Soil	4/21/99	14:12	4/24/99
123427	JAR Loc 9 Comp	Soil	4/21/99	14:45	4/24/99
123428	JAR Loc 10 Comp	Soil	4/21/99	15:05	4/24/99
123429	JAR Loc 11 Comp	Soil	4/21/99	15:15	4/24/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Sample Number: 123416
Description: JAR Bkfill Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		<10.0	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00587	10

Sample Number: 123417
Description: Jar Loc 20 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		1730	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00587	10

Sample Number: 123418
Description: Jar Loc 21 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		<10.0	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00587	10

Sample Number: 123419
Description: JAR Loc 1 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		<10.0	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00587	10

Sample Number: 123420
Description: JAR Loc 2 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		371	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00587	10

Sample Number: 123421
Description: ✓JAR Loc 3 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		6720	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00587	10

Sample Number: ✓123422
Description: JAR Loc 4 Comp Some Salt

Param 5SX30	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		2800	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00587	10

Sample Number: 123423
Description: JAR Loc 5 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		<10.0	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00587	10

Sample Number: 123424
Description: JAR Loc 6 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		612	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00588	10

Sample Number: 123425
Description: JAR Loc 7 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		402	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00588	10

Sample Number: 123426
Description: JAR Loc 8 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		186	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00588	10

Sample Number: 123427
Description: JAR Loc 9 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		5540	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00588	10

Sample Number: 123428
Description: JAR Loc 10 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		104	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00588	10

Sample Number: 123429
Description: JAR Loc 11 Comp

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
TRPHC		<10.0	mg/Kg	1	E 418.1	4/26/99	4/26/99	MF	PB00491	QC00588	10

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
TRPHC		<10.0	mg/Kg	10	4/26/99	PB00491	QC00586
TRPHC		<10.0	mg/Kg	10	4/26/99	PB00491	QC00587
TRPHC		<10.0	mg/Kg	10	4/26/99	PB00491	QC00588

Appendix B

VIEW OF EXCAVATION

VIEW OF BACKFILLED AREA