MARTIN YATES, III

FRANK W. YATES 1936-1986

> S.P YATES 1914:2000



105 SOUTH FOURTH STREET

ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

www.yatespetroleum.com

JOHN A. YATES

JOHN A. YATES JR.

DOUGLAS E. BROOKS
PRESIDENT
CHIEF EXECUTIVE OFFICER

JOHN D. PERINI
EXECUTIVE VICE PRESIDENT
CHIEF FINANCIAL OFFICER

JAMES 5. BROWN CHIEF OPERATING OFFICER

January 26, 2016

Mr. Mike Bratcher or Ms. Heather Patterson NMOCD District II 811 South First Artesia, NM 88210

RE:

Woodchuck ABW State #3

30-015-39155

Section 13, T17S-R28E Eddy County, New Mexico

Mr. Bratcher or Ms. Patterson,

Yates Petroleum Corporation would like to submit the following plan of work to you regarding the release that occurred at the above mentioned facility on August 22, 2014 (2RP-2470). The release was 10 barrels of produced water and 5 barrels of crude oil released, with 0 barrels of produced water and 0 barrels of crude oil recovered.

With NMOCD and NMSLO approval of this work plan, Yates will hold a bid meeting allowing several contractors the opportunity to submit bids on this remediation project. Bids that are received will be forwarded to Yates Management for review. Once Yates Management reviews the bids and gives approval, the remediation project will be awarded to a contractor for work to commence.

If you have any questions or concerns, I can be reached at (575) 748-4111 or by email at agriffin@yatespetroleum.com.

Thank You,

Amber Griffin

Environmental Regulatory Agent

Yates Petroleum Corporation

amber Griffin

Yates Petroleum Corporation
Woodchuck ABW State #3
Section 13, T17S-R28E
Eddy County, New Mexico
January 26, 2016

I. Location

The release area is located approximately 15.2 miles east of Artesia, NM on Highway 82, approximately 1.9 miles north of Highway 82 on Turkey Track Road (County Road 209) and approximately 0.5 miles east of Turkey Track Road (County Road 209) on a lease road.

II. Background

On August 22, 2014, Yates had a release of 10 barrels produced water and 5 barrels of crude oil, with 0 barrels produced water and 0 barrels of crude oil recovered. The area affected from this release was on the production pad for the well. An initial Form C-141 was submitted, via e-mail, to the NMOCD District II on September 2, 2014.

On August 28, 2014 Yates returned to the site and collected initial soil samples from the surface using a shovel. The hardness of the caliche on the pad prevented further sampling. The surface soil sample was sent to an approved NMOCD laboratory and tested for BTEX 8021B, TPH 8015M, and Chlorides SM4500Cl-B. Yates received the analytical results on September 11, 2014 (Report H402740 attached to this work plan). The analytical results showed that both BTEX and TPH were at levels above NMOCD RRAL's. The analytical results also showed elevated chloride levels, and Yates determined that further vertical delineation of BTEX, TPH and chlorides was needed.

On December 8, 2015 Yates returned to the site and collected further soil samples from the depths of 1' – 3' below the surface level with a backhoe. The soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B, TPH 8015M, and Chlorides 300.0. Yates received the analytical results on December 28, 2015 (Report 1512604 attached to this work plan). The analytical results showed that both BTEX and TPH had delineated to levels below NMOCD RRAL's. The analytical results also showed that chloride levels had delineated.

III. Surface and Ground Water

Area surface geology is Cenozoic. The ChevronTexaco depth to ground water map shows the depth to groundwater to be approximately 50-75 feet making the site ranking for this site a ten (10). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

The ranking for this site is ten (10) based on the following:

Depth to ground water 50-99' Wellhead Protection Area > 1000' Distance to surface water body > 1000'

IV. Soils

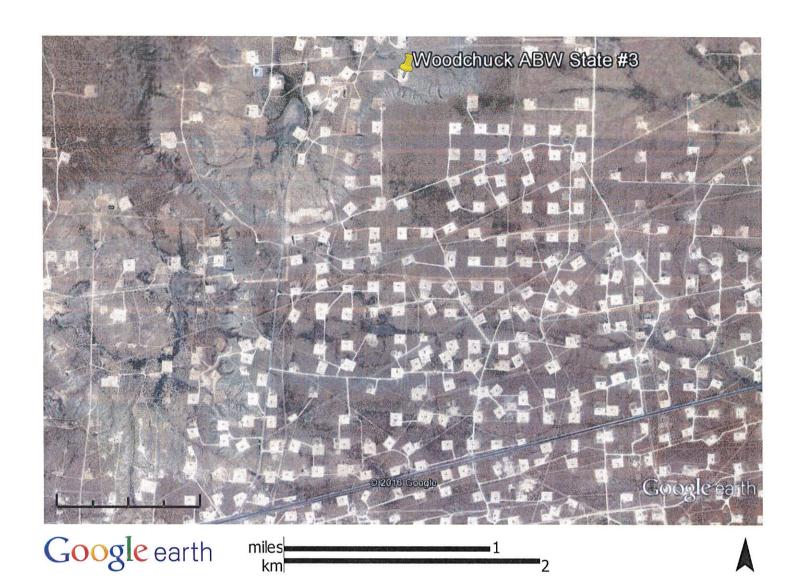
The area consists of soils that are caliche and clay seams.

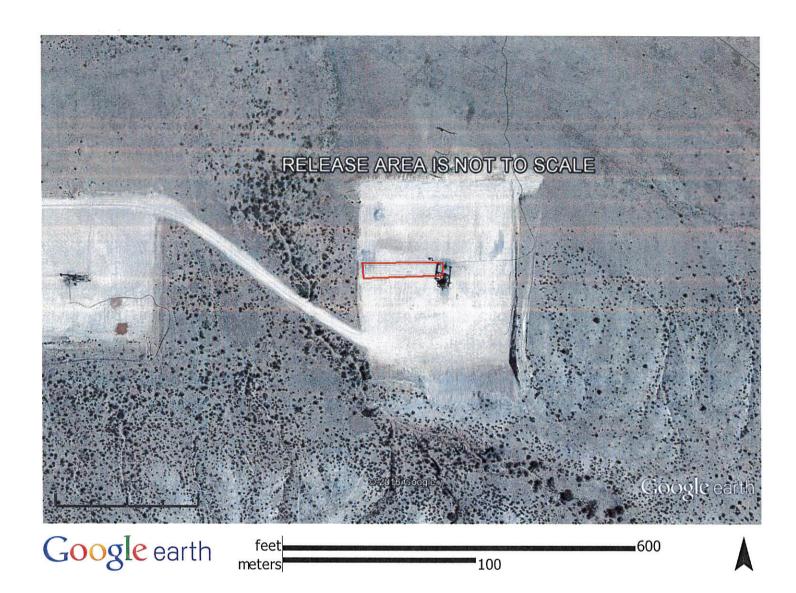
V. Scope of Work

Based off the analytical reports which show complete vertical delineation, Yates proposes to excavate 1.5' from the release area. The excavation will be approximately 50' long, 4' wide. Once all soils have been excavated the excavation will be backfilled with caliche.

Contaminated soils that are excavated will be hauled to a NMOCD approved disposal facility, The Lea Land, Inc. Landfill.

Once all excavation and backfill work is complete, Yates will submit a Final Form C-141 to NMOCD and NMSLO requesting closure of this release.





Woodchuck ABW State #3

Cardinal Laboratories

	Analytical Report	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	TOTAL	Chlorides
SURFACE	H402740	Release Area	8/28/2014	Grab/Shovel	Surface	55.9	761	8380	9141	12,900
7	1512604	Release Area	12/8/2015	Grab/Backhoe	1.	QΝ	QN	25	25	1,300
2'	1512604	Release Area	12/8/2015	Grab/Backhoe	2'	QΝ	QN	ND	ND	430
3,	1512604	Release Area	12/8/2015	Grab/Backhoe	3'	QN	QN	ND	ND	40

Site Ranking is TEN (10). Depth to Ground Water 50-75' per ChevronTexaco Trend Map All results are ppm.Chlorides for documentation.
Released: 10 B/PW, 5 B/O; Recovered: 0 B/PW, 0 B/O. Release Date: 8/22/2014. 2RP-2470



September 11, 2014

AMBER CANNON
YATES PETROLEUM CORPORATION
105 S 4th Street
Artesia, NM 88210

RE: WOODCHUCK ABW STATE #3

Enclosed are the results of analyses for samples received by the laboratory on 09/04/14 10:15.

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 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



Analytical Results For:

YATES PETROLEUM CORPORATION AMBER CANNON 105 S 4th Street Artesia NM, 88210

Fax To:

(505) 748-4635

Received:

09/04/2014

Sampling Date:

08/28/2014

Reported:

09/11/2014

Sampling Type:

Soil

Project Name:

WOODCHUCK ABW STATE #3

Sampling Condition:

Cool & Intact

Project Number:

30-015-39155

Sample Received By:

Kathy Perez

Project Location:

EDDY COUNTY, NM

Sample ID: SURFACE (H402740-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.500	0.500	09/10/2014	ND	2.04	102	2.00	3.90		
Toluene*	9.00	0.500	09/10/2014	ND	1.83	91.4	2.00	3.90		
Ethylbenzene*	14.0	0.500	09/10/2014	ND	1.70	84.8	2.00	3.77		
Total Xylenes*	32.8	1.50	09/10/2014	ND	5.15	85.8	6.00	3.51		
Total BTEX	55.9	3.00	09/10/2014	ND						
Surrogate: 4-Bromofluorobenzene (PIL	150 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	12900	16.0	09/10/2014	ND	400	100	400	7.69		
TPH 8015M	mg/	'kg	Analyze	d By: ms					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	761	100	09/06/2014	ND	180	90.1	200	0.353		
DRO >C10-C28	8380	100	09/06/2014	ND	213	107	200	0.664		
Surrogate: 1-Chlorooctane	191	% 65.2-14	0							
Surrogate: 1-Chlorooctadecane	228	% 63.6-15	4							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whiether 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 claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This

Celey D. Keens



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,
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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.
-0 -0	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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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

December 28, 2015

Amber Griffin
Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4111

FAX

RE: Woodchuck ABW State #3

OrderNo.: 1512604

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/11/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1512604

Date Reported: 12/28/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Project: Woodchuck ABW State #3

Lab ID: 1512604-001

Matrix: SOIL

Client Sample ID: 1'

Collection Date: 12/8/2015 9:58:00 AM

Received Date: 12/11/2015 9:40:00 AM

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	S			Analys	t: JME
Diesel Range Organics (DRO)	25	10	mg/Kg	1	12/16/2015 12:36:09 F	M 22768
Surr: DNOP	109	70-130	%REC	1	12/16/2015 12:36:09 F	M 22768
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/16/2015 3:23:20 AM	M 22788
Surr: BFB	88.5	66.2-112	%REC	1	12/16/2015 3:23:20 AM	M 22788
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.049	mg/Kg	1	12/16/2015 3:23:20 Af	M 22788
Toluene	ND	0.049	mg/Kg	1	12/16/2015 3:23:20 Af	M 22788
Ethylbenzene	ND	0.049	mg/Kg	1	12/16/2015 3:23:20 Af	M 22788
Xylenes, Total	ND	0.097	mg/Kg	1	12/16/2015 3:23:20 Af	M 22788
Surr: 4-Bromofluorobenzene	115	80-120	%REC	1	12/16/2015 3:23:20 Al	M 22788

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 6 J
- P Sample pH Not In Range
- Reporting Detection Limit

Lab Order 1512604

Date Reported: 12/28/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Project:

Lab ID: 1512604-002

Woodchuck ABW State #3

Matrix: SOIL

Client Sample ID: 2'

Collection Date: 12/8/2015 10:00:00 AM

Received Date: 12/11/2015 9:40:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS	3			Analys	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/16/2015 12:57:52 P	M 22768
Surr: DNOP	112	70-130	%REC	1	12/16/2015 12:57:52 P	M 22768
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	12/16/2015 3:47:35 AN	1 22788
Surr: BFB	90.4	66.2-112	%REC	1	12/16/2015 3:47:35 AM	1 22788
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.050	mg/Kg	1	12/16/2015 3:47:35 AN	1 22788
Toluene	ND	0.050	mg/Kg	1	12/16/2015 3:47:35 AN	1 22788
Ethylbenzene	ND	0.050	mg/Kg	1	12/16/2015 3:47:35 AN	1 22788
Xylenes, Total	ND	0.10	mg/Kg	1	12/16/2015 3:47:35 AN	1 22788
Surr: 4-Bromofluorobenzene	118	80-120	%REC	1	12/16/2015 3:47:35 AM	1 22788

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 6 J
- Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1512604

Date Reported: 12/28/2015

12/16/2015 4:12:12 AM 22788

12/16/2015 4:12:12 AM 22788

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Project:

Lab ID: 1512604-003

Xylenes, Total

Surr: 4-Bromofluorobenzene

Woodchuck ABW State #3

Matrix: SOIL

ND

112

Client Sample ID: 3'

Collection Date: 12/8/2015 10:03:00 AM Received Date: 12/11/2015 9:40:00 AM

Analyses Result **RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) ND 10 mg/Kg 12/16/2015 1:19:43 PM 22768 Surr: DNOP 85.9 70-130 %REC 1 12/16/2015 1:19:43 PM 22768 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.8 12/16/2015 4:12:12 AM 22788 mg/Kg Surr: BFB 86.6 66.2-112 %REC 12/16/2015 4:12:12 AM 22788 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.048 mg/Kg 12/16/2015 4:12:12 AM 22788 Toluene ND 0.048 mg/Kg 12/16/2015 4:12:12 AM 22788 Ethylbenzene ND 0.048 mg/Kg 12/16/2015 4:12:12 AM 22788

0.096

80-120

mg/Kg

%REC

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 6 J
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1512604

28-Dec-15

Client:

Yates Petroleum Corporation

Project:

Woodchuck ABW State #3

Sample ID	MB-22768	SampType:	MBLK	TestCode:	EPA Method	8015M/D: Diesel Range Organics
Client ID:	PBS	Batch ID:	22768	RunNo:	30855	
Prep Date:	12/14/2015	Analysis Date:	12/15/2015	SeqNo:	943423	Units: mg/Kg

Analyte SPK value SPK Ref Val %REC Result **PQL** LowLimit HighLimit %RPD **RPDLimit** Qual

Diesel Range Organics (DRO) ND 10

Surr: DNOP 9.5 10.00 94.9 70 130

Sample ID LCS-22768	SampTyp	e: LCS	S	Test	Code: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch II	D: 227	68	R	unNo: 3	0855				
Prep Date: 12/14/2015	Analysis Date	e: 12 /	/15/2015	S	eqNo: 9	43438	Units: mg/K	g		
Analyte	Result I	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.1	65.8	136			
Surr: DNOP	4.5		5.000		89.9	70	130			

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank В

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit Page 4 of 6

OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1512604

28-Dec-15

Client:

Yates Petroleum Corporation

Project:

Woodchuck ABW State #3

Sample ID MB-22788

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 22788

PQL

5.0

RunNo: 30861

Prep Date: 12/14/2015

Analysis Date: 12/15/2015

SeqNo: 943137

Units: mg/Kg

Analyte

HighLimit

112

RPDLimit Qual

Gasoline Range Organics (GRO)

ND 960

Result

1000

25.00

1000

1000

SPK value SPK Ref Val

95.8 66.2

LowLimit

79.6

66.2

LowLimit

66.2

%RPD

%RPD

%RPD

Surr: BFB

TestCode: EPA Method 8015D: Gasoline Range

Sample ID LCS-22788 Client ID:

LCSS

SampType: LCS Batch ID: 22788

RunNo: 30861

Prep Date:

12/14/2015

Analysis Date: 12/15/2015

0

SeqNo: 943138

Units: mg/Kg

HighLimit

Qual

Analyte

Gasoline Range Organics (GRO) 23 1100

93.0

107

Surr: BFB

PQL 5.0

SPK value SPK Ref Val

SPK value SPK Ref Val %REC

%REC LowLimit

122

112

RPDLimit

Sample ID MB-22811

Sample ID LCS-22811

SampType: MBLK

Result

Result

%REC

TestCode: EPA Method 8015D: Gasoline Range

Client ID: Prep Date:

PBS

Batch ID: 22811

Analysis Date: 12/16/2015

RunNo: 30888 SeqNo: 944120

Units: %REC

HighLimit

112

Qual

Analyte Surr: BFB

12/15/2015

830

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

82 7

RunNo: 30888

Units: %REC

Prep Date: Analyte

Client ID:

12/15/2015

LCSS

Batch ID: 22811

Analysis Date: 12/16/2015

SeqNo: 944121

%REC

%RPD

Qual

Surr: BFB

Result 1000 SPK value SPK Ref Val 1000

101

66.2

LowLimit

HighLimit 112 **RPDLimit**

RPDLimit

Qualifiers:

- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded H
- R RPD outside accepted recovery limits
- Value exceeds Maximum Contaminant Level.
- ND Not Detected at the Reporting Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 5 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1512604

28-Dec-15

Client:

Yates Petroleum Corporation

Project:

Woodchuck ABW State #3

Sample ID MB-22788	Sampl	Гуре: МЕ	E MBLK TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batcl	h ID: 22	788	F	RunNo: 3	0861					
Prep Date: 12/14/2015	Analysis E	Date: 12	2/15/2015	S	SeqNo: 9	43176	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.050									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	1.3		1.000		126	80	120			S	
Comple ID 1 00 00000											
Sample ID LCS-22788	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID: LCSS		ype: LC h ID: 22			tCode: El RunNo: 3		8021B: Vola	tiles			
55(C)		h ID: 22 7	788	F		0861	8021B: Volati Units: mg/k				
Client ID: LCSS	Batcl	h ID: 22 7	788 2/15/2015	F	RunNo: 3	0861			RPDLimit	Qual	
Client ID: LCSS Prep Date: 12/14/2015 Analyte Benzene	Batcl Analysis D	h ID: 227 Date: 12	788 2/15/2015	F	RunNo: 3 SeqNo: 9	0861 43177	Units: mg/k	(g	RPDLimit	Qual	
Client ID: LCSS Prep Date: 12/14/2015 Analyte Benzene Toluene	Batcl Analysis D Result	h ID: 22 7 Date: 12 PQL	788 2/15/2015 SPK value	SPK Ref Val	RunNo: 3 SeqNo: 9 %REC	0861 43177 LowLimit	Units: mg/F	(g	RPDLimit	Qual	
Client ID: LCSS Prep Date: 12/14/2015 Analyte Benzene	Batcl Analysis E Result 0.99	PQL 0.050	788 2/15/2015 SPK value 1.000	SPK Ref Val	RunNo: 3 SeqNo: 9 %REC 99.4	0861 43177 LowLimit 80	Units: mg/K HighLimit 120	(g	RPDLimit	Qual	
Client ID: LCSS Prep Date: 12/14/2015 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Batch Analysis E Result 0.99 0.99	PQL 0.050 0.050	788 2/15/2015 SPK value 1.000 1.000	SPK Ref Val 0 0	RunNo: 36 SeqNo: 96 %REC 99.4 98.7	0861 43177 LowLimit 80 80	Units: mg/F HighLimit 120 120	(g	RPDLimit	Qual	
Client ID: LCSS Prep Date: 12/14/2015 Analyte Benzene Toluene Ethylbenzene	Analysis E Result 0.99 0.99 1.1	PQL 0.050 0.050 0.050	788 2/15/2015 SPK value 1.000 1.000 1.000	SPK Ref Val 0 0 0	RunNo: 3 SeqNo: 9 %REC 99.4 98.7 105	0861 43177 LowLimit 80 80 80	Units: mg/F HighLimit 120 120	(g	RPDLimit	Qual	

Sample ID MB-22811	SampT	уре: Мі	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	ID: 22	811	F	RunNo: 3	0888				
Prep Date: 12/15/2015	Analysis D	ate: 1:	2/16/2015	S	SeqNo: 9	44175	Units: %RE	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID LCS-22811	SampT	ype: LC	cs	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	n ID: 22	811	F	RunNo: 3	0888				
Prep Date: 12/15/2015	Analysis D	ate: 1	2/16/2015	5	SeqNo: 9	44176	Units: %RE	С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		119	80	120			

1.2 1.000 119 80 120

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
 - Analyte detected below quantitation ininis
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 6 of 6



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corporat Work Order Number:	1512604		RcptNo: 1	,
Received by/date: 5A 12/11/15		¥¥		
Logged By: Lindsay Mangin 12/11/2015 9:40:00 AM		Stanley Hlenger		æ
Completed By: Lindsay Mangin 12/14/2015 8:52:33 AM		Junky Hofge		
Reviewed By:	5			
Chain of Custody	•	•		
1. Custody seals intact on sample bottles?	Yes 🖈	No 🗆	Not Present	
2. Is Chain of Custody complete?	Yes 🗹	No 🗆	Not Present	
3. How was the sample delivered?	Courier			
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	NA 🗆	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗆	na 🗆	
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗆		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🐼	No 🗆	ŧ	
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗆	
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials	
11. Were any sample containers received broken?	Yes \square	No 🗹	# of preserved	
	🔼	No 🗆	bottles checked for pH:	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	NO 🗀		>12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?	¥
14. Is it clear what analyses were requested?	Yes 🛃	No 🗆		
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No L	Checked by:	
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗆	NA 🗹	
Person Notified: Date:				
By Whom: Via:	eMail	Phone Fax	☐ In Person	
Regarding:				
Client Instructions:	*****			j
17. Additional remarks:		and the second state of	reaccessation contents. 20 Jan 17.5	
18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No 1 2.3 Good Yes	Seal Date	Signed By	1	

HALL ENVIRONMENTAL ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analy	eseid\a) Н (Бва) Эг, С	8310 (1.814 (1.814) (1.403 (HAq (HAq (HAq (NO ₃ , NO (AO	od · bo cide cide (AC)	BTEX + MTBTEX + MTTPH Methorem (P. Methorem	× ×	×	× ×						Remarks: IPH: 8013b, BIEA: 007 IB. results as mg/kg. Please put chloride re		This serves as notice of this nossibility. Any sub-contracted data will be clearly notated on the analytical report.		
Turn-Around Time: X Standard □ Rush	Project Name:	Woodchuck ABW State #3	Project#:	2RP-2470	Project Manager. Amber Griffin	PO # 205-2020	Sampler: Amber Griffln 及ら Onites: Myes ENVo	Sample Temperatitie	Container Preservative HEALING Type and # Type Type	1-4oz. lce -OO!		<u>80</u>		Grant Control of the		2.7	the second of th	2014 12/11/15 0940	Received by: Date Time	- 1 3	<u> </u>	
Client: Yates Petroleum Corporation	The state of the s	Mailing Address:	105 South 4th Street Artesia. NM 88210	Phone #: 575-513-8799 or 575-748-4111	Fax#: acannon@yatespetroleum.com		n:	ype)	me Matrix Sample Request ID	12/8/2015 9:58 Soil 1'	10.00 Soil 2	10-03 Soil 3'						12 lol S. 3.4 (Imbor Sulter)	Time: Relinquished by:	and the second s	If necessary, samples submitted to Hall Environmental may be subcollinated to our	



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 28, 2015

Amber Griffin
Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4111

FAX

RE: Woodchuck ABW State #3

OrderNo.: 1512604

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/11/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order: 1512604

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/28/2015

20 12/16/2015 8:15:04 PM 22840

CLIENT: Yates Petroleum Corporation Lab Order: 1512604 Project: Woodchuck ABW State #3 Lab ID: 1512604-001 Collection Date: 12/8/2015 9:58:00 AM Client Sample ID: Matrix: SOIL Analyses Result **RL Qual Units DF** Date Analyzed **Batch ID EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 1300 75 mg/Kg 12/17/2015 5:05:11 PM 22840 Lab ID: 1512604-002 Collection Date: 12/8/2015 10:00:00 AM Client Sample ID: 2' Matrix: SOIL **DF** Date Analyzed Analyses Result **RL Qual Units Batch ID EPA METHOD 300.0: ANIONS** Analyst: JRR Chloride 430 30 mg/Kg 12/16/2015 8:02:40 PM 22840 Lab ID: 1512604-003 Collection Date: 12/8/2015 10:03:00 AM Client Sample ID: 3' Matrix: SOIL Analyses Result **RL Qual Units DF** Date Analyzed Batch ID **EPA METHOD 300.0: ANIONS** Analyst: JRR Chloride

30

mg/Kg

40

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits J
 - Page 1 of 2
- P Sample pH Not In Range
- Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1512604

28-Dec-15

Client:

Yates Petroleum Corporation

Project:

Woodchuck ABW State #3

Sample ID MB-22840

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 22840

RunNo: 30906

Prep Date: 12/16/2015

Analysis Date: 12/16/2015

PQL

1.5

Units: mg/Kg

SeqNo: 944949

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD

RPDLimit Qual

Analyte Chloride

Result ND

Sample ID LCS-22840

SampType: LCS

TestCode: EPA Method 300.0: Anions

Client ID:

LCSS

Batch ID: 22840

PQL

1.5

RunNo: 30906

SeqNo: 944950

LowLimit

Units: mg/Kg

Prep Date: 12/16/2015

Analysis Date: 12/16/2015

SPK value SPK Ref Val %REC HighLimit

%RPD **RPDLimit**

Qual

Analyte

0

94.1

90

Chloride

Result 14

15.00

110

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 2 of 2



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Yates Petroleum Corporat Work Order Number:	1512604		RoptNo: 1
Received by/date: 5A 12/11/15			
Logged By: Lindsay Mangin 12/11/2015 9:40:00 AM		Simby Hoggs	
Completed By: Lindsay Mangin 12/14/2015 8:52:33 AM		Janely Hopes	
Reviewed By:	5		
Chain of Custody	• 550	5.	
Custody seals intact on sample bottles?	Yes 🐼	No 🗆	Not Present
2. Is Chain of Custody complete?	Yes 🗹	No 🗆	Not Present
3. How was the sample delivered?	Courier		
<u>Log In</u>			
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	na 🗆
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗆	na 🗆
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗆	
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆	
8. Are samples (except VOA and ONG) properly preserved?	Yes 🐼	No 🗆	
9. Was preservative added to bottles?	Yes 🗌	No 🕏	NA □
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials
11. Were any sample containers received broken?	Yes 🗆	No 🗹	# of preserved
40 Days are and watch halfful labeled	Yes 🗹	No 🗆	bottles checked for pH:
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	res 💌	NO L	(<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗷	No 🗆	Adjusted?
14. Is it clear what analyses were requested?	Yes 🗹	No 🗆	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 📙	Checked by:
Special Handling (if applicable)			
16. Was client notified of all discrepancies with this order?	Yes 🗆	No 🗆	NA 🗹
Person Notified: Date:			
By Whom: Via:	eMail	Phone Fax	☐ In Person
Regarding:		THE PERSON NAMED IN COLUMN	
Client Instructions:			
17. Additional remarks:			
18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No 2.3 Good Yes	Seal Date	Signed By	

AL	SRY								(N	<u> </u>	() S	Air Bubble								-	-	1	1		BTEX parate	
HALL ENVIRONMENTAL	ANALYSIS LABORATORY		109																		1	+			Remarks: TPH: 8015B, BTEX: 8021B. Please show BTEX results as mg/kg. Please put chloride results on a separate	Time: Relinquished by: Date Time Poorts of the relative notated on the analytical report.
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Chain-of-Custody Record	Yates Petroleum Corporation		fress:	4th Stre			1	cage:		į	(bd)	шe	0.58 Soil	10:00 Soil									ŀ		Time:	Time:
ວ	Client		Mailing Address:	105 South 4th Street Artesia. NM 88210	Dhone #	moil or Couff.	Idii Oi ra	OA/OC Package:	Accreditation	□ NELAP	□ EDD (Type)	Date	42/8/201E	12/8/2015	12/8/2015										Date:	Date: