

Yates Petroleum  
Cigarillo SWD System  
2RP-2580

Upland Area  
Final Work Plan

**From:** [Bob Asher](#)  
**To:** [Bratcher, Mike, EMNRD](#); [Patterson, Heather, EMNRD](#); [Billings, Bradford, EMNRD](#)  
**Cc:** [Katie Parker](#)  
**Subject:** Cigarillo SWD System Work Plan (9-15-2015)  
**Date:** Tuesday, September 15, 2015 3:19:17 PM  
**Attachments:** [Cigarillo SWD System Work Plan \(9-15-2015\).pdf](#)

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I've included that Yates will also construct low berms for erosion control per our meeting this morning.

Thank you.

**Robert Asher**  
**NM Environmental Regulatory Supervisor**  
**Yates Petroleum Corporation**  
105 S. 4<sup>th</sup> Street  
Artesia, NM 88210  
575-748-4217 (Office)  
575-365-4021 (Cell)

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MARTIN YATES, III

1912-1985

FRANK W. YATES

1936-1986

S.P. YATES

1914-2000



105 SOUTH FOURTH STREET

ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

JOHN A. YATES  
CHAIRMAN OF THE BOARD

JOHN A. YATES JR.  
PRESIDENT

JOHN D. PERINI  
EXECUTIVE VP. OF MONETIZATION  
CHIEF FINANCIAL OFFICER

JAMES S. BROWN  
CHIEF OPERATING OFFICER

September 15, 2015

Mr. Mike Bratcher  
NMOCD District II  
1301 West Grand  
Artesia, NM 88210

Re: Cigarillo SWD System (SE of the Bonbon BNN State Com. #1-H)  
2RP-2580  
30-015-36913  
Section 27, T25S-R28E  
Eddy County, New Mexico

Dear 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 November 4, 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 September 21, 2015.**

If you have any questions call me at (575) 748-4217

Thank you.

YATES PETROLEUM CORPORATION

Robert Asher  
NM Environmental Regulatory Supervisor

Enclosure(s)

**Yates Petroleum Corporation**

**Cigarillo SWD System Work Plan**

**Section 27, T25S-R28E**

**Eddy County, New Mexico**

**September 15, 2015**

**I. Location**

The release point is located approximately 10 miles south of Malaga, NM and 0.25 miles west of Pecos Highway (US 285), as represented by the attached Red Bluff, NM, USGS Quadrangle Map.

**II. Background**

On November 4, 2014, Yates submitted to the NMOCD District II office a Form C-141 for a release of 20 B/O and 500 B/PW with 15 B/O and 375 B/PW recovered. The total affected area is approximately 330 feet by 1500 feet area. The release was from a buried poly line that failed. Initial impacted soils were excavated to depths between 12" and 24" and hauled to an approved NMOCD facility. Delineation samples were taken (11/13/2014) and sent to an NMOCD approved laboratory (results enclosed).

**III. Surface and Ground Water**

Area surface geology ranges from Cenozoic to Paleozoic. Groundwater of record is listed on the Chevron Texaco Trend Map shows depth to groundwater approximately 50 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 as following:

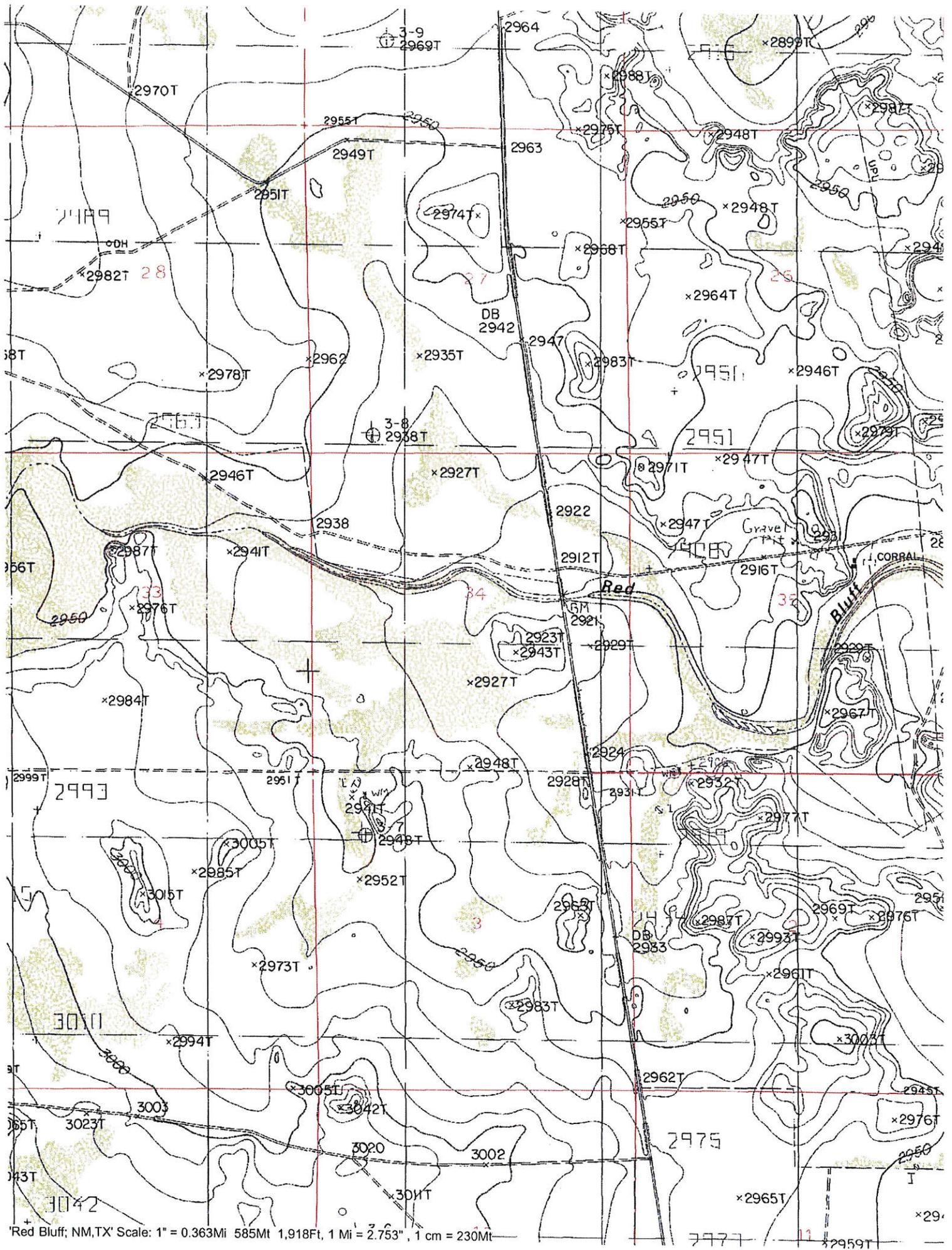
Depth to ground water	50-99'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

**IV. Soils**

The area consists of soils that are caliche and loamy top soil and 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 analytical results, Yates Petroleum Corporation will excavate a ten (10) foot by ten (10) foot by four (4) foot deep area of impacted soils within the release area designated in blue on the enclosed sample diagram. Those soils will be taken to an approved NMOCD facility. Based on background analytical results enclosed, Yates will conduct horizontal delineation of chlorides utilizing Hack Quantab strips. Impacted soils above the background level of 1440 ppm will be excavated and hauled to an MNOC approved facility. Impacted soils below the background level of 1440 ppm will be left in-place. When delineation sampling and excavation work is completed a C-141, Final Report will be submitted to the NMOCD and request closure of the site. When delineation samples indicate chlorides to be below the background level of 1440 ppm within the area designated in blue, like soils will be brought in and backfilled and the entire release area will be contoured to match current grade of surface. Low berms will be incorporated on the reclaimed surface to limit watershed size, disperse water and promote infiltration. The area will be seeded with the mixture recommended by the NMSLO/Red Bluff Draw Remediation Plan.



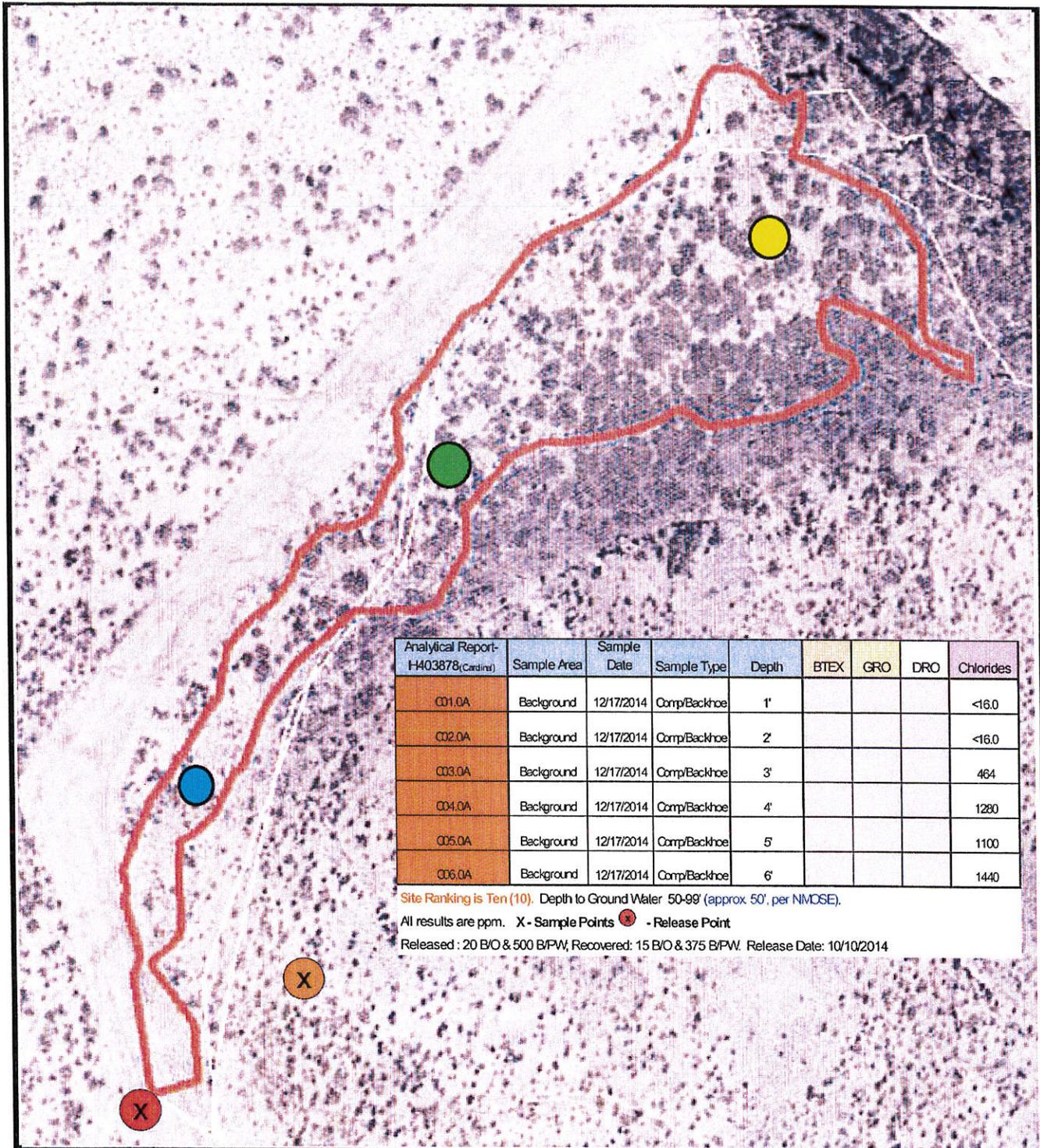
'Red Bluff, NM, TX' Scale: 1" = 0.363Mi 585M 1,918Ft, 1 Mi = 2.753", 1 cm = 230M

Analytical Report- H301570-01 (Cardinal)	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
A 1.0	Release/ Excavation	7/22/2015	Comp/Backhoe	1'				46
A 2.0	Release/ Excavation	7/22/2015	Comp/Backhoe	2'				32
A 3.0	Release/ Excavation	7/22/2015	Comp/Backhoe	3'				ND
A 4.0	Release/ Excavation	7/22/2015	Comp/Backhoe	4'				130
A 5.0	Release/ Excavation	7/22/2015	Comp/Backhoe	5'				180
A 6.0	Release/ Excavation	7/22/2015	Comp/Backhoe	6'				ND
Analytical Report- H301570-01 (Cardinal)	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
B 1.0	Release/ Excavation	7/22/2015	Comp/Backhoe	1'				ND
B 2.0	Release/ Excavation	7/22/2015	Comp/Backhoe	2'				56
B 3.0	Release/ Excavation	7/22/2015	Comp/Backhoe	3'				40
B 4.0	Release/ Excavation	7/22/2015	Comp/Backhoe	4'				74
B 5.0	Release/ Excavation	7/22/2015	Comp/Backhoe	5'				290
B 6.0	Release/ Excavation	7/22/2015	Comp/Backhoe	6'				730
Analytical Report- H301570-01 (Cardinal)	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
C 1.0	Release/ Excavation	7/22/2015	Comp/Backhoe	1'				3700
C 2.0	Release/ Excavation	7/22/2015	Comp/Backhoe	2'				1100
C 3.0	Release/ Excavation	7/22/2015	Comp/Backhoe	3'				2700
C 4.0	Release/ Excavation	7/22/2015	Comp/Backhoe	4'				4200
C 5.0	Release/ Excavation	7/22/2015	Comp/Backhoe	5'				99
C 6.0	Release/ Excavation	7/22/2015	Comp/Backhoe	6'				65

**Site Ranking is Ten (10).** Depth to Ground Water 50-99' (approx. 50', per NMOSE).

All results are ppm. X - Sample Points - Release Point

Released : 20 B/O & 500 B/PW; Recovered: 15 B/O & 375 B/PW. Release Date: 10/10/2014



Analytical Report- H403878 <sub>(Cardinal)</sub>	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
001.0A	Background	12/17/2014	Comp/Backhoe	1'				<16.0
002.0A	Background	12/17/2014	Comp/Backhoe	2'				<16.0
003.0A	Background	12/17/2014	Comp/Backhoe	3'				464
004.0A	Background	12/17/2014	Comp/Backhoe	4'				1280
005.0A	Background	12/17/2014	Comp/Backhoe	5'				1100
006.0A	Background	12/17/2014	Comp/Backhoe	6'				1440

Site Ranking is Ten (10). Depth to Ground Water 50-99' (approx 50', per NMOSE).

All results are ppm. X - Sample Points (X) - Release Point

Released : 20 B/O & 500 B/PW; Recovered: 15 B/O & 375 B/PW. Release Date: 10/10/2014



Cigarillo SWD System  
 30-015-36913  
 Section 27, T25S-R28E  
 Eddy County, NM

SAMPLE DIAGRAM  
 Prepared by Robert Asher  
 Environmental Regulatory Division



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

July 31, 2015

Robert Asher  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4217  
FAX

RE: Cigarillo SWD System

OrderNo.: 1507B56

Dear Robert Asher:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/24/2015 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](http://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 qualifiers 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report

Lab Order: 1507B56

Date Reported: 7/31/2015

Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Yates Petroleum Corporation  
**Project:** Cigarillo SWD System

**Lab Order:** 1507B56

**Lab ID:** 1507B56-001 **Collection Date:** 7/22/2015 10:15:00 AM  
**Client Sample ID:** A 1.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	46	30		mg/Kg	20	7/28/2015 9:33:35 PM	20490

**Lab ID:** 1507B56-002 **Collection Date:** 7/22/2015 10:20:00 AM  
**Client Sample ID:** A 2.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	32	30		mg/Kg	20	7/28/2015 10:10:48 PM	20490

**Lab ID:** 1507B56-003 **Collection Date:** 7/22/2015 10:24:00 AM  
**Client Sample ID:** A 3.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	ND	30		mg/Kg	20	7/28/2015 10:23:12 PM	20490

**Lab ID:** 1507B56-004 **Collection Date:** 7/22/2015 10:27:00 AM  
**Client Sample ID:** A 4.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	130	30		mg/Kg	20	7/28/2015 10:35:37 PM	20490

**Lab ID:** 1507B56-005 **Collection Date:** 7/22/2015 10:30:00 AM  
**Client Sample ID:** A 5.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	180	30		mg/Kg	20	7/28/2015 11:12:51 PM	20490

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 3
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix		

Analytical Report

Lab Order: 1507B56

Date Reported: 7/31/2015

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Yates Petroleum Corporation  
**Project:** Cigarillo SWD System

**Lab Order:** 1507B56

**Lab ID:** 1507B56-006

**Collection Date:** 7/22/2015 10:35:00 AM

**Client Sample ID:** A 6.0

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	ND	30		mg/Kg	20	7/28/2015 11:25:15 PM	20490

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B56

31-Jul-15

Client: Yates Petroleum Corporation

Project: Cigarillo SWD System

Sample ID	MB-20490	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	20490	RunNo:	27838					
Prep Date:	7/28/2015	Analysis Date:	7/28/2015	SeqNo:	836982	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-20490	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	20490	RunNo:	27838					
Prep Date:	7/28/2015	Analysis Date:	7/28/2015	SeqNo:	836983	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.1	90	110			

## 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
- P Sample pH Not In Range
- RL Reporting Detection Limit



# Sample Log-In Check List

Client Name: Yates Petroleum Corpora      Work Order Number: 1507B56      RptNo 1

Received by/date: *CS*      *07/24/15*  
 Logged By: Lindsay Mangin      7/24/2015 9:05:00 AM      *Judy Mangin*  
 Completed By: Lindsay Mangin      7/24/2015 12:53:34 PM      *Judy Mangin*  
 Reviewed By: *CS*      *07/24/15*

**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

**Log In**

- 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 CNG) 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 bottles checked for pH:      (≤2 or >12 unless noted)
- 12. Does paperwork match bottle labels?      Yes       No       Adjusted?      (Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody?      Yes       No
- 14. Is it clear what analyses were requested?      Yes       No
- 15. Were all holding times able to be met?      Yes       No       Checked by:
- (If no, notify customer for authorization )

**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: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

# Chain-of-Custody Record

Client: Yates Petroleum Corporation

Mailing Address: 105 South 4th Street

Artesia, NM 88210

Phone #: (575) 748-4217

email: [boba@yatespetroleum.com](mailto:boba@yatespetroleum.com)

QAVOC Package:

Standard  Level 4 (Full Validation)

Accreditation:

NELAP  Other

EDD (Type)

Turn-Around Time:

X Standard  Rush

Project Name:

Cigarillo SWD System

Project #:

30-015-36913

Project Manager:

Robert Asher

PO# 205632

Sampler: Robert Asher

On Ice:  Yes  No

Sample Temperature: 100C

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
7/22/15	10:15 AM	Soil	A 1.0	1 - 4oz.	N/A	1507B560 -001
7/22/15	10:20 AM	Soil	A 2.0	1 - 4oz.	N/A	-002
7/22/15	10:24 AM	Soil	A 3.0	1 - 4oz.	N/A	-003
7/22/15	10:27 AM	Soil	A 4.0	1 - 4oz.	N/A	-004
7/22/15	10:30 AM	Soil	A 5.0	1 - 4oz.	N/A	-005
7/22/15	10:35 AM	Soil	A 6.0	1 - 4oz.	N/A	-006

Container Type and #

Preservative Type

HEAL No.

7/22/15 10:15 AM Soil A 1.0

7/22/15 10:20 AM Soil A 2.0

7/22/15 10:24 AM Soil A 3.0

7/22/15 10:27 AM Soil A 4.0

7/22/15 10:30 AM Soil A 5.0

7/22/15 10:35 AM Soil A 6.0

## Analysis Request

BTEX + MTBE + TMBs (0021)

BTEX + MTBE + TPH (Gas only)

TPH Method 6015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (Cl)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Emissions (V or M)



www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Received by: *[Signature]*

Date: 07/24/15

Time: 0905

Relinquished by:

Date:

Time:



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

July 31, 2015

Robert Asher

Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4217  
FAX

RE: Cigarillo SWD System

OrderNo.: 1507B57

Dear Robert Asher:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/24/2015 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](http://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 qualifiers 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,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Yates Petroleum Corporation **Lab Order:** 1507B57  
**Project:** Cigarillo SWD System

**Lab ID:** 1507B57-001 **Collection Date:** 7/22/2015 10:42:00 AM  
**Client Sample ID:** B 1.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	ND	30		mg/Kg	20	7/28/2015 11:37:40 PM	20490

**Lab ID:** 1507B57-002 **Collection Date:** 7/22/2015 10:45:00 AM  
**Client Sample ID:** B 2.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	56	30		mg/Kg	20	7/28/2015 11:50:04 PM	20490

**Lab ID:** 1507B57-003 **Collection Date:** 7/22/2015 10:48:00 AM  
**Client Sample ID:** B 3.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	40	30		mg/Kg	20	7/29/2015 12:02:29 AM	20490

**Lab ID:** 1507B57-004 **Collection Date:** 7/22/2015 10:51:00 AM  
**Client Sample ID:** B 4.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	74	30		mg/Kg	20	7/29/2015 12:14:54 AM	20490

**Lab ID:** 1507B57-005 **Collection Date:** 7/22/2015 10:53:00 AM  
**Client Sample ID:** B 5.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	290	30		mg/Kg	20	7/29/2015 12:42:32 PM	20513

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 3
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S % Recovery outside of range due to dilution or matrix		

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Yates Petroleum Corporation  
**Project:** Cigarillo SWD System

**Lab Order:** 1507B57

**Lab ID:** 1507B57-006

**Collection Date:** 7/22/2015 10:56:00 AM

**Client Sample ID:** B 6.0

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	730	30		mg/Kg	20	7/29/2015 1:19:45 PM	20513

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B57

31-Jul-15

**Client:** Yates Petroleum Corporation  
**Project:** Cigarillo SWD System

Sample ID	MB-20490	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	20490	RunNo:	27838					
Prep Date:	7/28/2015	Analysis Date:	7/28/2015	SeqNo:	836982	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-20490	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	20490	RunNo:	27838					
Prep Date:	7/28/2015	Analysis Date:	7/28/2015	SeqNo:	836983	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.1	90	110			

Sample ID	MB-20513	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	20513	RunNo:	27852					
Prep Date:	7/29/2015	Analysis Date:	7/29/2015	SeqNo:	837706	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-20513	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	20513	RunNo:	27852					
Prep Date:	7/29/2015	Analysis Date:	7/29/2015	SeqNo:	837707	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.5	90	110			

**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
- P Sample pH Not In Range
- RL Reporting Detection Limit



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 Corpora      Work Order Number: 1507B57      RcptNo: 1

Received by/date: *CS*      *07/24/15*

Logged By: Lindsay Mangin      7/24/2015 9:05:00 AM      *[Signature]*

Completed By: Lindsay Mangin      7/24/2015 12:58:08 PM      *[Signature]*

Reviewed By: *CS*      *07/24/15*

### 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

### Log In

- 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 bottles checked for pH:
- 12. Does paperwork match bottle labels?      Yes       No       ( <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?      Yes       No       Checked by:
- (If no, notify customer for authorization.)

### 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: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	10	Good	Yes			

# Chain-of-Custody Record

Client: Yates Petroleum Corporation

Mailing Address: 105 South 4th Street

Artesia, NM 88210

Phone #: (575) 748-4217

email: [boba@yatespetroleum.com](mailto:boba@yatespetroleum.com)

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:

NELAP  Other

EDD (Type)

Turn-Around Time:

X Standard  Rush

Project Name:

Cigarillo SWD System

Project #:

30-015-36913

Project Manager:

Robert Asher

PO# 205632

Sampler: Robert Asher

On Ice:  Yes  No

Sample Temperature: 1.0°C

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
7/22/15	10:42 AM	Soil	B-1.0	1 - 4oz.	N/A	1507B57
7/22/15	10:45 AM	Soil	B-2.0	1 - 4oz.	N/A	-001
7/22/15	10:48 AM	Soil	B-3.0	1 - 4oz.	N/A	-002
7/22/15	10:51 AM	Soil	B-4.0	1 - 4oz.	N/A	-003
7/22/15	10:53 AM	Soil	B-5.0	1 - 4oz.	N/A	-004
7/22/15	10:56 AM	Soil	B-6.0	1 - 4oz.	N/A	-005

HEAL No.

Preservative Type

Container Type and #

Matrix

Sample Request ID

Date

Time

## Analysis Request

BTEX + MTBE + TMBs (8021)

BTEX + MTBE + TPH (Gas only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (Cl)

8081 Pesticides / 8082 PCBs

8260B (VOA)

8270 (Semi-VOA)

Air Richies (Y or N)



**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Remarks:

Received by: *Robert Asher* Date: 07/24/15 Time: 0905

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: *Robert Asher*

Relinquished by: \_\_\_\_\_

Date: 7/23/15 Time: 7:58A

Date: \_\_\_\_\_ Time: \_\_\_\_\_

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

July 31, 2015

Robert Asher  
Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, NM 88210  
TEL: (575) 748-4217  
FAX

RE: Cigarillo SWD System

OrderNo.: 1507B58

Dear Robert Asher:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/24/2015 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](http://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 qualifiers 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Yates Petroleum Corporation  
**Project:** Cigarillo SWD System

**Lab Order:** 1507B58

**Lab ID:** 1507B58-001

**Collection Date:** 7/22/2015 11:00:00 AM

**Client Sample ID:** C 1.0

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	----	------	-------	----	---------------	----------

**EPA METHOD 300.0: ANIONS**

Analyst: LGT

Chloride	3700	150		mg/Kg	100	7/31/2015 1:50:34 AM	20513
----------	------	-----	--	-------	-----	----------------------	-------

**Lab ID:** 1507B58-002

**Collection Date:** 7/22/2015 11:03:00 AM

**Client Sample ID:** C 2.0

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	----	------	-------	----	---------------	----------

**EPA METHOD 300.0: ANIONS**

Analyst: LGT

Chloride	1100	75		mg/Kg	50	7/31/2015 2:02:58 AM	20513
----------	------	----	--	-------	----	----------------------	-------

**Lab ID:** 1507B58-003

**Collection Date:** 7/22/2015 11:06:00 AM

**Client Sample ID:** C 3.0

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	----	------	-------	----	---------------	----------

**EPA METHOD 300.0: ANIONS**

Analyst: LGT

Chloride	2700	150		mg/Kg	100	7/31/2015 2:15:23 AM	20513
----------	------	-----	--	-------	-----	----------------------	-------

**Lab ID:** 1507B58-004

**Collection Date:** 7/22/2015 11:09:00 AM

**Client Sample ID:** C 4.0

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	----	------	-------	----	---------------	----------

**EPA METHOD 300.0: ANIONS**

Analyst: LGT

Chloride	4200	150		mg/Kg	100	7/31/2015 2:27:48 AM	20513
----------	------	-----	--	-------	-----	----------------------	-------

**Lab ID:** 1507B58-005

**Collection Date:** 7/22/2015 11:11:00 AM

**Client Sample ID:** C 5.0

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
----------	--------	----	------	-------	----	---------------	----------

**EPA METHOD 300.0: ANIONS**

Analyst: LGT

Chloride	99	30		mg/Kg	20	7/29/2015 2:46:37 PM	20513
----------	----	----	--	-------	----	----------------------	-------

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

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

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Yates Petroleum Corporation  
**Project:** Cigarillo SWD System

**Lab Order:** 1507B58

**Lab ID:** 1507B58-006

**Collection Date:** 7/22/2015 11:15:00 AM

**Client Sample ID:** C 6.0

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: LGT
Chloride	65	30		mg/Kg	20	7/29/2015 2:59:01 PM	20513

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1507B58

31-Jul-15

Client: Yates Petroleum Corporation

Project: Cigarillo SWD System

Sample ID	MB-20513	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	20513	RunNo:	27852					
Prep Date:	7/29/2015	Analysis Date:	7/29/2015	SeqNo:	837706	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-20513	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	20513	RunNo:	27852					
Prep Date:	7/29/2015	Analysis Date:	7/29/2015	SeqNo:	837707	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.5	90	110			

### 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
- P Sample pH Not In Range
- RL Reporting Detection Limit

Client Name: Yates Petroleum Corpora

Work Order Number: 1507B58

RcptNo: 1

Received by/date:

*CS* *07/24/15*

Logged By: Lindsay Mangin

7/24/2015 9:05:00 AM

*Lindsay Mangin*

Completed By: Lindsay Mangin

7/24/2015 1:01:18 PM

*Lindsay Mangin*

Reviewed By:

*CS* *07/24/15*

**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

**Log In**

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
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
13. Are matrices correctly identified on Chain of Custody? Yes  No
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
- # of preserved bottles checked for pH:   
(<2 or >12 unless noted)  
Adjusted?
- 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: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

# Chain-of-Custody Record

Client: Yates Petroleum Corporation

Mailing Address: 105 South 4th Street

Artesia, NM 88210

Phone #: (575) 748-4217

e-mail: boba@yatespetroleum.com

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:

NELAP  Other

EDD (Type)

Turn-Around Time:

Standard  Rush

Project Name:

Cigarillo SWD System

Project #:

30-015-36913

Project Manager:

Robert Asher

PO# 205632

Sampler: Robert Asher

On Ice:  Yes  No

Sample Temperature: 100C

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
7/22/15	11:00 AM	Soil	C-1.0	1 - 4oz.	N/A	1507B58 -001
7/22/15	11:03 AM	Soil	C-2.0	1 - 4oz.	N/A	-002
7/22/15	11:06 AM	Soil	C-3.0	1 - 4oz.	N/A	-003
7/22/15	11:09 AM	Soil	C-4.0	1 - 4oz.	N/A	-004
7/22/15	11:11 AM	Soil	C-5.0	1 - 4oz.	N/A	-005
7/22/15	11:15 AM	Soil	C-6.0	1 - 4oz.	N/A	-006

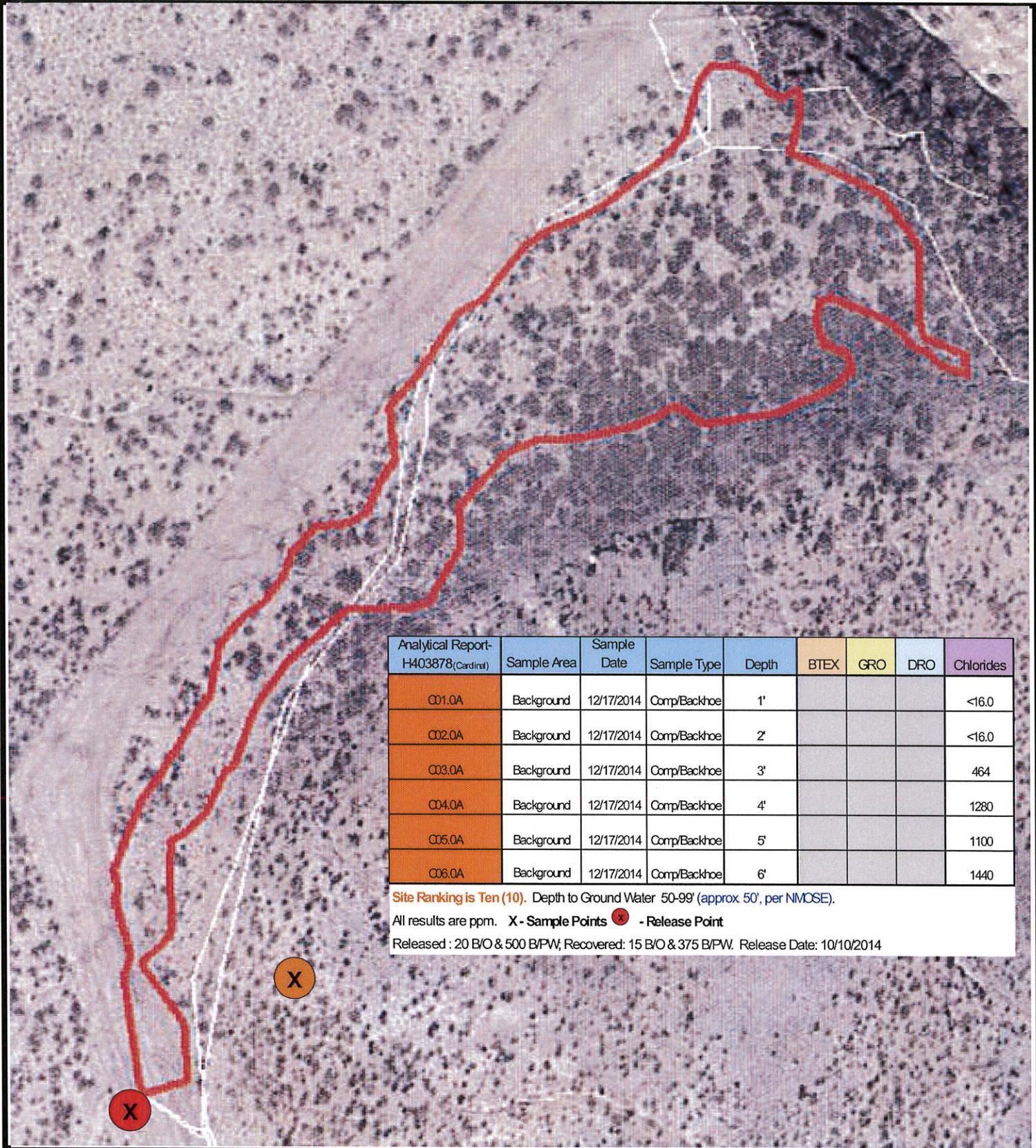
Date:	Time:	Relinquished by:	Date:	Time:	Received by:
7/23/15	7:50A	<i>[Signature]</i>	7/24/15	9:05	<i>[Signature]</i>

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Aroclors (Cl)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)
							X			
							X			
							X			
							X			
							X			
							X			

## Analysis Request

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Cigarillo SWD System

30-015-36913

Section 27, T25S-R28E

Eddy County, NM

SAMPLE DIAGRAM

Prepared by Robert Asher  
Environmental Regulatory Division

December 23, 2014

ROBERT ASHER

YATES PETROLEUM CORPORATION

105 S 4th Street

Artesia, NM 88210

RE: CIGARILLO SWD SYSTEM

Enclosed are the results of analyses for samples received by the laboratory on 12/18/14 16:11.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 YATES PETROLEUM CORPORATION  
 ROBERT ASHER  
 105 S 4th Street  
 Artesia NM, 88210  
 Fax To: (505) 748-4635

Received:	12/18/2014	Sampling Date:	12/17/2014
Reported:	12/23/2014	Sampling Type:	Soil
Project Name:	CIGARILLO SWD SYSTEM	Sampling Condition:	Cool & Intact
Project Number:	30-015-36913	Sample Received By:	Kathy Perez
Project Location:	EDDY COUNTY, NM		

**Sample ID: C01.0B (H403878-01)**

Chloride, SM4500CI-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	12/19/2014	ND	400	100	400	0.00		

**Sample ID: C02.0B (H403878-02)**

Chloride, SM4500CI-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	12/19/2014	ND	400	100	400	0.00		

**Sample ID: C03.0B (H403878-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	12/19/2014	ND	400	100	400	0.00		

**Sample ID: C04.0B (H403878-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1280	16.0	12/19/2014	ND	400	100	400	0.00		

Cardinal Laboratories

\* = Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 YATES PETROLEUM CORPORATION  
 ROBERT ASHER  
 105 S 4th Street  
 Artesia NM, 88210  
 Fax To: (505) 748-4635

Received:	12/18/2014	Sampling Date:	12/17/2014
Reported:	12/23/2014	Sampling Type:	Soil
Project Name:	CIGARILLO SWD SYSTEM	Sampling Condition:	Cool & Intact
Project Number:	30-015-36913	Sample Received By:	Kathy Perez
Project Location:	EDDY COUNTY, NM		

**Sample ID: C05.0B (H403878-05)**

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1100	16.0	12/19/2014	ND	400	100	400	0.00		

**Sample ID: C06.0B (H403878-06)**

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1440	16.0	12/22/2014	ND	416	104	400	3.92		

Cardinal Laboratories

\*=Accredited Analyte

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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

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



**From:** Patterson, Heather, EMNRD  
**To:** ["Bob Asher"](#)  
**Cc:** [Katie Parker](#); [Bratcher, Mike, EMNRD](#); [Billings, Bradford, EMNRD](#)  
**Subject:** RE: Cigarillo SWD System Work Plan (9-15-2015)  
**Date:** Monday, September 21, 2015 1:17:00 PM

---

**RE: Yates \* Cigarillo SWD System \* 30-015-36913 \* 2RP-2580 (upland portion of release)**

Bob,

This work plan is approved as written.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

Heather Patterson  
Environmental Specialist  
NMOCD District II  
Office (575)748-1283 ext.101  
Cell (575)703-0228

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**From:** Bob Asher [mailto:BobA@yatespetroleum.com]  
**Sent:** Tuesday, September 15, 2015 3:18 PM  
**To:** Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD; Billings, Bradford, EMNRD  
**Cc:** Katie Parker  
**Subject:** Cigarillo SWD System Work Plan (9-15-2015)

I've included that Yates will also construct low berms for erosion control per our meeting this morning.

Thank you.

**Robert Asher**  
**NM Environmental Regulatory Supervisor**  
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