## Goetze, Phillip, EMNRD

From:

Michael Feldewert < MFeldewert@hollandhart.com>

Sent:

Monday, March 20, 2017 9:41 AM

To:

Goetze, Phillip, EMNRD; Brooks, David K, EMNRD; Jones, William V, EMNRD

Subject:

Case No. 15644: Application of WPX for Section 30 Recycling Containment - Updated

numbers and lab reports

Attachments:

030917 Rpt\_1703538\_Final\_v1.pdf; 030117 Rpt\_1703134\_Final\_v1.pdf; 030217 Rpt\_1703134\_Final\_v1.pdf; 030317 Rpt\_1703262\_Final\_v1.pdf; 030417 Rpt\_1703261 \_Final\_v1.pdf; 030517 Rpt\_1703260\_Final\_v1.pdf; 030617 Rpt\_1703359\_Final\_v1.pdf; 030717 Rpt\_1703443\_Final\_v1.pdf; 030817 Rpt\_1703537\_Final\_v1.pdf; 031017 Rpt\_1703537\_Final\_v1.pdf;

1703657\_Final\_v1.pdf

Good morning gents: Per your request, attached are the lab reports provided to the District Office this morning under the email below.

Michael H. Feldewert Santa Fe Office 505-988-4421 505-983-6043 (fax) mfeldewert@hollandhart.com

# HOLLAND&HART



**CONFIDENTIALITY NOTICE:** This message is confidential and may be privileged. If you believe that this email has been sent to you in error, please reply to the sender that you received the message in error; then please delete this e-mail. Thank you.

From: Watson, Debbie

Sent: Monday, March 20, 2017 7:22 AM

To: Smith, Cory, EMNRD < Cory.Smith@state.nm.us > Subject: Section 30 Recycling Containment Update

Hello Cory,

Attached are the final lab reports for the sample events listed below. Note: I had to revise one number in the table below (highlighted). WPX also collected a sample on March 10- results are as follows: chloride 2,900 mg/L, TDS 8,020 mg/L.

**Laboratory Analytical Results** 

Sample	Date	Time	TDS	Chloride
ID			mg/L	mg/L
LD.03.01.17	1-Mar-17	12:15	8,800	2,900
LD.03.02.17	2-Mar-17	9:35	7,890	3,000
LD.03.03.17	3-Mar-17	9:15	8,500	2,900
LD.03.04.17	4-Mar-17	9:30	7,940	2,700
LD.03.05.17	5-Mar-17	9:30	8,030	2,700
LD.03.06.17	6-Mar-17	9:38	7,860	2,600
LD.03.07.17	7-Mar-17	9:38	7,900	2,800
LD.03.08.17	8-Mar-17	9:30	8,150	3,000

LD.03.09.17	9-Mar-17	9:32	8,080	3,000
Containment.03.09.17	9-Mar-17	10:04	7,950	2,800

Thank you,

Debbie

Deborah Watson
Environmental Specialist
PO Box 640 | Aztec, NM 87410
office 505.333.1880 | cell 505.386.9693 | fax 505.333.1805
deborah.watson@wpxenergy.com



If you have received this message in error, please reply to advise the sender of the error and then immediately delete this message. Thank you.



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

March 15, 2017

Debbie Watson WPX Energy 721 S Main Ave Aztec, NM 87410

TEL: (505) 333-1880

FAX

RE: Section 30 Recycling Containment

OrderNo.: 1703538

## Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/10/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

## **Analytical Report**

Lab Order 1703538

Date Reported: 3/15/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: Containment 03.09.17

Project: -- Section 30 Recycling Containment

Collection Date: 3/9/2017 10:04:00 AM

Lab ID: = - 1703538-001 "

Matrix: AQUEOUS

Received Date: 3/10/2017 7:08:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	·- ·· ·					Anal	yst: <b>LGT</b>
- Chloride	2800	100	•	mg/L	200	3/10/2017 5:27:28 P	M R41320
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS					Anal	yst: SRM
Total Dissolved Solids	7950	40.0	•D	mg/L	1	3/14/2017 12:49:00	PM 30663

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

# Qualifiers: Value exceeds Maximum Contaminant Level B Analyte detected in the associated Method Blank E Value above quantitation range Value above quantitation range J Analyte detected below quantitation limits Page 1 of 4 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 W Sample container temperature is out of limit as specified

## **Analytical Report**

Lab Order 1703538

Date Reported: 3/15/2017

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Project: Section 30 Recycling Containment

Lab ID: - 1703538-002

Client Sample ID: LD 03.09.17

Collection Date: 3/9/2017 9:32:00 AM

Received Date: 3/10/2017 7:08:00 AM

:Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIO	NS					Anal	yst: <b>LGT</b>
Chloride	3000	100	*	mg/L	200	3/10/2017 5:39:52 P	M R41320
SM2540C MOD: TOTAL DIS	SSOLVED SOLIDS -:					Anal	yst: SRM 🐣
Total Dissolved Solids	. 8080	40.0	*D	mg/L	1	3/14/2017 12:49:00	PM 30663

Matrix: AQUEOUS

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

Qualifiers:	٠	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н-	: Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 4
•	ΝD	Not Detected at the Reporting Limit	P	Sample pH Not In Range
, 1	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	_ <b>S</b>	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1703538

15-Mar-17

Client:

**WPX** Energy

Project:

Section 30 Recycling Containment

Sample ID MB :-

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

Prep Date:

Batch ID: R41320 Analysis Date: 3/10/2017 RunNo: 41320 ,

SeqNo: 1294723

Units: mg/L

HighLimit

%RPD **RPDLimit** 

Qual

PQL SPK value SPK Ref Val %REC LowLimit Result

SampType: LCS

TestCode: EPA Method 300.0: Anions

Sample ID LCS Client ID: LCSW

Batch ID: R41320

RunNo: 41320

Prep Date:

Analysis Date: 3/10/2017

SeqNo: 1294724

Units: mg/L

**RPDLimit** 

Analyte ::

Result

SPK value SPK Ref Val

%REC LowLimit

**PQL** 0.50

%RPD

Qual

HighLimit

5.000

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

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1703538

15-Mar-17 3 . 9

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB-30663

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

Analyte ...

PBW

Batch ID: 30663

RunNo: 41360

Result

Prep Date: 3/13/2017

Analysis Date: 3/14/2017

SeqNo: 1296218

Units: mg/L **HighLimit** 

%RPD **RPDLimit** 

Qual \*\*\*

Total Dissolved Solids

ND

**PQL** 

TestCode: SM2540C MOD: Total Dissolved Solids

\_;. ~ - <u>-</u>

Sample ID LCS-30663,

Client ID: LCSW

.SampType: LCS Batch ID: 30663

RunNo: 41360

Analyte

Prep Date: 3/13/2017

Analysis Date: 3/14/2017

SeqNo: 1296219

Units: mg/L

%RPD **RPDLimit** 

Qual ·

Total Dissolved Solids

Result.

SPK value SPK Ref Val 1000

SPK value SPK Ref Val %REC LowLimit

%REC 100

HighLimit

Page 4 of 4

1000

**PQL** 20.0

LowLimit

120

# Qualifiers:

- 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
- R RPD outside accepted recovery limits
- S:...% Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified



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

<u></u>							<u> </u>
Client Name: WPX ENERGY	Work Order Number:	1703	538		RcptNo:	1	- 
Received by/date:	03/10/17			<u></u>	<del></del>	· <u> </u>	-
Logged By: Lindsay Mangin	3/10/2017 7:08:00 AM		0	ty they	ð		-
Completed By Lindsay Mangin	3/10/2017 8:04:17 AM		<u> </u>	- Little	b		
Reviewed By:	03/10/17		ν				1
Chain of Custody				ŀ		* 200   1200	- ,
1. Custody seals intact on sample bottles?		Yes		No 🗆	Not Present 🗹		
2. Is Chain of Custody complete?		Yes	V	No 🗆	Not Present 🗀	•	- ,
3. How was the sample delivered?		Cour	<u>jet</u>				
<u>Log In</u>				i I			
4. Was an attempt made to cool the samples	?	Yes	Ø	No 🗆	na 🗆		
5. Were all samples received at a temperatur	e of >0° C to 6.0°C	Yes	$ \mathbf{Z} $	No 🗆	NA $\square$		
6. Sample(s) in proper container(s)?		Yes	<b>Y</b>	No 🗆			
7. Sufficient sample volume for indicated test	(s)?	Yes	$\checkmark$	No 🗆			
8. Are samples (except VOA and ONG) prope	erly preserved?	Yes	V	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	ken?	Yes		No 🗹	# of preserved		
<b>10</b> 1					bottles checked		
12 Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes	<b>✓</b>	No ∐	for pH:(<2 c	r >12 unless note	: :d) (b:
13. Are matrices correctly identified on Chain of	f Custody?	Yes	. <b>•</b>	No 🗆	Adjusted?		
14. Is it clear what analyses were requested?		Yes	$\overline{\mathbf{Z}}$	No 🗆			
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes	<b>☑</b>	No 🗆	Checked by:		
				i			
Special Handling (if applicable)							
16. Was client notified of all discrepancies with	this order?	Yes		No 🗆	NA 🗹		
Person Notified:	Date					<del>-</del> :	
By Whom:	Via:	] eMa	ell Phone	e¦⊟ Fax	In Person		
Regarding:							
Client Instructions:				!		=	
17. Additional remarks:				1		_	
18. Cooler Information Cooler No   Temp °C   Condition   S	Seal Intact   Seal No   S	Seal Da	ate   Sico	ned By	1	•	
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	(Type)		<del></del>	Sample, Tem	perature:	5 To 1 To	MTBE	MTBE	ଥ	ᇫ	g ,			용	2	اج	2		- {	اع
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALNO- 1903638	1 + 1	BTEX + M1	TPH 8015B (GRO / DRO	TPH (Method 418.1)	EDB (Method 504.1)	PCRA & Metals	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	Chlaride	150	<u> </u>	Air Bubbles (Y or N)
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3/9/17	932	1720	LD.03.09.17	-500ml	Cool	-02	╀	$\dashv$	-	+	+	+-	+-	_		Н	X	X	<del> -</del>	4-
3/8/17		120	<u> </u>	500 00	Cool			_	_	_	4.	<u>↓</u> _	┦						$\dashv$	
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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

March 10, 2017

Debbie Watson

WPX Energy 721 S Main Ave

Aztec, NM 87410

TEL: (505) 333-1880

FAX

RE: Section 30 Recycling Containment

OrderNo.: 1703134

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/3/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

## **Analytical Report**

Lab Order 1703134

Date Reported: 3/10/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: LD 03.01.17

Project:

Section 30 Recycling Containment

Collection Date: 3/1/2017 12:15:00 PM

Lab ID:

1703134-001

Matrix: AQUEOUS

Received Date: 3/3/2017 7:15:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analy	/st: MRA
Chloride	2900	100	٠	mg/L	200	3/8/2017 2:25:19 AM	R41211
SM2540C MOD: TOTAL DISSOL	VED SOLIDS					Analy	/st: KS
Total Dissolved Solids	8800	200	*D	mg/L	1	3/8/2017 11:39:00 AI	M 30550

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

#### 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 Page 1 of 3
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1703134

10-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID: PBW

Batch ID: R41211

RunNo: 41211

HighLimit

Prep Date:

Analysis Date: 3/7/2017

SeqNo: 1290901

Units: mg/L

%RPD **RPDLimit**  Qual

Analyte Chloride

Result **PQL** ND 0.50

Sample ID LC\$

LCSW

SampType: Ics Batch ID: R41211

RunNo: 41211

TestCode: EPA Method 300.0: Anions

Client ID: Prep Date:

SeqNo: 1290902

Units: mg/L

Analysis Date: 3/7/2017

HighLimit

**RPDLimit** 

Analyte

PQL SPK value

SPK Ref Val %REC

SPK value SPK Ref Val %REC LowLimit

LowLimit

%RPD

Qual

Chloride

0.50

5.000

Result 4.9

97.2

110

## Qualifiers:

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits
- Page 2 of 3

- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

10-Mar-17 -

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB-30550 SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW

Batch ID: 30550

RunNo: 41222

Prep Date: \_ 3/6/2017 . . .

\_\_\_ Analysis Date: 3/8/2017

SeqNo: 1291645

Units: mg/L HighLimit

%RPD

**RPDLimit** Qual - : 5

Total Dissolved Solids

Result **PQL** 20.0

Sample ID LCS-30550 --- SampType: LCS

TestCode: SM2540C MOD: Total Dissolved Solids RunNo: 41222

Client ID: LCSW

Batch ID: 30550

Prep Date: -- 3/6/2017 .... Analysis Date: 3/8/2017

SeqNo: 1291646

Units: mg/L

HighLimit %RPD **RPDLimit** Qual, -, -...

20.0

1000

SPK value

%REC 103

80

LowLimit

Total Dissolved Solids

Analyte

1030

SPK value SPK Ref Val %REC LowLimit

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

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit

Sample container temperature is out of limit as specified

Page 3 of 3



Hall Environmental Analysis Laboratory 4901 Havekins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Website www.hallenvironmental.com

# Sample Log-In Check List

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Client Name: WPX ENERGY Work Order Num	ber: 1703134		RoptNo: 1	· · · · · · · · · · · · · · · · · · ·
Received by/date: 02-03-14	· · · · · · · · · · · · · · · · · · ·			The second secon
Logged By: Lindsey Mangin 3/3/2017, 7:15:00 A	<b>M</b> .	July 1		e e e e e e e e e e e e e e e e e e e
Completed By: Lindsay Mangin 3/3/2017-7:51:39 A		MARION	<u> </u>	79 P
	7	0,00		1.24
Chain of Custody			<u> </u>	
1, Custody seals intact on sample bottles?	Yes 🖸	No 🗔	Not Present 🗹	The second
2. Is Chain of Custody complete?	Yes 🔽	No 🔲	Not Present	
3. How was the sample delivered?	Couner	ं वर्ष चर्याः	to the standers	.=
Log In				
4. Was an attempt made to cool the samples?	Yes	No 🗆	'NA 🎦	
6. Wore all samples received at a temperature of >0° C to 6.0°C	Yes 🔽	No 🖸	ÑA 🗖	
6. Sample(s) in proper container(s)?	Yes: 🗹	Ño"□		
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 D	
10. VOA vials have zero headspace?	Yes 🖸	No 🗀	No VOA Vials 🗹	
1.1. Were any sample containers received broken?	Yes 🗆	No Œ	# of preserved	
12. Does paperwork match bottle labels?	Yes 🗹	Ño 🖸	bottles checked for pH:	
(Note discrepancies on chain of custody)	163 141.	NO,E		unless noted):
13. Are matrices correctly identified on Chain of Custody?	Yes 🔽	No 🛄	Adjusted?	· ····
14, is it clear what analyses were requested?	Yes 🔽	No 🔲	AC SCH	, *A
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: Va;		Photo: Draw		
By Whom: Via: Regarding: Client Instructions:	☐ eMalt ☐	Phone Fax	In Person	•
17. Additional remarks:	·	<del></del>		
18: Cooler Information				
Cooler No Temp C Condition Seal Intact Seal No	Seal Date	Signed By		
1.9 Good Yes	.,1	"		and the second

C	hain	of-Cu	stody Record	Turn-Around	Time: T <b>4</b> T		F			н	<b>.</b>	F	NV	/TC	20	n P	AF	NTA	A.S	
Client:	WPX	Every	14	Standard Project Name				· · · · · · · · · · · · · · · · · · ·	- - 200	A	A	LY:	SIS	5 L	.AE	30		TO		,
Mailing	Address	7215	Main	1 -		Containment			— 11 H:	w wkin:	ww.ha						7100			
		NM 8		Project #:	14 CO CIUM	<u>Contractor</u>				5-345										
Phone i		333		_				10		3-0-10			ysis	_					*. *	, *** &
			10 bow waterergy.com	Project Mana	ger:			3	6			_	<del>} `</del>							
	Package:		☐ Level 4 (Full Validation)	D. Watson			TMB's (8021)	+ TPH (Gas only)	O / MR		íΩ		PO4,SC	PCB's						
Accredi	tation			Ou los: Massa Wes Terrain Info Est Assault			TMB'	TPH (	NO / DIA	(1)	8270 S	<b>'</b>	NO.	/ 8082		<b>&amp;</b>				2 Z
□ EDD	(Type)			Sample Terri	perature	<b>MATERIAL</b>	띪	BE	9	4		tels	锰	ides	<b>-</b>	\ <u>\</u>		-		ځ
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX + MTBE	BTEX + MTBE	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 304.1) PAH's (8310 or 8270 SIMS)	RCRA 8 Me	Anions (FC)NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	126			Air Bubbles (Y or N)
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	-		<u></u>					$\longrightarrow$	-+	+	+	+	$\vdash$	-			$\vdash$	$+\!\!\!-$	+-	⊬
Date:	Time: NSG Time:	Retinquisho	I Water	Received by:	helphoet	Date Time 3/2/11/14SC Date Time	Ren	narks	<u>_</u>	I	_ I		<u> </u>	<u> </u>	<b>_</b>			<b></b>		<u> </u>
حالاك	1827	Mis	the Walter	The state of the s	× 0.	303/7 O715		_lelm , d	<u> </u>		نداد قصد								<u> </u>	



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

March 10, 2017

Debbie Watson WPX Energy 721 S Main Ave Aztec, NM 87410

TEL: (505) 333-1880

FAX

RE: Section 30 Recycling Containment

OrderNo.: 1703223

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/4/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

Sold

4901 Hawkins NE

Albuquerque, NM 87109

## **Analytical Report**

Lab Order 1703223

Date Reported: 3/10/2017

# Hall Environmental Analysis Laboratory, Inc.

CLIENT:- WPX Energy

Client Sample ID: LD.03.02.17

Project: - Section 30 Recycling Containment

Collection Date: 3/2/2017 9:35:00 AM

Lab ID: : 1703223-001

Matrix: AQUEOUS

Received Date: 3/4/2017 9:30:00 AM

-Analyses	Result	PQL.	Qual	Units	DF ·	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS		•				Analy	/st: MRA
Chloride	3000	100	٠	mg/L	200	3/8/2017 5:06:40 AM	A41211
SM2540C MOD: TOTAL DISSOLV	ED SOLIDS					Analy	/st: KŠ
Total Dissolved Solids	7890	200	*D	mg/L	1	3/8/2017 11:39:00 AI	M 30550

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

Qualifiers:	- •	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D.	Sample Diluted Due to Matrix	Ε	Value above quantitation range
	∴Н .	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
the second state of	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1703223

10-Mar-17 (50446-38.4.

Client:

· WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID: PBW

Prep Date:

Batch ID: A41211

RunNo: 41211

Analysis Date: 3/8/2017

SeqNo: 1290980

Units: mg/L HighLimit

RPDLimit

Qual

Result. PQL · ND

Sample ID LCS

SampType: Ics

TestCode: EPA Method 300.0: Anions

Client ID: LCSW

Batch ID: A41211

RunNo: 41211

SPK value SPK Ref Val %REC LowLimit

SPK value SPK Ref Val %REC

Prep Date: --

--- Analysis Date: 3/8/2017

SeqNo: 1290981

Units: mg/L HighLimit

**RPDLimit** 

Qual

Page 2 of 3

Result \* PQL

5.000

Qualifiers:

. . 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

aS an % Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1703223

10-Mar-17 =

Client:

**WPX** Energy

Project:

Section 30 Recycling Containment

--. - SampType: MBLK

Sample ID \_ MB-30550

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW

Batch ID: 30550

PQL

RunNo: 41222

Prep Date: - 3/6/2017 "

Analysis Date: 3/8/2017

Result

SeqNo: 1291645

%REC LowLimit

Units: mg/L HighLimit

%RPD

**RPDLimit** 

Qual ....

Analyte معادية Total Dissolved Solids

™ND 20.0

Sample ID, LCS-30550 : SampType: LCS

TestCode: SM2540C MOD: Total Dissolved Sollds

Client ID: LCSW

Batch ID: 30550

RunNo: 41222

Prep Date: 3/6/2017

Analysis Date: 3/8/2017

SeqNo: 1291646

Units: mg/L HighLimit

%RPD

Analyte

SPK value 1000

SPK Ref Val

%REC

LowLimit

120

Qual

Total Dissolved Solids

Result 1030 PQL 20.0

SPK value SPK Ref Val

103

'RPDLimit

Page 3 of 3

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

RPD outside accepted recovery limits

.. % Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

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: WPX ENERGY	Work Order Number:	1703223		RcptNo:	1
Received by/date: 1103/04/17	,	<del></del>	<del></del>		
Logged By: Anne Thorne 3/	4/2017 9:30:00 AM		an I	_	
Completed By: Anne Thorne 3/	6/2017 1:32:42 PM		an Il	_	;
Reviewed By: C3	locality				į
Chain of Custody	1-5-1-1				
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	oreserved?	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	
12. Does paperwork match bottle labels?		Yes 🗹	No 🗆	bottles checked for pH:	
(Note discrepancies on chain of custody)		v 🗷	ar. 🗆	(<2 or Adjusted?	>12 unless noted)
13 Are matrices correctly identified on Chain of Cu 14 Is it clear what analyses were requested?	istody?	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 T Fax	☐ in Person	
Regarding:	, , , ,		T HORE		
Client Instructions:					
17. Additional remarks:					
18. Cooler Information					
	Intact   Seal No   S	eal Date	Signed By		
1  2.1  Good  Yes					

Chain-of-Custody Record			Turn-Around Time:				HALL ENVIRONMENTAL									
Client:	WPX E	nergy		ASAP	- A		' '	<u> </u>				. –			,	
			<del></del>	Xstandard Project Name:	□ Rush	<del></del>	╅┡	3	<b>,</b>	ANA	LY5	IS L	ABO	RAT	OR	Y
		_		Project Name:			.15	ے کے		ww	w.halle	enviror	mental.	com		i
Mailing Add	dress:	721 S Ma		Section 30 Recyclin	ng Containme	nt .	1	49	01 Hz	wkins	NE -	Albuat	Jerque;∷	NM 87	109	}
_	_	Aztec, Ni	M 87410	Project #:			1			5-345-3		-	505-34	1		•
Phone #:		.505-333-		1								sis Re				
email or Fa	pa#:		watson@wpxenergy.com	Project Manager.							T			TT		
QA/QC Paci										- 1	1 1					
XStandard	andard 🔲 Level 4 (Full Validation			Deborah Watson						ĺ	l l			1 1	- {	1
Accreditation	on:		<u> </u>	Sampler:	D8/DW		1		1		1	-			- 1	
□ NELAP		□ Other		On ice No Yes				ļ					1			킪
□ EDD (Type)			Sample Temperatu	F 22-12-11		6			į.		ļ	1 1	1	- [	اځا	
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Date	Time	Matrix	Sample Request ID	Container Type	Preservative	HEAL NO	9	달			!	ŀ	1 1	1 1		멸
	{		· · ·	and#	Type	77/3223	102	Chloride		-		- 1		1 1	-	Air Bubbles (Y or N)
03,02.17	9:35	water	LD.03.02.17	1-500 mL plastic	cold	ZU	X	x	┝╌┼	+-	<del>                                     </del>	+-	<del>                                     </del>	╆	_	+*
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3/3/17 Date:	1520 Time:	Reinguishe		Received by:	Vacto 3	3/17 1520 ate Time	₹									
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3/3/17	1820	1 ch	while		- 03/04	1/17 MBD	<u> </u>									
	H nyé	CESSINY, METTE	oles submitted to Hat Environmental may	be subcontracted to other a	coredited laboratoric	s. This serves as notic	e of this	s posse	billy. A	ui arup-co	ntracted	र्थ हिल ब्राव्ह	c deaty n	stated on	the end	lytical ret
		/		. /												



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

March 13, 2017

Debbie Watson WPX Energy 721 S Main Ave Aztec, NM 87410

TEL: (505) 333-1880

FAX

RE: Section 30 Recycling Containment

OrderNo.: 1703262

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/7/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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

Boles

4901 Hawkins NE

Albuquerque, NM 87109

# **Analytical Report**

Lab Order 1703262

Date Reported: 3/13/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample ID: LD.03.03.17

Project:

Section 30 Recycling Containment

Collection Date: 3/3/2017 9:15:00 AM

Lab ID:

1703262-001

Matrix: AQUEOUS

Received Date: 3/7/2017 7:15:00 AM

Analyses	<u> </u>	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 3	00.0: ANIONS	•••				_	Analy	/st: LGT
Chloride		2900	100	٠	mg/L	200	3/10/2017 4:25:24 Pf	M R41320
SM2540C MOD:	TOTAL DISSOLVE	D SOLIDS					Analy	/st: KS
Total Dissolved S	Solids	8500	200	*D	mg/L	1	3/9/2017 4:59:00 PM	30585

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

#### Qualifiers:

- 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
- E Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 3
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1703262

13-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID: **PBW**  Batch ID: R41320

RunNo: 41320

Prep Date:

Analysis Date: 3/10/2017

SeqNo: 1294723

Units: mg/L

HighLimit

%RPD **RPDLimit** 

Qual

Analyte Chloride

Result **PQL** ND 0.50

Sample ID LCS

LCSW

SampType: LCS

TestCode: EPA Method 300.0: Anions

Batch ID: R41320

RunNo: 41320

Client ID: Prep Date:

Analysis Date: 3/10/2017

SeqNo: 1294724

Units: mg/L HighLimit

**RPDLimit** 

Qual

Analyte

SPK value SPK Ref Val 5.000

%REC 105

Result PQL

SPK value SPK Ref Val %REC LowLimit

110

%RPD

Chloride 5.2 0.50

## Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

П Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

RPD outside accepted recovery limits

· % Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits

Page 2 of 3

P Sample pH Not In Range

RLReporting Detection Limit

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1703262

13-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB-30585

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

PBW

Batch ID: 30585

RunNo: 41272

Prep Date:

3/8/2017

Analysis Date: 3/9/2017

SeqNo: 1293066

Units: mg/L

Analyte

Result

SPK value SPK Ref Val %REC LowLimit

SPK value SPK Ref Val

HighLimit

%RPD **RPDLimit**  Qual

Total Dissolved Solids

Sample ID LCS-30585

LCSW

3/8/2017

ND

**PQL** 20.0

SampType: LCS Batch ID: 30585

**PQL** 

TestCode: SM2540C MOD: Total Dissolved Solids RunNo: 41272

Units: mg/L

120

Prep Date: Analyte

Client ID:

Analysis Date: 3/9/2017 Result

SeqNo: 1293067 %REC

LowLimit

HighLimit

**RPDLimit** 

Total Dissolved Solids

1020 20.0 1000

n

102

80

%RPD

Qual

Qualifiers:

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

S % Recovery outside of range due to dilution or matrix В Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Page 3 of 3

Sample pH Not In Range

RLReporting 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: WPX ENERGY	Work Order Number	: 1703262		RcptNo: 1									
Received by/date: A 03/07/1	7												
Logged By: Anne Thorns	3/7/2017 7:15:00 AM		anne II.	_									
Completed By: Anne Thorne	3/7/2017 8:47:45 AM		an Ilm	_									
Reviewed By:	3/7/17		0.000										
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 sample	s?	Yes 🗹	No 🗆	na 🗆									
5. Were all samples received at a temperatu	ure 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 tes	it(s)?	Yes 🗹	No 🗌										
8. Are samples (except VOA and ONG) prop	erly preserved?	Yes 🗹	No 🗌										
9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA $\square$									
10.VOA vials have zero headspace?		Yes 🗌	No 🗌	No VOA Vials 🗹									
11. Were any sample containers received bro	oken?	Yes 🗆	No 🗹 🖰	# of preserved									
42.0		v 🗇	<b>—</b>	bottles checked									
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 📙	for pH: (<2 ar	>12 unless noted)								
13. Are matrices correctly identified on Chain	of Custody?	Yeş 🗹	No 🗀	Adjusted?	<u> </u>								
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 <u>Handling (if applicable)</u>													
16. Was client notified of all discrepancies wit	h this order?	Vas 🗆	No 🗆	NA 🔽									
		Yes □	. No ∐ 	· · · ;									
Person Notified:	Date		:	<b>.</b>									
By Whom:	Via:	eMail F	Phone  Fax	n Person									
Client Instructions:		•	<del>.</del>										
17. Additional remarks:	<del></del>	<del>-</del>		· · · · · · · · · · · · · · · · · · ·									
18. Cooler Information													
	Seal Intact   Seal No	Seal Date	Signed By										
	es												

Sandard	Cham-or-custody Necord			Turn-Around Time: ASAP	•		1			HAL	l E	NV	/IR	ON	ME	NT/	AT .	
Mailing Address: 721 S Mailn Section 30 Recycling Containment Section 30 Recycling Containment 4801 Hawkins NE - Albuquerque, NM 87109  Aztec, NN 87410 Project #: 505-345-3875 Fax 505-345-4107  Phone #: 505-333-1880 Project Manager: OA/OC Package: Xstandard Level 4 (Full Validation) Deborath Watson Accreditation: Sampler: DB/DW Singiple Emperatural: Formation Type Preservative and # Type Internation	Client:	WPX Er	nergy 			□ Rush	l			<u>-</u>								
Mailing Address: 721 S Main  Aztec, NM 87410  Project #: 505-333-1830  Project Manager:  Analysis Request  Deborah Watson  Accordidation:  Deborah Watson  Sample: DB/DW  Sample: DB/DW  Time Matrix Sample Request ID  Container Type and # Type and Type a					Project Name:										-			
Proper #: 505-345-3976 Fax 505-345-4107  Proper #: 505-333-1880  Project #: 505-333-1880  Analysis Request  All Validation Deborah Watson  Accreditation:  Deborah Watson  Sample: DB/DW  Olices Sample: DB/DW  Type Sample: DB/DW  Type Sample: DB/DW  Type Sample: DB/DW  Olices Sample: DB/DW  Olices Sample: DB/DW  Type Sample: DB/DW  Type Sample: DB/DW  Type Sample: DB/DW  Olices Sample: DB/DW  Type Sample: DB/DW	Mailing Ad	dress:	721 S M		Section 30 Perceli	na Containma	at .											
Phone #: 505-333-1880  emeil of Fax#: deborab.watson@woxenergy.com  OA/OC Package:  ACCOMMINION   Container Type   Container			· · · · ·			ng Containing	int	1			•				-			
email or Fax#: dehorah watson@woxenerry.com  OA/OC Package:  XStandard  □ Level 4 (Full Validation)  Deborah Watson  Sampler: DB/DW  Emicro  Date  Time Matrix Sample Request ID  Container Type  and #  Type  Type  Type  Type  Time: Reinquished by:  Received by:  Receiv	5h#			<del></del>	1				16	el. 50						45-41	٠ 7ړ	
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Standard   Level 4 (Full Validation)   Deborah Watson   Sampler: DB/DW   DB/			ospolan.	walson@wbxenerdv.com	Project Manager.					]	- [					ļ		, <b>[</b>
Date Time Matrix Sample Request ID Container Type and # Type and *				□ Level 4 (Full Validation)	Deborah Watson													
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Date: Time: Rejinguished by:    Stop   Stop	D EDD (T	ype)	<del></del>		Sample Lemperature 10												<u> </u>	
Date: Time: Rejinguished by:    Stop   Stop	Date	Time	Matrix	Sample Request ID			HEALNO.	TDS	Chloride									Air Bubbles
Date: Time: Relinquished by: Received by: Date Time  Stulp 1844 Must Date Char Inc. 03/67/17 07/15-	03.03.17	9:15	water	LD.03.03.17	1-500 mL plastic	cold	701	Х										
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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

March 15, 2017

Debbie Watson WPX Energy 721 S Main Ave

Aztec, NM 87410

TEL: (505) 333-1880

**FAX** 

RE: Section 30 Recycling Containment

OrderNo.: 1703261

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/7/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report Lab Order 1703261

Date Reported: 3/15/2017

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT: WPX Energy** 

Client Sample ID: LD.03.04.17

Project: Section 30 Recycling Containment

Collection Date: 3/4/2017 9:30:00 AM

Lab ID: 1703261-001

Matrix: AQUEOUS

Received Date: 3/7/2017 7:15:00 AM

Analyses	Result	PQL (	Qual	Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	<u></u>				Analys	st: LGT
Chloride	2700	100	•	mg/L	200 3/10/2017 4:12:59 PM	R41320
SM2540C MOD: TOTAL DISSOLVED	SOLIDS				Analys	st: KS
Total Dissolved Solids	7940	200	*D	mg/L	1 3/8/2017 5:19:00 PM	30562

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

#### 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 Page 1 of 3
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1703261

15-Mar-17

Client:

WPX Energy

Project:

Prep Date:

Section 30 Recycling Containment

Sample ID MB

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID: **PBW** 

Batch ID: R41320 Analysis Date: 3/10/2017 RunNo: 41320

SeqNo: 1294723

Units: mg/L

**RPDLimit** 

Qual

Analyte Chloride

Result **PQL** 

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD

ND 0.50

Sample ID LCS Client ID: LCSW SampType: LCS

RunNo: 41320

Prep Date:

Analysis Date: 3/10/2017

SeqNo: 1294724

TestCode: EPA Method 300.0: Anions

Units: mg/L

%RPD

Result PQL SPK value SPK Ref Val

%REC LowLimit

Analyte Chloride

0.50

Batch ID: R41320

90

110

5.2

105

5.000

HighLimit

**RPDLimit** 

Qual

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

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

Analyte detected below quantitation limits

Page 2 of 3

Sample pH Not In Range

Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1703261

15-Mar-17=

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB-30562 -- SampType: - MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW

Batch ID: 30562

RunNo: 41240

Prep Date: - 3/7/2017

Analysis Date: 3/8/2017

SeqNo: 1292049

Units: mg/L

HighLimit

%RPD

**RPDLimit** 

Analyte Total Dissolved Solids Result 1 **PQL** 20.0

Sample ID LCS-30562 - - SampType: LCS

TesiCode: SM2540C MOD: Total Dissolved Solids RunNo: 41240

Client ID: **LCSW**  Batch ID: 30562

Prep Date: - 3/7/2017

Analysis Date: 3/8/2017

SPK value

SeqNo: 1292050

Units: mg/L

HighLimit

**RPDLimit** 

Page 3 of 3

PQL 20.0

1000

103

%REC LowLimit

%RPD

Qual

Result 1020

SPK Ref Val-

120

Total Dissolved Solids

SPK value SPK Ref.Val %REC LowLimit

## Qualifiers:

- \*. 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
- .R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified



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: WPX ENERGY Work Order Numb	per. 1703261	•	RcptNo:	1
Received by/date: A (3(67/17				
Logged By: Anne Thorne 3/7/2017 7:15:00 AM	A	aone Am	_	
Completed By: Anne Thorne 3/7/2017 8:38:29 AM	4	Aone Han		j
Reviewed By: 17) 3/7/17		am jim		!
Chain of Custody	<del></del>			
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 $\square$	
10. VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials	
11. Were any sample containers received broken?	Yes 🗆	No 🗹		
	_	_	# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗀	for pH;	r >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.	<del></del>
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗆	NA 🗹	
				]
: Person Notified: Date  By Whom: Via:	J . [□ eMail □ l	Phone 🗔 Fax	☐ In Pareon	 
Regarding:				
Client Instructions:			:	
17. Additional remarks:	<del></del>	······································		<u>.</u>
18. Cooler Information				
Cooler No Temp C Condition Seal Intact Seal No	Seal Date	Signed By		
1 1.0 Good Yes				

Ch	Chain-of-Custody Record		Turn-Around Time:				4	7.				~						
Client:	WPX E	nergy		ASAP Xstandard	□ Rush	•	' _		_	HAL								_
				Project Name:				ANALYSIS LABORATORY										<b>. T</b> .
Mailing Add	dress.			┪.				www.hallenvironmental.com										1
		721 S Ma	<u>ain</u>	Section 30 Recycli	ng Containme	<u>nt</u>	4901 Hawkins NE - Albuquerque, NM 87109											
		Aztec, N	M 87410	Project #:				Te	el. 505-345-3975 Fax. 505					<u> 505-</u>	<u> 345-</u>			
Phone #:		505-333-	-1880								Anal	ysis	Rec	uesl	t			
email or Fa	x#:	deborah.	watson@wpxenergy.com	Project Manager:						-	}			\				
QA/QC Pad XStandard	_		.⊒ Level 4 (Full Validation)	Deborah Watson										ľ				
Accreditation:			EBV6/4 (Full Validation)	<del></del>	- 45 (D) 4 ( ·		}		1	1	1	}	}			. }	1	
	□ NELAP □ Other			Sampler:	MP/DW			l			1			]		Ī		[z]
□ EDD (Type)				Samplet (emperate				[	1	}		}	1	i	1	- 1	- }	٥
<u> </u>	) 	T	<del></del>	Campagianpaga	100000000000000000000000000000000000000	NAME OF STREET										1		ျင
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	FEAUNC	TDS	Chloride										Air Bubbles (Y or N)
03.04.17	9:30	water	LD.03.04.17	1-500 mL plastic	cold	701	х	Х			$\top$					$\neg$	十	
	i —					]										$\Box$	$\neg$	
						<u> </u>	T			1	╅	Ì	_			_	$\dashv$	-
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3/6/17	1520	Nebr	ih Water	Mustra L	Self 3/	1/17 1526												
Date:	Time:	Relinquishe	•	Interveluely 1 / Louis Time			[											
3/4/17 1844 Monstellas			Cam Sudon17 0715							_					ľ			

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



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

March 15, 2017

Debbie Watson

WPX Energy 721 S Main Ave

Aztec, NM 87410

TEL: (505) 333-1880

**FAX** 

RE: Section 30 Recycling Containment

OrderNo.: 1703260

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/7/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

## **Analytical Report**

Lab Order 1703260

Received Date: 3/7/2017 7:15:00 AM

Date Reported: 3/15/2017

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT: WPX Energy** Client Sample ID: LD.03.05.17

Project: Section 30 Recycling Containment Collection Date: 3/5/2017 9:30:00 AM 1703260-001 Matrix: AQUEOUS

**Analyses** Result **PQL Qual Units** DF Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 2700 100 mg/L 200 3/10/2017 4:00:35 PM R41320 SM2540C MOD: TOTAL DISSOLVED SOLIDS Analyst: KS **Total Dissolved Solids** 8030 3/8/2017 5:19:00 PM 30562 200 •D

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

#### Qualifiers:

Lab ID:

- 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
- 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 1 of 3 J
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1703260

15-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB

Prep Date:

SampType: MBLK

Analysis Date: 3/10/2017

PQL

TestCode: EPA Method 300.0: Anions

Client ID: PBW

Batch ID: R41320

RunNo: 41320

SeqNo: 1294723

Units: mg/L HìghLimit

%RPD **RPDLimit** 

Qual

Analyte Chloride

ND 0.50

Sample ID LCS

SampType: LCS

TestCode: EPA Method 300.0: Anions

SPK value SPK Ref Val %REC LowLimit

Client ID: LCSW

Batch ID: R41320

RunNo: 41320

Analysis Date: 3/10/2017 Result

5.2

Result

SeqNo: 1294724

Units: mg/L HighLimit

%RPD **RPDLimit** Qual

Analyte

Prep Date:

PQL

SPK value SPK Ref Val

%REC

Chloride

0.50

5.000

105

LowLimit

110

Qualifiers: Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded Н

Not Detected at the Reporting Limit ND

RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Value above quantitation range Е

Analyte detected below quantitation limits

Page 2 of 3

Sample pH Not In Range

RLReporting Detection Limit

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1703260

15-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB-30562

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

%REC LowLimit

Client ID:

**PBW** 

Batch ID: 30562

RunNo: 41240

Prep Date: 3/7/2017

Analysis Date: 3/8/2017

SeqNo: 1292049

Units: mg/L HighLimit

**RPDLimit** 

Qual

Analyte Total Dissolved Solids Result **PQL** ND 20.0

Sample ID LCS-30562

SampType: LCS

TestCode: SM2540C MOD: Total Dissolved Solids

%RPD

Client ID:

LCSW

Batch ID: 30562

RunNo: 41240

Prep Date: 3/7/2017 Analysis Date: 3/8/2017

SeqNo: 1292050

Units: mg/L

%RPD

Total Dissolved Solids

**PQL** 

1000

80

20.0

Analyte detected in the associated Method Blank

Sample container temperature is out of limit as specified

Analyte detected below quantitation limits

Value above quantitation range

Sample pH Not In Range

Reporting Detection Limit

120

Result 1020

В

Е

RL

SPK value SPK Ref Val

Analyte

Qualifiers:

D

Н

ND

R S

Value exceeds Maximum Contaminant Level

Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix

Sample Diluted Due to Matrix

Not Detected at the Reporting Limit

RPD outside accepted recovery limits

SPK value SPK Ref Val

%REC 103

LowLimit HighLimit

**RPDLimit** 

Page 3 of 3

Qual



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: \$05-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: WPX ENERGY	Work Order Number.	1703260		RcptNo:	1
Received by/date: 4 03/07/17					
Logged By: Anne Thorne	3/7/2017 7:15:00 AM		an I'm	_	:
Completed By: Anne Thorne	3/7/2017,8:33:24 AM		an Il		·
Reviewed By:	3/7/17		CIN A		
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	e 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) prope	arly 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 brol	ken?	Yes	No 🗹	# of preserved	<del></del>
_				bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No ∐	for pH: (<2 c	or >12 unless noted)
13. Are matrices correctly identified on Chain of	f 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	· <del></del>
Special Handling (if applicable)		<b>—</b>		F	
16. Was client notified of all discrepancies with	this order?	Yes 🗌	No L	NA 🔽	¬
Person Notified:	Date				
By Whom:	Via: [	eMail [	Phone Tax	In Person	
Regarding:			<del>_</del>	<del></del>	1
Client Instructions:				_ <del></del>	· ⇒
17. Additional remarks:					
		Seal Date	Signed By		
1  1.0  Good  Ye					

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Client:	WPX E	nergy		ASAP Xstandard	. 🗆 Rush	1	` <u>_</u>			ANA						-,	
				Project Name:		<del></del>	Ī` <b>L</b>		<b>d</b> "		1			1			KI
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		-Aztec, N	M 87410	Project #:				Te	l. 505	-345-3			ax 5		45 <b>-4</b> 1	07	
Phone #:		505-333-	1880								Anai	ysis	Requ	est	البا		
email or Fa	ax#:	<u>deborah</u>	watson@wpxenergy.com	Project Manager:									li		ļ	ļ	
QA/QC Pac	-													1	f	1	
XStandard	<u></u>		☐ Level 4 (Full Validation)	Deborah Watson			]		}	1				Ì	Ì	Ì	] ] ;
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□ EDD (T	ype)	<del></del>	<del></del>	Sample Temperati			i										ے  ا
Date	Time	Matrix	Sample Request ID		Preservative	HEALING		rido									Air Bubbles (Y or N)
	<u> </u>		·	and #	Туре	1703200	TDS	Chlorido							$\perp$		Air B
03.05.17	9:30	water	£D.03.05:17	1-500 mL plastic	cold	701	х	Х			ــــــ			$\bot$	$\bot$	$oldsymbol{ol}}}}}}}}}}}}}}$	
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Date:	1250	Levi		Much L	<u>_ بعلي</u>	14/17 1520											
	Time:	Retinquish	•	Received by:	13/-	ate Time.	1										
3/4/17	1844	/ Ww	+ Walte	Clan-	1 0301	117 0715	ĺ										

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 re



Hall Environmental Analysis Laboratory
4901 Hawkins NE

Albuquerque, NM 87109

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

March 13, 2017

Debbie Watson WPX Energy 721 S Main Ave

Aztec, NM 87410

TEL: (505) 333-1880

**FAX** 

RE: Section 30 Recycling Containment

OrderNo.: 1703359

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/8/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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

andel

4901 Hawkins NE

Albuquerque, NM 87109

#### Analytical Report Lab Order 1703359

Date Reported: 3/13/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: -WPX Energy

Project: -= Section 30 Recycling Containment

Lab ID: 1703359-001

Client Sample ID: LD.03.06.17

Collection Date: 3/6/2017 9:38:00 AM

Received Date: 3/8/2017 7:35:00 AM

Analyses	Result	PQL Qı	ial , Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	<u> </u>			Analy	st: MRA
Chloride - The second - The sec	- 2600	100	• mg/L	200 3/10/2017 1:38:01 AN	R41268
SM2540C MOD: TOTAL DISSOLVE	SOLIDS			Analy	st: KS
Total Dissolved Solids	7860	200	*D mg/L	1 3/9/2017 4:59:00 PM	30585

Matrix: AQUEOUS

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

 Qualifiers:
 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
 W
 Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1703359

13-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB

SampType: mblk

TestCode: EPA Method 300.0: Anlons

Client ID: PBW

Batch ID: **R41268** 

RunNo: 41268

Prep Date:

Analysis Date: 3/9/2017

SeqNo: 1294025

%REC LowLimit

Units: mg/L HighLimit

%RPD **RPDLimit** 

Qual

Analyte: Chloride

Result :PQL · ND 0.50

SampType: Ics

TestCode: EPA Method 300.0: Anions

Sample ID LCS Client ID: LCSW,

Batch ID: R41268

RunNo: 41268

Prep Date:

Analysis Date: 3/9/2017

SeqNo: 1294026

Units: mg/L

Analyte ·

PQL

SPK value SPK Ref Val . %REC - LowLimit

SPK value SPK Ref Val

HighLimit

110

Chloride

- Résult

5.000

**RPDLimit** 

0.50

Qualifiers:

- \* - Value exceeds Maximum Contaminant Level.

D \_ Sample Diluted Due to Matrix

He 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

Ε Value above quantitation range

Analyte detected below quantitation limits

Page 2 of 3

Sample pH Not In Range

Reporting Detection Limit

Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1703359

13-Mar-17

Ćlient:

**WPX** Energy

Project:

Section 30 Recycling Containment

Sample ID-MB-30585 -- SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW

Prep Date: 3/8/2017

Batch ID: 30585 Analysis Date: 3/9/2017 RunNo: 41272

SeqNo: 1293066

Units: mg/L

Analyte

Result

SPK value SPK Ref Val

%REC LowLimit

HighLimit

%RPD **RPDLimit**  Qual :---

Total Dissolved Solids .

20.0

Sample ID LCS-30585 -- .... SampType: LCS

Batch ID: 30585

RunNo: 41272

Prep Date: 3/8/2017

LCSW

Analysis Date: 3/9/2017

SeqNo: 1293067

Units: mg/L

HighLimit

**RPDLimit** 

%REC LowLimit

Total Dissolved Solids

Client ID:

Result 1020

20.0

PQL

1000

SPK value SPK Ref Val.

TestCode: SM2540C MOD: Total Dissolved Solids

120

- 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
- В Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkius NE

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

## Albuquerque, NM 87109 Sample Log-In Check List

Client Name: WPX ENERGY	Work Order Number:	1703359		RoptNo	1
Received by/date:	03/08/17				:
Logged By: Ashley Gallegos 3/9	8/2017 7:35:00 AM	,	A -		
	8/2017 9:52:36 AM		A R		
Reviewed By: A 53/07/17			· · · · · · · · · · · · · · · · · · ·		
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 1 !	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 p	reserved?	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 🐼		
<u></u>				# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗸	No ! !	for pH:	or >12 unless noted)
13. Are matrices correctly identified on Chain of Cu	stady?	Yes 😾	No !	: Adjusted?	or >12 unless noteu)
14. Is it clear what analyses were requested?	olody :	Yes 🗸	No [1]		•
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗸	No ! i	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:		. Ald the factor	THE PROPERTY OF THE	: 111 013011	!
Client Instructions:					:
17. Additional remarks:					•
18. <u>Cooler Information</u>					

1.6 Good Yes

Chient:	nain-c WPX E		tody Record	ASAP  Astandard  Project Name:	□ Rush		HALL ENVIRONMENTA ANALYSIS LABORATOR								: :		
Mailing Add	iress:	721 S Ma		Section 30 Recycli Project #:	ng Containme	nt	-		'	awkins	NE -	Albi	ndneu	•	M 8710	9	1
		Aztec, NI 505-333-						IE	ei. 50	5-345-			ax 50 Reque	5-345-	4107		عذ
Phone #: email or Fa			watson@wpxenergy.com	Project Manager:	·					_	Allei	/ 2 I S	XCQ ue	- S.		4	
QA/QC Ped		deportan.	Westernergy: com	i rojest majnagen.					ļ								
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Accreditation	בחנ:			Sampler:	DB/DW		] .		.				İ		ļ	{	2
O NELAP	_	□ Other														1	Q o
EDD (T)	/pe)	<del> </del>		Sample liemperati		el con autori			·								اح
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALNO 1202357	TDS	Chloride									Air Bubbles (Y
03.06.17	9:38	water	LD.03.06.17	1-500 mL plastic	cold	-001	×	x							1	$\top$	
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Date: 3/1/m	Time:	Relinauishe	. 1 . 1	Received by:	<del></del>	ate Time											
	If ne	cessary, samp	ples submitted to Hall Environmental man	y be subcontracted to other a			e of thi	s poss	ibility.	Any sub-	contract	ed data	will be c	learly not	sted on th	e enalyli	ippi ne



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

March 15, 2017

Debbie Watson WPX Energy 721 S Main Ave

Aztec, NM 87410 TEL: (505) 333-1880

FAX

RE: Section 30 Recycling Containment

OrderNo.: 1703443

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/9/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

Indel

4901 Hawkins NE

Albuquerque, NM 87109

## Analytical Report

#### Lab Order 1703443

Date Reported: 3/15/2017

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** WPX Energy

Client Sample ID: LD.03.07.17

Project: Section 30 Recycling Containment

Collection Date: 3/7/2017 9:38:00 AM

Lab ID:

1703443-001

Received Date: 3/0

Received Date: 3/9/2017 7:10:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch_
EPA METHOD 300.0: ANIONS						Anal	yst: <b>LGT</b>
Chloride	2800	100	٠	mg/L	200	3/10/2017 4:37:49 P	M R41320
SM2540C MOD: TOTAL DISSOLVE	SOLIDS					Anal	yst: SRM
Total Dissolved Solids	7900	40.0	*D	mg/L	1	3/14/2017 12:49:00	PM 30663

Matrix: AQUEOUS

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
- 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 Page 1 of 3
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1703443

15-Mar-17 -

Client:

**WPX** Energy

Project:

Section 30 Recycling Containment

Sample ID MB

SampType: MBLK

**PQL** 

TestCode: EPA Method 300.0: Anlons

Client ID: **PBW** 

Batch ID: R41320

RunNo: 41320

Prep Date:

Analysis Date: 3/10/2017

SeqNo: 1294723

Units: mg/L HighLimit

%RPD **RPDLimit** 

Qual

Analyte Chloride

Result ND 0.50

Sample ID LCS

SampType: LCS

TestCode: EPA Method 300.0: Anlons

Client ID: LCSW

Batch ID: R41320

RunNo: 41320

Prep Date:

SeqNo: 1294724

Units: mg/L

Analysis Date: 3/10/2017

%RPD

**PQL** SPK value SPK Ref Val

Chloride

105

Analyte

Result 5.2

5.000

**RPDLimit** 

Page 2 of 3

0.50

Qual

SPK value SPK Ref Val %REC LowLimit

%REC LowLimit

HighLimit 110

Qualifiers;

S

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Н Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix

Not Detected at the Reporting Limit

RPD outside accepted recovery limits

В Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit Sample container temperature is out of limit as specified

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1703443

15-Mar-17

Client:

WPX Energy

Project:

Analyte

Section 30 Recycling Containment

Sample ID MB-30663 Client ID:

SampType: MBLK Batch ID: 30663

PBW

RunNo: 41360

Prep Date: 3/13/2017

Analysis Date: 3/14/2017

SeqNo: 1296218

Units: mg/L

HighLimit

TestCode: SM2540C MOD: Total Dissolved Solids

TestCode: SM2540C MOD: Total Dissolved Solids

%RPD **RPDLimit** 

Qual

Total Dissolved Solids

Result PQL ND

Sample ID LCS-30663

SampType: LCS Batch ID: 30663

RunNo: 41360

Prep Date:

Analyte

Client ID: LCSW

3/13/2017

Analysis Date: 3/14/2017

SeqNo: 1296219

Units: mg/L

Total Dissolved Solids

Client ID: LD.03.07.17

**PQL** Result 1000 20.0 SPK value SPK Ref Val 1000

%REC 100

SPK value SPK Ref Val %REC LowLimit

LowLimit

HighLimit

**RPDLimit** 

Qual

Sample ID 1703443-001AMS

Prep Date:

SampType: MS

Batch ID: 30663

Analysis Date: 3/14/2017

40.0

TestCode: SM2540C MOD: Total Dissolved Solids

RunNo: 41360

Units: mg/L

%RPD

Qual

Analyte

3/13/2017

**PQL** Result 10100

Result

10300

SPK value SPK Ref Val

SeqNo: 1296221 %REC LowLimit 109

HighLimit

%RPD **RPDLimit** 

D

**Total Dissolved Solids** 

Sample ID 1703443-001AMSD

SampType: MSD

TestCode: SM2540C MOD: Total Dissolved Solids

120

Client ID:

LD.03.07.17

Batch ID: 30663

2000

2000

RunNo: 41360 SeqNo: 1296222

80

Units: mg/L

**RPDLimit** 

Qual

Analyte Total Dissolved Solids

Prep Date: 3/13/2017

Analysis Date: 3/14/2017

PQL

40.0

SPK value SPK Ref Val 7902

7902

%REC LowLimit 118

80

HighLimit 120 %RPD 1.89

Page 3 of 3

Qualifiers:

S

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded Ħ

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RLReporting Detection Limit

Sample container temperature is out of limit as specified

% Recovery outside of range due to dilution or matrix



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquergue, NM 87109

TEL: \$05-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

## Albuquerque, NM 87109 Sample Log-In Check List

त्त्वमुक्ता का अपने काल

--- :: E...

	<del></del>			
Client Name: WPX ENERGY Work Order Numl	per: 1703443	,	RoptNo: 1	<del>- " - " - " - " - " - " - " - " - " - "</del>
Received by/date: A+ 3/9/17				
		-A=-3		
Logged By: Ashley Gallegos 3/9/2017 7:10:00 Al		347		
Completed By: Ashley Gallegos 3/9/2017 8:59:27 A	М	SAF		
Reviewed By: 03/09/	17			
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 .	
	100 14			
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗸	No [	NA 1 !	** =
6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	u fá			·
6. Sample(s) in proper container(s)?	Yes 🗸	No []		•
7. Sufficient sample volume for indicated test(s)?	Yes 🗸	No . i		
8: Are samples (except VOA and ONG) properly preserved?	Yes 🗸	No		
9. Was preservative added to bottles?	Yes !!	No 🔀	NA .	غ
10.VOA vials have zero headspace?	Yes	No i i	No VOA Vials .✔	
11. Were any sample containers received broken?	Yes	No 🗸		
			# of preserved bottles checked	7
12. Does paperwork match bottle labels?	Yes 🔽	No !	for pH:	10 ualone noted)
(Note discrepancies on chain of custody)	Yes ✓	No	Adjusted?	12 unless noted)
13. Are matrices correctly identified on Chain of Custody?  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.)	ies V;	140 ; .		
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes	No	NA 🗸	•
Person Notified: Date	;	, district ,		
_By Whom: Via:	eMail .	Phone   Fax	In Person	
Regarding:		<u> </u>	<u> </u>	
Client Instructions:	**************************************	*****		
17. Additional remarks	•	•		
18. Cooler Information				= + +'*
Cooler No.   Temp ºC   Condition   Seal Intect   Seal No.	Seel Date	Signed By		

Good

Ch	nain-c	ot-Cus	stody Record	Turn-Around Time:			HALL ENVIRONMENT						<b>64</b> 74	11.				
Client	WPX Er	nergy		☐standard	X Rush: <u>no</u>	later than 3/13	֓֞֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֡֓֓֓֡֓						-	OR/				
				Project Name:			=							al.com				
Mailing Add	dress:	721 S Ma		Section 30 Recyclin	na Containme	int		ÁOſ	)1 Haw									
<u>-</u>		Aztec, N		Project #:	ng Ochaminic		1		l. 505-3					345-41				
Phone #:	·	505-333-		1				ΙE	1. 505-0			rax sis Re						
email or Fa			watson@wpxenergy.com	Project Manager:								7/3 T (C						
QA/QC Pack		<u>accotant</u>	THE CONTROLLED TO COMM	i rojeot manogor.			1		Ì	1 1								
XStandard	-		☐ Level 4 (Full Validation)	Deborah Watson														
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□ EDD (Ty	/pe)			Samplementi			3	]			Ì		1 1			٤		
Date	Time	Matrîx	Sample Request ID	Container Type and #	Preservative Type	HEALING	TDS	Chloride								Air Bubbles (Y or N)		
03.07.17	9:38	water	LD.03.07.17	1-500 mL plastic	cold	-001	X	X										
						<u> </u>												
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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

March 15, 2017

Debbie Watson WPX Energy

721 S Main Ave

Aztec, NM 87410 TEL: (505) 333-1880

FAX

RE: Section 30 Recycling Containment

OrderNo.: 1703537

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/10/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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,

Andy Freeman

Laboratory Manager

andel

4901 Hawkins NE

Albuquerque, NM 87109

#### **Analytical Report**

Lab Order 1703537

#### Date Reported: 3/15/2017

#### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** WPX Energy

Client Sample ID: LD.03.08.17

Project: Section 30 Recycling Containment

**Collection Date:** 3/8/2017 9:30:00 AM

Lab ID: 1703537-001

Matrix: AQUEOUS

Received Date: 3/10/2017 7:08:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analy	st: LGT
Chloride	3000	100	•	mg/L	200	3/10/2017 5:15:03 PM	M R41320
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS					Analy	st: SRM
Total Dissolved Solids	8150	40.0	*D	mg/L	1	3/14/2017 12:49:00 F	М 30663

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
- 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 Page 1 of 3
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1703537

15-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID: MB

SampType: MBLK

TestCode: EPA Method 300.0: Anlons

Client ID: **PBW**  Batch ID: R41320

RunNo: 41320

Analysis Date: 3/10/2017

Result

SeqNo: 1294723

Units: mg/L

Prep Date: Analyte

HighLimit

%RPD **RPDLimit**  Qual

Chloride

0.50 ND

Sample ID · LCS

SampType: LCS

TestCode: EPA Method 300.0; Anions RunNo: 41320

Client ID: LCSW Batch ID: R41320

Prep Date:

Analysis Date: 3/10/2017

SeqNo: 1294724

Units: mg/L

**RPDLimit** 

Analyte

%RPD

Qual

PQL 0.50

SPK value SPK Ref Val %REC LowLimit

110

Chloride

Page 2 of 3

5.2

105

Result

SPK value SPK Ref Val 5.000

%REC LowLimit

HighLimit

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

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

1 Analyte detected below quantitation limits

P Sample pH Not In Range

RLReporting Detection Limit

Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1703537

15-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB-30663

SampType: MBLK Batch ID: 30663

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW

RunNo: 41360

SPK value SPK Ref Val %REC LowLimit

Prep Date: 3/13/2017

Analysis Date: 3/14/2017

SeqNo: 1296218

Units: mg/L

HighLimit

%RPD **RPDLimit** 

Qual

Total Dissolved Solids

Analyte

ND

SampType: LCS

Result

TestCode: SM2540C MOD: Total Dissolved Solids

Sample ID LCS-30663 Client ID: LCSW

Batch ID: 30663

RunNo: 41360

Prep Date:

Analyte

3/13/2017

Analysis Date: 3/14/2017

SeqNo: 1296219

Units: mg/L

PQL Result

SPK value SPK Ref Val

%REC

LowLimit

HighLimit

%RPD

**RPDLimit** Qual

Total Dissolved Solids

1000

20.0

1000

100

120

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix В Analyte detected in the associated Method Blank

Value above quantitation range Е

Analyte detected below quantitation limits

Page 3 of 3

Sample pH Not In Range

Reporting Detection Limit

Sample container temperature is out of limit as specified



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

12.3

## Sample Log-In Check List

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Hlypo
<b>y</b>
Also
Not Present 🗹
Not Present
• •
D NA 🗆
□ NA □
<b>.</b> 🗆
NA 🗆
No VOA Vials ☑
<b>☑</b>
# of preserved bottles checked
for pH:
(<2 or >12 unless noted) Adjusted?
<u> </u>
Checked by:
·
□ NA ☑
Fax I In Person
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,

	hain	-of-Cu	istody Record	Turn-Around	Time:														
Client:	WP	X		□ Standard Project Name	Rush	idu 3/13	HALL E ANALY			.YS	SIS	S L	AE	30					
Mailing	Address	72	15 Main	Section 3	o Recycl	ing Confirment		-490	11 Hav							•	7100		
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			<u> </u>			PINO		<u></u>		<u> </u>	or 8	[m	ٳڲۣڒ	Se		ð			ò
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type		BTEX + MTBE	BTEX + MTBE	TPH 8015B (GRO / DRO / MRO)	EDB (Method 504.1)	PAH'S (8310 or 8270 SIMS)	RCRA 8 Metals 1 1274	Anions (F.C)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Somi-VOA)	705	į	Ar Bubbles (Y or N)
3-8-17	930	H20	LD.03.08.17	1-500ml	wid	-001				1			又				又	$\top$	
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3/9/17	Time: 185/	Relinquish	dulibela	Received by:	- B	Date Time													
1 11	necessary	samples sub-	mitted to Hall Environmental may be subd	contracted to other as	nderedal besonation	es This serves as notice of this	diszoc	ilitry, A	ny sub-c	ontracte	d data	will be	clear	у пов	ted an	the ar	nalytica	Peport	

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11 .



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

March 17, 2017

Debbie Watson WPX Energy 721 S Main Ave Aztec, NM 87410

TEL: (505) 333-1880

FAX

RE: Section 30 Recycling Containment

OrderNo.: 1703657

#### Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/14/2017 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 <a href="www.hallenvironmental.com">www.hallenvironmental.com</a> 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

andel

4901 Hawkins NE

Albuquerque, NM 87109

#### **Analytical Report**

Lab Order 1703657

Date Reported: 3/17/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: WPX Energy

Client Sample 1D: LD.03.10.17

Project: Section 30 Recycling Containment

Collection Date: 3/10/2017 8:20:00 AM

Lab ID: .1703657-001

Matrix: AQUEOUS

Received Date: 3/14/2017 7:35:00 AM

Analyses	Result	PQL (	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				_		Analy	/st: LGT
Chloride	2900	100	٠	mg/L	200	3/15/2017 4:14:53 Al	M A41377
SM2540C MOD: TOTAL DISSOLVE	D SOLIDS					Analy	/st: <b>KS</b>
Total Dissolved Solids	8020	200	•D	mg/L	1	3/16/2017 4:33:00 PI	M 30709

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
- 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 Page 1 of 3
  - Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

#### Hall Environmental Analysis Laboratory, Inc.

WO#:

1703657

17-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID MB

SampType: MBLK

PQL

TestCode: EPA Method 300.0: Anlons

Client ID: PBW Batch ID: A41377

RunNo: 41377

Prep Date:

Analysis Date: 3/14/2017

SeqNo: 1296988

Units: mg/L HighLimit

Result

%RPD

Qual

Analyte Chloride

ND 0.50

Sample ID LCS

SampType: LCS

TestCode: EPA Method 300.0: Anions

Client ID: LCSW

Batch ID: A41377

RunNo: 41377

Prep Date:

Analysis Date: 3/14/2017

SeqNo: 1296989

Units: mg/L

Analyte

SPK value SPK Ref Val

%REC

LowLimit

HighLimit %RPD

4.7

Chloride

Result

**PQL** 0.50

90

110

SPK value SPK Ref Val %REC LowLimit

93.1

5.000

**RPDLimit** 

**RPDLimit** 

Qual

- 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
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Ε Value above quantitation range J Analyte detected below quantitation limits
- Page 2 of 3

- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

WO#:

1703657

17-Mar-17

Client:

WPX Energy

Project:

Section 30 Recycling Containment

Sample ID . MB-30709 மண்கட்டி SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW

Prep Date: 3/15/2017

Batch ID: 30709 Analysis Date: 3/16/2017 RunNo: 41433

SeqNo: 1298863

Units: mg/L

Qual -\_##

Qual

Analyte .......... Total Dissolved Solids

Analyte :: \*\*

**Total Dissolved Solids** 

Result

Result

1050

SPK value SPK Ref Val

20.0

%REC LowLimit

HighLimit

%RPD

**RPDLimit** 

<u>--</u>:--

Sample ID: LCS-30709 -- SampType: LCS

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: LCSW Prep Date: 3/15/2017

Batch ID: 30709 Analysis Date: 3/16/2017

**PQL** 

RunNo: 41433

105

SPK value SPK Ref Val. %REC

1000

SeqNo: 1298864

LowLimit

Units: mg/L HighLimit

%RPD **RPDLimit** 

#### Qualifiers:

- . Value exceeds Maximum Contaminant Level.
- Da. Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- R ... RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Page 3 of 3



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: WPX ENERGY	Work Order Number:	1703657		RoptNo	. 1	2 1 41 -
Received by/date:	0314172					
Logged By: Lindsay Mangin	3/14/2017 7:35:00 AM		Julythypo			77
Completed By: Lindsay Mangin	3/14/2017 8:24:21 AM		ALAMO			,
Reviewed By:	03/14/17		000			
Chain of Custody					-	i
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 sample	s?	Yes 🗹	No 🗀	NA 🗆		
5. Were all samples received at a temperature	re 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 tes	t(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 $\square$	No 🗹 📑	# of preserved		
42 5		🗖	•ı- □ <sup>;</sup>	bottles checked		
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗆	for pH:(<2 (	or >12 unless r	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:		
Constal Mandling (Mandington)						
Special Handling (If applicable)	h dhin nadad	Yes 🗌	N- □	<del>[2</del> ]		
16. Was client notified of all discrepancies with		res 🗆	No 🗆	NA 🗹	٦ -	
Person Notified:	Date	7 .a (C	<b>Dt</b>		!	•
By Whom:	Via:	eMail	Phone Fax	In Person	•	
Client Instructions:		<del></del>		THE RESIDENCE OF THE PARTY OF T		-
17. Additional remarks:				<del>.</del>	<b>-</b>	•
18. Cooler Information		_	_			
		eal Date	Signed By			٠.
1.8 Good Y	es				,.	

Client: WPX Energy	HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 901 Hawkins NE - Albuquerque, NM 87109 el. 505-345-3975 Fax 505-345-4107
Mailing Address: 721 S Main Section 30 Recycling Containment 49	www.hallenvironmental.com 901 Hawkins NE - Albuquerque, NM 87109
721 3 Main Section 30 Recycling Containment 4s	901 Hawkins NE - Albuquerque, NM 87109
Aztec, NM 87410 Project #:	
Phone #: 505-333-1880	Analysis Request
email or Fax#: deborah.watson@wpxenergy.com Project Manager:	
QA/QC Package:  XStandard	
Accreditation: Sampler: DB/DW	
□ NELAP □ Other □ Office □ Pres □ INOS	
□ EDD (Type) SampleDemperature: □ SampleDem	
Date Time Matrix Sample Request ID Container Type and # Preservative Type	Air Bubbles (Y or N)
03.10.17 8:20 water LD.03.10.17 1-500 mL plastic cold - COL X X	1
Date: Time: Relinquished by: Recaived by: Date Time Remark  3   3   7   529 Debut Wath    Recaived by: Date Time Remark	ks:
Date: Time: Refinquished by: Received by: Date: Time    Received by:   Date: Time   Date: Time	

pronocours time.