

## **SPILL RESPONSE REMEDIATION REPORT**

Bell-B FED #2

Unit Letter P, Section 20, Township 9S, Range 38E in Lea County, New Mexico

### **Prepared for**

KEM Ventures LP

Attn: Hang Yeh

### **Prepared by**

CRG Texas Environmental Services, Inc.

2504 Avenue I

Rosenberg, Texas 77471



April 15, 2020

CRG Project Number 20-044



April 15, 2020

KEM Ventures LP

Attn: Hang Yeh

[hang.yeh@kemgroups.com](mailto:hang.yeh@kemgroups.com)

**RE: SPILL RESPONSE REMEDIATION REPORT**

Bell-B FED #2

Unit Letter P, Section 20, Township 9S, Range 38E

Lea County, New Mexico

Dear Mr. Yeh;

CRG Texas Environmental Services, Inc., (CRG Texas) is pleased to submit our report to KEM Ventures LP (KEM) detailing the activities and associated findings resulting from the Spill Response / Remediation activities conducted at the above-referenced spill site. The information presented was provided to CRG Texas in the form of a draft spill response report prepared by KEM and from subsequent correspondence with KEM personnel to provide additional data and clarification on the remediation activities.

Based on the confirmation analytical results, no additional corrective action appears warranted at the spill location. If you have any questions or require further clarification of the report findings, please contact the undersigned at your convenience.

Yours very truly,

A handwritten signature in blue ink, appearing to read "K. Casler".

CRG Texas Environmental Services, Inc.

Kevin C. Casler

Environmental Professional

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## **1.0 INTRODUCTION**

This report presents an overview of the spill response activities conducted at a crude oil release in the area immediately adjacent to the Bell-B Fed #2 well and associated tank battery. The spill response and this report were conducted and prepared in general accordance with the State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division (NMOCD) Guidelines For Remediation of Leaks, Spills and Releases published in the New Mexico Administrative Code (NMAC) Title 19, Chapter 15, Part 29, updated in 2018.

A copy of the NMOCD email presenting deficiencies in the original KEM report is provided in Appendix 1. Figure 1 illustrates the site location, and Figure 2 and 3 illustrate the pre and post remediation sample locations, and are included in Appendix 2. Photographs taken during the remediation are presented in Appendix 3, tables and laboratory analytical reports are presented in Appendix 4, and an Excavation / Remediation Log is presented in Appendix 5. Figures, photographs and laboratory analytical result, both tables and the original analytical reports, utilized in the preparation of this report were provided, unmodified, from the original KEM report.

## **2.0 BACKGROUND**

On August 20, 2019, a Bureau of Land Management (BLM) inspector observed indications of a crude oil release in the area immediately adjacent to the Bell-B Fed #2 well and associated tank battery. The BLM inspector notified KEM of the release and requested the site area be remediated.

The Bell-B Fed #2 well is located approximately 60 miles North of Hobbs, New Mexico in Unit P, Section 20, Township 9S, Range 38E in Lea County, New Mexico. The GPS (NAD83) location for the well site is latitude 33.5143356 North and longitude -103.0648651 West. Figure 1 illustrates the site location as approximately 3000 feet west of State Line Road 769. From the photographs provided, it appeared the release resulted from small operational discharges over a period of time rather than a one-time discharge. Soil staining was present over much of the area between the tank battery and wellhead. Upon exposure of the wellhead, a leak on casing was found consisting of an approximate 5-inch crack in the casing about 10 feet below the ground level. Figure 2 presents a Site Map illustrating the oil production equipment and impacted soil area. Photographs of the observed soil impacts are presented in Attachment 3.



### **3.0 INITIAL SOIL ASSESSMENT**

On August 26, 2019, KEM contracted a third party company to conduct a visual site assessment in order to identify the depth and extent of the impacted area. Based on the assessment, a possible 100 foot by 80 foot impact area was identified. Hand installed borings were installed to assess the depth of impact at various locations. A total of 40 soil samples were collected at various depths based on visual and olfactory observations. One sample was collected for each 200 square foot of excavated area. Sample locations are illustrated in the Figure 3: Confirmation Grid Sample Locations Map. Photographs illustrating the depth assessment boring locations is provided in Attachment 3.

### **4.0 SOIL REMEDIATION**

From October 28, 2019 to November 19, 2019, KEM had contracted a service company to start cleaning up the impacted area and to facilitate soil sampling when clean soil was visually observed. Soil remediation was performed in accordance with procedures described in NMAC Title 19, Chapter 15, Part 29, updated in 2018 and included a combination of bioremediation and compositing with clean dirt. A copy of the excavation / remediation log is presented in Appendix 4. The remediation process included:

- Excavation of impacted soil until clean soil is identified visually (i.e., no staining, hydrocarbon odor, etc);
- Mixing impacted soil with clean soil at a ratio of one load of contaminated soil to one load clean soil;
- Staging mixed soil on-site and collection of post-removal confirmation soil samples both from the excavated soil area and the mixed soil stockpiles;
- Confirmation sampling and laboratory chemical analysis; and,
- Backfilling the excavated areas.

Based on the measurement of the areas and the depths of excavation across the treated area, approximately 3,000 cubic yards of impacted soil were treated. Remediation activities continued until post-remediation sample concentrations were at or below the desired NMOCD target concentrations as illustrated on Tables 1 and 2.

## 5.0 CONFIRMATION SOIL SAMPLING

Forty (40) confirmation soil samples were collected from the base of the excavation in order to demonstrate the contamination had been adequately removed. Sample locations were selected from a sampling grid established for the excavated area as illustrated on Figure 3 and were collected at various depths as presented on Table 1 in Appendix 4. In addition, four (4) samples were also collected from the excavated / mixed soil stockpiles. All samples were analyzed by Cardinal Laboratories in Hobbs, New Mexico for:

- Total Petroleum Hydrocarbons (TPH),
- TPH - Gasoline Range Organics (GRO) and Diesel Range Organics (DRO);
- Benzene, toluene, ethylbenzene and xylene (BTEX); and,
- Chlorides.

The sample results were compared to the NMOCD regulatory standards as depicted on Table 1. There were no exceedances of the NMOCD limits in any of the samples. The results may be further summarized as follows:

- TPH was reported to be non-detect (<10.0 mg/Kg) to 510 mg/Kg. All results are below the NMOCD standard of 2,500 mg/Kg;
- TPH GRO / DRO constituents were reported to be non-detect (<10.0 mg/Kg) to 510 mg/Kg. All results were below the NMOCD standard of 1,000 mg/Kg;
- Individual BTEX constituent were reported less than the detection limit (<0.300 mg/Kg) for all samples; and,
- Chloride concentrations were reported to range from non-detect (<16 mg/Kg) to 656 mg/kg. All results were below the NMOCD standard of 2,500 mg/Kg.

The soil sample analysis results and chain of custody forms from Cardinal Laboratories are included in Appendix 4.

Photographs illustrating the post-excavation site conditions are presented in Appendix 3.

## **6.0 CONCLUSIONS AND RECOMMENDATIONS**

The analytical results for the confirmation samples collected and analyzed after the remediation were reported below NMOCD action levels. Based on the confirmation sampling analytical results from this remediation effort, no additional work is warranted at this area.

We appreciate the opportunity to be of service to you on this project.

Respectfully submitted,



Kevin C. Casler

Vice-President, TCEQ RCAS, CAPM, LOSS

## **APPENDIX 1**

### **NMOCD Email**

NMOCD Email

-----Original Message-----

From: "Venegas, Victoria, EMNRD"

<[Victoria.Venegas@state.nm.us](mailto:Victoria.Venegas@state.nm.us)<<mailto:Victoria.Venegas@state.nm.us>>>

Sent: Thursday, March 5, 2020 5:39pm

To: "[hang.yeh@kemgroups.com](mailto:hang.yeh@kemgroups.com)<<mailto:hang.yeh@kemgroups.com>>"

<[hang.yeh@kemgroups.com](mailto:hang.yeh@kemgroups.com)<<mailto:hang.yeh@kemgroups.com>>>, "Bratcher, Mike, EMNRD"

<[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)<<mailto:mike.bratcher@state.nm.us>>>, "Hamlet, Robert,

EMNRD" <[Robert.Hamlet@state.nm.us](mailto:Robert.Hamlet@state.nm.us)<<mailto:Robert.Hamlet@state.nm.us>>>, "Eads,

Cristina, EMNRD" <[Cristina.Eads@state.nm.us](mailto:Cristina.Eads@state.nm.us)<<mailto:Cristina.Eads@state.nm.us>>>

Cc: "CFO\_Spill, BLM\_NM"

<[BLM\\_NM\\_CFO\\_Spill@blm.gov](mailto:BLM_NM_CFO_Spill@blm.gov)<[mailto:BLM\\_NM\\_CFO\\_Spill@blm.gov](mailto:BLM_NM_CFO_Spill@blm.gov)>>

Subject: NRM2003134504 BELL B FED #2 @ 30-025-07066

NRM2003134504 BELL B FED #2 @ 30-025-07066

Mr. Yeh,

The OCD has denied the submitted Closure Report C-141 for incident #

NRM2003134504 BELL B FED #2 @ 30-025-07066 for the following reasons:

\* Soil samples were collected from only 5 points within the excavation spanning an area of approximately 8,000 square feet. Please see

19.15.29.12<<http://19.15.29.12>> D. Closure Requirements. Each sample should not represent more than 200 square feet unless a sampling plan has already been submitted to and approved by the division.

\* In your next submittal, please, include a sampling map that shows all the confirmation sample points.

\* As of August 2018, NMOCD has discontinued the use of the ranking system for remediation of spills and releases. In your next submittal, do not include Table 3. Ranking Score Summary.

\* The current spill rule may be viewed here:

<http://164.64.110.134/parts/title19/19.015.0029.html><<http://164.64.110.134/parts/title19/19.015.0029.html>>

\* For further clarifications regarding the implementation of the spill rule, please visit the OCD web site:

<http://www.emnrd.state.nm.us/OCD/documents/OCDInternalPolicy-SpillRuleClarifications.pdf><<http://www.emnrd.state.nm.us/OCD/documents/OCDInternalPolicy-SpillRuleClarifications.pdf>>

The Denied C-141 can be found in the online image file. Please review and make the required correction prior to resubmitting through the fee portal.

Thank you,

Victoria Venegas

State of New Mexico

Energy, Minerals, and Natural Resources

Oil Conservation Division

811 S. First St., Artesia NM 88210

(575) 748-1283

[Victoria.Venegas@state.nm.us](mailto:Victoria.Venegas@state.nm.us)<<mailto:Victoria.Venegas@state.nm.us>><<mailto:Victoria.Venegas@state.nm.us>>

## **APPENDIX 2**

**Figure 1 - Vicinity Map**

**Figure 2 – Site Map**

**Figure 3 – Confirmation Grid Sample Locations Map**



Figure 1: Site Location Map



Figure 2: Site Map



**Figure 3: Confirmation Grid Sample Locations Map**



## **APPENDIX 3**

### **Photographic Log**

## PHOTOGRAPHIC LOG



Photo 1: Pre-remediation photo showing oil staining on ground surface (view looking west)



Photo 2: Pre-remediation visual assessment locations (view looking east)

## PHOTOGRAPHIC LOG



Photo 3: Post remediation grid sample locations (view looking west)



Photos 4 & 5: Post excavation of wellhead area

## **APPENDIX 4**

### **Table 1 - Confirmation Sample Analytical Results**

### **Table 2 – Stockpile Analytical Results**

### **Cardinal Laboratories Analytical Report**



**Table 1- Confirmation Sampling Results**

Sample ID	Depth (ft)	Sampling Date	TPH (mg/kg)	GRO + DRO (mg/kg)	BTEX (mg/kg)	Benzene (mg/kg)	Chloride (mg/kg)
NMOCD Standard*	-	-	2,500	1,000	50	10	2,500
4' East	4.0	11/12/2019	< 10.0	< 10.0	<0.300	<0.05	656
2	5.0	03/11/2020	34.9	34.9	<0.300	<0.05	544
3	5.5	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	176
4	6.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	48
5	6.2	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	32
6	6.5	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	64
7	6.2	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	48
8	5.5	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	32
9	3.0	03/11/2020	25.2	25.2	<0.300	<0.05	48
10	3.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	16
11	4.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	144
12	4.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	<16
13	6.6	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	16
14	6.6	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	32
15	6.6	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	<16
16	8.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	16
17	8.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	<16
18	9.0	03/11/2020	36.9	36.9	<0.300	<0.05	<16
19	4.0	03/11/2020	50.9	50.9	<0.300	<0.05	<16
5' South	5.0	11/12/2019	53	35.4	<0.300	<0.05	48
21	4.0	03/11/2020	16.5	16.5	<0.300	<0.05	144
22	10.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	16
23	10.0	03/11/2020	21.8	21.8	<0.300	<0.05	128
24	10.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	16
25	10.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	16
21'	21.0	11/01/2019	< 10.0	< 10.0	<0.300	<0.05	32
28'	28.0	11/01/2019	< 10.0	< 10.0	<0.300	<0.05	96
28	6.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	<16
29	4.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	48
30	10.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	<16
31	10.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	<16
32	15.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	32
38	10.0	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	48
34	15	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	80
35	10	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	80
36	10	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	128
37	10	03/11/2020	510	510	<0.300	<0.05	160
Well H 28'	28	11/14/2019	< 10.0	< 10.0	<0.300	<0.05	176
39	10	03/11/2020	< 10.0	< 10.0	<0.300	<0.05	32
40	10	03/11/2020	10.9	10.9	<0.300	<0.05	32

**Table 2 – Stockpile Sample Results**

Sample ID	Date	TPH (mg/kg)	GRO + DRO (mg/kg)	BTEX (mg/kg)	Benzene (mg/kg)	Chloride (mg/kg)
OCD Recommended Values		2,500	1,000	50	10	10,000
R1	11/26/19	796	599	<0.300	<0.05	336
PILE B - 1	11/26/19	101	146	<0.300	<0.05	368
PILE A - 1	11/26/19	116	98	<0.300	<0.05	352
C 1	11/26/19	374.1	286	<0.300	<0.05	336



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

March 13, 2020

HANG YEH

KEM ENERGY

515A S FRY RD, STE. 406

KATY, TX 77450

RE: BEIL - B

Enclosed are the results of analyses for samples received by the laboratory on 03/11/20 14:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script, reading 'Celey D. Keene'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 2 5' (H000769-01)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	8.97	
Toluene*	<0.050	0.050	03/12/2020	ND	1.81	90.7	2.00	8.89	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.84	92.2	2.00	9.07	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.39	89.8	6.00	9.04	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

Chloride, SM4500CI-B			mg/kg							Analyzed By: GM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	544	16.0	03/12/2020	ND	400	100	400	7.69			
TPH 8015M	mg/kg		Analyzed By: MS								

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	19.9	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	15.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 90.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.7 % 42.2-156

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 3 5.5' (H000769-02)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	8.97	
Toluene*	<0.050	0.050	03/12/2020	ND	1.81	90.7	2.00	8.89	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.84	92.2	2.00	9.07	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.39	89.8	6.00	9.04	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 94.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.5 % 42.2-156

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 4 6' (H000769-03)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	8.97	
Toluene*	<0.050	0.050	03/12/2020	ND	1.81	90.7	2.00	8.89	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.84	92.2	2.00	9.07	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.39	89.8	6.00	9.04	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M		mg/kg		Analyzed By: MS					

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 93.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 96.1 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 5 6.2' (H000769-04)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	8.97	
Toluene*	<0.050	0.050	03/12/2020	ND	1.81	90.7	2.00	8.89	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.84	92.2	2.00	9.07	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.39	89.8	6.00	9.04	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/12/2020	ND	400	100	400	7.69		
TPH 8015M			mg/kg		Analyzed By: MS					

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 91.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.0 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 6 6.5' (H000769-05)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	8.97	
Toluene*	<0.050	0.050	03/12/2020	ND	1.81	90.7	2.00	8.89	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.84	92.2	2.00	9.07	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.39	89.8	6.00	9.04	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 95.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.2 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 7 6.2' (H000769-06)**

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/12/2020	ND	1.75	87.6	2.00	2.91		
Toluene*	<0.050	0.050	03/12/2020	ND	1.77	88.4	2.00	2.75		
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	3.09		
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.28	88.0	6.00	3.20		
Total BTEX	<0.300	0.300	03/12/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 91.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.1 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 8 5.5' (H000769-07)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/12/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/12/2020	ND	400	100	400	7.69		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND				

Surrogate: 1-Chlorooctane 92.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.6 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 9 3.' (H000769-08)**

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/12/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.28	88.0	6.00	3.20	
Total BTX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	25.2	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 90.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 90.0 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 10 3.0' (H000769-09)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/12/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M		mg/kg		Analyzed By: MS					

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 92.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.0 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 11 4.0' (H000769-10)**

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91		
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75		
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09		
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20		
Total BTEX	<0.300	0.300	03/13/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 89.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 91.7 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 12 4.0' (H000769-11)**

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91		
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75		
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09		
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20		
Total BTEX	<0.300	0.300	03/13/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/12/2020	ND	400	100	400	7.69		

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 84.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 87.4 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 13 6.6' (H000769-12)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 91.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.6 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 14 6.6' (H000769-13)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/12/2020	ND	400	100	400	7.69		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND				

Surrogate: 1-Chlorooctane 89.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.9 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 15 6.6' (H000769-14)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/12/2020	ND	400	100	400	7.69		

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 87.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.1 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 16 8.0' (H000769-15)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/12/2020	ND	400	100	400	7.69	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 90.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.5 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 17 8.0' (H000769-16)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/13/2020	ND	400	100	400	3.92		

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	203	102	200	4.18	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	205	103	200	4.14	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 91.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.8 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 18 9.0' (H000769-17)**

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91		
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75		
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09		
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20		
Total BTEX	<0.300	0.300	03/13/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	24.7	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	12.2	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 19 4.0' (H000769-18)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0,050	0,050	03/13/2020	ND	1,75	87,6	2,00	2,91	
Toluene*	<0,050	0,050	03/13/2020	ND	1,77	88,4	2,00	2,75	
Ethylbenzene*	<0,050	0,050	03/13/2020	ND	1,80	90,1	2,00	3,09	
Total Xylenes*	<0,150	0,150	03/13/2020	ND	5,28	88,0	6,00	3,20	
Total BTEX	<0,300	0,300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/13/2020	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	33.7	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	17.2	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 101 % 44.3-144

Surrogate: 1-Chlorooctadecane 109 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 21 4.0' (H000769-19)**

BTX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91		
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75		
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09		
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20		
Total BTX	<0.300	0.300	03/13/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	16.5	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 98.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 22 10.' (H000769-20)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 98.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 23 10' (H000769-21)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31
DRO >C10-C28*	21.8	10.0	03/12/2020	ND	251	126	200	0.681
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND				

Surrogate: 1-Chlorooctane 99.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 106 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 24 10' (H000769-22)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 98.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 108 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 25 10' (H000769-23)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 109 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 28 6' (H000769-24)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/13/2020	ND	400	100	400	3.92		

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0,681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 103 % 44.3-144

Surrogate: 1-Chlorooctadecane 112 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 29 4' (H000769-25)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/13/2020	ND	1.75	87.6	2.00	2.91	
Toluene*	<0.050	0.050	03/13/2020	ND	1.77	88.4	2.00	2.75	
Ethylbenzene*	<0.050	0.050	03/13/2020	ND	1.80	90.1	2.00	3.09	
Total Xylenes*	<0.150	0.150	03/13/2020	ND	5.28	88.0	6.00	3.20	
Total BTEX	<0.300	0.300	03/13/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 100 % 44.3-144

Surrogate: 1-Chlorooctadecane 107 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 31 10' (H000769-26)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/13/2020	ND	400	100	400	3.92		

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0,681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 32 15' (H000769-27)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0.681
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND				

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 111 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 34 15' (H000769-28)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 100 % 44.3-144

Surrogate: 1-Chlorooctadecane 108 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 35 10' (H000769-29)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/13/2020	ND	400	100	400	3.92		
TPH 8015M			mg/kg		Analyzed By: MS					

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 97.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 36 10' (H000769-30)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	03/13/2020	ND	400	100	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31
DRO >C10-C28*	37.8	10.0	03/12/2020	ND	251	126	200	0.681
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND				

Surrogate: 1-Chlorooctane 96.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 103 % 42.2-156

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 37 10' (H000769-31)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31	
DRO >C10-C28*	361	10.0	03/12/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	150	10.0	03/12/2020	ND					

Surrogate: 1-Chlorooctane 96.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 111 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 38 10' (H000769-32)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67		
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50		
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64		
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86		
Total BTEX	<0.300	0.300	03/12/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500CI-B			mg/kg							Analyzed By: GM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	48.0	16.0	03/13/2020	ND	400	100	400	3.92			
TPH 8015M			mg/kg							Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		

GRO C6-C10*	<10.0	10.0	03/12/2020	ND	225	113	200	3.31
DRO >C10-C28*	<10.0	10.0	03/12/2020	ND	251	126	200	0,681
EXT DRO >C28-C36	<10.0	10.0	03/12/2020	ND				

Surrogate: 1-Chlorooctane 96.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 105 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 39 (H000769-33)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/13/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/13/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/13/2020	ND					

Surrogate: 1-Chlorooctane 99.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 109 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 40 10' (H000769-34)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/13/2020	ND	225	113	200	3.31	
DRO >C10-C28*	10.9	10.0	03/13/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/13/2020	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-144

Surrogate: 1-Chlorooctadecane 114 % 42.2-156

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**Analytical Results For:**

KEM ENERGY  
 HANG YEH  
 515A S FRY RD, STE. 406  
 KATY TX, 77450  
 Fax To:

Received: 03/11/2020  
 Reported: 03/13/2020  
 Project Name: BEIL - B  
 Project Number: NOT GIVEN  
 Project Location: LEA, NM

Sampling Date: 03/11/2020  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Jodi Henson

**Sample ID: 30 10' (H000769-35)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/12/2020	ND	1.81	90.3	2.00	5.67	
Toluene*	<0.050	0.050	03/12/2020	ND	1.82	91.1	2.00	5.50	
Ethylbenzene*	<0.050	0.050	03/12/2020	ND	1.85	92.5	2.00	5.64	
Total Xylenes*	<0.150	0.150	03/12/2020	ND	5.36	89.3	6.00	5.86	
Total BTEX	<0.300	0.300	03/12/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/13/2020	ND	400	100	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				

GRO C6-C10*	<10.0	10.0	03/13/2020	ND	225	113	200	3.31	
DRO >C10-C28*	<10.0	10.0	03/13/2020	ND	251	126	200	0.681	
EXT DRO >C28-C36	<10.0	10.0	03/13/2020	ND					

Surrogate: 1-Chlorooctane 99.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 109 % 42.2-156

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#### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report



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Page 37 of 45




101 East Marland, Hobbs, NM 88240  
(575) 393-2325 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Company Name:</b> KEM Ventures <b>Project Manager:</b> Hang Yeh <b>Address:</b> 12651 Bryar Forest Dr. Suite 151A <b>City:</b> Houston, TX <b>State:</b> TX <b>Zip:</b> 77099 <b>Phone #:</b> 832-906-9584 <b>Fax #:</b> <b>Project #:</b> <b>Project Name:</b> B01 B <b>Project Owner:</b> KEM <b>Project Location:</b> <b>Sampler Name:</b>		<b>BILL TO</b> <b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>		<b>ANALYSIS REQUEST</b>	
<b>Lab I.D.</b> H0001A	<b>Sample I.D.</b> 1 5.5' 2 6.2' 3 6.5' 4 6.2' 5 5.5' 6 5.5' 7 3.0' 8 3.0' 9 3.0' 10 3.0' 11 3.0'	<b>MATRIX</b> (G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER ACID/BASE ICE / COOL OTHER	<b>PRESERV</b> DATE TIME	<b>SAMPLING</b> CHloride TPH BTX	V V V V V V V V V V V
<b>Redelivered By:</b> [Signature] <b>Redelivered By:</b> [Signature] <b>Time:</b> 3/11/08 <b>Observed Temp. °C:</b> 15.1 <b>Connected Temp. °C:</b> <b>Sample Condition:</b> Cool Intact <b>Sample LPS - Blue - Other:</b>		<b>Received By:</b> [Signature] <b>Date:</b> 3/11/08 <b>Observed Temp. °C:</b> 15.1 <b>Connected Temp. °C:</b> <b>Sample Condition:</b> Cool Intact <b>Sample LPS - Blue - Other:</b>			
<b>Remarks:</b> Hang Yeh @ kemgroups.com Samples taken & brought directly to lab.		<b>Vertical Result:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Adapt Photos #:</b> All Results are emailed. Please provide Email address: Hang Yeh @ kemgroups.com Samples taken & brought directly to lab.			
<b>Turnaround Time:</b> [Signature] <b>Thermometer ID #:</b> [Signature] <b>Correction Factor:</b> -0.4 °C <b>Standard:</b> [Signature] <b>Bacteria (only) Sample Condition:</b> Cool Intact <b>Observed Temp. °C:</b> <b>Connected Temp. °C:</b>		<b>Corrected Temp. °C:</b>			

\* Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallab.com



**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**Company Name:** KEM  
**Project Manager:** Chang Yeh  
**Address:** 12651 Briarcroft Dr, STE 151A  
**City:** Houston  
**State:** TX **Zip:** 77077  
**Phone #:** \_\_\_\_\_ **Fax #:** \_\_\_\_\_  
**Project #:** \_\_\_\_\_ **Project Owner:** KEM  
**Project Location:** BPI B  
**Sampler Name:** \_\_\_\_\_

**BILL TO**

**P.O. #:** \_\_\_\_\_  
**Company:** \_\_\_\_\_  
**Attn:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**City:** \_\_\_\_\_  
**State:** \_\_\_\_\_ **Zip:** \_\_\_\_\_  
**Phone #:** \_\_\_\_\_ **Fax #:** \_\_\_\_\_

**101 East Mariand, Hobbs, NM 88240**  
**(375) 393-2326 FAX (375) 393-2476**

Lab I.D.	Sample I.D.	# GRAB OR (Q)OMP	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME	ANALYSIS REQUEST
11	12	4.0'										3/1	11:50	CHLORIDE
12	13	6.6'										3/1		TBH
13	14	6.6'										3/1		BIV
14	15	6.6'										3/1		
15	16	8.0'												
16	17	8.0'												
17	18	9.0'												
18	19	4.0'												
19	20	4.0'												
20	21	4.0'												
	22	10.1'												

**Refrigerated By:** \_\_\_\_\_ **Date:** 3/1/10 **Received By:** [Signature] **Time:** 11:55  
**Delivered By:** (Circle One) \_\_\_\_\_ **Observed Temp. °C:** 18.1 **Corrected Temp. °C:** \_\_\_\_\_  
**Sampler:** UPS - (Blue - Other) \_\_\_\_\_ **Sample Condition:** ☒ Intact ☐ Crushed ☐ No ☐ No ☐ No

**Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabsonline.com**



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

<b>Project Manager:</b> KEM <b>Address:</b> 12611 Briar Forest Dr. - STE 101A <b>City:</b> Houston <b>State:</b> TX <b>Zip:</b> 77079 <b>Phone #:</b> <b>Fax #:</b> <b>Project #:</b> BPI B <b>Project Name:</b> <b>Project Location:</b> <b>Sampler Name:</b> <b>FOR LAB USE ONLY</b>		<b>BILL TO</b> <b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>	
<b>Lab I.D.:</b> H000169 <b>Sample I.D.:</b> <div style="display: flex; justify-content: space-between;"> <div> 23 24 25 26 27 28 29 30 </div> <div> 10 10 10 10 10 10 10 10 </div> </div>		<b>MATRIX</b> <input type="checkbox"/> DRAB OR (C) DMF <input type="checkbox"/> CONTAINERS <input type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER <input type="checkbox"/> ACID/BASE <input type="checkbox"/> ICE / COOL <input type="checkbox"/> OTHER	
<b>DATE</b> 3/11/11 <b>TIME</b> 11:30		<b>SAMPLING</b> LL TPH BIX	
<b>REMARKS:</b> All Results are attached. Please provide Email address: <b>Verbal Results:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add Phone #:</b> <b>Turnaround Time:</b> <b>Standard</b> <input type="checkbox"/> <b>Flash</b> <input type="checkbox"/> <b>Thermomax ID #97</b> <b>Bacteria (only) Sample Condition:</b> <input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Observed Temp. °C <b>Correction Factor +0.4 °C</b> <b>Compressed Temp. °C</b>		<b>CHILLED BY:</b> <b>RECEIVED BY:</b> <b>DATE:</b> <b>TIME:</b>	



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

4

<b>Company Name:</b> KEM <b>Project Manager:</b> KEM <b>Address:</b> 12651 Bryant Forest Dr, STE 111A <b>City:</b> Lovu <b>State:</b> TX <b>Zip:</b> 79097 <b>Phone #:</b> <b>Fax #:</b> <b>Project #:</b> <b>Project Name:</b> Bell B <b>Project Location:</b> <b>Sampler Name:</b>		<b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>	
<b>Lab I.D.</b> H000764 <b>Sample I.D.</b> 31, 32, 33, 34, 35 <b>Matrix:</b> GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER <b>Preserv:</b> ACID/BASE, ICE / COOL, OTHER <b>Sampling:</b>		<b>DATE</b> 3/11 <b>TIME</b> 11:30 <b>ANALYSIS REQUEST</b> CL, TPH, BTV	
<b>Relinquished By:</b> [Signature] <b>Time:</b> 3/11/10 <b>Received By:</b> [Signature] <b>Time:</b> 14:55 <b>Relinquished By:</b> [Signature]		<b>Turnaround Time:</b> Standard <b>Thermometer ID:</b> 497 <b>Correction Factor:</b> 0.4 °C <b>Bacteria (only) Sample Condition:</b> Cool, Heat <b>Observed Temp:</b> °C <b>Corrected Temp:</b> °C	

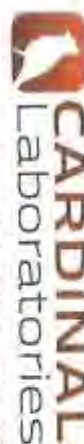
† Cardinal cannot accept verbal changes. Please email changes to cdeby.keene@cardinalabnm.com



Company Name: KEM Ventures

† Cardinal cannot accept verbal changes. Please email changes to [celej.keene@cardinallabsnm.com](mailto:celej.keene@cardinallabsnm.com)



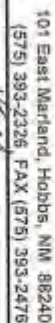


101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

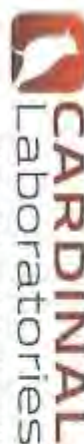
<b>Company Name:</b> KEM <b>Project Manager:</b> Hank Yeh <b>Address:</b> 12651 Bryant Rd, STE 151A <b>City:</b> Albuquerque <b>State:</b> TX <b>Zip:</b> 77077 <b>Phone #:</b> <b>Fax #:</b> <b>Project #:</b> 84116 <b>Project Name:</b> <b>Project Owner:</b> KEM <b>Project Location:</b> <b>Sampler Name:</b>		<b>P.O. #:</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>	
<b>Lab I.D.</b> <b>Sample I.D.</b> <b>Matrix:</b> (G)RAB OR (C)OMP <b>Containers:</b> GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER <b>Acid/Base:</b> ICE / COOL, OTHER <b>DATE:</b> 3/11/11 <b>TIME:</b> 11:50 <b>CHLORIDE</b> <b>TB</b> <b>BIX</b>		<b>BILL TO</b> <b>ANALYSIS REQUEST</b>	
<b>Delivered By:</b> (Circle One) <b>Sampler - Upg - Blue - Other:</b>		<b>Observed Temp. °C:</b> 15.1 <b>Corrected Temp. °C:</b> <b>Sample Condition:</b> Cool, Intact <b>Checked By:</b> [Signature] <b>Turnaround Time:</b> Standard (Rush) <b>Bacteria (only) Sample Condition:</b> Cool, Intact <b>Thermometer ID #87</b> <b>Correction Factor +0.4 °C</b>	
<b>Received By:</b> [Signature] <b>Date:</b> 3/11/11 <b>Received By:</b> [Signature]		<b>Verbal Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add Phone #:</b> <b>All Results are attached. Please provide Email address:</b> <b>REMARKS:</b>	

† Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinallabnm.com



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

+ Cardinal cannot accept verbal changes. Please email changes to [celej.keene@cardinallabsnm.com](mailto:celej.keene@cardinallabsnm.com)



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# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

4

<b>Company Name:</b> KEM <b>Project Manager:</b> Lawrence <b>Address:</b> 12651 Bryon Forest Dr, STE 151A <b>City:</b> Fort Worth <b>State:</b> TX <b>Zip:</b> 76107 <b>Phone #:</b> <b>Fax #:</b> <b>Project #:</b> 8411 B <b>Project Owner:</b> KEM <b>Project Location:</b> <b>Sampler Name:</b>		<b>P.O. #</b> <b>Company:</b> <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>	
<b>Lab I.D.</b> H08C0769 31 32 33 34 35		<b>Sample I.D.</b> 37 38 39 40 41	
(B) RAB OR (C) OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE ICE / COOL OTHER :		<b>DATE</b> 3/11/10 <b>TIME</b> 11:30	
<b>Matrix</b> PRESERV SAMPLING		CL TPH BTV	
<b>Requisitioned By:</b> Date: 3/11/10 Time: 14:55 Received By: Heidi Hunter Time: 14:55 Date: 3/11/10		<b>Turnaround Time:</b> Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Bacteria (only) Sample Condition <input type="checkbox"/> Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No Corrected Temp. °C	
<b>Requisitioned By:</b> Date: 3/11/10 Time: 14:55 Received By: Heidi Hunter Time: 14:55 Date: 3/11/10		<b>Remarks:</b> All Results are emailed. Please provide Email address: Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:	

1 Cardinal cannot accept verbal changes. Please email changes to cefey.kenne@cardinallabsnm.com

## **APPENDIX 5**

### **Excavation / Remediation Log**

## **Bell-B FED #2 Excavation / Remediation Log**

Day 1 (10/28): Clean up and prepare the surface of impacted area (100' X 80')

Day 2 (10/29): Remove Oil tanks from the area and started excavating impacted area

Day 3 (10/30): Excavating NE area of impacted region until clean dirt found visually, about 4 feet and piled up the dirt.

Day 4 (10/31): Excavating North area of impacted region until clean dirt found visually, about 5 feet and piled up the dirt.

Day 5 (11/1): Excavating the center part of impacted region, clean dirt was hit visually. Two samples were taken (21' & 28' respectively) and brought to Cardinal Lab

Day 6 (11/12): Excavating the area nearby the well head. Sampled the soil at NE area of impacted region and North area.

Day 7 (11/14) Excavating the area nearby the well head. 28' deep hole was dug. Some grey dirt was found. It was suspected to be clay, so the dirt was sampled and brought to the lab. The leak of gas on casing was found, a hole, about 10 feet from the ground level

Day 8 (11/15) Excavating the area nearby the well head. Upon exposure of the wellhead, a leak on casing was found consisting of an approximate 5-inch crack in the casing about 10 feet below the ground level.

Day 9 (11/16) Excavating the area around well head

Day 10 (11/18) Excavating the area around well head

Day 11 (11/19) Excavating the area around well head a 1/2 circular sector area (20 feet radius from the well head) was identified to be contaminated and boundaries were identified.

Day 12 (11/20) Removing & clean out the dirt from the impacted area

Day 13 (11/21) Removing & clean out the dirt from the impacted area

Day 14 (11/22) Removing & clean out the dirt from the impacted area

Day 15 (11/23) Removing & clean out the dirt from the impacted area

Day 16 (11/25) Remediating

Day 17 (11/26) Remediating

Day 18 (12/2) Remediating

Day 19 (12/3) Remediating

Day 20 (12/4) Remediating

Day 21 (12/5) Remediating