

dugan production corp.

February 5, 2016

Mr. Jamie Keyes (jamie.keyes@state.nm.us)

Mr. Tomas Oberding (tomas.oberding@state.nm.us)

Re: Oil Spill Report – Dugan Production – KM Chaveroo Tank Battery Chaves, Co., NM

Gentlemen:

On August 24, 2015, Dugan Production notified the NMOCD of a crude oil spill at our KM Chaveroo Tank Battery located in LAT 33.651832, LONG -103.540328, CHAVES CO. NM. It is estimated that 205 bbls of crude oil was lost, with 50 bbls recovered and stored in an adjacent tank. The cause of the tank was a corrosion hole near the base of the storage tank. The tank was full and waiting to sell a load of oil when the hole occurred.

On schematic 2 at reference point 6, a line leak not associated with the storage take failure was found and repaired. The damage from that leak was noted on the drawing and repaired.

The attached reports have all be previously submitted to you, I wanted to put them all in one document for your convenience

I am prepared to send one of our production foremen to meet with you and address any concerns you have about remediation of this facility.

Please contact me with any questions you have and what steps you would want me to take next.

John Alexander
Vice President

Dugan Production Corp.
PO Box 420
Farmington, NM 87499

PLAN FOR REMEDIATION OF OIL SPILL
KM CHAVEROO TANK BATTERY
LAT 33.651832
LONG -103.540328
CHAVES CO. NM

Occurrence:

On August 24, 2015 our contract pumper Rainy McKay reported that one of the oil storage tanks at the subject tank battery had developed a corrosion hole near the base of the tank. A total of 255 bbls of crude oil was released. We recovered 50 bbls of oil. There are two tanks in the battery. The recovered oil was transferred into the non-damaged tank. The 205 bbl spill was located near the tank batter has shown on the attached plan view of the location. Mr. McKay notified Ms. Kellie Jones with NMOCD in Hobbs, NM. A report of the spill was filed with NMOCD in Hobbs.

Plan To Remediate:

1. The damaged tank is removed for service.
2. Remove the stock piled soil that was removed from the spill area. The soil will be taken to an NMOCD approved remediation facility.
3. Samples will be taken from the areas where the soil was stock piled on location. The results will be sent to NMOCD, Hobbs.
4. The areas that are stained will be sampled at the same time. The location of sampling and pertinent depth and other data will be reported to NMOCD.
5. After sampling a plan for contaminated soil removal will be cleared with NMOCD.
6. The NMOCD will be updated on the cleanup progress.

Contacts:

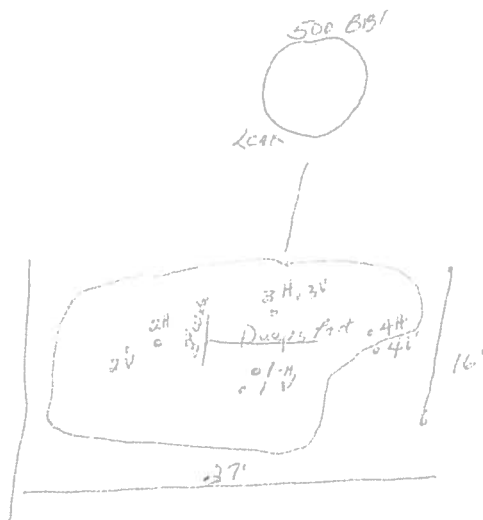
John Alexander
Vice President
Dugan Production Corp.
505-325-1821 office
505-320-1935 cell
John.alexander@duganproduction.com

Rainy McKay
Contract pumper for Dugan Production
575-602-3796 cell
rcmckay@hotmail.com

Prepared by John Alexander.

Schematic #1

Km Battery



Deep Part 3' deep
 + 1/3' wide + 1/2' long
 1-H Horizontal
 1-V Vertical
 1-H Sample 8" Deep

September 08, 2015

JOHN ALEXANDER
DUGAN PRODUCTION
P. O. BOX 420
FARMINGTON, NM 87499

1st Soil Samples

RE: K M BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 09/01/15 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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,



Celey D. Keene
Lab Director/Quality Manager

Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 09/01/2015
 Reported: 09/08/2015
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: CHAVES CO, NM

 Sampling Date: 09/01/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SAMPLE #1 (H502326-01)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.23	0.500	09/03/2015	ND	1.90	95.1	2.00	0.227	
Toluene*	14.1	0.500	09/03/2015	ND	1.74	86.8	2.00	0.647	
Ethylbenzene*	27.1	0.500	09/03/2015	ND	1.80	90.1	2.00	0.934	
Total Xylenes*	23.3	1.50	09/03/2015	ND	5.43	90.5	6.00	1.45	
Total BTEX	65.7	3.00	09/03/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 110 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	09/04/2015	ND	432	108	400	7.69	

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	597	200	09/02/2015	ND	190	94.9	200	0.159		
DRO >C10-C28	18700	200	09/02/2015	ND	206	103	200	0.564		
Total TPH C6-C28	19300	200	09/02/2015	ND	396	99.0	400	0.370		

Surrogate: 1-Chlorooctane 176 % 47.2-157

Surrogate: 1-Chlorooctadecane 309 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 09/01/2015
 Reported: 09/08/2015
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: CHAVES CO, NM

 Sampling Date: 09/01/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SAMPLE #2 (H502326-02)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	09/03/2015	ND	1.90	95.1	2.00	0.227	
Toluene*	3.86	0.500	09/03/2015	ND	1.74	86.8	2.00	0.647	
Ethylbenzene*	22.3	0.500	09/03/2015	ND	1.80	90.1	2.00	0.934	
Total Xylenes*	22.5	1.50	09/03/2015	ND	5.43	90.5	6.00	1.45	
Total BTEX	48.6	3.00	09/03/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 112 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	09/04/2015	ND	432	108	400	7.69	
TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

GRO C6-C10	547	200	09/02/2015	ND	190	94.9	200	0.159	
DRO >C10-C28	23900	200	09/02/2015	ND	206	103	200	0.564	
Total TPH C6-C28	24500	200	09/02/2015	ND	396	99.0	400	0.370	

Surrogate: 1-Chlorooctane 192 % 47.2-157

Surrogate: 1-Chlorooctadecane 424 % 52.1-176

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*=Accredited Analyte

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Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 09/01/2015
 Reported: 09/08/2015
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: CHAVES CO, NM

 Sampling Date: 09/01/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SAMPLE #3 (H502326-03)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	10.9	2.50	09/04/2015	ND	1.96	98.1	2.00	0.983	
Toluene*	112	2.50	09/04/2015	ND	1.79	89.3	2.00	1.10	
Ethylbenzene*	235	2.50	09/04/2015	ND	1.84	91.8	2.00	2.38	
Total Xylenes*	204	7.50	09/04/2015	ND	5.74	95.7	6.00	0.630	
Total BTEX	562	15.0	09/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 121 % 85.6-137

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/04/2015	ND	432	108	400	7.69	
TPH 8015M		mg/kg		Analyzed By: CK					
									S-06

S-06

Surrogate: 1-Chlorooctane 271 % 47.2-157

Surrogate: 1-Chlorooctadecane 444 % 52.1-176

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

KM Chaveroo Bat.

Oil Spill Products

Dugan Production Corp.
KM Chaveroo Battery

All samples will be taken at the surface

Soil Sample Location Plan View

- 1 - 4' from south end of spill and 5' from existing firewall - this is approximately the intersection of the oil flow with the spill area.
- 2 - 40' from the south end of the spill area and 8' from the edge of the spill area
- 3 - 5' from the north end of the spill area and 15' from the edge of the spill area
- 4 - 10' north and 14' west of sample point 2
- 5 - is in a 15'x15' area which is approximately 10' south and east of the southernmost 500 bbl. tank. It is not associated with the most recent spill, but was cleaned up during that effort.
- 6 - is in a 3'x4' area approximately 12' east of the southernmost 500 bbl. tank. It is not part of the most recent spill, but a leak was noticed during inspection of the spill. That leak was repaired the day following the inspection. The area was cleaned up on the same day as repair was made.
- 7 and 8 - are in a 25'x30' area that is approximately 12' east of the southernmost 500 bbl tank. This area is not associated with the most recent spill, but was cleaned up during that effort. Sample 7 is 5' from the south end of the contaminated area and sample 8 is 5' from the north end of the same area.

TANKS
8
7

25 x 30

15 x 15

Oil Spill 3 x 6

601

4

3

1

January 25, 2016

JOHN ALEXANDER

DUGAN PRODUCTION

P. O. BOX 420

FARMINGTON, NM 87499

g Net Soil Samples

RE: K M BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/19/16 14:50.

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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,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 01/19/2016
 Reported: 01/25/2016
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: SEC 2, T8S, R33ECHAVES CO, NM

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: #1 (H600112-01)

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	01/21/2016	ND	1.83	91.4	2.00	10.6		
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52		
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09		
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58		
Total BTEX	<0.300	0.300	01/21/2016	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	01/20/2016	ND	400	100	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						

Surrogate: 1-Chlorooctane 93.4 % 35-147

Surrogate: 1-Chlorooctadecane 101 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

DUGAN PRODUCTION
JOHN ALEXANDER
P. O. BOX 420
FARMINGTON NM, 87499
Fax To: (505) 327-4043

Received: 01/19/2016
Reported: 01/25/2016
Project Name: K M BATTERY
Project Number: NONE GIVEN
Project Location: SEC 2, T8S, R33ECHAVES CO, NM

Sampling Date: 01/19/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: #2 (H600112-02)

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	01/21/2016	ND	1.83	91.4	2.00	10.6	
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52	
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09	
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58	
Total BTEX	<0.300	0.300	01/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 103 % 73.6-140

Chloride, SM4500Cl-B			mg/kg Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/20/2016	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	01/20/2016	ND	191	95.3	200	1.65	
DRO >C10-C28	<10.0	10.0	01/20/2016	ND	197	98.7	200	9.16	
Total TPH C6-C28	<10.0	10.0	01/20/2016	ND	388	97.0	400	5.41	

Surrogate: 1-Chlorooctane 95.5 % 35-147

Surrogate: 1-Chlorooctadecane 98.7 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 01/19/2016
 Reported: 01/25/2016
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: SEC 2, T8S, R33ECHAVES CO, NM

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: #3 (H600112-03)

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	01/21/2016	ND	1.83	91.4	2.00	10.6		
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52		
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09		
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58		
Total BTEX	<0.300	0.300	01/21/2016	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/20/2016	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	01/20/2016	ND	191	95.3	200	1.65		
DRO >C10-C28	<10.0	10.0	01/20/2016	ND	197	98.7	200	9.16		
Total TPH C6-C28	<10.0	10.0	01/20/2016	ND	388	97.0	400	5.41		

Surrogate: 1-Chlorooctane 92.4 % 35-147

Surrogate: 1-Chlorooctadecane 94.4 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 01/19/2016
 Reported: 01/25/2016
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: SEC 2, T8S, R33ECHAVES CO, NM

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: #4 (H600112-04)

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	01/21/2016	ND	1.83	91.4	2.00	10.6	
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52	
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09	
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58	
Total BTEX	<0.300	0.300	01/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/20/2016	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	01/20/2016	ND	191	95.3	200	1.65	
DRO >C10-C28	130	10.0	01/20/2016	ND	197	98.7	200	9.16	
Total TPH C6-C28	130	10.0	01/20/2016	ND	388	97.0	400	5.41	

Surrogate: 1-Chlorooctane 95.8 % 35-147

Surrogate: 1-Chlorooctadecane 99.8 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 01/19/2016
 Reported: 01/25/2016
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: SEC 2, T8S, R33ECHAVES CO, NM

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: #5 (H600112-05)

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	01/21/2016	ND	1.83	91.4	2.00	10.6	
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52	
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09	
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58	
Total BTEX	<0.300	0.300	01/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/20/2016	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	24.4	10.0	01/21/2016	ND	191	95.3	200	1.65	
DRO >C10-C28	532	10.0	01/21/2016	ND	197	98.7	200	9.16	
Total TPH C6-C28	557	10.0	01/21/2016	ND	388	97.0	400	5.41	

Surrogate: 1-Chlorooctane 97.6 % 35-147

Surrogate: 1-Chlorooctadecane 108 % 28-171

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Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
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 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 01/19/2016
 Reported: 01/25/2016
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: SEC 2, T8S, R33ECHAVES CO, NM

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: #6 (H600112-06)

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	01/21/2016	ND	1.83	91.4	2.00	10.6	
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52	
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09	
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58	
Total BTEX	<0.300	0.300	01/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.1 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/20/2016	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	01/20/2016	ND	191	95.3	200	1.65	
DRO >C10-C28	57.0	10.0	01/20/2016	ND	197	98.7	200	9.16	
Total TPH C6-C28	57.0	10.0	01/20/2016	ND	388	97.0	400	5.41	

Surrogate: 1-Chlorooctane 95.5 % 35-147

Surrogate: 1-Chlorooctadecane 106 % 28-171

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Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 01/19/2016
 Reported: 01/25/2016
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: SEC 2, T8S, R33ECHAVES CO, NM

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: #7 (H600112-07)

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	01/21/2016	ND	1.83	91.4	2.00	10.6	
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52	
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09	
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58	
Total BTEX	<0.300	0.300	01/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/20/2016	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	01/20/2016	ND	191	95.3	200	1.65	
DRO >C10-C28	<10.0	10.0	01/20/2016	ND	197	98.7	200	9.16	
Total TPH C6-C28	<10.0	10.0	01/20/2016	ND	388	97.0	400	5.41	

Surrogate: 1-Chlorooctane 96.3 % 35-147

Surrogate: 1-Chlorooctadecane 97.3 % 28-171

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Analytical Results For:

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 JOHN ALEXANDER
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 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 01/19/2016
 Reported: 01/25/2016
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: SEC 2, T8S, R33ECHAVES CO, NM

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: #8 (H600112-08)

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	01/21/2016	ND	1.83	91.4	2.00	10.6	
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52	
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09	
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58	
Total BTEX	<0.300	0.300	01/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/20/2016	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	01/21/2016	ND	191	95.3	200	1.65	
DRO >C10-C28	43.9	10.0	01/21/2016	ND	197	98.7	200	9.16	
Total TPH C6-C28	43.9	10.0	01/21/2016	ND	388	97.0	400	5.41	

Surrogate: 1-Chlorooctane 95.2 % 35-147

Surrogate: 1-Chlorooctadecane 99.0 % 28-171

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Received: 01/19/2016
Reported: 01/25/2016
Project Name: K M BATTERY
Project Number: NONE GIVEN
Project Location: SEC 2, T8S, R33ECHAVES CO, NM

Sampling Date: 01/19/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: #9 (H600112-09)

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	01/21/2016	ND	1.83	91.4	2.00	10.6	
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52	
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09	
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58	
Total BTEX	<0.300	0.300	01/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	01/20/2016	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	01/21/2016	ND	191	95.3	200	1.65	
DRO >C10-C28	137	10.0	01/21/2016	ND	197	98.7	200	9.16	
Total TPH C6-C28	137	10.0	01/21/2016	ND	388	97.0	400	5.41	

Surrogate: 1-Chlorooctane 71.9 % 35-147

Surrogate: 1-Chlorooctadecane 81.7 % 28-171

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Analytical Results For:

 DUGAN PRODUCTION
 JOHN ALEXANDER
 P. O. BOX 420
 FARMINGTON NM, 87499
 Fax To: (505) 327-4043

 Received: 01/19/2016
 Reported: 01/25/2016
 Project Name: K M BATTERY
 Project Number: NONE GIVEN
 Project Location: SEC 2, T8S, R33ECHAVES CO, NM

 Sampling Date: 01/19/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: #10 (H600112-10)

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	01/21/2016	ND	1.83	91.4	2.00	10.6	
Toluene*	<0.050	0.050	01/21/2016	ND	1.80	89.8	2.00	8.52	
Ethylbenzene*	<0.050	0.050	01/21/2016	ND	1.65	82.3	2.00	7.09	
Total Xylenes*	<0.150	0.150	01/21/2016	ND	5.11	85.1	6.00	6.58	
Total BTEX	<0.300	0.300	01/21/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 73.6-140

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/20/2016	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	01/20/2016	ND	191	95.3	200	1.65	
DRO >C10-C28	<10.0	10.0	01/20/2016	ND	197	98.7	200	9.16	
Total TPH C6-C28	<10.0	10.0	01/20/2016	ND	388	97.0	400	5.41	

Surrogate: 1-Chlorooctane 91.6 % 35-147

Surrogate: 1-Chlorooctadecane 95.5 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

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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Celey D. Keene, Lab Director/Quality Manager



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(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

Office of State Engineer Depth to Ground Water															
POD Number	Code	POD Subbasin	County	q64	q16	q4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column	
CL 00307 POD1			CH	2	3	4	13	08S	32E	628014	3720298	195	165	30	
RA 10566			CH	3	2	1	04	08S	32E	622553	3724496	230	190	40	
RA 10570			CH	1	4	1	08	08S	32E	620923	3722681	207	182	25	
RA 10573			CH	3	2	1	10	08S	32E	624174	3722911	180	165	15	
RA 12225 POD1			CH	2	1	1	27	08S	32E	624005	3718438	115	70	45	
RA 12226 POD1			CH	4	4	4	22	08S	32E	625136	3718457	115	80	35	