MARTIN YATES, III

FRANK W. YATES

5.P YATES



# 105 SOUTH FOURTH STREET ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

JOHN A. YATES CHAIRMAN OF THE BOARD

JOHN A. YATES JR.

JOHN D. PERINI
EXEGUTIVE V.P. OF MONETIZATION
CHIEF FINANCIAL OFFICER

JAMES S. BROWN

September 30, 2014

Mr. Mike Bratcher NMOCD District II 811 S. First St. Artesia, NM 88210

Re:

Sara AHA #1 Battery

30-015-23890

Section 11, T20S-R24E Eddy County, New Mexico

Mr. Bratcher,

Yates Petroleum Corporation is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated June 26, 2014.

If there are no objections with the scope of work described in the plan, Yates will have a contractor begin work on or after the week of October 14, 2014.

If you have any questions, feel free to call me at (575) 748-4171

Thank you.

YATES PETROLEUM CORPORATION

Chase Settle Environmental Regulatory Agent

Enclosure(s)

## Yates Petroleum Corporation

Sara AHA #1 Battery Work Plan

**Section 11, T20S-R24E** 

**Eddy County, New Mexico** 

September 30, 2014

#### I. Location

The battery is located 15 miles south of Artesia on US 285, west approximately 8 miles on Rock Daisy Road, then south on Sawbuck Road 2 miles, and approximately 0.6 of a mile east on the lease road.

#### II. Background

On June 26, 2014, Yates submitted to the NMOCD District II office a Form C-141 for the release of 16 B/PW with 11 B/PW recovered. Excavation of visually impacted soils was undertaken within the release area. The total affected area was approximately 350 feet by 10 feet outside the bermed battery, with an additional area of 100 feet by 60 around the tanks within the battery berm and 115 feet by 5 feet down the east side of the battery berm. Initial delineation samples were taken at the S1, S2, and S3 sample points in the release area (7/11/2014) and sent to a NMOCD approved laboratory (7/21/2014, results enclosed). Based on analytical results (7/21/2014), Yates determined that further sampling was needed in the S1 and S2 release areas. Additional delineation samples were taken from the S1 and S2 release areas (7/25/2014) and sent to a NMOCD approved laboratory (8/06/2014, results enclosed). Based on analytical results (8/06/2014), Yates sampled the S2 release area again (9/11/2014) and sent samples to a NMOCD approved laboratory (9/22/2014, results enclosed).

#### III. Surface and Ground Water

Area surface geology is Paleozoic Permian. The ChevronTexaco Trend Map displays at this location (Section 11, T20S-R24E) that depth to groundwater is approximately 170 feet making the site ranking for this site a zero (0). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

The ranking for this site is zero (0) based on the as following:

Depth to ground water > 100'
Wellhead Protection Area > 1000'
Distance to surface water body > 1000'

#### IV. Soils

The area consists of soils that are caliche and loamy topsoil, which are interspersed with clay seams providing a low permeability barrier to retard vertical percolation of contaminants into the subsurface.

### V. Scope of Work

Based on enclosed analytical results, the depth to groundwater (170'), and a decrease in chlorides, Yates Petroleum Corporation will excavate five (5) feet in the S1 release area and three (3) feet in the S2 release area. The S1 release area will then be backfilled with five (5) feet of caliche and the S2 release area will be backfilled with three (3) feet of caliche providing for protection from groundwater contamination. The TPH & BTEX are within the RRAL's for BTEX (50 ppm) and TPH (5000 ppm) for the Total Ranking Score of zero (0) in the release area, no further analytical testing of TPH and/or BTEX will be conducted (all chloride analytical results are for documentation). When remediation work is completed a C-141, Final Report will be submitted to the NMOCD requesting closure of the site.

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Release area

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S1 Sample point

X

S2 Sample point

X

S3 Sample point

H402128	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-1'	Release Area	7/11/2014	Backhoe	1'	<0.3	<10.0	<10.0	6240
S1-2'	Release Area	7/11/2014	Backhoe	2'	<0.3	<10.0	<10.0	6080
S1-3'	Release Area	7/11/2014	Backhoe	3'	<0.3	<10.0	<10.0	5760
S1-4'	Release Area	7/11/2014	Backhoe	4'	<0.3	<10.0	<10.0	4480
	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S2-1'	Release Area	7/11/2014	Backhoe	1'	<0.3	<10.0	<10.0	6560
S2-2'	Release Area	7/11/2014	Backhoe	2'	<0.3	<10.0	<10.0	7040
S2-3 <sup>1</sup>	Release Area	7/11/2014	Backhoe	3'	<0.3	<10.0	<10.0	7440
S2-4 <sup>1</sup>	Release Area	7/11/2014	Backhoe	4'	<0.3	<10.0	<10.0	3800
	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S3-1'	Release Area	7/11/2014	Backhoe	1'	<0.3	<10.0	<10.0	176
S3-2'	Release Area	7/11/2014	Backhoe	2'	<0.3	<10.0	<10.0	272
S3-3 <sup>1</sup>	Release Area	7/11/2014	Backhoe	3'	<0.3	<10.0	<10.0	192
H402356	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S1-5'	Release Area	7/25/2014	Backhoe	5'	N/A	N/A	N/A	3960
S1-6'	Release Area	7/25/2014	Backhoe	6'	N/A	N/A	N/A	1580
S1-7'	Release Area	7/25/2014	Backhoe	7'	N/A	N/A	N/A	1570
S1-8'	Release Area	7/25/2014	Backhoe	8'	N/A	N/A	N/A	1250
	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S2-5 <sup>'</sup>	Release Area	7/25/2014	Backhoe	5'	N/A	N/A	N/A	4440
S2-6 <sup>1</sup>	Release Area	7/25/2014	Backhoe	6'	N/A	N/A	N/A	4080
S2-7'	Release Area	7/25/2014	Backhoe	7'	N/A	N/A	N/A	4240
₹ S2-8¹	Release Area	7/25/2014	Backhoe	8'	N/A	N/A	N/A	3880
H402858	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
S2-9 <sup>1</sup>	Release Area	9/11/2014	Backhoe	9'	N/A	N/A	N/A	752
S2-10 <sup>'</sup>	Release Area	9/11/2014	Backhoe	10'	N/A	N/A	N/A	656
S2-11 <sup>'</sup>	Release Area	9/11/2014	Backhoe	11'	N/A	N/A	N/A	576
S2-12 <sup>'</sup>	Release Area	9/11/2014	Backhoe	12'	N/A	N/A	N/A	576

Site Ranking is Zero (0). >100' (170', Section 11, T20S-R24E, Trend Map All results are ppm. Chlorides for documentation Released: 16 B/PW; Recovered: 11 B/PW Release Date: 06/16/2014



July 21, 2014

CHASE SETTLE
YATES PETROLEUM CORPORATION
105 S 4th Street
Artesia, NM 88210

RE: SARA AHA #1 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 07/14/14 14:22.

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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited certif.html.

Cardinal Laboratories is accreditated 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.

Celeg & Keine

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



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number: Project Location: NONE GIVEN NOT GIVEN

Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

## Sample ID: S1-1' (H402128-01)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2014	ND	2.36	118	2.00	2.15	
Toluene*	<0.050	0.050	07/18/2014	ND	2.17	108	2.00	1.57	
Ethylbenzene*	<0.050	0.050	07/18/2014	ND	2.24	112	2.00	1.50	
Total Xylenes*	<0.150	0.150	07/18/2014	ND	6.76	113	6.00	1.44	
Total BTEX	<0.300	0.300	07/18/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	122 9	% 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6240	16.0	07/17/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/15/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	125 9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	131 9	% 63.6-15	4						

## Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name: Project Number: SARA AHA #1 BATTERY

Project Location:

NONE GIVEN NOT GIVEN

Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: S1-2' (H402128-02)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2014	ND	2.36	118	2.00	2.15	
Toluene*	<0.050	0.050	07/18/2014	ND	2.17	108	2.00	1.57	
Ethylbenzene*	< 0.050	0.050	07/18/2014	ND	2.24	112	2.00	1.50	
Total Xylenes*	<0.150	0.150	07/18/2014	ND	6.76	113	6.00	1.44	
Total BTEX	<0.300	0.300	07/18/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	123 %	6 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6080	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/15/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	117 9	65.2-14	0						
Surrogate: 1-Chlorooctadecane	125 %	63.6-15	4						

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\*=Accredited Analyte

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Celey D. Keene



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number: Project Location:

NONE GIVEN NOT GIVEN Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

## Sample ID: S1-3' (H402128-03)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2014	ND	2.14	107	2.00	6.10	
Toluene*	<0.050	0.050	07/18/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/18/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/18/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/18/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109 9	6 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5760	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/15/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	122 9	65.2-14	0						
Surrogate: 1-Chlorooctadecane	126 9	63.6-15	4						

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\*=Accredited Analyte

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Celeg & Keene



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name: Project Number: SARA AHA #1 BATTERY NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: S1-4' (H402128-04)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2014	ND	2.14	107	2.00	6.10	
Toluene*	<0.050	0.050	07/18/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/18/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/18/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/18/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109 9	% 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4480	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/15/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	123 9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	128 9	% 63.6-15							

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\*=Accredited Analyte

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Celey D. Keene



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received: Reported: 07/14/2014

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number: Project Location: NONE GIVEN NOT GIVEN

Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

## Sample ID: S2-1' (H402128-05)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	< 0.050	0.050	07/18/2014	ND	2.14	107	2.00	6.10	
Toluene*	<0.050	0.050	07/18/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/18/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/18/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/18/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109 %	6 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6560	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/15/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/15/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	119 %	6 65.2-14	0						-
Surrogate: 1-Chlorooctadecane	123 %	63.6-15	4						

#### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number: Project Location: NONE GIVEN NOT GIVEN

Sampling Date: Sampling Type: 07/11/2014

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

## Sample ID: S2-2' (H402128-06)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2014	ND	2.14	107	2.00	6.10	
Toluene*	< 0.050	0.050	07/18/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/18/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/18/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/18/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109 %	6 89.4-12	6		***				
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7040	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/16/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/16/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	121 %	65.2-14	0						
Surrogate: 1-Chlorooctadecane	126 %	63.6-15	4						

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\*=Accredited Analyte

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Celeg & Keene



YATES PETROLEUM CORPORATION **CHASE SETTLE** 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: S2-3' (H402128-07)

BTEX 8021B	mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2014	ND	2.14	107	2.00	6.10	
Toluene*	<0.050	0.050	07/18/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/18/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/18/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/18/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	110 9	% 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP	Oli lang kanan				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7440	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/16/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/16/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	120	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	121	% 63.6-15	4						

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\*=Accredited Analyte

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Celeg & Keene



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

o: (505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date: Sampling Type: 07/11/2014

Soil

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Sample ID: S2-4' (H402128-08)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/18/2014	ND	2.14	107	2.00	6.10	
Toluene*	<0.050	0.050	07/18/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/18/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/18/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/18/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	110 %	6 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3800	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/16/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/16/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	120 %	65.2-14	0						
Surrogate: 1-Chlorooctadecane	124 9	63.6-15	4						

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\*=Accredited Analyte

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Celey D. Keene



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: S3-1' (H402128-09)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/19/2014	ND	2.14	107	2.00	6.10	
Toluene*	<0.050	0.050	07/19/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/19/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/19/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/19/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109 9	% 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/16/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/16/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	118 9	% 65.2-14	10						

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Celey & Keene



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number: Project Location: NONE GIVEN NOT GIVEN

Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: S3-2' (H402128-10)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/19/2014	ND	2.14	107	2.00	6.10	
Toluene*	<0.050	0.050	07/19/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/19/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/19/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/19/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	109 9	% 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/16/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0	10.0	07/16/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	107 5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	109 9	% 63.6-15	4						

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\*=Accredited Analyte

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Celey D. Keine



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/14/2014

Reported:

07/21/2014

Project Name:

SARA AHA #1 BATTERY

Project Number: Project Location: NONE GIVEN

NOT GIVEN

Sampling Date:

07/11/2014

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

#### Sample ID: S3-3' (H402128-11)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result Reporting Limit		Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050 0.050		07/19/2014	ND	2.14	107	2.00	6.10	
Toluene*	<0.050	0.050	07/19/2014	ND	2.00	100	2.00	6.61	
Ethylbenzene*	<0.050	0.050	07/19/2014	ND	2.13	107	2.00	6.05	
Total Xylenes*	<0.150	0.150	07/19/2014	ND	6.89	115	6.00	5.97	
Total BTEX	<0.300	0.300	07/19/2014	ND					
Surrogate: 4-Bromofluorobenzene (PIL	111 9	6 89.4-12	6	-1					
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result Reporting Limit		Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	07/18/2014	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/16/2014	ND	184	91.9	200	0.268	
DRO >C10-C28	<10.0 10.0		07/16/2014	ND	198	98.9	200	1.29	
Surrogate: 1-Chlorooctane	112 9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	117 9	% 63.6-15	4						

#### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene



#### **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 SM4500CI-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

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene

Telephone No:

575-748-4171

Fax No:

575-748-4131

	Relinquished by:	Relinquished by	Relinquished by:		Special I		d	J	6	G	¢			2	Enos,	LA	AB # (lab use only)	ORDER #	(lab use only)		-	
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	due	5 5	Custody seals on contain Custody seals on cooler Sample Hand Delivered	VOCs Free of Headspa Labels on container(s)	Laboratory Comments: Sample Containers Intact		$\dashv$	$\dashv$	1	$\neg$			T				Anions (Cl. SO4, Alkalinity)		10	٦		
	erat	Sar	dy s le H	Fre	e Co		$\neg$	$\dashv$	$\neg$			T	T	T			SAR / ESP / CEC		TOTAL	TCLP:		
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	Upo	? CII	Del 9	Hea	omi		$\neg$	$\dashv$				T	T	1			Volatiles				Analyze	
	n Re	ent I	cool	adsp	nen s int	$\vdash$	+	+				T	+	1			Semivolatiles				e F	
	Temperature Upon Receipt:	by Sampler/Client Rep.? by Courier? UPS	Custody seals on container(s) Custody seals on cooler(s) Sample Hand Delivered	VOCs Free of Headspace? Labels on container(s)	Laboratory Comments: Sample Containers Intact?	H	-	×	×	×	×	×	>	< ;	×	×	BTEX 8021B/5030 or BTEX 82	60			For:	
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		tar						×	×	×	×	×	:	×	×	×	Standard TAT					



August 06, 2014

CHASE SETTLE
YATES PETROLEUM CORPORATION
105 S 4th Street
Artesia, NM 88210

RE: SARA AHA #1 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 07/30/14 15:30.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accredited certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keine

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



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/30/2014

Reported:

08/06/2014

Project Name: Project Number: SARA AHA #1 BATTERY

Project Location:

ber: NONE GIVEN NOT GIVEN

Sampling Date:

07/25/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Kathy Perez

#### Sample ID: S1-5' (H402356-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3960	16.0	08/05/2014	ND	400	100	400	0.00	
Sample ID: S1- 6' (H4023	356-02)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1580	16.0	08/05/2014	ND	400	100	400	0.00	
Sample ID: S1- 7' (H4023	356-03)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1570	16.0	08/05/2014	ND	400	100	400	0.00	
Sample ID: S1- 8' (H4023	356-04)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1250	16.0	08/05/2014	ND	400	100	400	0.00	

#### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keine



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

07/30/2014

Reported:

08/06/2014

Project Name:

Project Number: Project Location: NONE GIVEN NOT GIVEN

SARA AHA #1 BATTERY

Sampling Type:

Sampling Date:

07/25/2014

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Kathy Perez

#### Sample ID: S2- 5' (H402356-05)

Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4440	16.0	08/05/2014	ND	400	100	400	0.00	
Sample ID: S2- 6' (H4023	356-06)								
Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4080	16.0	08/05/2014	ND	400	100	400	0.00	
Sample ID: S2- 7' (H4023	356-07)								
Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	08/05/2014	ND	400	100	400	0.00	
Sample ID: S2- 8' (H4023	356-08)								
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3880	16.0	08/05/2014	ND	400	100	400	0.00	

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Celeg & treens -



#### **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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\*=Accredited Analyte

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Celey D. France

Standard TAT

Page 5 of 5

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September 22, 2014

CHASE SETTLE
YATES PETROLEUM CORPORATION
105 S 4th Street
Artesia, NM 88210

RE: SARA AHA #1 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 09/12/14 15:00.

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 <a href="https://www.tceq.texas.gov/field/qa/lab">www.tceq.texas.gov/field/qa/lab</a> accredited certif.html.

Cardinal Laboratories is accreditated 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.

Celeg D. Keine

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



YATES PETROLEUM CORPORATION CHASE SETTLE 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

09/12/2014

09/22/2014

Reported: Project Name:

SARA AHA #1 BATTERY

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

09/11/2014

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

## Sample ID: S2- 9' (H402858-01)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	09/18/2014	ND	416	104	400	0.00	
Sample ID: S2- 10' (H402	858-02)								
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	09/18/2014	ND	416	104	400	0.00	
Sample ID: S2- 11' (H402	858-03)								
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Analyte  Chloride	Result <b>576</b>	Reporting Limit	Analyzed 09/18/2014	Method Blank	BS 416	% Recovery	True Value QC 400	RPD 0.00	Qualifie
353	576		000 Tak (10000)				AND		Qualifie
Chloride	576	16.0	09/18/2014				AND		Qualifier
Chloride Sample ID: S2- 12' (H402	576 858-04)	16.0	09/18/2014	ND			AND		Qualifier Qualifier

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\*=Accredited Analyte

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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

Cardinal Laboratories

\*=Accredited Analyte

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Clay & Keene

Reinquisned by:		Relinguished by:	opecial instructions:					L S2-12'	<b>3</b> S2-11'	Z S2-10'	1 S2-9'	LAB # (lab use only)  FIELD CODE		(lab use only)	Sampler Signature:	Telephone No: 575-748-4171	City/State/Zip: Artesia, NM 88210	Company Address: 105 South 4th Street	Comp: (505) 393-2326 Yates Petroleum Corporation	Project Manager: Chase Settle	ARDINAL LABORATORIES  101 East Marland, Hobbs, NM 88240
Date	772-14 Date	Date											F		M.		10	reet	Corporati		240
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