1R - 347

REPORTS

DATE:

2002

Key Energy Services, Inc.
2625 W. Marland
P.O. Box 2040
Hobbs, NM 88241
(505)393-9171 Fax (505)393-3848

Permian Basin Division

South Eastern New Mexico Division Office

Fax Transmittal Cover Sheet

Date: 12/18/2002

To: Wayne Price

Attention: _____

From: Royce Crowell

Pages: 3
(Including Cover)

Notes:
requested pages

For Information or Confirmation, Please call (505)393-9171

1. No NORM impact was found at this site.
2. Hydrocarbon impact was addressed by the PID readings and the laboratory analysis of soil samples.
   2a. Laboratory analysis indicates that there is no BTEX impact.
   2b. The only TPH impact that was encountered was from diesel range organics (DRO>C12-C35) and only one sample exceeded the 100-ppm regulatory limit. This sample was taken in SB-3 (2'). The DRO was 110 ppm and the sample below SB-3 (5') had no detectable hydrocarbon impact.
3. Laboratory analysis of the soil samples for RCRA metals indicated that there was no selenium, silver or mercury detected in any of the samples.
   3a. Barium was encountered, but is felt that this was a natural occurrence.
   3b. Small amounts of arsenic, cadmium, chromium, and lead were encountered in the soils and their source is unclear.
4. Moderately high concentrations of chlorides were encountered in each of the soil borings and these appear to decrease with depth.
   4a. The highest chloride concentrations appear to be associated with the shallow borings (SB-1 & SB-2) around the cement pad.
   4b. The chlorides were in the 1,060 milligrams per kilogram (mg/Kg) to 4,520 mg/Kg (equivalent to ppm) range.

RECOMMENDATIONS

ARCADIS proposes the following recommendations for consideration:

1. A groundwater assessment should be performed to determine the depth and quality of the groundwater. A monitor well drilled southeast of the pad and sump will evaluate potential chloride impact.
2. A shallow soil sample in another area removed from the pad should be taken and analyzed for RCRA total metals and chlorides to be used as a background control sample.
3. Excavation of the shallow impacted soil associated with the cement pad should be removed and replaced.
4. It is required that the soils at the base of an excavation be sampled to comply with NMOCD regulations.

ARCADIS

Mr. Royce Crowell
January 20, 2003

ARCADIS appreciates the opportunity to investigate this property for Key Energy Services. If you should have any questions regarding this report of activities at the site, please do not hesitate to contact us at (915) 687-5400.

Very truly yours,

ARCADIS G&M, Inc.

Ralph Lang

Ralph Lang
Scientist

Steven P. Tischer

Steven P. Tischer
Remediation Department Manager

copies: Mr. Gene Butler
Key Energy Services
6 Desta Drive #5900
Midland, TX 79705

Price, Wayne

From: Price, Wayne
Sent: Friday, February 28, 2003 2:10 PM
To: Royce Crowell (E-mail)
Cc: 'rlang@arcadis-us.com'
Subject: Key Energy Services-Eunice Yard

The OCD is in receipt of the Arcadis report titled "Findings and Recommendations from a Soil Investigation of the Truck Wash Sump Eunice NM Yard" dated January 20, 2003. Please note pages 3 and 4 of the report are missing. There is no recommendations that OCD could find. In addition, there is no signature page from Key Energy or Arcadis. OCD assumes this was on page 3 or 4. Please note this is a voluntary investigation by Key Energy. It is a normal practice that operators supply to the OCD complete information including findings and recommendations. Otherwise, OCD will have to require that this site be permitted and the investigation will be handled under the permit or an abatement plan. It is OCD's recommendation that Key continue with the voluntary procedure allowed by WQCC and provide OCD with a complete report.

Sincerely:

Wayne Price
New Mexico Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, NM 87505
505-476-3487
fax: 505-476-3462
E-mail: WPRICE@state.nm.us

ARCADIS

Infrastructure, buildings, environment, communications

ARCADIS G&M, Inc.
1004 N. Big Spring Street.
Suite 300
Midland Texas 79701
Tel 915-687-5400
Fax 915-687-5401
www.arcadis-us.com

Mr. Royce Crowell
Key Energy Services
2625 W. Marland
Hobbs, New Mexico 88241

ENVIRONMENT

Subject:
Findings and Recommendations from a Soil Investigation of the Truck Wash Sump
Key Energy Services, Eunice, New Mexico Facility
Lea County, New Mexico

Date:
January 20, 2003

Contact:
Ralph Lang

Phone:
(915) 687-5400

Email:
rlang@arcadis-us.com

Our ref:
G:/Aproject/Key Energy Services/MT0764.01 Eunice/reports/Key Energy Eunice Truck Sump Report

Dear Mr. Crowell:

On November 19, 2002, ARCADIS G&M, Inc. (ARCADIS) performed an investigation into the potential soil impact associated with the Key Energy Services truck washing facility pad and sump located in Eunice, New Mexico. The sump and pad are contiguous to the main shop and office building and are directly south of the building. A total of four soil borings were advanced using air rotary drilling.

The Key Energy Services facility is located at 2105 Avenue O (New Mexico Highway 176) in Eunice, New Mexico. The sump is located at approximately North 32 Degrees, 26 Minutes, 29.6 seconds longitude and West 103 degrees, 10 minutes, 7.3 seconds latitude. Figure 1 is a map of the site.

Mr. Wayne Price of the New Mexico Oil Conservation Commission (NMOCD) inspected the site before work began and verified compliance with NMOCD regulations.

FIELD METHODS

Four soil borings were drilled around the truck washing facility sump and pad. A direct-push sampling device was used to collect soil samples for analysis. The sampling device was thoroughly cleaned between each sample using laboratory-grade soap and water. Soil samples were caught at intervals of 0-0.5 feet, 2 feet, 5 feet, and at 5-foot intervals thereafter, to total depth.

The samples were sealed in 4-ounce glass jars and in plastic zip-lock bags. The headspace in the zip-lock bags was analyzed using a photo-ionization detector (PID) that was previously calibrated using 100 parts per million (ppm) isobutane. A scintillator was used to screen for the potential of naturally occurring radioactive material (NORM).

The two borings closest to the sump, SB-1 and SB-2, were drilled to 25 feet and 21 feet, respectively. Soil borings SB-3 and SB-4 were drilled until no impacted soil was evident by field inspection and screening (13 feet and 15 feet, respectively). All soil borings were plugged to the surface with bentonite chips that were hydrated with fresh water.

Two soil samples from each borehole were submitted to the laboratory for analysis. One sample was taken from the sample with the highest headspace reading; the other sample was taken from either the base of the boring or when field observation indicated that there was no other soil impact. Samples were collected according to standard procedures in containers supplied by the laboratory. They were placed on ice soon after they were taken and kept on ice until they were turned over to laboratory personnel.

PID readings, scintillator readings, and the soil descriptions are summarized on the boring logs in Appendix A. Using appropriate chain-of-custody protocol, the soil samples were hand-delivered by ARCADIS personnel to Environmental Lab of Texas I, LTD.

The samples were analyzed for total petroleum hydrocarbons (TPH) by method 8015M and for benzene, toluene, ethylbenzene and xylenes (BTEX) by method 8021B/5030. The samples were also examined for the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, selenium, silver, mercury) and for chloride.

FIELD AND ANALYTICAL RESULTS

The highest PID readings observed were 220 ppm and 299 ppm in soil boring SB-1 from 10 feet and 20 feet, respectively. Field readings for NORM did not exceed measured background levels.

Analytical results were examined for completeness and procedural errors and none were observed. The complete laboratory analytical report is included in Appendix B.

No BTEX was detected in any of the samples analyzed. TPH was found in the diesel range (>C12-C35). TPH and BTEX analytical results are summarized Table A. Chloride and RCRA 8 metals analytical results are summarized in Table B.

CONCLUSIONS

There were four types of potential soil impact addressed by this investigation. These potential impacts were NORM, hydrocarbon, metals, and chloride. No groundwater investigation was conducted at this site. Field and laboratory analysis indicated the following:

1. No NORM impact was found at this site.
2. Hydrocarbon impact was addressed by the PID readings and the laboratory analysis of soil samples.
   2a. Laboratory analysis indicates that there is no BTEX impact.
   2b. The only TPH impact that was encountered was from diesel range organics (DRO>C12-C35) and only one sample exceeded the 100-ppm regulatory limit. This sample was taken in SB-3 (2'). The DRO was 110 ppm and the sample below SB-3 (5') had no detectable hydrocarbon impact.
3. Laboratory analysis of the soil samples for RCRA metals indicated that there was no selenium, silver or mercury detected in any of the samples.
   3a. Barium was encountered, but is felt that this was a natural occurrence.
   3b. Small amounts of arsenic, cadmium, chromium, and lead were encountered in the soils and their source is unclear.
4. Moderately high concentrations of chlorides were encountered in each of the soil borings and these appear to decrease with depth.
   4a. The highest chloride concentrations appear to be associated with the shallow borings (SB-1 & SB-2) around the cement pad.
   4b. The chlorides were in the 1,060 milligrams per kilogram (mg/Kg) to 4,520 mg/Kg (equivalent to ppm) range.

ARCADIS

Key Energy Services
Eunice, New Mexico
Truck Washing Facility Pad and Sump

Samples collected November 19, 2002

Table A

Organic Compounds
in mg/Kg (ppm)

Soil Borings	TPH		BTEX				
	GRO, C6-C12	DRO, >C12-C35	Benzene	Ethylbenzene	Toluene	p/m-Xylene	o-Xylene
SB-1 (20')	<10.0	20.7	<0.025	<0.025	<0.025	<0.025	<0.025
SB-1 (25')	<10.0	60.8	<0.025	<0.025	<0.025	<0.025	<0.025
SB-2 (10')	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025
SB-2 (15')	<10.0	16.8	<0.025	<0.025	<0.025	<0.025	<0.025
SB-3 (2')	<10.0	110	<0.025	<0.025	<0.025	<0.025	<0.025
SB-3 (5')	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025
SB-4 (2')	<10.0	33.3	<0.025	<0.025	<0.025	<0.025	<0.025
SB-4 (5')	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<0.025

Key Energy Services

Eunice, New Mexico

ARCADIS

Truck Washing Facility Pad and Sump

Samples collected November 19, 2002

Table B

Eight RCRA Metals and Chloride
in mg/Kg (ppm)

Soil Borings	Chloride	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
SB-1 (20')	1060	<0.40	196	0.677	4.35	<0.550	<0.20	<0.10	<0.10
SB-1 (25')		<0.40	98.3	0.652	4.29	1.09	<0.20	<0.10	<0.10
SB-2 (10')		1.72	130	0.431	2.48	<0.550	<0.20	<0.10	<0.10
SB-2 (15')	1660	1.41	559	0.543	3.42	0.76	<0.20	<0.10	<0.10
SB-3 (2')		1.32	522	0.606	3.58	4.57	<0.20	<0.10	<0.10
SB-3 (5')	2390	2.92	216	0.758	3.5	0.7	<0.20	<0.10	<0.10
SB-4 (2')		0.945	169	0.682	3.88	6.14	<0.20	<0.10	<0.10
SB-4 (5')	4520	2.06	169	0.433	1.95	1.68	<0.20	<0.10	<0.10

VERY LOW LEVELS

Appendix A

Soil Boring Logs

BORING LOG

BORING NO.: SB-1

ARCADIS
1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 915 687-5400 Fax: 915 687-5401

PROJECT NUMBER: MT000764.0001
CLIENT NAME: Key Energy Services, Inc.
PROJECT NAME: Eunice Yard Wash Basin Soil Borings
SITE LOCATION: Lea County, New Mexico
UNIQUE NUMBER: FILE NAME: SB-1.dat

DRILLING CO: Environmental Plus
DRILLING METHOD: Geoprobe
DRILLER: —
LOGGER: D. McNeese
DATE BEGUN: 11/19/02 DATE COMPLETED: 11/19/02

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	OVM READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Push				14.2			SAND: brown, very fine grained, rounded, well sorted. Dark brown stain with strong hydrocarbon odor.
						145			SAND: reddish brown, very fine grained, rounded to subrounded, well sorted, slight odor.
-5		Push				33			SAND: pale yellow, very fine grained, rounded to subrounded, well sorted, slight odor.
-10		Push				122			SAND: light red to pink, very fine grained, rounded, well sorted, trace of CALICHE.
-15		Shovel				220			SANDY CALICHE: pale yellow, chalky SAND, rounded, quartz grains (hard drilling).
-20		Push				299			SAND: light pink, very fine grained, rounded to subrounded, fairly sorted (very hard drilling between 20' and 25').
-25		Push/ Shovel				8			SANDY CALICHE: pale tan to buff, slightly chalky; SAND—very fine grained. (Note:25' sample was not very representative. The push tube only yielded about 2 oz. The remainder was from shovel sample off the augers.)

ARCADIS

BORING LOG

BORING NO.: SB-2

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 915 687-5400 Fax: 915 687-5401

PROJECT NUMBER: MT000764.0001
CLIENT NAME: Key Energy Services, Inc.
PROJECT NAME: Eunice Yard Wash Basin Soil Borings
SITE LOCATION: Lea County, New Mexico
UNIQUE NUMBER: FILE NAME: SB-2.dat

DRILLING CO: Environmental Plus
DRILLING METHOD: Geoprobe
DRILLER: —
LOGGER: D. McNeese
DATE BEGUN: 11/19/02 DATE COMPLETED: 11/19/02

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	OVM READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Push				165			SAND: pale red to buff, very fine grained. Some brown stain with strong hydrocarbon odor.
		Push				10			SAND: red brown, very fine to fine grained, rounded, well sorted, trace stain, moderate odor.
-5		Push				15			SAND: light red, very fine to fine grained, trace CALICHE, some pink.
-10		Push/ Shovel				146			SAND: light red, very fine grained, rounded to subrounded, well sorted; CALICHE—buff, firm to hard.
-15		Shovel				0			CALICHE: Note: CALICHE loaded up probe; no sample (sample collected from shovel). Very hard to 18', pushed probe from 19' to 20.5'.
-20						36			SANDY CALICHE: light pink, some limestone nodules, slightly chalky. Refusal at 21'.

ARCADIS

BORING LOG

BORING NO.

SB-3

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 915 687-5400 Fax: 915 687-5401

PROJECT NUMBER: MT000764.0001
CLIENT NAME: Key Energy Services, Inc.
PROJECT NAME: Eunice Yard Wash Basin Soil Borings
SITE LOCATION: Lea County, New Mexico
UNIQUE NUMBER: FILE NAME: SB-3.dat

DRILLING CO: Environmental Plus
DRILLING METHOD: Geoprobe
DRILLER: —
LOGGER: D. McNeese
DATE BEGUN: 11/19/02 DATE COMPLETED: 11/19/02

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	OVM READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						2.1 2.4			SAND: pale yellow to buff tan, very fine grained, well sorted, rounded, trace brown stain.
									SAND: light red brown, very fine grained, fairly sorted, trace CALICHE.
-5						0			SAND: red brown, very fine grained, well sorted, trace CALICHE.
-10						0			SAND: light pink red, very fine grained, well sorted, clean. Refusal at 13'. Stopped drilling because clean hole.

ARCADIS

BORING LOG

BORING NO.: SB-4

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 915 687-5400 Fax: 915 687-5401

PROJECT NUMBER: MT000764.0001
CLIENT NAME: Key Energy Services, Inc.
PROJECT NAME: Eunice Yard Wash Basin Soil Borings
SITE LOCATION: Lea County, New Mexico
UNIQUE NUMBER: FILE NAME: SB-4.dat

DRILLING CO: Environmental Plus
DRILLING METHOD: Geoprobe
DRILLER: —
LOGGER: D. McNeese
DATE BEGUN: 11/19/02 DATE COMPLETED: 11/19/02

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	OVM READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						5.2			SAND: red brown, very fine grained, rounded, well sorted, trace CALICHE.
						42			SAND: red to red brown, very fine grained, rounded, well sorted, slightly moist, trace CALICHE.
-5						0			SAND: light red to pink, very fine grained, subrounded, fairly sorted, trace CALICHE.
-10						0			SAND: red orange, very fine grained, rounded, well sorted, clean
									CALICHE
									SAND
									CALICHE
-15						8.2			SANDY CALICHE: pale yellow to light pink, very fine grained SAND.

ARCADIS

Appendix B

Laboratory Analyses

ANALYTICAL REPORT

Prepared for:

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Project: MT000764.0001

PO#:

Order#: G0205083

Report Date: 11/27/2002

Certificates
US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701
687-5401

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0205083-06	SB-1 (20')	SOIL	11/19/02 10:30	11/20/02 16:50	4 oz Glass	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8015M 8021B/5030 BTEX METALS RCRA 7 Total Chloride Mercury, Total					
0205083-07	SB-1 (25')	SOIL	11/19/02 10:50	11/20/02 16:50	4 oz Glass	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8015M 8021B/5030 BTEX METALS RCRA 7 Total Mercury, Total					
0205083-11	SB-2 (10')	SOIL	11/19/02 13:13	11/20/02 16:50	4 oz Glass	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8015M 8021B/5030 BTEX METALS RCRA 7 Total Mercury, Total					
0205083-12	SB-2 (15')	SOIL	11/19/02 14:35	11/20/02 16:50	4 oz Glass	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8015M 8021B/5030 BTEX METALS RCRA 7 Total Chloride Mercury, Total					
0205083-15	SB-3 (2')	SOIL	11/19/02 15:05	11/20/02 16:50	4 oz Glass	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8015M					

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701
687-5401

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
	8021B/5030 BTEX METALS RCRA 7 Total Mercury, Total					
0205083-16	SB-3 (5')	SOIL	11/19/02 15:10	11/20/02 16:50	4 oz Glass	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8015M 8021B/5030 BTEX METALS RCRA 7 Total Chloride Mercury, Total					
0205083-19	SB-4 (2')	SOIL	11/19/02 16:20	11/20/02 16:50	4 oz Glass	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8015M 8021B/5030 BTEX METALS RCRA 7 Total Mercury, Total					
0205083-20	SB-4 (5')	SOIL	11/19/02 16:25	11/20/02 16:50	4 oz Glass	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8015M 8021B/5030 BTEX METALS RCRA 7 Total Chloride Mercury, Total					
0205083-23	TRIP BLANK	LIQUID	11/19/02	11/20/02 16:50	40 mL VOA	Ice
	Lab Testing:	Rejected: No		Temp: 0.5 C		
	8021B/5030 BTEX					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-06
Sample ID: SB-1 (20')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/23/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	20.7	10.0
TOTAL, C6-C35	20.7	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	104%	70	130
1-Chlorooctadecane	99%	70	130

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003876-02		11/25/02 1:17	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	90%	80	120
Bromofluorobenzene	96%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-07
Sample ID: SB-1 (25')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/23/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	60.8	10.0
TOTAL, C6-C35	60.8	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	98%	70	130
1-Chlorooctadecane	93%	70	130

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003876-02		11/25/02 1:36	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	88%	80	120
Bromofluorobenzene	93%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-11
Sample ID: SB-2 (10')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/23/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	126%	70	130
1-Chlorooctadecane	116%	70	130

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003876-02		11/25/02 1:55	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	82%	80	120
Bromofluorobenzene	88%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-12
Sample ID: SB-2 (15')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/23/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	16.8	10.0
TOTAL, C6-C35	16.8	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	100%	70	130
1-Chlorooctadecane	95%	70	130

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003876-02		11/25/02 2:14	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	83%	80	120
Bromofluorobenzene	91%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-15
Sample ID: SB-3 (2')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/23/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	110	10.0
TOTAL, C6-C35	110	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	103%	70	130
1-Chlorooctadecane	94%	70	130

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003876-02		11/25/02 2:33	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	86%	80	120
Bromofluorobenzene	94%	80	120

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-16
Sample ID: SB-3 (5')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/23/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	105%	70	130
1-Chlorooctadecane	98%	70	130

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003876-02		11/25/02 2:52	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	88%	80	120
Bromofluorobenzene	94%	80	120

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ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-19
Sample ID: SB-4 (2')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/23/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	33.3	10.0
TOTAL, C6-C35	33.3	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	100%	70	130
1-Chlorooctadecane	94%	70	130

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003876-02		11/25/02 3:11	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	84%	80	120
Bromofluorobenzene	94%	80	120

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ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-20
Sample ID: SB-4 (5')

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		11/22/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Surrogates	% Recovered	QC Limits (%)	
1-Chlorooctane	112%	70	130
1-Chlorooctadecane	104%	70	130

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003876-02		11/25/02 3:30	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	82%	80	120
Bromofluorobenzene	88%	80	120

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ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MTU00764.0001
Location: Key Eunice / NM

Lab ID: 0205083-23
Sample ID: TRIP BLANK

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003877-02		11/23/02 14:51	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	86%	80	120
Bromofluorobenzene	87%	80	120

Approval: Raland K Tuttle 12-02-02
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-06
Sample ID: SB-1 (20')

METALS RCRA 7 Total

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Arsenic	< 0.40	mg/kg	50	0.40	3050/6010B	11/24/2002	11/26/02	SM
Barium	196	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Cadmium	0.677	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Chromium	4.35	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM
Lead	< 0.550	mg/kg	50	0.550	3050/6010B	11/24/2002	11/26/02	SM
Selenium	< 0.20	mg/kg	50	0.20	3050/6010B	11/24/2002	11/26/02	SM
Silver	< 0.10	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Mercury, Total	< 0.10	mg/kg	50	0.10	7470	11/23/2002	11/24/02	SM

Lab ID: 0205083-07
Sample ID: SB-1 (25')

METALS RCRA 7 Total

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Arsenic	< 0.40	mg/kg	50	0.40	3050/6010B	11/24/2002	11/26/02	SM
Barium	98.3	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Cadmium	0.652	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Chromium	4.29	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM
Lead	1.09	mg/kg	50	0.550	3050/6010B	11/24/2002	11/26/02	SM
Selenium	< 0.20	mg/kg	50	0.20	3050/6010B	11/24/2002	11/26/02	SM
Silver	< 0.10	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Mercury, Total	< 0.10	mg/kg	50	0.10	7470	11/23/2002	11/24/02	SM

Lab ID: 0205083-11
Sample ID: SB-2 (10')

METALS RCRA 7 Total

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Arsenic	1.72	mg/kg	50	0.40	3050/6010B	11/24/2002	11/26/02	SM
Barium	130	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Cadmium	0.431	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Chromium	2.48	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM
Lead	< 0.550	mg/kg	50	0.550	3050/6010B	11/24/2002	11/26/02	SM
Selenium	< 0.20	mg/kg	50	0.20	3050/6010B	11/24/2002	11/26/02	SM
Silver	< 0.10	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM

N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-11
Sample ID: SB-2 (10')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Mercury, Total	< 0.10	mg/kg	50	0.10	7470	11/23/2002	11/24/02	SM

Lab ID: 0205083-12
Sample ID: SB-2 (15')

METALS RCRA 7 Total

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Arsenic	1.41	mg/kg	50	0.40	3050/6010B	11/24/2002	11/26/02	SM
Barium	559	mg/kg	500	0.50	3050/6010B	11/24/2002	11/26/02	SM
Cadmium	0.543	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Chromium	3.42	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM
Lead	0.760	mg/kg	50	0.550	3050/6010B	11/24/2002	11/26/02	SM
Selenium	< 0.20	mg/kg	50	0.20	3050/6010B	11/24/2002	11/26/02	SM
Silver	< 0.10	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Mercury, Total	< 0.10	mg/kg	50	0.10	7470	11/23/2002	11/24/02	SM

Lab ID: 0205083-15
Sample ID: SB-3 (2')

METALS RCRA 7 Total

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Arsenic	1.32	mg/kg	50	0.40	3050/6010B	11/24/2002	11/26/02	SM
Barium	522	mg/kg	500	0.50	3050/6010B	11/24/2002	11/26/02	SM
Cadmium	0.606	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Chromium	3.58	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM
Lead	4.57	mg/kg	50	0.550	3050/6010B	11/24/2002	11/26/02	SM
Selenium	< 0.20	mg/kg	50	0.20	3050/6010B	11/24/2002	11/26/02	SM
Silver	< 0.10	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Mercury, Total	< 0.10	mg/kg	50	0.10	7470	11/23/2002	11/24/02	SM

N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-16
Sample ID: SB-3 (5')

METALS RCRA 7 Total

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Arsenic	2.92	mg/kg	50	0.40	3050/6010B	11/24/2002	11/26/02	SM
Barium	216	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Cadmium	0.758	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Chromium	3.5	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM
Lead	0.70	mg/kg	50	0.550	3050/6010B	11/24/2002	11/26/02	SM
Selenium	< 0.20	mg/kg	50	0.20	3050/6010B	11/24/2002	11/26/02	SM
Silver	< 0.10	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Mercury, Total	< 0.10	mg/kg	50	0.10	7470	11/23/2002	11/24/02	SM

Lab ID: 0205083-19
Sample ID: SB-4 (2')

METALS RCRA 7 Total

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Arsenic	0.945	mg/kg	50	0.40	3050/6010B	11/24/2002	11/26/02	SM
Barium	169	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Cadmium	0.682	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Chromium	3.88	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM
Lead	6.14	mg/kg	50	0.550	3050/6010B	11/24/2002	11/26/02	SM
Selenium	< 0.20	mg/kg	50	0.20	3050/6010B	11/24/2002	11/26/02	SM
Silver	< 0.10	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Mercury, Total	< 0.10	mg/kg	50	0.10	7470	11/23/2002	11/24/02	SM

Lab ID: 0205083-20
Sample ID: SB-4 (5')

METALS RCRA 7 Total

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Arsenic	2.06	mg/kg	50	0.40	3050/6010B	11/24/2002	11/26/02	SM
Barium	169	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Cadmium	0.433	mg/kg	50	0.050	3050/6010B	11/24/2002	11/26/02	SM
Chromium	1.95	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM
Lead	1.68	mg/kg	50	0.550	3050/6010B	11/24/2002	11/26/02	SM
Selenium	< 0.20	mg/kg	50	0.20	3050/6010B	11/24/2002	11/26/02	SM
Silver	< 0.10	mg/kg	50	0.10	3050/6010B	11/24/2002	11/26/02	SM

N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-20
Sample ID: SB-4 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Prepared	Date Analyzed	Analyst
Mercury, Total	< 0.10	mg/kg	50	0.10	7470	11/23/2002	11/24/02	SM

Approval: Raland K Tuttle 12-02-02
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

N/A = Not Applicable RL = Reporting Limit

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

MR. STEVE TISCHER
ARCADIS GERAGHTY & MILLER, INC.
1004 N. BIG SPRING STREET
MIDLAND, TX 79701

Order#: G0205083
Project: None Given
Project Name: MT000764.0001
Location: Key Eunice / NM

Lab ID: 0205083-06
Sample ID: SB-1 (20')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	1060	mg/kg	1	20	9253	11/25/02	SB

Lab ID: 0205083-12
Sample ID: SB-2 (15')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	1660	mg/kg	1	20	9253	11/25/02	SB

Lab ID: 0205083-16
Sample ID: SB-3 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	2390	mg/kg	1	20	9253	11/25/02	SB

Lab ID: 0205083-20
Sample ID: SB-4 (5')

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	4520	mg/kg	1	20	9253	11/25/02	SB

Approval: Raland K Tuttle 12-02-02
Raland K. Tuttle, Lab Director, QA Officer — Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

RL = Reporting Limit N/A = Not Applicable

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0205083

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003857-02			<10.0		
TOTAL, C6-C35-mg/kg	0003870-02			<10.0		
CONTROL SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003870-03		952	1160	121.8%	
CONTROL DUP SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003870-04		952	1240	130.3%	6.7%
MS SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0205083-20	0	952	1020	107.1%	
MSD SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0205083-20	0	952	1020	107.1%	0.%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003857-05		1000	983	98.3%	
TOTAL, C6-C35-mg/kg	0003870-05		1000	956	95.6%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0205083

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0003876-02			<0.025		
Benzene-mg/L	0003877-02			<0.001		
Ethylbenzene-mg/kg	0003876-02			<0.025		
Ethylbenzene-mg/L	0003877-02			<0.001		
Toluene-mg/kg	0003876-02			<0.025		
Toluene-mg/L	0003877-02			<0.001		
p/m-Xylene-mg/kg	0003876-02			<0.025		
p/m-Xylene-mg/L	0003877-02			<0.001		
o-Xylene-mg/kg	0003876-02			<0.025		
o-Xylene-mg/L	0003877-02			<0.001		
CONTROL LIQUID	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L	0003877-03		0.1	0.096	96.%	
Ethylbenzene-mg/L	0003877-03		0.1	0.101	101.%	
Toluene-mg/L	0003877-03		0.1	0.099	99.%	
p/m-Xylene-mg/L	0003877-03		0.2	0.214	107.%	
o-Xylene-mg/L	0003877-03		0.1	0.102	102.%	
CONTROL DUP LIQUID	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L	0003877-04		0.1	0.096	96.%	0.%
Ethylbenzene-mg/L	0003877-04		0.1	0.099	99.%	2.%
Toluene-mg/L	0003877-04		0.1	0.098	98.%	1.%
p/m-Xylene-mg/L	0003877-04		0.2	0.21	105.%	1.9%
o-Xylene-mg/L	0003877-04		0.1	0.101	101.%	1.%
MS SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0205083-20	0	0.1	0.106	106.%	
Ethylbenzene-mg/kg	0205083-20	0	0.1	0.112	112.%	
Toluene-mg/kg	0205083-20	0	0.1	0.112	112.%	
p/m-Xylene-mg/kg	0205083-20	0	0.2	0.229	114.5%	
o-Xylene-mg/kg	0205083-20	0	0.1	0.112	112.%	
MSD SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0205083-20	0	0.1	0.103	103.%	2.9%
Ethylbenzene-mg/kg	0205083-20	0	0.1	0.111	111.%	0.9%
Toluene-mg/kg	0205083-20	0	0.1	0.108	108.%	3.6%
p/m-Xylene-mg/kg	0205083-20	0	0.2	0.225	112.5%	1.8%
o-Xylene-mg/kg	0205083-20	0	0.1	0.111	111.%	0.9%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0003876-05		0.1	0.101	101.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0205083

SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L	0003877-05		0.1	0.096	96.%	
Ethylbenzene-mg/kg	0003876-05		0.1	0.106	106.%	
Ethylbenzene-mg/L	0003877-05		0.1	0.099	99.%	
Toluene-mg/kg	0003876-05		0.1	0.104	104.%	
Toluene-mg/L	0003877-05		0.1	0.097	97.%	
p/m-Xylene-mg/kg	0003876-05		0.2	0.226	113.%	
p/m-Xylene-mg/L	0003877-05		0.2	0.213	106.5%	
o-Xylene-mg/kg	0003876-05		0.1	0.108	108.%	
o-Xylene-mg/L	0003877-05		0.1	0.1	100.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

METALS RCRA 7 Total

Order#: G0205083

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Arsenic-mg/kg	0003899-02			< 0.40		
Barium-mg/kg	0003899-02			< 0.050		
Cadmium-mg/kg	0003899-02			< 0.050		
Chromium-mg/kg	0003899-02			< 0.10		
Lead-mg/kg	0003899-02			< 0.55		
Selenium-mg/kg	0003899-02			< 0.20		
Silver-mg/kg	0003899-02			< 0.10		
CONTROL SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Arsenic-mg/kg	0003899-03		40	35.7	89.3%	
Barium-mg/kg	0003899-03		10	10.8	108.%	
Cadmium-mg/kg	0003899-03		10	9.74	97.4%	
Chromium-mg/kg	0003899-03		10	10.3	103.%	
Lead-mg/kg	0003899-03		50	52.1	104.2%	
Selenium-mg/kg	0003899-03		20	20.3	101.5%	
Silver-mg/kg	0003899-03		2.5	2.64	105.6%	
CONTROL DUP SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Arsenic-mg/kg	0003899-04		40	35.5	88.7%	0.6%
Barium-mg/kg	0003899-04		10	10.8	108.%	0.%
Cadmium-mg/kg	0003899-04		10	9.74	97.4%	0.%
Chromium-mg/kg	0003899-04		10	10.3	103.%	0.%
Lead-mg/kg	0003899-04		50	52.0	104.%	0.2%
Selenium-mg/kg	0003899-04		20	20.3	101.5%	0.%
Silver-mg/kg	0003899-04		2.5	2.34	93.6%	12.%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Arsenic-mg/kg	0003899-05		1	1.05	105.%	
Barium-mg/kg	0003899-05		1	1.08	108.%	
Cadmium-mg/kg	0003899-05		1	1.07	107.%	
Chromium-mg/kg	0003899-05		1	1.04	104.%	
Lead-mg/kg	0003899-05		1	1.04	104.%	
Selenium-mg/kg	0003899-05		1	1.04	104.%	
Silver-mg/kg	0003899-05		0.5	0.546	109.2%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0205083

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0003885-01			<20.0		
Mercury, Total-mg/kg	0003864-01			< 0.10		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0205083-06	1060	1250	2300	99.2%	
Mercury, Total-mg/kg	0204993-20	0.109	1	1.10	99.1%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0205083-06	1060	1250	2280	97.6%	0.9%
Mercury, Total-mg/kg	0204993-20	0.109	1	1.14	103.1%	3.6%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0003885-04		5000	4960	99.2%	
Mercury, Total-mg/kg	0003864-04		0.75	0.700	93.3%	

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page 1 of 2

Project Number/Name MT0007764.0001

Project Location KEY EUNICE / NM

Laboratory Environmental Labs of Texas

Project Manager S. TISCHER

Sampler(s)/Affiliation D. McNEESE

0205083

	Sample ID/Location	Matrix	Date ~~Time~~ Sampled	TIME ~~Lab ID~~	ANALYSIS / METHOD / SIZE: BTEX 8021B pres. Ice	TPH 8015 Modified GRO / DRO pres. Ice	RCRA 8 Metals pres. Ice	Chlorides pres. Ice	Remarks	Total
01	SB-1 (0-6")	S	11-19-02	0940	HOLD	HOLD	HOLD	→		1
02	SB-1 (2')			0945	HOLD	→	→	→		1
03	SB-1 (5')			0950	HOLD	→	→	→		1
04	SB-1 (10')			0955	HOLD	→	→	→		1
05	SB-1 (15')			1000	HOLD	→	→	→		1
06	SB-1 (20')			1030	✓	✓	✓	✓		1
07	SB-1 (25')			1050	✓	✓	✓	HOLD		1
08	SB-2 (0-6")			1245	HOLD	→	→	→		1
09	SB-2 (2')			1252	HOLD	→	→	→		1
10	SB-2 (5')			1308	HOLD	→	→	→		1
11	SB-2 (10')			1313	✓	✓	✓			1
12	SB-2 (15')			1435	✓	✓	✓	✓		1
13	SB-2 (19-20.5')			1440	HOLD	→	→	→		1
14	SB-3 (0-6")	↓	↓	1500	HOLD	→	→	→		1
15	SB-3 (2')	S	11-19-02	1505	✓	✓	✓	HOLD		1

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 15

Relinquished by: Deborah Dann	Organization: ARCADIS	Date 11/20/02	Time 1700	Seal Intact?	
Received by: Dawnell Caudle	Organization: ENV. LABS OF TX	Date 11/20/02	Time 1650	(Yes) No N/A	
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact?	
Received by: _____	Organization: _____	Date / /	Time _____	Yes No N/A	

Special Instructions/Remarks: 0.5 C 4oz GLASS Run BTEX as per Steve Tischer 11/21/02 ABW

Delivery Method: ☒ In Person ☐ Common Carrier _____ SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000764.0001

Project Location KEY EUNICE / NM

Laboratory ENVIRONMENTAL LABS of TEXAS

Project Manager S. TISCHER

Sampler(s)/Affiliation D. McNEESE

0205083

	Sample ID/Location	Matrix	Date/~~Time~~ Sampled	~~Time~~ Lab ID	ANALYSIS / METHOD / SIZE: BTEX 8021B	pres. Ice	TPH 8015 Modified GRO / DRO	pres. Ice	RCRA 8 Metals	pres. Ice	Chlorides	pres. Ice			Remarks	Total
16	SB-3 (5')	S	11-19-02	1510	✓		✓		✓		✓					1
17	SB-3 (10-12')	S		1515	HOLD	→		→		→						1
18	SB-4 (0-6")	S		1615	HOLD	→		→		→						1
19	SB-4 (2')	S		1620	✓		✓		✓		HOLD					1
20	SB-4 (5')	S		1625	✓		✓		✓		✓					1
21	SB-4 (10')	S	↓	1630	HOLD	→		→		→						1
22	SB-4 (15')	S	11-19-02	1650	HOLD	→		→		→						1
23	TRIP BLANK	L	—	—	✓											1
~~24~~	TEMP BLANK	L	—	—	—											1

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers

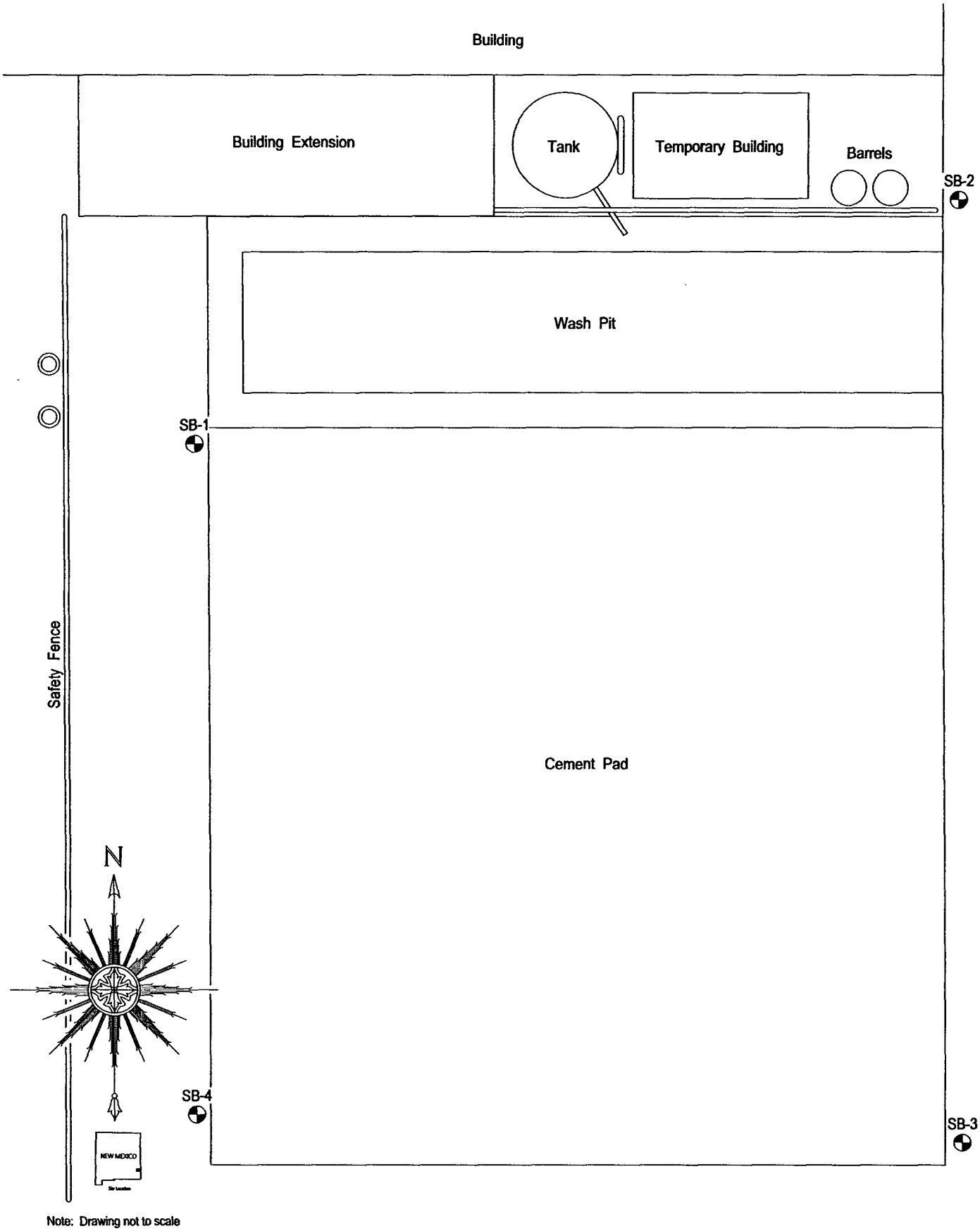
Relinquished by: Deborah Gann	Organization: ARCADIS	Date 11/20/02	Time 1700	Seal Intact?		
Received by: Laura M. Caudill	Organization: ENV. LAB of TX	Date 11/20/02	Time 1650	(Yes)	No	N/A
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact?		
Received by: _____	Organization: _____	Date / /	Time _____	Yes	No	N/A

Special Instructions/Remarks:

0.5 C 4oz GLASS BLANK 4oz VOA

Delivery Method: ☒ In Person ☐ Common Carrier _____ SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01



Note: Drawing not to scale

ARCADIS
1004 N. Big Spring Street, Suite 300
Midland, TX 79701-3383
Tel 915 687 5400 Fax 915 687 5401

Drawing Date	File Name	File Location	Task Manager	Project Director	Area Manager
21 January 2003	MT764101.dwg	\AutoCAD\DWG\Key Energy Services	R. Lang	S. Tischer	A. Schmidt

Key Energy Services, Inc.
Eunice Yard Wash Basin Soil Borings

Site Plan

Lea County, New Mexico

Technical Review	Unique Number
S. Tischer	31-014-00420
Project Number	**Figure**
MT000764.0001	1

Eunice, NM
04-15-02

02 APR 19 PM 2:14
OIL CONSERVATION DIV.

Ms. Jennifer Salsibury
Director of New Mexico State
Oil Conservation Department
1220 S. St Francis Dr.
Santa Fe, NM 89051

Ms. Salsibury,

In recent conservation with State Senator Carroll H. Leavell, we discussed a neighborhood concern. He asked me to write you, that perhaps you could help regarding the following problems. When we purchased our home at 1310 20th St. Eunice, NM in January 1991, we knew of the small trucking company just ½ block west from our home and at that time we had only the normal amount of blowing sand that's prevalent in SE New Mexico.

Then 2 years later this trucking company was sold to the Rowland Company, who expanded this lot to approximately ¼ block area, with about 15 trucks. That's when the blowing dust started to reach our homes and became a problem. At this time 42 neighbors (within a 4 block area of this truck lot) all signed a letter to the Rowland Company asking them for their help in containing this increased sand and dust if possible.

Their safety officer informed us that they would pave the lot if we would all chip in the $50,000. Which was of course impossible for a group of retirees on fixed incomes. Shortly thereafter, the truck lot was again sold to Key Energy Services, who promptly expanded the lot to ¾ block area, added about 20 more trucks. Then covered the lot with caliche dirt. As a result of this every time a truck moved on this lot a cloud of caliche fog was stirred up and blew our way to cover decks, porches, cars and everything outside. Also this lot now has an open pit into which they dump the sour crude oil sludge mixed with an H25 gas residue as they clean out the trucks and tanks. We wrote to Key Energy Services in Midland, TX asking for some relief, to no avail, their letter promised to water/spray the dirt lot when the wind was blowing heavily, but they don't, especially on weekends.

We asked to city council person to intercede, but there was no response. After calling the Environmental Department in Roswell, NM, a Mr. William Huber came by and said that what they were doing was legal. So now we ask for your help to try and improve our quality of life at least to the original level.

It is impossible to keep this dust and horrendous odor from permeating our homes, clothes and cars. To say nothing of the retirees with emphysema, asthma and allergies, who suffer with breathing problems please, if you can help we would be very grateful. See attached letters.

Sincerely,

M.A. Moats
And all signers of the letter

c.c.
Senator Carroll H. Leavell
Mayor Brown-Eunice
Key Energy Services, Inc.

We, the undersigned, respectfully request that immediate attention be given to the problem of the dust created by the parking lot surrounding Rowland Trucking Co. Because of the blowing dust on windy days, it is extremely hard to breathe (especially for those with breathing problems), and the damage done by the dirt and dust that permeates the houses and cars within a four to five block area of this lot must be acknowledged. House keeping is absolutely impossible and the quality of life in this area is greatly diminished due to this dust. Listed below is a spray that can be used to permanently stop the dust from blowing off of this lot into the surrounding area and we ask that the Rowland Trucking Co. get and use this material as soon as possible.

Magnesium choloride, Cost aprrox. 38¢ gal. 1 gallon covers 7 square yards. MOuntain State Chemical: Farmingon, N.M. EPA approved

Ma Moats 1310 - 20th Eunice N.M.
Anne Moats 1310 - 20th
Susie Espino 1320 - 20th Eunice N M
Mary Espino 1320 - 20th Eunice N M
Lou Cornes 1321 20th Eunice, N.M.
Jon & Emily Navarette 1323 20th Eunice
Louis & Lucille Garcia 1324 20th Eunice N. M.
Eddie Massey 1309 20th Eunice N. Mex.
Tom Schleicher 1308 20th
Cindy Schleicher 1308 20th Eunice, N M
Cindy Hicks 1307 20th Eunice NM
Ronnie Lewis 1304 20th Eunice.
Dennis & Linda Call 1305 19th St Eunice
Judith Brock 1310 19th St
Kay Brock 1308 19th St. Eunice. NM
Ed Brock 1310 19th ST Eunice N. M
Michael Brock 1308 19th Eunice N.M
Curt Blake 1309 19th EUNICE N. M.
Debbie Blake 1309 19th Eunice NM

Mary M. Smith 1307 - 19th St.

Cynthia Robertson 1315 19th St

Vicky C. 1901 ACEO

DeDane Usener 1919 Ave J.

Doris Usener 1919 Ave J

Jeremiah Usener 1919 Ave J

Bob Beck 1314 20th

Jean Beck 1314 20th

[illegible] Estella [illegible] 1318 20th st.

[illegible] Villa 1317 20 st

Fay Thompson 1301 20 st

Fay Thompson 1305 20 st

[illegible] 2027 Ave, P.

R A Thompson 1024 7th.

John Parker 1317 18th

Altha Parker 1317 19th

Billy Jordan 1320 19th

Melba Jordan 1320 19th

Rebecca Jordan 1320 19th

Betty Pender 1402 20th

Donna Flick 1403 20th

Key Energy Services, Inc.
Eastern New Mexico Division
2105 Avenue O
P.O. Box 99
Eunice, NM 88231

Phone: 505-394-2581
Fax: 505-394-2584

631-7577

June 4, 1999

Mrs. M. A. Moats
1310 20th Street
P.O. Box 1507
Eunice, NM 88231

Dear Mrs. Moats,

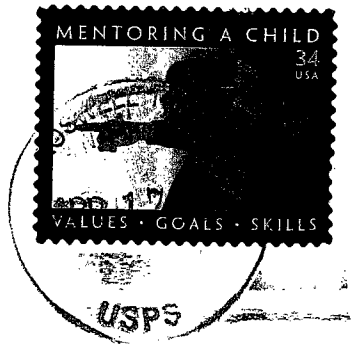
I received your letter from the Corporate Office of Key Energy Services, Inc. I appreciate you taking the time and effort to correspond with them. I have lived in Eunice almost all my life and I certainly understand the dust is a constant problem; I also realize that the wind is not always the culprit. I cannot change what has taken place in the past; however, I can have an effect on the future. I have issued instructions to all drivers to keep their speed slow enough that it will not stir up dust. I've instructed the dispatcher to promptly water the yard during high wind times. I will monitor the weather channel and when high winds are forecasted, the yard will be watered before the wind begins to blow. Key Energy Services, Inc. will strive to be a good neighbor. In the future, please feel welcome to stop by the office and visit or call.

Sincerely,

Bob Patterson
District Manager

TS

V.M.



Ms Jennifer Salisbury
Director of N.M State
Oil Conservation Dept
1220 S. St. Francis Dr.
Santa Fe N.M.
89051

87505/4000