GW - 007

ANNUAL REPORTS

ANNUAL LPG WELL REPORT

OPERATOR: Western Refining Company

UIC CLASS LPG STORAGE WELLS API NUMBER

31055 WELL 1: 30-025-35954 31055 WELL 2: 30-025-35955 31055 WELL 3: 30-025-35956 31055 WELL 4: 30-025-35957

WESTERN REFINING JAL STORAGE FACILITY

Company Representative: Ken Parker

Date: 1-29-19

Well Summary

Well 1

Well one was utilized in 2018 for storing Isobutane. Total barrels injecting throughout the year was 51,317 barrels. Well was operated within the OCD guidelines without any issues. Injecting rate were between 230 & 250 barrels per hour with a maximum injecting pressure of 780 psig.

In 2018 the annual Isobutane withdrawn from the well was 33,593 barrels. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 440 & 550 psig.

In 2018 well one stored product 12 months out of the year. The maximum volume stored in the well was 27,463 barrels or 14% of well capacity.

Well 2

Well two was utilized in 2018 injecting 53,031 barrels of normal butane into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was between 230 & 250 barrels per hour with a maximum injecting pressure of 710 psig. Injection pressures were slightly higher than last year due to salt block in the tubing.

In 2018 82,253 barrels of normal butane was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 400 & 500 psig.

In 2018 well two stored product 12 months out of the year. The maximum volume stored in the well was 62,756 barrels or 43% of well capacity.

Well 3

Well three was utilized in 2018 injecting 46,376 barrels of LPG butane into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was 187 barrels per hour with a maximum injecting pressure of 780 psig.

In 2018 32,288 barrels of LPG was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 600 to 680 psig.

In 2018 well three stored product 11 months out of the year. The maximum volume stored in the well was 25,541 barrels or 32% of well capacity.

Well 4

Well four was utilized in 2018 injecting 46,161 barrels of normal butane into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was between 184-187 barrels per hour with a maximum injecting pressure of 790 psig.

In 2018 58,688 barrels of normal butane was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 600 to 680 psig.

In 2018 well four stored product 12 months out of the year. The maximum volume stored in the well was 46,984 barrels or 34% of well capacity.

Production Volumes

See Attachments Well 1 Annual C-131B Well 2 Annual C-131B Well 3 Annual C-131B Well 4 Annual C-131B

Injecting Fluid Analysis

See Attachment 610293 Report

Deviation from Normal Production Method N/A

Leak and Spill Report N/A

Ground Water Monitoring N/A

Cavity Subsidence See Attachment

Area of Review No activity in the year 2018 Pursuant to all applicable parts of the Water Quality Control Commission (WQCC) Regulations 20.6.2 NMAC and more specifically 20.6.2.5101. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Western Refining Terminals, LLC Company Name

Ken Parker Company Representative

Ky Huber

Company Representative Signature

Title: Facility Manager

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Terminals, LLC	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT <u>Jal Terminal</u> COUNTY <u>Lea</u> Month/Year <u>12-18</u>

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 4 30-025-35957	M32-238-37E	790	46,161	58,688
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 967

TOTAL CAPACITY (BBLS) <u>136,626 Barrels</u>

NET CHANGE (BBLS) <u>12,527</u>

BEGINNING STORAGE (BBLS) 28,480

ENDING STORAGE (BBLS) <u>15,953</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature

Printed Name & Title Ken Parker, Manager

E-mail Address Kenneth J. Parker@andeavor.com

Date 1-29-19 Telephone No. 575-395-2632

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Terminals, LLC	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lea	Month/Year 12-18
			1300	THOMAS I VAL IN IO

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 1 30-025-35954	M32-23S-37E	780	51,317	33,593
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 875

TOTAL CAPACITY (BBLS) 201,013 Barrels

NET CHANGE (BBLS) <u>17,724</u>

BEGINNING STORAGE (BBLS) 9,324

ENDING STORAGE (BBLS) <u>27,048</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature _

Printed Name & Title Ken Parker, Manager

E-mail Address Kenneth.J.Parker@andeavor.com

Date <u>1-29-19</u> Telephone No. <u>575-395-2632</u>

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

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ANNUAL LPG STORAGE REPORT

Western Refining Terminals, LLC	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT Jal Terminal COUNTY Lea Month/Year 12-18

WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 2 30-025-35955	M32-238-37E	710	53,031	82,253
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 888

TOTAL CAPACITY (BBLS) <u>144,443 Barrels</u>

NET CHANGE (BBLS) 29,222

BEGINNING STORAGE (BBLS) 63,398

ENDING STORAGE (BBLS) 34.176I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature _

Printed Name & Title Ken Parker, Manager

E-mail Address Kenneth. J. Parker@andeavor.com

Date <u>1-29-19</u> Telephone No. <u>575-395-2632</u>

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

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ANNUAL LPG STORAGE REPORT

Western Refining Terminals, LLC	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lea	Month/Year 12-	18
	Jui i viinnui	00000001	Leu		10

WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 3 30-025-35956	M32-23S-37E	780	46,376	33,288
	ΤΟΤΑΙ S			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 987

TOTAL CAPACITY (BBLS) 79,692 Barrels

NET CHANGE (BBLS) <u>13,088</u>

BEGINNING STORAGE (BBLS) 5,608

ENDING STORAGE (BBLS) <u>18,696</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature ____

Printed Name & Title Ken Parker, Manager

E-mail Address Kenneth.J.Parker@andeavor.com

Date <u>1-29-19</u> Telephone No. <u>575-395-2632</u>



Certificate of Analysis Summary 610293

Western Refining, Jal, NM Project Name: South Brine Pond



Date Received in Lab: Fri Jan-04-19 02:04 pm Report Date: 14-JAN-19 Project Manager: Kelsey Brooks

	Lab Id:	610293-001				
Analysis Requested	Field Id:	South Pond				
аницузь пециемен	Depth:	1 ft			1	
	Matrix:	WATER				
	Sampled:	Jan-04-19 10:30				
Alkalinity by SM2320B	Extracted:	Jan-07-19 11:30				
SUB: T104704215-18-28	Analyzed:	Jan-07-19 14:11				
	Units/RL:	mg/L RL				
Alkalinity, Total (CaCO3)		126 4.00				
BTEX by EPA 8021B	Extracted:	Jan-09-19 16:30				
	Analyzed:	Jan-10-19 10:15				
	Units/RL:	mg/L RL				
Benzene		<0.00200 0.00200				
Toluene		<0.00200 0.00200				
Ethylbenzene		<0.00200 0.00200				
m.p-Xylenes		<0.00400 0.00400				
o-Xylene		<0.00200 0.00200				
Total Xylenes		<0,00200 0.00200				
Total BTEX	C	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	Jan-04-19 15:54				
	Analyzed:	Jan-04-19 17:48				
	Units/RL:	mg/L RL				
Chloride		151000 1000				
Mercury, Total by EPA 245.1	Extracted:	Jan-07-19 09:10		i.		
SUB: T104704215-18-28	Analyzed:	Jan-07-19 13:11				
	Units/RL:	mg/L RL				
Mereury		<0.000200 0.000200	1			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use The interpretations and results expressed throughout this analytical report represent the best judgment of XENO Laboratories. XENOC Laboratories assumes no responsibility and makes no warranty to the edu as of the data bereby presented. Our labolity is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks Project Manager

Page 1 of 20

Final 1.000



Certificate of Analysis Summary 610293

Western Refining, Jal, NM





Project Manager: Kelsey Brooks

	Lab Id:	610293-001				
Augheria Democrated	Field Id:	South Pond				
Analysis Requested	Depth:	I ft				
	Matrix:	WATER				
	Sampled:	Jan-04-19 10:30				
Recoverable Metals by EPA 200.8	Extracted:	Jan-07-19 09:25		 		
SUB: T104704215-18-28	Analyzed:	Jan-07-19 17:42				
	Units/RL:	mg/L RL				
Arsenic	Units/KL.	0.0565 0.0400				
Barium		0.0921 0.0400				
Cadmium		<0.0200 0.0200				
Chromium		<0.0400 0.0400		 		
Lead		<0.0200 0.0200				
Selenium		<0.0200 0.0200				
Silver		<0.0200 0.0200				
Recoverable Metals per ICP by EPA	Extracted:	Jan-08-19 03:00				
200.7	Analyzed:	Jan-08-19 13:45				
SUB: T104704215-18-28	Units/RL:	mg/L RL				
Calcium	·	386 D 10.0				
Magnesium		1920 D 20.0				
Potassium		5250 D 25.0				
Sodium		73500 1250				
TDS by SM2540C	Extracted:					
	Analyzed:	Jan-04-19 16:30				
	Units/RL:	mg/L RL				
Total Dissolved Solids		251000 5.00				
pH by SM4500-H	Extracted:					
	Analyzed:	Jan-04-19 15:45				
	Units/RL:	Deg C RL				
Temperature		16.1 K	1			1
L		-			L	

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Kelsey Brooks Project Manager

Final 1.000



Project Location:

Certificate of Analysis Summary 610293 Western Refining, Jal, NM

Project Name: South Brine Pond



 Date Received in Lab:
 Fri Jan-04-19 02:04 pm

 Report Date:
 14-JAN-19

 Project Manager:
 Kelsey Brooks

	Lab Id:	610293-001			
Analysis Requested	Field Id:	South Pond			
Anuiysis Requesieu	Depth:	1 ft			
	Matrix:	WATER			
	Sampled:	Jan-04-19 10:30			
pH by SM4500-H	Extracted:				
	Analyzed:	Jan-04-19 15:45			
	Units/RL:	SU RL			
pH		7.70 K			

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Kelsey Brooks Project Manager

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Analytical Report 610293

for Western Refining

Project Manager: Ken Parker South Brine Pond

14-JAN-19

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757) Xenco-Atlanta (LELAP Lab ID #04176) Xenco-Tampa: Florida (E87429) Xenco-Lakeland: Florida (E84098)





Project Manager: Ken Parker Western Refining

P.O. Box 1345 Jal, NM 88252

14-JAN-19

Reference: XENCO Report No(s): 610293 South Brine Pond Project Address:

Ken Parker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 610293. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 610293 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kursk

Kelsey Brooks

Project Manager Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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Sample Cross Reference 610293



Western Refining, Jal, NM

South Brine Pond

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Pond	W	01-04-19 10:30	1 ft	610293-001



CASE NARRATIVE

Client Name: Western Refining Project Name: South Brine Pond

Project ID: Work Order Number(s): 610293 Report Date:14-JAN-19Date Received:01/04/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3075007 Total Recoverable Lead per ICP/MS by EPA 200.8 Sample diluted because of sample matrix leading to the failure of internal standard and QC samples



Certificate of Analytical Results 610293



Western Refining, Jal, NM

South Brine Pond

Sample Id: Lab Sample Id	South Pond 1: 610293-001		Matrix: Date Colle	Water ected: 01.04.19 10.30		Date Received:01.0 Sample Depth: 1 ft)4
-	thod: Chloride by El	PA 300	Prep Method: E30 % Moisture:					
Analyst:	OJS		Date Prep:	01.04.19 15.54		76 Moisture.		
Seq Number:			Date Flep.	01.04.19 15.54				
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	151000	1000	mg/L	01.04.19 17.48		2000
Analytical Me	thod: TDS by SM25	40C						
Tech:	OJS					% Moisture:		
Analyst:	OJS							
Seq Number:	3074971							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved	Solids	1642222	251000	5.00	mg/L	01.04.19 16.30		1
Analytical Me	thod: pH by SM4500	0-H						
Tech:	OJS					% Moisture:		
Analyst:	OJS							
-	3074956							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
рН		12408-02-5	7.70	· · · · · · · · · · · · · · · · · · ·	SU	01.04.19 15.45	K	1



Certificate of Analytical Results 610293



Western Refining, Jal, NM

South Brine Pond

Sample Id:South PondLab Sample Id:610293-001		Matrix: Date Coll	Water ected: 01.04.19 10.30		Date Received:01.0 Sample Depth: 1 ft		4
Analytical Method: Recoverable Met Tech: AHI	als by EPA 200.8				Prep Method: E20 % Moisture:	00.8P	
Analyst: DEP		Date Prep	: 01.07.19 09.25				
Seq Number: 3075007					SUB: T104704215	-18-28	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	0.0565	0.0400	mg/L	01.07.19 17.42		10
Barium	7440-39-3	0.0921	0.0400	mg/L	01.07.19 17.42		10
Cadmium	7440-43-9	< 0.0200	0.0200	mg/L	01.07.19 17.42	U	10
Chromium	7440-47-3	< 0.0400	0.0400	mg/L	01.07.19 17.42	U	10
Lead	7439-92-1	< 0.0200	0.0200	mg/L	01.07.19 17.42	U	10
Selenium	7782-49-2	< 0.0200	0.0200	mg/L	01.07.19 17.42	U	10
Silver	7440-22-4	< 0.0200	0.0200	mg/L	01.07.19 17.42	U	10

Analytical Me	ethod: Recoverable Me	tals per ICP by EPA	A 200.7]	Prep Method: E20	0.7P	
Tech:	AHI			C	% Moisture:			
Analyst:	DEP		Date Prep	: 01.08.19 03.00				
Seq Number:	3075130				1	SUB: T104704215	-18-28	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Calcium		7440-70-2	386	10.0	mg/L	01.08.19 14.06	D	50
Calcium Magnesium		7440-70-2 7439-95-4	386 1920	10.0 20.0	mg/L mg/L	01.08.19 14.06 01.08.19 14.06	D D	50 50
					0		_	

Analytical M Tech:	ethod: Alkalinity by YAV	9 SM2320B				Prep Method: SM % Moisture:	2320P	
Analyst: Seq Number:	YAV 3075062		Date Prep	01.07.19 11.30	:	SUB: T104704215	-18-28	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Alkalinity, Tot:	ıl (CaCO3)	1640192	126	4.00	mg/L	01.07.19 14.11		1



1,4-Difluorobenzene

4-Bromofluorobenzene

Certificate of Analytical Results 610293



Western Refining, Jal, NM

South Brine Pond

Sample Id:South PondLab Sample Id:610293-001		Matrix: Date Coll	Water lected: 01.04.19 10.30		Date Received:01. Sample Depth: 1 ft		14
Analytical Method: Mercury, Tota	ıl by EPA 245.1				Prep Method: E24	5.1P	
Tech: MLI					% Moisture:		
Analyst: ANJ		Date Prep	o: 01.07.19 09.10				
Seq Number: 3074996					SUB: T104704215	-18-28	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Mercury	7439-97-6	< 0.000200	0.000200	mg/L	01.07.19 13.11	U	1

Analytical Me	ethod: BTEX by EPA 8	021B				P	rep Method: SW	5030B	
Tech:	SCM					9	6 Moisture:		
Analyst:	SCM		Date Pre	ep: 01.0	9.19 16.30				
Seq Number:	3075319								
Parameter		Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene		71-43-2	< 0.00200	0.00200		mg/L	01.10.19 10.15	U	1
Toluene		108-88-3	< 0.00200	0.00200		mg/L	01.10.19 10.15	U	1
Ethylbenzene		100-41-4	< 0.00200	0.00200		mg/L	01.10.19 10.15	U	1
m,p-Xylenes		179601-23-1	< 0.00400	0.00400		mg/L	01.10.19 10.15	U	1
o-Xylene		95-47-6	< 0.00200	0.00200		mg/L	01.10.19 10.15	U	1
Total Xylenes		1330-20-7	< 0.00200	0.00200		mg/L	01.10.19 10.15	U	1
Total BTEX			< 0.00200	0.00200		mg/L	01.10.19 10.15	U	1
Surrogate			Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

114

86

%

%

70-130

70-130

01.10.19 10.15

01.10.19 10.15

540-36-3

460-00-4



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- RL Reporting Limit
- MDL Method Detection Limit
 SDL
 Sample Detection Limit
 LOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labor	ratory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



South Brine Pond

Analytical Method: Seq Number: MB Sample Id:	Chloride by EPA 3 3074814 7669199-1-BLK	00		Matrix:	Water 7669199-	I-BKS			rep Metho Date Pro	ep: 01.0	0P)4.19 9199-1-BSD	
Parameter	MB	Spike	LCS	LCS	LCSD	LCSD	Limits		RPD Lim		Analysis	Flag
	Result	Amount	Result	%Rec	Result	%Rec					Date	8
Chloride	<0.500	25.0	23.6	94	23.2	93	90-110	2	20	mg/L	01.04.19 12:11	
Analytical Method: Seq Number: Parent Sample Id:	Chloride by EPA 3 3074814 610224-001	00			Drinking 610224-0				rep Metho Date Pro	ep: 01.0		
•	Parent	Spike	MS	MS	MSD	MSD	Limits		RPD Lim		Analysis	
Parameter	Result	Amount	Result	%Rec	Result	%Rec	Limito	/0101 2			Date	Flag
Chloride	20.7	25.0	43.5	91	45.6	100	90-110	5	20	mg/L	01.04.19 12:34	
Analytical Method: Seq Number: Parent Sample Id:	Chloride by EPA 3 3074814 610228-001		MS Sar	nple Id:	Drinking 610228-0	01 S		MS	-	ep: 01.0 e Id: 6102	94.19 228-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	7.47	25.0	31.9	98	31.9	98	90-110	0	20	mg/L	01.04.19 17:33	
Analytical Method: Seq Number: MB Sample Id: Parameter Total Dissolved Solids	TDS by SM2540C 3074971 3074971-1-BLK MB Result <5.00	Spike Amount 1000		Matrix: nple Id: LCS %Rec 98	Water 3074971- LCSD Result 974	I-BKS LCSD %Rec 97	Limits 80-120		D Sample RPD Lim 10		4971-1-BSD Analysis Date 01.04.1916:30	Flag
Analytical Method:	TDS by SM2540C				XX 7 .							

Seq Number:	3074971	Matrix:	: Water	
Parent Sample Id:	610325-001	MD Sample Id:	: 610325-001 D	
Parameter	Parent Result	MD Result	%RPD RPD Limit Units Analysis Flag Date	
Total Dissolved Solids	5690	5560	2 10 mg/L 01.04.19 16:30	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100*(C-A) / B RPD = 200* |(C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



South Brine Pond

Analytical Method: pH by SM4500-H Sea Numbe

	pre of other over							
Seq Number:	3074956	Matrix:	Water					
Parent Sample Id:	610293-001	MD Sample Id:	610293-001 D					
Parameter	Parent Result	MD Result	%	RPD	RPD Limit	Units	Analysis Date	Flag
pН	7.70	7.70		0	20	SU	01.04.19 15:45	
Temperature	16.1	16.0		1	20	Deg C	01.04.19 15:45	

Analytical Method: Recoverable Metals by EPA 200.8

Seq Number: MB Sample Id:	3075007 7669276-1-BLK	-		Matrix: nple Id:	Water 7669276-	I-BKS		Date Prep: 01.07.19 LCSD Sample Id: 7669276-1-BSD				
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	< 0.000396	0.100	0.0996	100	0.0985	99	85-115	1	20	mg/L	01.07.19 14:53	
Barium	< 0.000472	0.100	0.101	101	0.0986	99	85-115	2	20	mg/L	01.07.19 14:53	
Cadmium	< 0.000115	0.100	0.102	102	0.101	101	85-115	1	20	mg/L	01.07.19 14:53	
Chromium	< 0.000283	0.100	0.104	104	0.102	102	85-115	2	20	mg/L	01.07.19 14:53	
Lead	< 0.000152	0.100	0.103	103	0.101	101	85-115	2	20	mg/L	01.07.19 14:53	
Selenium	< 0.000368	0.100	0.102	102	0.101	101	85-115	1	20	mg/L	01.07.19 14:53	
Silver	< 0.000159	0.0500	0.0503	101	0.0500	100	85-115	1	20	mg/L	01.07.19 14:53	

Analytical Method: Seq Number: Parent Sample Id:	Recoverable Metals 3075007 610031-001	s by EPA 20		Matrix: nple Id:	Water 610031-00	01 S		Prep Method: E200.8P Date Prep: 01.07.19 MSD Sample Id: 610031-001 SD				
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	0.00249	0.100	0.103	101	0.104	102	70-130	1	20	mg/L	01.07.19 15:04	
Barium	0.129	0.100	0.235	106	0.236	107	70-130	0	20	mg/L	01.07.19 15:04	
Cadmium	< 0.000115	0.100	0.0990	99	0.0997	100	70-130	1	20	mg/L	01.07.19 15:04	
Chromium	0.00127	0.100	0.104	103	0.103	102	70-130	1	20	mg/L	01.07.19 15:04	
Lead	< 0.000152	0.100	0.102	102	0.102	102	70-130	0	20	mg/L	01.07.19 15:04	
Selenium	0.00131	0.100	0.103	102	0.103	102	70-130	0	20	mg/L	01.07.19 15:04	
Silver	< 0.000159	0.0500	0.0476	95	0.0478	96	70-130	0	20	mg/L	01.07.19 15:04	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample

A = Parent Result C = MS/LCS Result

E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

Prep Method: E200.8P



South Brine Pond

Analytical Method: Seq Number:	Recoverable Metals 3075007	s by EPA 20		Matrix:	Waste Water	00.8P 07.19		
Parent Sample Id:	610208-001		MS Sar	nple Id:	610208-001 S			
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Arsenic	< 0.00400	0.100	0.0976	98	70-130	mg/L	01.07.19 15:47	
Barium	< 0.000472	0.100	0.107	107	70-130	mg/L	01.07.19 15:47	
Cadmium	< 0.00200	0.100	0.0940	94	70-130	mg/L	01.07.19 15:47	
Chromium	< 0.00400	0.100	0.106	106	70-130	mg/L	01.07.19 15:47	
Lead	< 0.00200	0.100	0.101	101	70-130	mg/L	01.07.19 15:47	
Selenium	< 0.00200	0.100	0.0969	97	70-130	mg/L	01.07.19 15:47	
Silver	< 0.00200	0.0500	0.0468	94	70-130	mg/L	01.07.19 15:47	

Analytical Method: Seq Number:	Recoverable Metals 3075130												
MB Sample Id:	7669332-1-BLK		LCS Sar	nple Id:	7669332-	1-BKS		LCS	D Sample	Id: 766	9332-1-BSD		
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag	
Calcium	< 0.0293	25.0	24.8	99	24.8	99	85-115	0	20	mg/L	01.08.19 12:17		
Magnesium	< 0.0500	25.0	25.2	101	25.4	102	85-115	1	20	mg/L	01.08.19 12:17		
Potassium	< 0.107	10.0	10.3	103	10.3	103	85-115	0	20	mg/L	01.08.19 12:17		
Sodium	< 0.0667	25.0	25.4	102	25.5	102	85-115	0	20	mg/L	01.08.19 12:17		

Analytical Method: Seq Number: Parent Sample Id:	Recoverable Metal 3075130 610163-001	s per ICP b	Matrix:	Water 610163-00	01 S			Prep Method: E200.7P Date Prep: 01.08.19 MSD Sample Id: 610163-001 SD				
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	5.61	25.0	31.0	102	31.0	102	70-130	0	20	mg/L	01.08.19 12:30	
Magnesium	0.0685	25.0	26.0	104	26.1	104	70-130	0	20	mg/L	01.08.19 12:30	
Potassium	0.148	10.0	10.8	107	10.8	107	70-130	0	20	mg/L	01.08.19 12:30	
Sodium	0.107	25.0	26.3	105	26.4	105	70-130	0	20	mg/L	01.08.19 12:30	

Analytical Method: Seq Number: Parent Sample Id:	Recoverable Metals 3075130 610310-001	s per ICP b		Matrix:	Water 610310-001 S	r op meneu	00.7P 08.19	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Calcium	14.2	25.0	39.5	101	70-130	mg/L	01.08.19 13:28	
Magnesium	0.465	25.0	26.2	103	70-130	mg/L	01.08.19 13:28	
Potassium	2.40	10.0	13.0	106	70-130	mg/L	01.08.19 13:28	
Sodium	0.661	25.0	26.8	105	70-130	mg/L	01.08.19 13:28	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

[D] = 100*(C-A) / B RPD = 200* |(C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



South Brine Pond

Analytical Method: Seq Number: MB Sample Id: Parameter	Alkalinity by SM2320B 3075062 7669274-1-BLK MB Spike Result Amount	Matrix: LCS Sample Id: LCS LCS Result %Rec	Water 7669274-1-BKS LCSD LCSD Limits Result %Rec	Prep Method: SM2320P Date Prep: 01.07.19 LCSD Sample Id: 7669274-1-BSD %RPD RPD Limit Units Analysis Flag Date Flag
Alkalinity, Total (CaCO	< 4.00 250	248 99	250 100 80-120	1 20 mg/L 01.07.19 12:09
Analytical Method: Seq Number: Parent Sample Id:	Alkalinity by SM2320B 3075062 610188-001	Matrix: MD Sample Id:		Prep Method: SM2320P Date Prep: 01.07.19
Parameter	Parent Result	MD Result	·	%RPD RPD Limit Units Analysis Flag Date
Alkalinity, Total (CaCC	3) 370	372		1 20 mg/L 01.07.1913:52
Analytical Method: Seq Number: Parent Sample Id:	Alkalinity by SM2320B 3075062 610194-001	Matrix: MD Sample Id:	0	Prep Method: SM2320P Date Prep: 01.07.19
Parameter	Parent Result	MD Result		%RPD RPD Limit Units Analysis Flag Date
Alkalinity, Total (CaCC	3) 247	248		0 20 mg/L 01.07.19 12:29
Analytical Method: Seq Number: MB Sample Id:	Mercury, Total by EPA 245.1 3074996 7669264-1-BLK	Matrix:	Water 7669264-1-BKS	Prep Method: E245.1P Date Prep: 01.07.19 LCSD Sample Id: 7669264-1-BSD

MB Sample Id:	7669264-1-BLK	LCS Sample Id: 7669264-1			4-1-BKS LCSD Sample Id: /					9264-1-BSD		
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Mercury	<0.0000263	0.00200	0.00187	94	0.00193	97	85-115	3	20	mg/L	01.07.19 12:22	

Analytical Method:	Mercury, Total by 1	EPA 245.1						Prep Method: E245.1P				
Seq Number:	3074996			Matrix:	Water				Date Pr	ep: 01.0	7.19	
Parent Sample Id:	610163-001		MS Sar	nple Id:	610163-00	01 S		MS	D Sample	Id: 610	163-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Mercury	< 0.0000263	0.00200	0.00207	104	0.00220	110	70-130	6	20	mg/L	01.07.19 12:28	

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MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample) LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



QC Summary 610293

Western Refining

South Brine Pond

Analytical Method: Seq Number:	Mercury, Total by 3074996	cury, Total by EPA 245.1 4996			Water			Pr	ep Metho Date Pre			
Parent Sample Id:	610275-001				610275-00	01 S		MSI			275-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Mercury	< 0.0000263	0.00200	0.00196	98	0.00184	92	70-130	6	20	mg/L	01.07.19 12:55	

Analytical Method:	BTEX by EPA 8021	B							Prep Method	i: SW:	5030B	
Seq Number:	3075319			Matrix:	Water				Date Prep	o: 01.0	9.19	
MB Sample Id:	7669478-1-BLK		LCS Sar	nple Id:	7669478-	1-BKS		LC	SD Sample	Id: 7669	9478-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.111	111	0.110	110	70-130	1	25	mg/L	01.10.19 04:44	
Toluene	< 0.000367	0.100	0.0996	100	0.0965	97	70-130	3	25	mg/L	01.10.19 04:44	
Ethylbenzene	< 0.00200	0.100	0.0920	92	0.0891	89	70-130	3	25	mg/L	01.10.19 04:44	
m,p-Xylenes	<0.000630	0.200	0.183	92	0.177	89	70-130	3	25	mg/L	01.10.19 04:44	
o-Xylene	< 0.00200	0.100	0.0917	92	0.0893	89	70-130	3	25	mg/L	01.10.19 04:44	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
1,4-Difluorobenzene	109		1	07		109			70-130	%	01.10.19 04:44	
4-Bromofluorobenzene	88		:	88		92			70-130	%	01.10.19 04:44	

Analytical Method:	BTEX by EPA 802					Р	rep Method	i: SW5	5030B			
Seq Number:	3075319]	Matrix:	Water				Date Prep	o: 01.0	9.19	
Parent Sample Id:	610579-001		MS San	nple Id:	610579-00	01 S		MS	D Sample	Id: 610	579-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.122	122	0.110	110	70-130	10	25	mg/L	01.10.19 05:22	
Toluene	<0.000367	0.100	0.105	105	0.0969	97	70-130	8	25	mg/L	01.10.19 05:22	
Ethylbenzene	< 0.00200	0.100	0.0974	97	0.0900	90	70-130	8	25	mg/L	01.10.19 05:22	
m,p-Xylenes	< 0.000630	0.200	0.193	97	0.179	90	70-130	8	25	mg/L	01.10.19 05:22	
o-Xylene	< 0.00200	0.100	0.0971	97	0.0906	91	70-130	7	25	mg/L	01.10.19 05:22	
Surrogate				AS Rec	MS Flag	MSD %Ree			limits	Units	Analysis Date	
1,4-Difluorobenzene			1	11		110		7	0-130	%	01.10.19 05:22	
4-Bromofluorobenzene			!	91		93		7	0-130	%	01.10.19 05:22	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spikc B = Spike Added D = MSD/LCSD % Rec

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Chain of Custody

Work Order No: UCJ93

louston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334	(806)794-1296
In Antonio, TX	Lubbock, TX
902-0300 Sa	15)585-3443
allas, TX (214)	EL Paso, TX (9
) 240-4200 D	2-704-5440) [
ouston, TX (281	Midiand,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Ĭ	-

Project Manager;	Ken 1.	Parter			Bill to: (if different)	ent)						Work Ord	Work Order Comments	(s)
Company Name:	Western	Het.	Fir way	terminum	Terry in # Lecompany Name	ame:				Pro	gram: U	ST/PST PRP B	rownfields	Program: UST/PST PRP Brownfields RRC Superfund
Address:	100	130× 1.	345		Address:						State of Project:	Project:		
City, State ZIP:	JAL,	NW	20	52	City, State ZIP:	ie.				Rep	orting:Le	ovel II DLevel III		Reporting:Level II CLevel II CPST/UST TRRP CLevel IV
Phone:	675-39	395-26	132	Email:	14					Deli	Deliverables: EDD		ADaPT	Other:
Project Name;	South	Bierc	x Bud		Turn Around	STATES.			ANALYS	ANALYSIS REQUEST			We	Work Order Notes
Project Number:	1			Rot	Routine									
P.O. Number:	Credit	f CHVd	2	Rush:	h:-									
Sampler's Name:	Ken	14-146	(Due	Due Date:		3							
SAMPLE RECEIPT		Tqmp Blank:	Yes (No	Wet Ice:	e: (es No		7*4		_	_				
Temperature (°C):	0.51	60)	Thermometer 18	211		24			,				
Received Intact:	(Yes)	No			00	iletn	5.	5		4:				
Cooler Custody Seals:	Yes No. NIA	P, NA	Corre	Correction Factor:	1: AI	1	8	7		1			TAT star	TAT starts the day receiled hy the
Sample Custody Seals:	: Yes No	A/N O	Tota	Total Containers:		P. p. 1	8.4 HX	i Ja		14			lab,	lab, if received by 4:30pm
Sample Identification	lication	Matrix	Date	Time	Depth	equin	100	170	AL HE	VYH			Sai	Sample Comments
Louth R. J	The second rates	211)	1-11-19	10.30 44	101	XX	XX	X	>	>				
		2		61 AA. AJ		3		/		4				
											_			
Total 200.7 / 6010	0 200.8 / 6020:	5020: 40 ho ono		BRCRA 13PPM	PM Texas 11 AI S	I AI Sb As	Al Sb As Ba Be B	83	Cr Co	Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K	Mu N N	Se Ag	SiO2 Na Sr TI	Sn U V Zn
Note: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	ocument and rollin	quishment o	of samples co	nstitutes a val	Id purchase order	from client com	pany to Xenco	, its affiliate	s and subc	ontractors. It assign	us standard term	rd terms and conditions	80 .	
or service. Amonowin be liable only for me cost or samples and anali not assume any rest of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5	rge of \$75.00 will I	be applied to	o each project	not assume a	of \$5 for each sa	nple submitted t	expenses inc. o Xanco, but n	ot analyzed.	These term	in losses are due to hs will be enforced	unless pre	onstoniny for any losses or expenses incurred by the client if such losses are due to circumstances beyond the contro for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotisted.		
Relinquished by: (Signature)	Signature)	1D	Repeived	Repeived by: (Signature)	ture)		Time	44.9	juished l	Relinquished by: (Signature)		Received by: (Signature)	nature)	Date/Time
they the bar		M	m			1/6/	while b	2						
3						-		4						
2								9			_			
														Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number : 120091

Date/Time:	01/04	4/19 14:17	Created by:	Brianna Teel	Pl	Please send report to: Kelsey Brooks				
Lab# From	Mid	land	Delivery Pri	ority:	A	ddress:	1211 W. F	lorida Av	e, Midland TX 79701	
Lab# To:	Hou	ston	Air Bill No.	77412042277	7 E-	E-Mail: kelsey.brooks@xenco.com			co.com	
Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	РМ	Analytes	Sign
610293-001	w	South Pond	01/04/19 10.30	E200.7	Recoverable Metals per ICP by EPA 200.	01/10/19	07/03/19	KEB	CA K MG NA	
610293-001	w	South Pond	01/04/19 10:30	E245.1	Mercury, Total by EPA 245.1	01/10/19	02/01/19	KEB	HG	

Recoverable Mctals by EPA 200.8

Alkalinity by SM2320B

01/10/19

01/10/19

South Pond Inter Office Shipment or Sample Comments:

South Pond

Relinquished By:

610293-001

610293-001

Brince The

Brianna Teel

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Date Relinquished: 01/04/2019

01/04/19 10:30 E200.8

01/04/19 10:30 SM2320B

Received By: Taha Hedib 01/05/2019 10:00 Date Received: Cooler Temperature: 3.7

KEB

KEB

ALK

07/03/19

01/11/19

AG AS BA CD CR PB SE

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Final 1.000





Inter Office Report- Sample Receipt Checklist

Sent To: Houston IOS #: 120091

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Temperature Measuring device used : hou-068

Sent By:	Brianna Teel	Date Sent:	01/04/2019 02:17 PM
Received By:	Taha Hedib	Date Received:	01/05/2019 10:00 AM

Sample Receipt Checklist

Comments

	h
#1 *Temperature of cooler(s)?	3.7
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate ten	nperature? Yes
#4 *Custody Seals intact on shipping conta	ainer/ cooler? Yes
#5 *Custody Seals Signed and dated for C	containers/coolers Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix	? Yes
#9 Sample matrix/ properties agree with IC	DS? Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated	t test(s)? Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

	Nonconfor	mance Documentation
Contact:	 Contacted by :	

Checklist reviewed by:

Taha Hedib

Date: 01/05/2019

Date:



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Western Refining	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 01/04/2019 02:04:00 PM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 610293	Temperature Measuring device used: R8
Sample Recei	ot Checklist Comments
#1 *Temperature of cooler(s)?	.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Stafford
#18 Water VOC samples have zero headspace?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: BT

PH Device/Lot#: A032690

Checklist completed by: Bull Tul Brianna Teel Checklist reviewed by: Murs Aroah Kelsey Brooks

Date: 01/04/2019

Date: 01/04/2019



ENGINEERING SURVEYING TESTING

Ken Parker, Western Refining PO Box 1345 Jal, New Mexico, 88252 575-392-2632

17 December, 2018

RE: GW-7 Jal LPG Storage Facility Annual Subsidence Survey Report

SUBSIDENCE MONUMENT MONITORING

On December 17, 2018 a field survey was conducted to check for changes in monitoring location elevations at the Western Refining Facility located at the intersection of NM18 and Deep Wells Road near Jal, NM.

This survey was conducted using a Trimble DiNi digital level, which reads a bar code off of a special rod in order to determine difference in elevation from a known control point. This level is very accurate and the use helps to eliminate human reading errors. The data is stored onboard and may be transferred directly into the computer software at the office for analysis of results, ensuring greater accuracy.

Control Point CP2 (elevation 3297.82 above mean sea level (MSL)) has historically been the Reference Primary Elevation Point for determining elevations on this project. As in the past, a level loop was run thru the project with side shots as needed to check the different monuments, benchmarks, and control points at this site.

Observations were made on all available points and tabulated to compare the elevations to the base elevations established on May 13, 2009. See Table A for these results. Additionally, the results for the last 9 years have been tabulated and appear in Table B. Each monitoring point has also been plotted on a trend chart to aid in visually monitoring the changes in elevation of the monitoring points.

Prior to this survey, the elevations on the monitoring points were determined utilizing an automatic level, which is more prone to instrument operator reading errors than the DiNi that will now be used for all future monitoring at this site. See site map attached.

The surveyed elevations along with deltas from established values as follows:

NAME	BASE ELEVATION	ELEVATION	CHANGE IN
	5/13/2009	12/7/2018	ELEVATION
CP-1	3293.47	3293.47	No Change
CP-2	3297.82	3297.82	No Change
CP-3	3293.56	3293.56	No Change
SM-1	3292.27	3292.29	0.02
SM-2	3294.56	3294.54	-0.02
SM-3	3294.85	3294.87	0.02
SM-4	3294.86	3294.86	No Change
SMF-1 (Mid Flange)	3295.62	3295.65	0.03
SMF-1 (Lower Flange)	3293.67	3293.71	0.04
SMF-2 (Mid Flange)	3297.42	3297.43	0.01
SMF-2 (Lower Flange)	3295.52	3295.53	0.01
SMF-3 (Mid Flange)	3298.18	3298.18	0.01
SMF-3 (Lower Flange)	3296.44	3296.45	0.01
SMF-4 (Lower Flange)	3295.99	3296.01	0.02
BM-1	3294.30	3294.30	No Change
BM-2	3296.62	3296.64	0.02
BM-3	3297.73	3297.74	0.01

Table A: Monitoring Points and Elevations

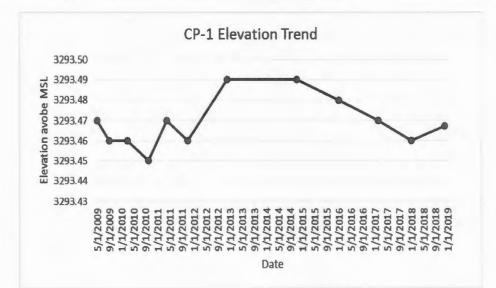
Direction Astron

Point	5/13/2009	9/25/2009	3/9/2010	10/29/2010	4/15/2011	11/10/2011	12/21/2012	11/12/2014	1/14/2016	2/15/2017	1/18/2018	12/17/2018
CP-1	3293.47	3293.46	3293.46	3293.45	3293.47	3293.46	3293.49	3293.49	3293.48	3293.47	3293.46	3293.47
CP-2 *	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82
CP-3	3293.56	3293.54	3293.55	3293.56	3293.56	3293.55	3293.57	3293.57	3293.55	3293.56	3293.54	3293.56
SM-1	3292.27	3292.26	3292.27	3292.27	3292.28	3292.26	3292.29	3292.29	3292.27	3292.27	3292.26	3292.29
SM-2	3294.56	3294.56	3294.56	3294.56	3294.56	3294.56	3294.57	3294.57	3294.57	3294.54	3294.54	3294.54
SM-3	3294.85	3294.83	3294.85	3294.84	3294.86	3294.85	3294.86	3294.86	3294.86	3294.86	3294.84	3294.87
SM-4	3294.86	3294.84	3294.86	3294.86	3294.87	3294.85	3294.87	3294.87	3294.89	3294.87	3294.84	3294.86
SMF-1 MID	3295.62	3295.62	3295.61	3295.64	3295.64	3295.61	3295.65	3295.65	3295.63	3295.62	3295.60	3295.65
SMF-1 LOW	3293.67	3293.67	3293.66	3293.69	3293.70	3293.66	3293.71	3293.71	3293.70	3293.67	3293.66	3293.71
SMF-2 MID	3297.42	3297.43	3297.42	3297.43	3297.43	3297.43	3297.45	3297.45	3297.43	3297.42	3297.42	3297.43
SMF-2 LOW	3295.52	3295.53	3295.52	3295.53	3295.53	3295.53	3295.55	3295.55	3295.51	3295.53	3295.52	3295.53
SMF-3 MID	3298.17	3298.17	3298.16	3298.16	3298.19	3298.17	3298.17	3298.17	3298.18	3298.17	3298.16	3298.18
SMF-3 LOW	3296.44	3296.43	3296.43	3296.42	3296.44	3296.43	3296.44	3296.44	3296.44	3296.43	3296.42	3296.45
SMF-4 MID	3297.73	3297.72	3297.73	3297.73	3297.74	3297.72	3297.74	3297.74				
SMF-4 LOW	3295.99	3295.98	3295.99	3296.00	3296.00	3295.98	3296.00	3296.00	3296.00	3296.00	3295.96	3296.01
BM-1	3294.30	3294.30	3294.30	3294.31	3294.31	3294.30	3294.33	3294.33	3294.31	3294.30	3294.30	3294.30
BM-2	3296.62	3296.62	3296.62	3296.63	3296.63	3296.63	3296.64	3296.64	3296.61	3296.64	3296.63	3296.64
BM-3	3297.73	3297.73	3297.73	3297.73	3297.73	3297.73	3297.73	3297.73	3297.74	3297.73	3297.73	3297.74

Conclusions

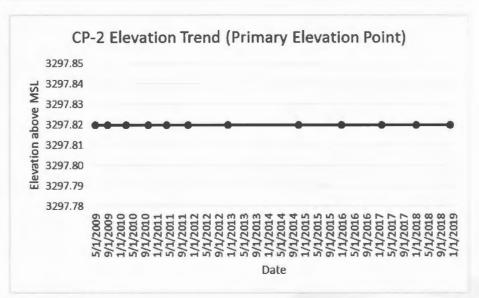
The survey was conducted and results analyzed, using the elevations originally established on May 13, 2009 as the base elevations for each point. The readings were consistent with a stable surface as there was little to no difference in elevations of any monitoring point, the most being on SMF-1 LOW with a change of 0.04 feet upward. The next highest change being on SMF-1 MID with a change of 0.03 feet upward. Similar deviations were found in SM-1, SM-3, SMF-4 LOW, and BM-2 all with a change of 0.02 feet upward. SM-2 experienced a deviation of 0.02 feet downward. The rest of the points were within tolerance of the readings for the DiNi level, showing 0.01 feet of difference or less, which is an unremarkable elevation change.

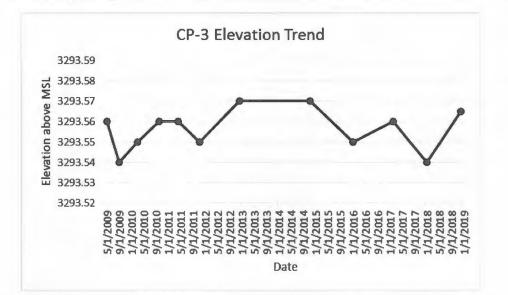
The area appears stable with little movement either up or downward over the past 9 years of monitoring. The greatest deviations in elevation at the SM-4 and SMF-1 LOW locations are around 0.05 feet, or about ½ inch from observed low elevation to observed high elevation, some of which was likely due to instrument, operator reading error, and procedural preferences. Most differences were 0.03 feet (about 3/8 inch) or less over the 9 year monitoring period. Trend charts for each monitoring, control, and bench mark point are attached as Exhibits herein.



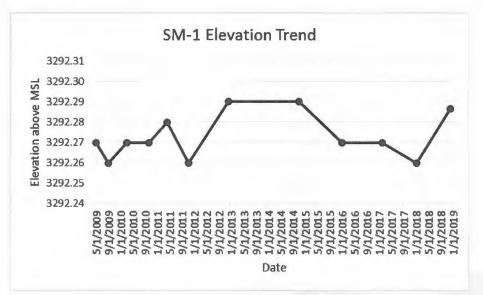
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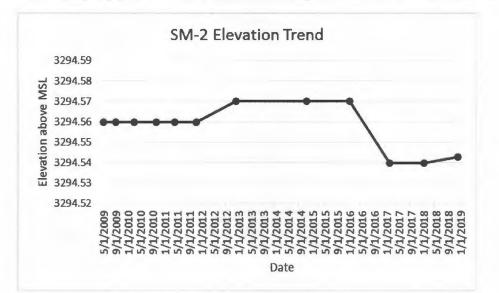
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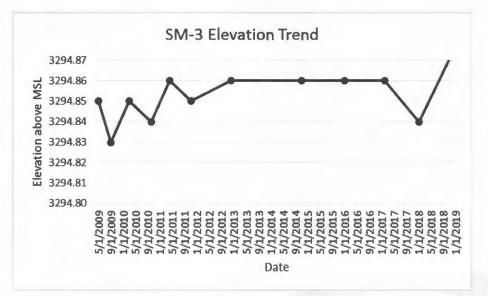


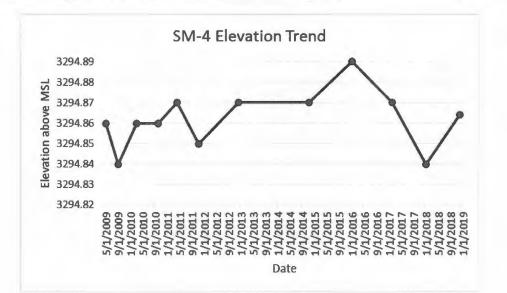
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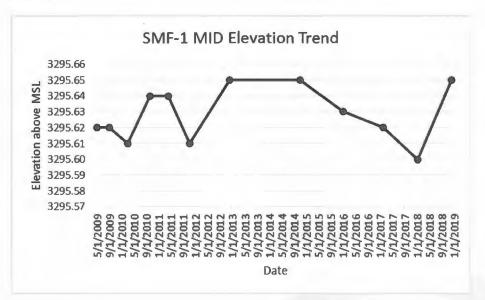
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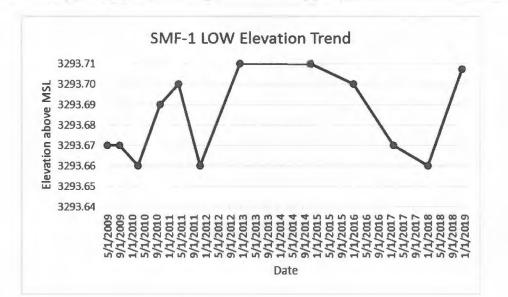




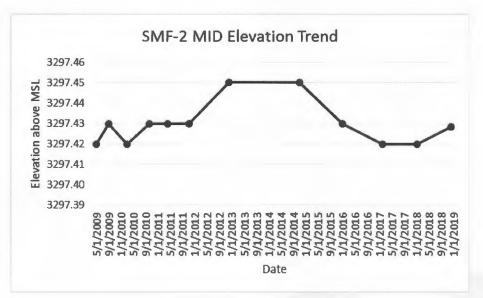
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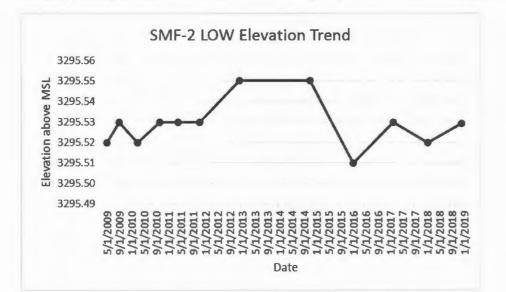
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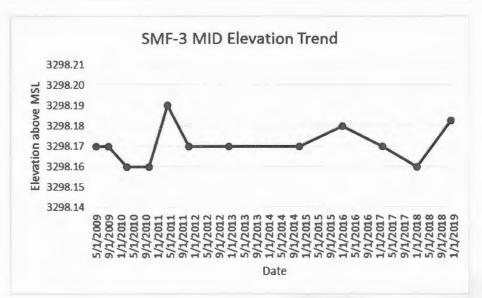


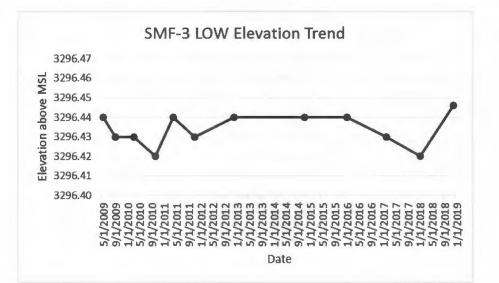
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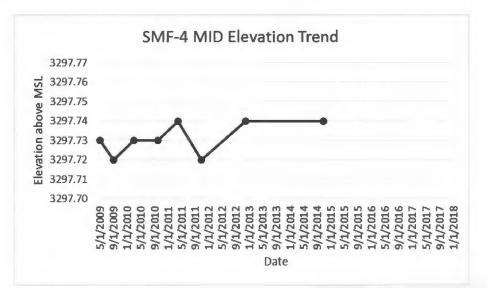


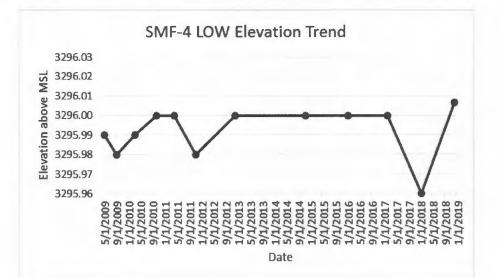
ALSA





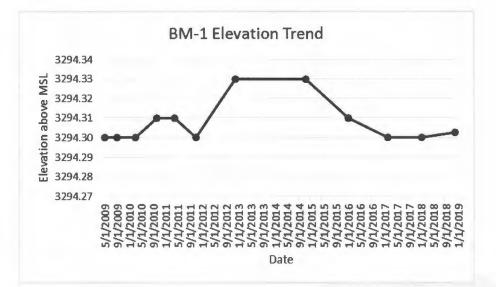
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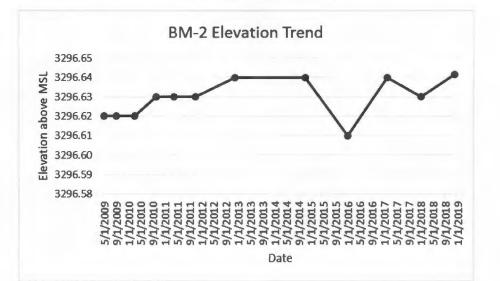




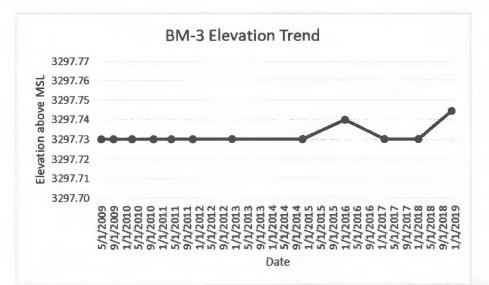
Contra Mile

MSSA





A Stand







Ken Parker, Western Refining PO Box 1345 Jal, New Mexico, 88252 575-392-2632

18 January, 2018

RE: GW-7 Jal LPG Storage Facility Annual Subsidence Survey Report

SUBSIDENCE MONUMENT MONITORING

On January 18, 2018 a field survey was conducted to check for changes in monitoring location elevations at the Western Refining Facility located at the intersection of NM18 and Deep Wells Road near Jal, NM.

This survey was conducted using a Trimble DiNi digital level, which reads a bar code off of a special rod in order to determine difference in elevation from a known control point. This level is very accurate and the use helps to eliminate human reading errors. The data is stored onboard and may be transferred directly into the computer software at the office for analysis of results, ensuring greater accuracy.

Control Point CP2 (elevation 3297.82 above mean sea level (MSL)) has historically been the Reference Primary Elevation Point for determining elevations on this project. As in the past, a level loop was run thru the project with side shots as needed to check the different monuments, benchmarks, and control points at this site.

Observations were made on all available points and tabulated to compare the elevations to the base elevations established on May 13, 2009. See Table A for these results. Additionally, the results for the last 9 years have been tabulated and appear in Table B. Each monitoring point has also been plotted on a trend chart to aid in visually monitoring the changes in elevation of the monitoring points.

Prior to this survey, the elevations on the monitoring points were determined utilizing an automatic level, which is more prone to instrument operator reading errors than the DiNi that will now be used for all future monitoring at this site. See site map attached.



The surveyed elevations along with deltas from established values as follows:

NAME	BASE ELEVATION	ELEVATION	CHANGE IN
	5/13/2009	01/18/2018	ELEVATION
CP-1	3293.47	3293.46	-0.01
CP-2	3297.82	3297.82	No Change
CP-3	3293.56	3293.54	-0.02
SM-1	3292.27	3292.26	-0.01
SM-2	3294.56	3294.54	-0.02
SM-3	3294.85	3294.84	-0.01
SM-4	3294.86	3294.84	-0.02
SMF-1 (Mid Flange)	3295.62	3295.60	-0.02
SMF-1 (Lower Flange)	3293.67	3293.66	-0.01
SMF-2 (Mid Flange)	3297.42	3297.42	No Change
SMF-2 (Lower Flange)	3295.52	3295.52	No Change
SMF-3 (Mid Flange)	3298.18	3298.16	-0.01
SMF-3 (Lower Flange)	3296.44	3296.42	-0.02
SMF-4 (Lower Flange)	3295.99	3295.96	-0.03
BM-1	3294.30	3294.30	No Change
BM-2	3296.62	3296.63	0.01
BM-3	3297.73	3297.73	No Change

Table A

Monitoring Points and Elevations

Point	5/13/2009	9/25/2009	3/9/2010	10/29/2010	4/15/2011	11/10/2011	12/21/2012	11/12/2014	1/14/2016	2/15/2017	1/18/2018
CP-1	3293.47	3293.46	3293.46	3293.45	3293.47	3293.46	3293.49	3293.49	3293.48	3293.47	3293.46
CP-2 *	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82	3297.82
CP-3	3293.56	3293.54	3293.55	3293.56	3293.56	3293.55	3293.57	3293.57	3293.55	3293.56	3293.54
SM-1	3292.27	3292.26	3292.27	3292.27	3292.28	3292.26	3292.29	3292.29	3292.27	3292.27	3292.26
SM-2	3294.56	3294.56	3294.56	3294.56	3294.56	3294.56	3294.57	3294.57	3294.57	3294.54	3294.54
SM-3	3294.85	3294.83	3294.85	3294.84	3294.86	3294.85	3294.86	3294.86	3294.86	3294.86	3294.84
SM-4	3294.86	3294.84	3294.86	3294.86	3294.87	3294.85	3294.87	3294.87	3294.89	3294.87	3294.84
SMF-1 MID	3295.62	3295.62	3295.61	3295.64	3295.64	3295.61	3295.65	3295.65	3295.63	3295.62	3295.60
SMF-1 LOW	3293.67	3293.67	3293.66	3293.69	3293.70	3293.66	3293.71	3293.71	3293.70	3293.67	3293.66
SMF-2 MID	3297.42	3297.43	3297.42	3297.43	3297.43	3297.43	3297.45	3297.45	3297.43	3297.42	3297.42
SMF-2 LOW	3295.52	3295.53	3295.52	3295.53	3295.53	3295.53	3295.55	3295.55	3295.51	3295.53	3295.52
SMF-3 MID	3298.17	3298.17	3298.16	3298.16	3298.19	3298.17	3298.17	3298.17	3298.18	3298.17	3298.16
SMF-3 LOW	3296.44	3296.43	3296.43	3296.42	3296.44	3296.43	3296.44	3296.44	3296.44	3296.43	3296.42
SMF-4 MID	3297.73	3297.72	3297.73	3297.73	3297.74	3297.72	3297.74	3297.74			
SMF-4 LOW	3295.99	3295.98	3295.99	3296.00	3296.00	3295.98	3296.00	3296.00	3296.00	3296.00	3295.96
BM-1	3294.30	3294.30	3294.30	3294.31	3294.31	3294.30	3294.33	3294.33	3294.31	3294.30	3294.30
BM-2	3296.62	3296.62	3296.62	3296.63	3296.63	3296.63	3296.64	3296.64	3296.61	3296.64	3296.63
BM-3	3297.73	3297.73	3297.73	3297.73	3297.73	3297.73	3297.73	3297.73	3297.74	3297.73	3297.73

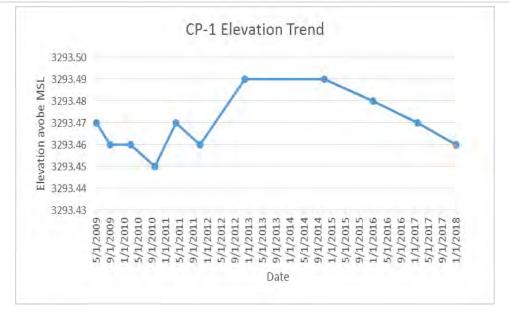


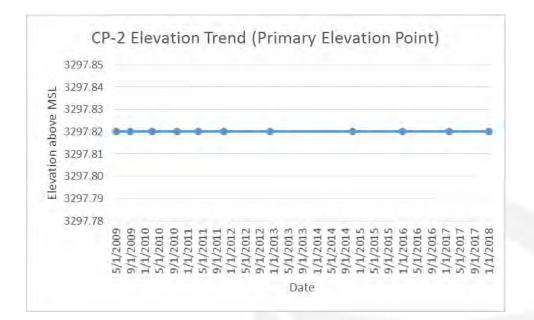
Conclusions

The survey was conducted and results analyzed, using the elevations originally established on May 13, 2009 as the base elevations for each point. The readings were consistent with a stable surface as there was little to no difference in elevations of any monitoring point, the most being on SMF-4 LOW with a change of 0.03 feet downward. Similar deviations were found in CP-3, SM-4, SMF-1 MID, and SMF-3 LOW all with a change of 0.02 feet downward. The rest of the points were within tolerance of the readings for the DiNi level, showing 0.01 feet of difference or less, which is an unremarkable elevation change.

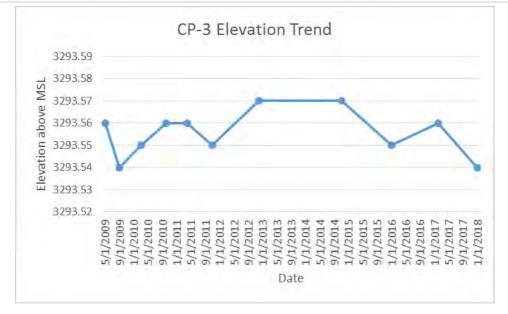
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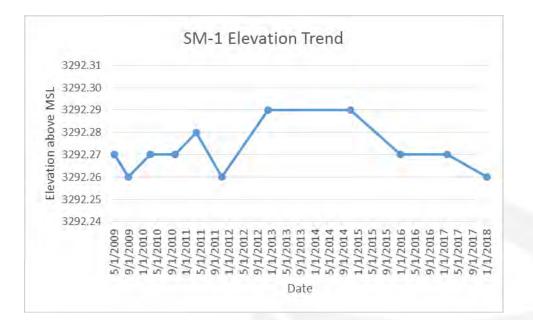




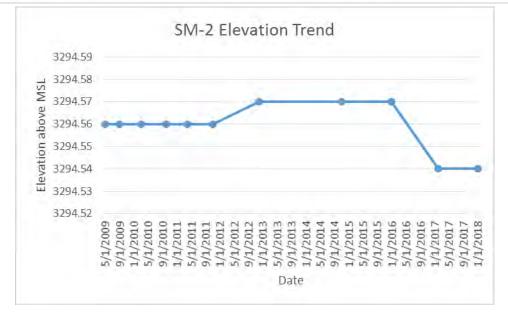






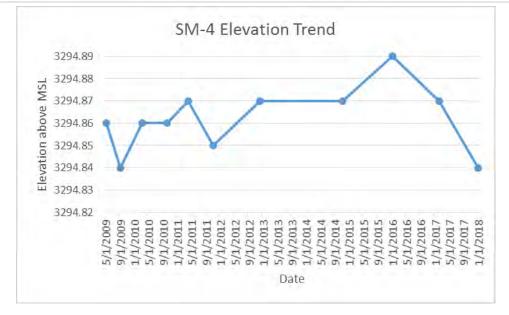






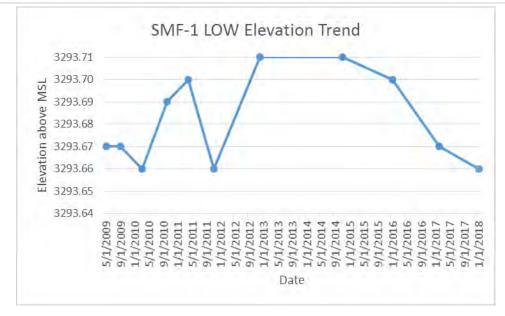


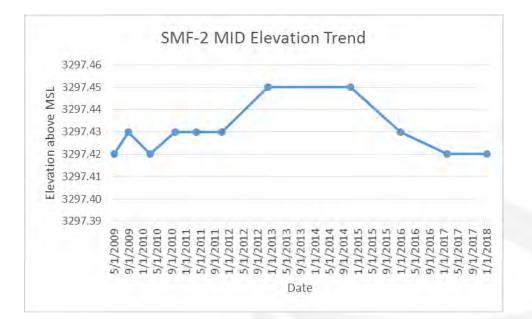


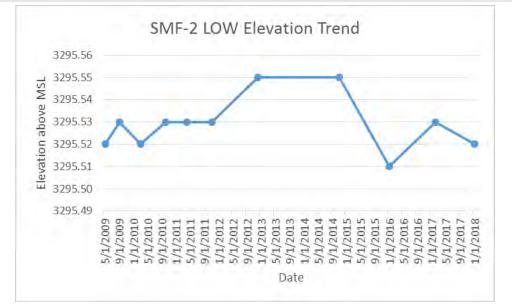


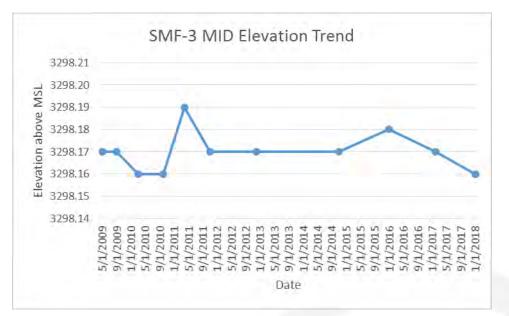


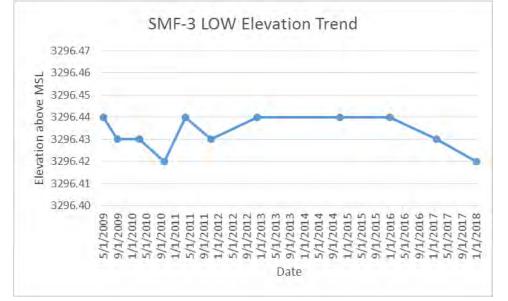


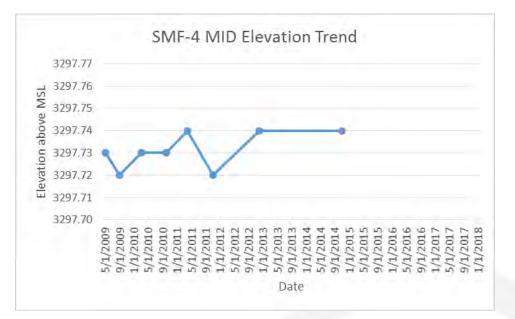


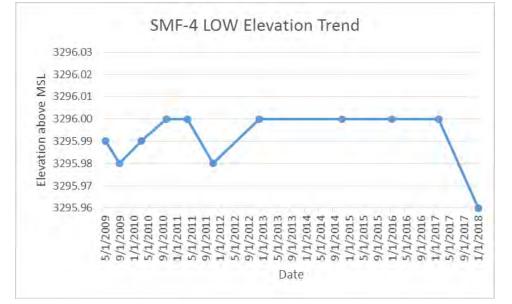


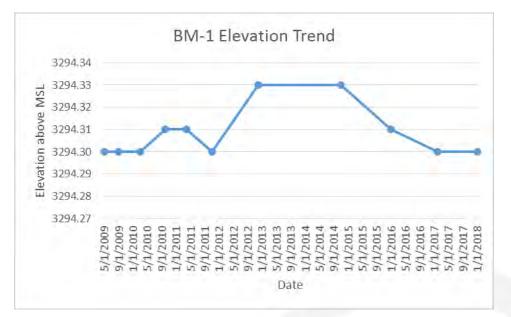




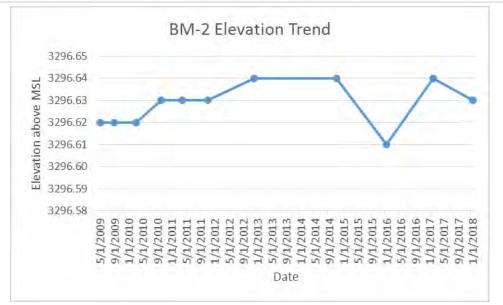


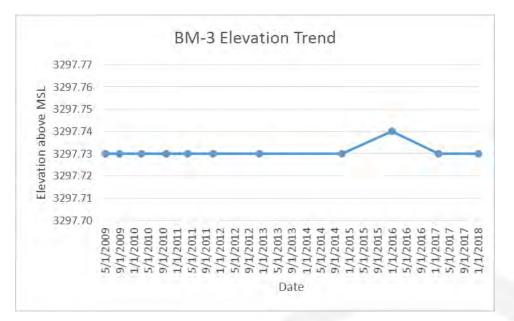












FEB 06 2018 PM02:34

ANNUAL LPG WELL REPORT

OPERATOR: Western Refining Company

UIC CLASS LPG STORAGE WELLS API NUMBER

31055 WELL 1: 30-025-35954 31055 WELL 2: 30-025-35955 31055 WELL 3: 30-025-35956 31055 WELL 4: 30-025-35957

WESTERN REFINING JAL STORAGE FACILITY

Company Representative: Ken Parker

Date: 1-30-18

Well Summary

Well 1

Well one was utilized in 2017 for storing Isobutane. Total barrels injecting throughout the year was 44,500 barrels. Well was operated within the OCD guidelines without any issues. Injecting rate were between 230 & 250 barrels per hour with a maximum injecting pressure of 740 psig.

In 2017 the annual Isobutane withdrawn from the well was 48,668 barrels. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 440 & 550 psig.

In 2017 well one stored product 12 months out of the year. The maximum volume stored in the well was 34,742 barrels or 17% of well capacity.

Well 2

Well two was utilized in 2017 injecting 364,738 barrels of normal butane into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was between 230 & 250 barrels per hour with a maximum injecting pressure of 820 psig. Injection pressures were slightly higher than last year due to salt block in the tubing. Fresh water was injected downhole removing the salt block and reducing injection pressure back to normal.

In 2017 351,445 barrels of normal butane was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 400 & 500 psig.

In 2017 well two stored product 12 months out of the year. The maximum volume stored in the well was 83,124 barrels or 58% of well capacity.

Well 3

Well three was utilized in 2017 injecting 10,785 barrels of LPG (butane/propane) into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was 187 barrels per hour with a maximum injecting pressure of 740 psig.

In 2017 18,844 barrels of LPG was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 600 to 680 psig.

In 2017 well three stored product 6 months out of the year. The maximum volume stored in the well was 11,414 barrels or 14% of well capacity.

Well 4

Well four was utilized in 2017 injecting 194,927 barrels of normal butane into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was between 184-187 barrels per hour with a maximum injecting pressure of 790 psig.

In 2017 215,264 barrels of normal butane was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 600 to 680 psig.

In 2017 well four stored product 6 months out of the year. The maximum volume stored in the well was 63,322 barrels or 46% of well capacity.

Production Volumes

See Attachments Well 1 Annual C-131B Well 2 Annual C-131B Well 3 Annual C-131B Well 4 Annual C-131B

Injecting Fluid Analysis

See Attachment 573320 Report

Deviation From Normal Production Method N/A

Leak and Spill Report N/A

Ground Water Monitoring N/A

Cavity Subsidence

Report is being generated and the report will be submitted separately no later than February 28, 2018.

Area of Review No activity in the year 2017

Pursuant to all applicable parts of the Water Quality Control Commission (WQCC) Regulations 20.6.2 NMAC and more specifically 20.6.2.5101. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Western Refining Company Company Name

Ken Parker **Company Representative**

Company Representative Signature

Title: Facility Manager

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lea	Month/Year 12-17

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 1 30-025-35954	M32-23S-37E	740	44,500	48,668
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 855

TOTAL CAPACITY (BBLS) 201,013 Barrels

NET CHANGE (BBLS) <u>4,168</u>

BEGINNING STORAGE (BBLS) 13,492

ENDING STORAGE (BBLS) <u>9.324</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date <u>1-29-18</u> Telephone No. <u>575-395-2632</u>

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lêâ	Month/Year 12-17
-------------------------	--------------	--------	-----	------------------

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 2 30-025-35955	M32-238-37E	820	364,738	351,445

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1,008

TOTAL CAPACITY (BBLS) 144,443 Barrels

NET CHANGE (BBLS) <u>13,293</u>

BEGINNING STORAGE (BBLS) 50,105

ENDING STORAGE (BBLS) <u>63,398</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature an

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date <u>1-29-18</u> Telephone No. <u>575-395-2632</u>

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico				
(Company)	(Address)				
NAME OF STORAGE PROJECT Jal Terminal	COUNTY Lea Month/Year 12-17				

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 3 30-025-35956	M32-23S-37E	740	10,785	18,844
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1.007

TOTAL CAPACITY (BBLS) 79,692 Barrels

NET CHANGE (BBLS) 8,059

BEGINNING STORAGE (BBLS) 13,667

ENDING STORAGE (BBLS) <u>5.608</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature ten laber

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parken@wnr.com

Date <u>1-29-18</u> Telephone No. <u>575-395-2632</u>

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining ((Company)		PO Box 1345 Jal, New Mexico (Address)				
NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lea Month	Year <u>12-17</u>		
WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)		
31055 State LPG Storage Well No. 4 30-025-35957	M32-23S-37E	790	194,927	215,264		

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1,127

TOTAL CAPACITY (BBLS) 136,626 Barrels

NET CHANGE (BBLS) 20,337

BEGINNING STORAGE (BBLS) 48,817

ENDING STORAGE (BBLS) <u>28,480</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

fre Signature ____

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date 1-29-18 Telephone No. 575-395-2632



Project Id:Contact:Ken ParkerProject Location:Jal, NM

Certificate of Analysis Summary 573320

Western Refining, Jal, NM Project Name: South Brine Pond



Date Received in Lab:Thu Jan-11-18 02:50 pmReport Date:19-JAN-18Project Manager:Kelsey Brooks

	Lab Id:	573320-001			
Ann Insis Descreted	Field Id:	South Pond			
Analysis Requested	Depth:	1 ft			
	Matrix:	WATER			
	Sampled:	Jan-11-18 10:30			
Alkalinity by SM2320B	Extracted:				
SUB: TX104704215-17-23	Analyzed:	Jan-16-18 10:00			
	Units/RL:	mg/L RL			
Alkalinity, Total (CaCO3)		113 4.00			
BTEX by EPA 8021B	Extracted:	Jan-16-18 10:00			
	Analyzed:	Jan-16-18 19:49			
	Units/RL:	mg/L RL			
Benzene		<0.00200 0.00200	1		
Toluene		<0.00200 0.00200			
Ethylbenzene		<0.00200 0.00200			
m,p-Xylenes		<0.00400 0.00400			
o-Xylene		<0.00200 0.00200			
Total Xylenes		<0.00200 0.00200		 	
Total BTEX		<0.00200 0.00200		 	
Chloride by EPA 300	Extracted:	Jan-17-18 12:00			
	Analyzed:	Jan-17-18 13:29			
	Units/RL:	mg/L RL			
Chloride		143000 1000			
Mercury, Total by EPA 245.1	Extracted:	Jan-15-18 10:20			
SUB: TX104704215-17-23	Analyzed:	Jan-15-18 15:50			
	Units/RL:	mg/L RL			
Мегсигу		<0.00200 0.00200			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.%

Huns Boah

Kelsey Brooks Project Manager



Project Id:

Contact: Ken Parker Project Location: Jal, NM Certificate of Analysis Summary 573320

Western Refining, Jal, NM Project Name: South Brine Pond



Date Received in Lab:Thu Jan-11-18 02:50 pmReport Date:19-JAN-18Project Manager:Kelsey Brooks

	Lab Id:	573320-00)1			
An sharin Dogwood ad	Field Id:	South Por	nd			
Analysis Requested	Depth:	1 ft				
	Matrix:	WATER				
	Sampled:	Jan-11-18 10	0:30			
Metals by EPA 200.8	Extracted:	Jan-15-18 10	0.05			
SUB: TX104704215-17-23	Analyzed:	Jan-16-18 23				
	Units/RL;	mg/L	RL			
Arsenic	Chillion ALL.	0.0300	0.0100			
Barium		0.101	0.0800	· · · · · · · · · · · · · · · · · · ·		
Cadmium		< 0.0100	0.0100			
Chromium		<0.0200	0.0200			
Selenium		< 0.0100	0.0100			
Silver		< 0.0100	0.0100			
Metals per ICP by EPA 200.7	Extracted:	Jan-15-18 10	0:05			
SUB: TX104704215-17-23	Analyzed:	Jan-18-18 16	5:05			
	Units/RL:	mg/L	RL			
Calcium		676	20.0			
Magnesium		2290	40.0			
Potassium		6150	50.0			
Sodium	_	107000	2500		 	
TDS by SM2540C	Extracted:					
SUB: TX104704215-17-23	Analyzed:	Jan-16-18 11	1:32			
	Units/RL:	mg/L	RL			
Total Dissolved Solids		229000	5.00			
рН by SM4500-Н	Extracted:					
SUB: TX104704215-17-23	Analyzed:	Jan-12-18 09	9:00			
	Units/RL:	Deg C	RL			
Temperature		19.2 K				

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Version: 1.%

Huns Boah

Kelsey Brooks Project Manager



Ken Parker

Jal, NM

Contact:

Project Location:

Certificate of Analysis Summary 573320

Western Refining, Jal, NM Project Name: South Brine Pond



Date Received in Lab:Thu Jan-11-18 02:50 pmReport Date:19-JAN-18Project Manager:Kelsey Brooks

	Lab Id:	573320-001			
Analysis Paguastad	Field Id:	South Pond			
Analysis Requested	Depth:	1 ft			
	Matrix:	WATER			
	Sampled:	Jan-11-18 10:30			
рН by SM4500-Н	Extracted:				
SUB: TX104704215-17-23	Analyzed:	Jan-12-18 09:00			
	Units/RL:	SU RL			
рН		7.71 K			

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Version: 1.%

Huns Roah

Kelsey Brooks Project Manager

Analytical Report 573320

for Western Refining

Project Manager: Ken Parker

South Brine Pond

19-JAN-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12) Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



19-JAN-18



Project Manager: Ken Parker Western Refining P.O. Box 1345 Jal, NM 88252

Reference: XENCO Report No(s): 573320 South Brine Pond Project Address: Jal, NM

Ken Parker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 573320. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 573320 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kmsk

Keisey Brooks Project Manager

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Sample Cross Reference 573320



Western Refining, Jal, NM

South Brine Pond

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Pond	W	01-11-18 10:30	1 ft	573320-001



Client Name: Western Refining Project Name: South Brine Pond

Project ID: Work Order Number(s): 573320 Report Date: 19-JAN-18 Date Received: 01/11/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 573320



Western Refining, Jal, NM

South Brine Pond

Sample Id: Lab Sample Id	South Pond d: 573320-001		Matrix: Date Colle	Water cted: 01.11.18 10.30		Date Received:01. Sample Depth: 1 ft		0
Analytical Me	thod: Chloride by EPA	300				Prep Method: E30	00P	
Tech:	OJS					% Moisture:		
Analyst:	OJS		Date Prep:	01.17.18 12.00				
Seq Number:			Dute Prop.					
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	143000	1600	mg/L	01.17.18 13.29		2000
Tech:	ethod: TDS by SM2540 YAV	с				% Moisture:		
Analyst:	YAV							
Seq Number:	3038357					SUB: TX10470421	15-17-23	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Total Dissolved	Solids	1642222	229000	5.00	mg/L	01.16.18 11.32		1
Analytical Me	ethod: pH by SM4500-F	H						
Tech:	MJP					% Moisture:		
Analyst:	MJP							
Seq Number:	3038125					SUB: TX1047042	15-17-23	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
pH		12408-02-5	7.71		SU	01.12.18 09.00	K	1
Temperature		TEMP	19.2		Deg C	01.12.18 09.00	К	1



Silver

Certificate of Analytical Results 573320



01.18.18 01.56

mg/L

U

5

Western Refining, Jal, NM

South Brine Pond

Sample Id: South Pond		Matrix:	Water]	Date Received:01.1	11.18 14.5	0
Lab Sample Id: 573320-001		Date Coll	ected: 01.11.18 10.30	Sample Depth: 1 ft			
Analytical Method: Metals by EPA Tech: AVM Analyst: DEP	200.8	Date Prep	: 01.15.18 10.05		Prep Method: E20 % Moisture:	0.8P	
Seq Number: 3038425				:	SUB: TX10470421	5-17-23	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Arsenic	7440-38-2	0.0300	0.0100	mg/L	01.18.18 01.56		5
Barium	7440-39-3	0.101	0.0800	mg/L	01.19.18 00.35		20
Cadmium	7440-43-9	< 0.0100	0.0100	mg/L	01.18.18 01.56	U	5
Chromium	7440-47-3	< 0.0200	0.0200	mg/L	01.18.18 01.56	U	5
Selenium	7782-49-2	< 0.0100	0.0100	mg/L	01.18.18 01.56	U	5

0.0100

< 0.0100

7440-22-4

Analytical Me	ethod: Metals per IC	CP by EPA 200.7			1	Prep Method: E20	0.7P	
Tech:	AVM				(% Moisture:		
Analyst:	DEP		Date Prep	01.15.18 10.05				
Seq Number:	3038561				1	SUB: TX10470421	5-17-23	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
				TCL .	Chito	A kind y bib Dure		2.11
Calcium		7440-70-2	676	20.0	mg/L	01.18.18 16.05		100
Calcium Magnesium		7440-70-2 7439-95-4	676 2290					
				20.0	mg/L	01.18.18 16.05		100

Alkalinity, Tota	l (CaCO3)	1640192	113	4.00	mg/L	01.16.18 10.00		1
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Seq Number:	3038441				5	SUB: TX1047042	15-17-23	
Analyst:	DHE							
Tech:	DHE				0	% Moisture:		
Analytical Me	ethod: Alkalinity b	y SM2320B						



Certificate of Analytical Results 573320



Western Refining, Jal, NM

South Brine Pond

Sample Id:South PondLab Sample Id:573320-001		Matrix: Date Collect	Water ted: 01.11.18 10.30		Date Received:01. Sample Depth: 1 ft		0
Analytical Method: Mercury, Total	by EPA 245.1				Prep Method: E24	5.1P	
Tech: AHI					% Moisture:		
Analyst: ELW		Date Prep:	01.15.18 10.20				
Seq Number: 3038298					SUB: TX1047042	15-17-23	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Mercury	7439-97-6	<0.00200 0	.00200	mg/L	01.15.18 15.50	U	1

Analytical Method:BTEX by EPATech:ALJAnalyst:ALJSeq Number:3038417	8021B	Date Pre	p: 01.16.	18 10.00		rep Method: SW: 6 Moisture:	5030B	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/L	01.16.18 19.49	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/L	01.16.18 19.49	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/L	01.16.18 19.49	U	1
m,p-Xylenes	179601-23-1	< 0.00400	0.00400		mg/L	01.16.18 19.49	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/L	01.16.18 19.49	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/L	01.16.18 19.49	U	1
Total BTEX		< 0.00200	0.00200		mg/L	01.16.18 19.49	U	1
Surrogate 1,4-Difluorobenzene		Cas Number 540-36-3	% Recovery 102	Units %	Limits 80-120	Analysis Date 01.16.18 19.49	Flag	
4-Bromofluorobenzene		460-00-4	95	%	80-120	01.16.18 19.49		



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection

- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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	1 none	1 aA
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



QC Summary 573320

Western Refining

South Brine Pond

Analytical Method:	Chloride by EPA 3	00						Pr	ep Metho	d: E30	0P	
Seq Number:	3038656			Matrix:	Water				Date Pre	p: 01.1	7.18	
MB Sample Id:	7637622-1-BLK		LCS Sar	nple Id:	7637622-	I-BKS		LCSI	O Sample	Id: 763	7622-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Chloride	< 0.500	25.0	25.9	104	26.1	104	90-110	1	20	mg/L	01.17.18 15:14	

Analytical Method:	Chloride by EPA 30	00						Pr	ep Metho	d: E30	0P	
Seq Number:	3038656			Matrix:	Ground W	ater			Date Pre	p: 01.1	7.18	
Parent Sample Id:	573507-006		MS Sar	nple Id:	573507-00	06 S		MSI	Sample	Id: 573	507-006 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD I	RPD Limi	t Units	Analysis Date	Flag
Chloride	39.3	25.0	63.5	97	63.5	97	90-110	0	20	mg/L	01.17.18 17:12	

Analytical Method:	Chloride by EPA 30	00						Pı	ep Metho	od: E30	0P	
Seq Number:	3038656			Matrix:	Drinking '	Water			Date Pre	ep: 01.1	7.18	
Parent Sample Id:	573644-001		MS San	nple Id:	573644-00	01 S		MS	D Sample	Id: 573	644-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	it Units	Analysis Date	Flag
Chloride	22.8	25.0	48.7	104	48.3	102	90-110	1	20	mg/L	01.17.18 15:35	

Analytical Method:	TDS by SM2540C											
Seq Number:	3038357			Matrix:	Water							
MB Sample Id:	3038357-1-BLK		LCS Sar	nple Id:	3038357-	1-BKS		LCSI	O Sample	Id: 303	8357-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Total Dissolved Solids	<5.00	1000	1100	110	1090	109	80-120	1	10	mg/L	01.16.18 11:32	

Analytical Method:	TDS by SM2540C							
Seq Number:	3038357	Matrix:	Water					
Parent Sample Id:	573363-003	MD Sample Id:	573363-003 D					
Parameter	Parent Result	MD Result		%RPD	RPD Limit	Units	Analysis Date	Flag
Total Dissolved Solids	470	514		9	10	mg/L	01.16.18 11:32	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery [D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100* (C) / [B] LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



Western Refining

South Brine Pond

Analytical Method: Seq Number: Parent Sample Id:	pH by SM4500-H 3038125 573053-001	Matrix: MD Sample Id:			
Parameter	Parent Result	MD Result	%RPD	RPD Lim	it Units
pН	8.12	8.12	0	20	SU
Temperature	19.6	19.7	1	20	Deg C

Analytical Method	Metals by EPA 200.8
Analytical Methou.	MICIAIS UY ET A 200.0

Seq Number: MB Sample Id:												
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Arsenic	< 0.00200	0.100	0.102	102	0.102	102	85-115	0	20	mg/L	01.16.18 22:32	
Barium	< 0.00400	0.100	0.103	103	0.102	102	85-115	1	20	mg/L	01.16.18 22:32	
Cadmium	< 0.00200	0.100	0.103	103	0.103	103	85-115	0	20	mg/L	01.16.18 22:32	
Chromium	< 0.00400	0.100	0.103	103	0.103	103	85-115	0	20	mg/L	01.16.18 22:32	
Selenium	< 0.00200	0.100	0.102	102	0.103	103	85-115	1	20	mg/L	01.16.18 22:32	
Silver	< 0.00200	0.0500	0.0495	99	0.0494	99	85-115	0	20	mg/L	01.16.18 22:32	

Analytical Method: Seq Number: Parent Sample Id:	Metals by EPA 200 3038425 573291-001	.8	Matrix: Water MS Sample Id: 573291-001 S					Prep Method: E200.8P Date Prep: 01.15.18 MSD Sample Id: 573291-001 SD				
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Arsenic	0.0208	0.100	0.125	104	0.125	104	70-130	0	20	mg/L	01.16.18 22:43	
Barium	0.0296	0.100	0.135	105	0.133	103	70-130	1	20	mg/L	01.16.18 22:43	
Cadmium	< 0.00200	0.100	0.0990	99	0.100	100	70-130	1	20	mg/L	01.16.18 22:43	
Chromium	< 0.00400	0.100	0.104	104	0.104	104	70-130	0	20	mg/L	01.16.18 22:43	
Selenium	0.0132	0.100	0.114	101	0.115	102	70-130	1	20	mg/L	01.16.18 22:43	
Silver	< 0.00200	0.0500	0.0478	96	0.0478	96	70-130	0	20	mg/L	01.16.18 22:43	

Analytical Method:	: Metals by EPA 200.8					Prep Method: E20	0.8P	
Seq Number:	3038425			Matrix:	Water	Date Prep: 01.1	5.18	
Parent Sample Id:	573393-009		MS Sar	nple Id:	573393-009 S			
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Arsenic	0.0102	0.100	0.114	104	70-130	mg/L	01.16.18 23:32	
Barium	0.216	0.100	0.338	122	70-130	mg/L	01.16.18 23:32	
Cadmium	< 0.00200	0.100	0.0932	93	70-130	mg/L	01.16.18 23:32	
Chromium	< 0.00400	0.100	0.108	108	70-130	mg/L	01.16.18 23:32	
Selenium	0.00327	0.100	0.104	101	70-130	mg/L	01.16.18 23:32	
Silver	< 0.00200	0.0500	0.0454	91	70-130	mg/L	01.16.18 23:32	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery [D] = 100*(C-A) / BRPD = 200* | (C-E) / (C+E) | [D] = 100*(C) / [B]

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

Analysis

Date 01.12.18 09:00 01.12.18 09:00

Prep Method: E200.8P

Flag



Western Refining

South Brine Pond

Analytical Method:	Metals per ICP by EPA 200.7
Analytical Method:	wietais per i

Analytical Method: Seq Number: MB Sample Id:	Metals per ICP by 3038561 7637463-1-BLK	EPA 200.7		Matrix: nple Id:	Water 7637463-	1-BKS			rep Methoo Date Prep D Sample I	p: 01.1	0.7P 5.18 7463-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	< 0.200	25.0	26.1	104	26.2	105	85-115	0	20	mg/L	01.17.18 13:20	
Magnesium	< 0.400	25.0	26.0	104	26.1	104	85-115	0	20	mg/L	01.17.18 13:20	
Potassium	< 0.500	10.0	10.5	105	10.5	105	85-115	0	20	mg/L	01.17.18 13:20	
Sodium	< 0.500	25.0	26.3	105	26.3	105	85-115	0	20	mg/L	01.17.18 13:20	

Analytical Method: Seq Number: Parent Sample Id:	Metals per ICP by 3038561 573227-003	EPA 200.7			Ground W 573227-00				rep Method Date Prep D Sample I	o: 01.1		
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Calcium	91.5	25.0	119	110	119	110	70-130	0	20	mg/L	01.17.18 13:37	
Magnesium	2.16	25.0	28.1	104	28.1	104	70-130	0	20	mg/L	01.17.18 13:37	
Potassium	< 0.500	10.0	11.0	110	10.9	109	70-130	1	20	mg/L	01.17.18 13:37	
Sodium	9.55	25.0	36.4	107	36.3	107	70-130	0	20	mg/L	01.17.18 13:37	

Analytical Method:	Alkalinity by SM	2320B										
Seq Number:	3038441			Matrix:	Water							
MB Sample Id:	3038441-1-BLK		LCS Sar	nple Id:	3038441-	1-BKS		LCSI	O Sample	Id: 303	8441-1-BSD	
Parameter	MI Resul		LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Alkalinity, Total (CaCC	(4.0	0 250	253	101	256	102	80-120	1	20	mg/L	01.16.18 10:00	

Analytical Method: Seq Number: Parent Sample Id:	Alkalinity by SM2320E 3038441 573310-001	B Matrix: MD Sample Id:					
Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (CaCC	3) <4.00	<4.00	0	20	mg/L	01.16.18 10:00	U

Analytical Method: Seq Number: Parent Sample Id:	Alkalinity by SM2320B 3038441 573444-001	Matrix: MD Sample Id:					
Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Alkalinity, Total (CaCO	93) 482	481	0	20	mg/L	01.16.18 10:00	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery

[D] = 100*(C-A) / BRPD = 200* | (C-E) / (C+E) | [D] = 100*(C) / [B]

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec



QC Summary 573320

Western Refining

South Brine Pond

Analytical Method:	Mercury, Total by	EPA 245.1						Pr	ep Metho	d: E24	5.1P	
Seq Number:	3038298			Matrix:	Water				Date Pre	ep: 01.	15.18	
MB Sample Id:	7637477-1-BLK		LCS San	nple Id:	7637477-	I-BKS		LCSI	O Sample	Id: 763	7477-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag

Analytical Method:	Mercury, Total by E	CPA 245.1						Pr	rep Metho	d: E24	5.1P	
Seq Number:	3038298			Matrix:	Water				Date Pre	ep: 01.1	5.18	
Parent Sample Id:	573090-001		MS San	nple Id:	573090-00	01 S		MS	D Sample	Id: 573	090-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag
Mercury	< 0.000200	0.00200	0.00196	98	0.00193	97	70-130	2	20	mg/L	01.15.18 15:13	

Analytical Method:	Mercury, Total by H	EPA 245.1						Pr	ep Metho	od: E24	45.1P	
Seq Number:	3038298			Matrix:	Storm Wa	ter			Date Pre	ep: 01.	15.18	
Parent Sample Id:	573419-002		MS Sar	nple Id:	573419-00	02 S		MSI	D Sample	Id: 573	419-002 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	it Units	Analysis Date	Flag
Mercury	< 0.000200	0.00200	0.00205	103	0.00209	105	70-130	2	20	mg/L	01.15.18 14:57	

Analytical Method:	BTEX by EPA 802	1 B						F	rep Metho	d: SW:	5030B	
Seq Number:	3038417			Matrix:	Water				Date Pre	p: 01.1	6.18	
MB Sample Id:	7637568-1-BLK		LCS San	nple Id:	7637568-	1-BKS		LCS	SD Sample	Id: 763	7568-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	t Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0894	89	0.0999	100	70-125	11	25	mg/L	01.16.18 10:35	
Toluene	< 0.00200	0.100	0.0920	92	0.0997	100	70-125	8	25	mg/L	01.16.18 10:35	
Ethylbenzene	< 0.00200	0.100	0.0939	94	0.102	102	71-129	8	25	mg/L	01.16.18 10:35	
m,p-Xylenes	< 0.00400	0.200	0.185	93	0.201	101	70-131	8	25	mg/L	01.16.18 10:35	
o-Xylene	< 0.00200	0.100	0.0933	93	0.103	103	71-133	10	25	mg/L	01.16.18 10:35	
Surrogate	MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			imits	Units	Analysis Date	
1,4-Difluorobenzene	99		1	01		86		8	0-120	%	01.16.18 10:35	
4-Bromofluorobenzene	95		1	13		114		8	30-120	%	01.16.18 10:35	

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



Western Refining

South Brine Pond

Analytical Method: BTEX by EPA 8021B

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3038417 573473-001	1B	MS San		Water 573473-00	01 S			Prep Methoo Date Prej SD Sample	p: 01.1	5030B 6.18 473-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD) RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0905	91	0.0985	99	70-125	8	25	mg/L	01.16.18 11:12	
Toluene	< 0.00200	0.100	0.0954	95	0.104	104	70-125	9	25	mg/L	01.16.18 11:12	
Ethylbenzene	< 0.00200	0.100	0.0981	98	0.107	107	71-129	9	25	mg/L	01.16.18 11:12	
m,p-Xylenes	0.00509	0.200	0.199	97	0.216	105	70-131	8	25	mg/L	01.16.18 11:12	
o-Xylene	< 0.00200	0.100	0.0969	97	0.105	105	71-133	8	25	mg/L	01.16.18 11:12	
Surrogate				1S Rec	MS Flag	MSD %Re			Limits	Units	Analysis Date	
1,4-Difluorobenzene			ç	94		104		8	80-120	%	01.16.18 11:12	
4-Bromofluorobenzene			ç	98		116		8	30-120	%	01.16.18 11:12	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery

[D] = 100*(C-A) / BRPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B]

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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																	An	alytica	il infor	matic	n			1		Mat	rix Codes	
Competition	Client / Reporting Information any Name / Branch: Western A any Address: DBOX 1345 JAL, Wheth, J. Parker OC at Contact: Kon Parker	NM 882 Phone No: Wder VO	52 r.com	Project Nan Project Loc Involce To:	etion:	So TA	u.t.	N	3r. M	ive	. ,	Por	10	1												GW = DW = P = P SW = SL =	oil/Sed/Solid Ground Wat Drinking Wa roduct Surface wat Sludge Ocean/Sea 1	ter ater
	tere's Name			PO Number	:										1	tals										0=0		er.
No.	Field ID / Point of Collectio	n [Sample	Collection	1		# of		Numit state		pres toszi	HOR		KEOH N	BTEX 8021	RCRA 8 Metals	Cations	Chloride	T	TDS	Alkalinity			-		A=/		
	South Poud		Depth 1.f.t	Date	Time 10:30 AM	Matrix	bottles 6	₽ 3	Ace	1	H25	Nac	Var	E NO		X	Ö X	X	Hd ×	×	X	+				Field Con	ments	
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10	Turnaround Time (Business days)			L		+	Data Del	iverable	Inform	ation					1	-				Notes								-
		5 Day TAT			Le	vel II Std					Le	vel IV (F	Full (Data Pk	iraw (data)				-		nn.	(41	1	RID:R-	8	
Г	Next Day EMERGENCY	7 Day TAT			Le	vel III Sta	d QC+ F	oma] TR	RP Lev	el IV	1						-	CF	(0-6	: -0.2	°C)	P	R ID:R-		
Г	2 Day EMERGENCY	Contract TAT			Le	vel 3 (CL	P Form	18)] US	TIRG	-411							-		(6-2	23: +0).2°C	24			
F						RP Che	ckilst				-									-	Co	rect	ed T	emp	: 4	.4		
-	TAT Starts Day received by Lab, If	received by 5:00	pm		n														FED-	EX / L	PS: T	acking				/		
R	telinquished by Sampler:	SAMPLE CUSTODY	MUST BE	DOCUMENT	Received	By	e samp	COL	ANGE I	N	Reli	N, INCLI Inquish	ed E	ig cour By:	IER DEI	LIVERY	Date	Time:			Rece	lved B	y:					
R	telinquished by:		Date Tim		Redelved	i By:		- A			Rell	Inquish	ed E	By:			Date	Time			Rece	ived B	y:					

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any bases or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be involced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

Custody Seal #

Received By:

Date Time:

Relinquished by:

On Ice

Cooler Temp.

Thermo. Corr. Factor

Preserved where applicable



Inter-Office Shipment

Page 1 of 1

IOS Number 1054510

Date/Time:	01/11/18 15:19	Created by:	Shawnee Smith
Lab# From:	Midland	Delivery Priority	:
Lab# To:	Houston	Air Bill No.:	771200896771

Please send report to: Kelsey Brooks

Address: 1211 W. Florida Ave, Midland TX 79701 Phone:

E-Mail: kelsey.brooks@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	РМ	Analytes	Sign
573320-001	W	South Pond	01/11/18 10:30	E200.7	Metals per ICP by EPA 200.7	01/17/18	07/10/18	KEB	CA K MG NA	
573320-001	W	South Pond	01/11/18 10:30	E200.8	Metals by EPA 200.8	01/17/18	02/08/18	KEB	AG AS BA CD CR HG SE	
573320-001	W	South Pond	01/11/18 10:30	E245.1	Mercury, Total by EPA 245.1	01/17/18	02/08/18	KEB	HG	
573320-001	W	South Pond	01/11/18 10:30	SM2320B	Alkalinity by SM2320B	01/17/18	01/18/18	KEB	ALK	
573320-001	W	South Pond	01/11/18 10:30	SM2540C	TDS by SM2540C	01/17/18	01/18/18	KEB	TDS	
573320-001	W	South Pond	01/11/18 10:30	SM4500-H	pH by SM4500-H	01/17/18	01/11/18	KEB		

Inter Office Shipment or Sample Comments:

March St. M.

Relinquished By

Shawnee Smith

Date Relinquished: 01/11/2018

Met.

Received By:

Rene Vandenberghe

Date Received: 01/12/2018 09:55

Cooler Temperature: <u>1.2</u>



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Houston IOS #: 1054510

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Temperature Measuring device used : hou-068

Sent By:	Shawnee Smith	Date Sent:	01/11/2018 03:19 PM
Received By:	Rene Vandenberghe	Date Received:	01/12/2018 09:55 AM

Sample Receipt Checklist

Comments

Sample Receipt Checkinst	
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Contact:

Nonconformance Documentation

Contacted by :

Date:

Checklist reviewed by: Rene Vandenberghe Date: 01/12/2018



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Western Refining	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 01/11/2018 02:50:00 PM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 573320	Temperature Measuring device used : R8
Sample Recei	pt Checklist Comments
#1 *Temperature of cooler(s)?	4.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Houston
#18 Water VOC samples have zero headspace?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: ss

PH Device/Lot#: 213315

Checklist completed by: Shawnee Smith

Date: 01/11/2018

Checklist reviewed by: Muss Morah Date: 01/11/2018

RECEIVED OCD 203 (23 - 1 P 1: 1)9

ANNUAL LPG WELL REPORT

OPERATOR: Western Refining Company

GW PERMIT NUMBER: GW-007

UIC CLASS LPG STORAGE WELLS API NUMBER

31055 WELL 1: 30-025-35954 31055 WELL 2: 30-025-35955 31055 WELL 3: 30-025-35956 31055 WELL 4: 30-025-35957

WESTERN REFINING JAL STORAGE FACILITY

Company Representative: Ken Parker

Date: 1-31-13

Annual LPG Well Report

Well Summary

Well 1

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This well wasn't utilized until April 2012. During this past year 83,489 barrel of isobutane was injected and stored. Operating pressure were within the OCD guidelines. This well was trouble free and without mechanical issues. Well pressure was recorded daily and at no time was there a pressure loss when shut in.

Well 2

At the beginning of 2012, there was 68,526 barrels of normal butane being stored in well 2. During the year an additional 389,134 barrels was injected and 390,137 barrels were withdrawn. Well was operated within the OCD guidelines without issues. Well pressure was recorded daily and at no time was there a pressure loss when shut in.

Well 3

This well was taken out of service to make ready for the 5 year MIT. In late September well work began. There were issues with running the tubing down hole and pipe was lost.

Western is now entertaining new ideas on how to remove the fish and get the well back into service. Western will submit to OCD a scope of work plan at a later date.

Well 4

This well was taken out of service to make ready for the 5 year MIT. In late September well work began. There were issues with running the tubing down hole and pipe was lost.

Western is now entertaining new ideas on how to remove the fish and get the well back into service. Western will submit to OCD a scope of work plan at a later date.

Production Volumes

- --

See Attachments Well 1 Annual C-131B Well 2 Annual C-131B Well 3 Annual C-131B Well 4 Annual C-131B

Injecting Fluid Analysis

See Attachment Report 456094

Deviation From Normal Production Method N/A

Leak and Spill Report N/A

Ground Water Monitoring N/A

Cavity Subsidence See Attachment

Area of Review No activity in the year 2012.

Pursuant to all applicable parts of the Water Quality Control Commission (WQCC) Regulations 20.6.2 NMAC and more specifically 20.6.2.5101. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Western Refining Company Company Name

Ken Parker Company Representative

Company Representative Signature

Title: Facility Manager

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State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company (Company)		PO Box 1345 Jal, New Mexico (Address)			
NAME OF STORAGE PROJECT		COUNTY		(ear <u>12-12</u>	
WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)	
31055 State LPG Storage Well No. 1 30-025-35954	M32-23S-37E	720	83,489	50,548	
	ΤΟΤΑΙ S				

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 855

TOTAL CAPACITY (BBLS) 201,013 Barrels

NET CHANGE (BBLS) 32,941

BEGINNING STORAGE (BBLS) 0

ENDING STORAGE (BBLS) <u>32,941</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature Taker an

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date 1-31-13 Telephone No. 575-395-2632

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State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

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ANNUAL LPG STORAGE REPORT

Western Refining Company (Company)		РО Во	Mexico	
NAME OF STORAGE PROJECT _	Jal Terminal	COUNTY	Lea Month/	/Year <u>12-12</u>
WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 2 30-025-35955	M32-238-37E	720	389,134	390,137
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 868

TOTAL CAPACITY (BBLS) 130,201 Barrels

NET CHANGE (BBLS) 1,003

BEGINNING STORAGE (BBLS) 68,526

ENDING STORAGE (BBLS) <u>67,523</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature ape

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date <u>1-31-13</u> Telephone No. <u>575-395-2632</u>

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> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

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ANNUAL LPG STORAGE REPORT

Western Refining Company (Company)		PO Box 1345 Jal, New Mexico (Address)			
NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lea Month/	/Year <u>12-12</u>	
WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)	
31055 State LPG Storage Well No. 3 30-025-35956	M32-23S-37E	760	45,279	98,261	
	TOTALS				

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 367

TOTAL CAPACITY (BBLS) 79,692 Barrels

NET CHANGE (BBLS) 52,982

BEGINNING STORAGE (BBLS) 52,982

ENDING STORAGE (BBLS) $\underline{0}$ I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature Un

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date 1-31-13 Telephone No. 575-395-2632

1 1

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ANNUAL LPG STORAGE REPORT

Western Refining Company (Company)		PO Box 1345 Jal, New Mexico (Address)			
NAME OF STORAGE PROJECT _	Jal Terminal	COUNTY	LeaMonth/	/Year <u>12-12</u>	
WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)	
31055 State LPG Storage Well No. 4 30-025-35957	M32-23S-37E	740	13,414	41,218	
	ΤΟΤΑΙ S				

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 367

TOTAL CAPACITY (BBLS) 136,626 Barrels

NET CHANGE (BBLS) 27,804

BEGINNING STORAGE (BBLS) 27,804

ENDING STORAGE (BBLS) $\underline{0}$ I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date 1-31-13 Telephone No. 575-395-2632

Analytical Report 456094

1

for Western Refining

Project Manager: Ken Parker

South Brine Pond

29-JAN-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)

Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



29-JAN-13

Project Manager: **Ken Parker Western Refining** P.O. Box 1345 Jal, NM 88252

Reference: XENCO Report No(s): 456094 South Brine Pond Project Address:

Ken Parker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 456094. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 456094 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Nicholas Straccione Project Manager

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Sample Cross Reference 456094



Western Refining, Jal, NM

South Brine Pond

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Pond	W	01-21-13 09:41		456094-001

CASE NARRATIVE



Client Name: Western Refining Project Name: South Brine Pond



Project ID: Work Order Number(s): 456094 Report Date: 29-JAN-13 Date Received: 01/21/2013

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-905187 Alkalinity by SM2320B SM2320B

Batch 905187, Alkalinity, Total (as CaCO3) recovered below QC limits Samples affected are: 456094-001. The Laboratory Control Sample for Alkalinity, Total (as CaCO3) is within laboratory Control Limits

Batch: LBA-905595 Mercury, Total by EPA 245.1 E245.1

Batch 905595, Mercury recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 456094-001. The Laboratory Control Sample for Mercury is within laboratory Control Limits

456094 inteference matrix affected ms-msd



Project Location:

Project Id:

Contact: Ken Parker

Certificate of Analysis Summary 456094

Western Refining, Jal, NM

Project Name: South Brine Pond



Date Received in Lab: Mon Jan-21-13 12:54 pm Report Date: 29-JAN-13

Project Manager: Nicholas Straccione

				I Toject Manager.	Nicholas Straccione	
	Lab Id:	456094-001				
Analysis Requested	Field Id:	South Pond				- L
Analysis Kequestea	Depth:					
	Matrix:	WATER				
	Sampled:	Jan-21-13 09:41				
Alkalinity by SM2320B	Extracted:					-
SUB: TX104704215	Analyzed:	Jan-22-13 11:28				
	Units/RL:	mg/L RL				
Alkalinity, Total (as CaCO3)		183 4.00				
BTEX by SW 8260B	Extracted:	Jan-25-13 11:18				
SUB: TX104704215	Analyzed:	Jan-25-13 13:24				
	Units/RL:	mg/L RL				
Benzene		0.0114 0.00100				
Toluene		0.00454 0.00100				
Ethylbenzene		ND 0.00100				
m,p-Xylenes		ND 0.00200				
o-Xylene		ND 0.00100				
Total Xylenes		ND 0.00100	 			
Total BTEX		0.0159 0.00100				
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-22-13 14:53				
SUB: TX104704215	Analyzed:	Jan-22-13 14:53				
	Units/RL:	mg/L RL				
Chloride		187000 1000				
Mercury, Total by EPA 245.1	Extracted:	Jan-28-13 08:45				
SUB: TX104704215	Analyzed:	Jan-28-13 12:39				
	Units/RL:	mg/L RL				
Mercury		ND 0.000200				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Nul Ctr

Nicholas Straccione Project Manager



Project Location:

Project Id:

Contact: Ken Parker

Certificate of Analysis Summary 456094

Western Refining, Jal, NM

Project Name: South Brine Pond



Date Received in Lab: Mon Jan-21-13 12:54 pm Report Date: 29-JAN-13

Project Manager: Nicholas Straccione

456094-001 Lab Id: Field Id: South Pond Analysis Requested Depth: Matrix: WATER Sampled: Jan-21-13 09:41 Metals per ICP by EPA 200.7 Jan-24-13 12:00 Extracted: SUB: TX104704215 Analyzed: Jan-25-13 18:28 RL Units/RL: mg/L 0.200 ND Arsenic 0.200 ND Barium 0.100 Cadmium ND 100 Calcium 426 Chromium ND 0.200 0.200 Lead ND 1250 100 Magnesium 250 3360 Potassium 0.600 ND Selenium Silver 0.400 ND 65400 250 Sodium TDS by SM2540C Extracted: SUB: TX104704215 Analyzed: Jan-23-13 17:42 RL Units/RL: mg/L Total dissolved solids 315000 5.00 pH, Electrometric by EPA 150.2 Extracted: Analyzed: Jan-22-13 16:05 Deg C RL Units/RL: 23.8 K Temperature pH, Electrometric by EPA 150.2 Extracted: Jan-22-13 16:05 Analyzed: SU RL. Units/RL: pH 7.28 K

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Nul Ctr

Nicholas Straccione Project Manager



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

- RL Reporting Limit
- MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 Phone
 Fax

 (281) 240-4200
 (281) 240-4280

 (214) 902 0300
 (214) 351-9139

 (210) 509-3334
 (210) 509-3335

 (813) 620-2000
 (813) 620-2033

 (432) 563-1800
 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (770) 449-5477



Form 2 - Surrogate Recoveries

Project Name: South Brine Pond

Vork Orders: 456094	,		Project II	D:		
Lab Batch #: 905472	Sample: 456094-001 / SMP	Batch	h: l Matrix	:Water		
Units: mg/L	Date Analyzed: 01/25/13 13:24	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane		0.0535	0.0500	107	75-131	
1,2-Dichloroethane-D4		0.0572	0.0500	114	63-144	
Toluene-D8		0.0494	0.0500	99	80-117	
4-Bromofluorobenzene		0.0502	0.0500	100	74-124	
Lab Batch #: 905472	Sample: 632896-1-BLK / B	LK Batch	h: l Matrix	:Water		
Units: mg/L	Date Analyzed: 01/25/13 11:18	SUI	RROGATE RI	ECOVERY	STUDY	
BTE	X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane		0.0523	0.0500	105	75-131	
		0.0509	0.0500	102	63-144	
1,2-Dichloroethane-D4		0.0509	0.0500			
1,2-Dichloroethane-D4 Toluene-D8		0.0309	0.0500	93	80-117	
· · · · · · · · · · · · · · · · · · ·					80-117 74-124	
Toluene-D8	Sample: 632896-1-BKS / B	0.0464 0.0503	0.0500	93 101		
Toluene-D8 4-Bromofluorobenzene	Sample: 632896-1-BKS / B Date Analyzed: 01/25/13 10:24	0.0464 0.0503 KS Batch	0.0500	93 101 :Water	74-124	
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L	•	0.0464 0.0503 KS Batch	0.0500 0.0500 h: 1 Matrix	93 101 :Water	74-124	Flags
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L	Date Analyzed: 01/25/13 10:24 X by SW 8260B	0.0464 0.0503 KS Batch SUI Amount Found	0.0500 0.0500 h: 1 Matrix RROGATE RI True Amount	93 101 Water ECOVERY S Recovery %R	74-124 STUDY Control Limits	Flags
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2	Date Analyzed: 01/25/13 10:24 X by SW 8260B	0.0464 0.0503 KS Batch SUI Amount Found [A]	0.0500 0.0500 h: 1 Matrix RROGATE RI True Amount [B]	93 101 Water ECOVERY S Recovery %R [D]	74-124 STUDY Control Limits %R	Flags
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2 Dibromofluoromethane	Date Analyzed: 01/25/13 10:24 X by SW 8260B	0.0464 0.0503 KS Batch SUI Amount Found [A] 0.0477	0.0500 0.0500 n: 1 Matrix RROGATE RI True Amount [B] 0.0500	93 101 Water ECOVERY S Recovery %R [D] 95	74-124 STUDY Control Limits %R 75-131	Flags
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2 Dibromofluoromethane 1,2-Dichloroethane-D4	Date Analyzed: 01/25/13 10:24 X by SW 8260B	0.0464 0.0503 KS Batch SUI Amount Found [A] 0.0477 0.0481	0.0500 0.0500 h: 1 Matrix RROGATE RI True Amount [B] 0.0500 0.0500	93 101 : Water ECOVERY S Recovery %R [D] 95 96	74-124 STUDY Control Limits %R 75-131 63-144	Flags
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTEZ Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	Date Analyzed: 01/25/13 10:24 X by SW 8260B	0.0464 0.0503 KS Batch SUI Amount Found [A] 0.0477 0.0481 0.0481 0.0534	0.0500 0.0500 h: 1 Matrix RROGATE RI True Amount [B] 0.0500 0.0500 0.0500 0.0500	93 101 Water ECOVERY S Recovery %R [D] 95 96 96 107	74-124 STUDY Control Limits %R 75-131 63-144 80-117	Flags
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2 Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	Date Analyzed: 01/25/13 10:24 X by SW 8260B Analytes	0.0464 0.0503 KS Batch SUI Amount Found [A] 0.0477 0.0481 0.0481 0.0534 S Batch	0.0500 0.0500 h: 1 Matrix RROGATE RI True Amount [B] 0.0500 0.0500 0.0500 0.0500	93 101 Water ECOVERY S %R [D] 95 96 96 107 Water	74-124 STUDY Control Limits %R 75-131 63-144 80-117 74-124	Flags
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2 Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2	Date Analyzed: 01/25/13 10:24 X by SW 8260B Analytes Sample: 456094-001 S / MS	0.0464 0.0503 KS Batch SUI Amount Found [A] 0.0477 0.0481 0.0481 0.0534 S Batch	0.0500 0.0500 h: 1 Matrix RROGATE RI Amount [B] 0.0500 0.0500 0.0500 0.0500 0.0500 h: 1 Matrix	93 101 Water ECOVERY S %R [D] 95 96 96 107 Water	74-124 STUDY Control Limits %R 75-131 63-144 80-117 74-124	Flags
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2 Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2	Date Analyzed: 01/25/13 10:24 X by SW 8260B Analytes Sample: 456094-001 S / MS Date Analyzed: 01/25/13 14:41 X by SW 8260B	0.0464 0.0503 KS Batch SUI Amount Found [A] 0.0477 0.0481 0.0534 0.0534 SUI Amount Found SUI	0.0500 0.0500 h: 1 Matrix RROGATE RI Amount [B] 0.0500 0.0500 0.0500 0.0500 0.0500 h: 1 Matrix RROGATE RI True Amount	93 101 Water ECOVERY S Recovery %R [D] 95 96 96 96 107 Water ECOVERY S Recovery %R	74-124 STUDY Control Limits %R 75-131 63-144 80-117 74-124 STUDY Control Limits	
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTEZ Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTEZ	Date Analyzed: 01/25/13 10:24 X by SW 8260B Analytes Sample: 456094-001 S / MS Date Analyzed: 01/25/13 14:41 X by SW 8260B	0.0464 0.0503 KS Batch SUI Amount Found [A] 0.0477 0.0481 0.0481 0.0481 0.0534 S Batch SUI Amount Found [A]	0.0500 0.0500 h: 1 Matrix RROGATE RI Amount [B] 0.0500 0.0500 0.0500 0.0500 0.0500 h: 1 Matrix RROGATE RI True Amount [B]	93 101 Water ECOVERY S Recovery %R [D] 95 96 96 107 Water ECOVERY S Recovery %R [D]	74-124 STUDY Control Limits %R 75-131 63-144 80-117 74-124 STUDY Control Limits %R	
Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2 Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene Lab Batch #: 905472 Units: mg/L BTE2 Dibromofluoromethane	Date Analyzed: 01/25/13 10:24 X by SW 8260B Analytes Sample: 456094-001 S / MS Date Analyzed: 01/25/13 14:41 X by SW 8260B	0.0464 0.0503 KS Batch SUI Amount Found [A] 0.0477 0.0481 0.0481 0.0534 S Batch SUI Amount Found [A] 0.0535	0.0500 0.0500 h: 1 Matrix RROGATE RI Amount [B] 0.0500 0.0500 0.0500 0.0500 h: 1 Matrix RROGATE RI True Amount [B] 0.0500	93 101 Water ECOVERY S Recovery %R [D] 95 96 96 96 107 Water ECOVERY S Recovery %R [D] 107	74-124 STUDY Control Limits %R 75-131 63-144 80-117 74-124 STUDY Control Limits %R 75-131	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: South Brine Pond

Vork Orders : 456094 Lab Batch #: 905472 Units: mg/L	, Sample: 456094-001 SD / N Date Analyzed: 01/25/13 15:06	6 SURROGATE RECOVERY STUDY Amount True Control				
BTE	X by SW 8260B Analytes					Flags
Dibromofluoromethane		0.0497	0.0500	99	75-131	
1,2-Dichloroethane-D4		0.0526	0.0500	105	63-144	
Toluene-D8		0.0494	0.0500	99	80-117	
4-Bromofluorobenzene		0.0523	0.0500	105	74-124	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.





Work Order #: 456094	Project ID:					
Lab Batch #: 905472	Sample: 632896-	I-BKS	Matrix:	Water		
Date Analyzed: 01/25/2013 Date Pr	epared: 01/25/20	13 Analyst: SAD				
Reporting Units: mg/L	Batch #: 1	BLANK /I	BLANK SPI	KE REC	COVERY S	STUDY
BTEX by SW 8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	<0.00100	0.100	0.0878	88	66-142	
Toluene	< 0.00100	0.100	0.0824	82	59-139	
Ethylbenzene	< 0.00100	0.100	0.0871	87	75-125	
m,p-Xylenes	<0.00200	0.200	0.174	87	75-125	
o-Xylene	<0.00100	0.100	0.0913	91	75-125	
Date Analyzed: 01/22/2013 Date Pr	Sample: 632738- epared: 01/22/20 Batch #: 1	013	Matrix: Analyst: BLANK SPI	RKO	OVERY S	TUDY
Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<1.00	50.0	51.4	103	90-110	
Lab Batch #: 905595 5 Date Analyzed: 01/28/2013 Date Pr	<1.00 Sample: 632910- epared: 01/28/20 Batch #: 1	1-BKS 013	51.4 Matrix: Analyst: BLANK SPI	Water ANS		STUDY
Lab Batch #: 905595 5 Date Analyzed: 01/28/2013 Date Pr	Sample: 632910- epared: 01/28/20	1-BKS 013	Matrix: Analyst:	Water ANS		Flags





Work Order #: 456094		Project ID:																
Analyst: ALA		Da	ate Prepar	ed: 01/22/201	3			Date Analyzed: 01/22/2013										
Lab Batch ID: 905187	Sample: 905187-1-E	BKS	Batel	Matrix: V	Vater													
Units: mg/L			BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY															
Alkalinity by S Analytes	M2320B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag						
Alkalinity, Total (as CaCO3)		<4.00	250	261	104	250	261	104	0	80-120	20							
Analyst: MKO		Da	ate Prepar	ed: 01/24/201	Date A	nalyzed: (01/25/2013											
Lab Batch ID: 905572	Sample: 632834-1-E	SKS	Bate	h#: 1		Matrix: V	Nater											
Units: mg/L		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY																
Metals per ICP by	EPA 200 7	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control							
	EI /x 2001/	Sample Result [A]	Added	Spike Result	Spike %R	Added	Spike Duplicate	Dup. %R	RPD %	Limits %R	Limits %RPD	Flag						
Analytes		Sample Result		Spike	Spike		Spike	Dup.		Limits	Limits	Flag						
		Sample Result	Added	Spike Result	Spike %R	Added	Spike Duplicate	Dup. %R		Limits	Limits	Flag						
Analytes		Sample Result [A]	Added [B]	Spike Result [C]	Spike %R [D]	Added [E]	Spike Duplicate Result [F]	Dup. %R [G]	%	Limits %R	Limits %RPD	Flag						
Analytes Arsenic		Sample Result [A] <0.0100	Added [B] 1.00	Spike Result [C] 0.880	Spike %R [D] 88	Added [E] 1.00	Spike Duplicate Result [F] 0.907	Dup. %R [G] 91	% 3	Limits %R 85-115	Limits %RPD 20	Flag						
Analytes Arsenic Barium		Sample Result [A] <0.0100 <0.0100	Added [B] 1.00 1.00	Spike Result [C] 0.880 0.947	Spike %R [D] 88 95	Added [E] 1.00 1.00	Spike Duplicate Result [F] 0.907 0.974	Dup. %R [G] 91 97	% 3 3	Limits %R 85-115 85-115	Limits %RPD 20 20	Flag						
Analytes Arsenic Barium Cadmium		Sample Result [A] <0.0100 <0.0100 <0.00500	Added [B] 1.00 1.00 1.00	Spike Result [C] 0.880 0.947 0.932	Spike %R [D] 88 95 93	Added [E] 1.00 1.00 1.00	Spike Duplicate Result [F] 0.907 0.974 0.961	Dup. %R [G] 91 97 96	% 3 3 3	Limits %R 85-115 85-115 85-115	Limits %RPD 20 20 20	Flag						
Analytes Arsenic Barium Cadmium Calcium		Sample Result [A] <0.0100 <0.0100 <0.00500 <0.200	Added [B] 1.00 1.00 1.00 25.0	Spike Result Cl 0.880 0.947 0.932 23.8	Spike %R [D] 88 95 93 95	Added [E] 1.00 1.00 25.0	Spike Duplicate Result [F] 0.907 0.974 0.961 24.4	Dup. %R [G] 91 97 96 98	% 3 3 2	Limits %R 85-115 85-115 85-115 85-115	Limits %RPD 20 20 20 20	Flag						
Analytes Arsenic Barium Cadmium Calcium Chromium		Sample Result [A] <0.0100 <0.0100 <0.00500 <0.200 <0.0100	Added [B] 1.00 1.00 1.00 25.0 1.00	Spike Result [C] 0.880 0.947 0.932 23.8 0.939	Spike %R [D] 88 95 93 93 95 94	Added [E] 1.00 1.00 25.0 1.00	Spike Duplicate Result [F] 0.907 0.974 0.961 24.4 0.960	Dup. %R [G] 91 97 96 98 98	% 3 3 2 2	Limits %R 85-115 85-115 85-115 85-115 85-115	Limits %RPD 20 20 20 20 20 20	Flag						
Analytes Arsenic Barium Cadmium Calcium Chromium Lead		Sample Result [A] <0.0100 <0.00500 <0.200 <0.200 <0.0100 <0.0100	Added [B] 1.00 1.00 1.00 25.0 1.00 1.00	Spike Result [C] 0.880 0.947 0.932 23.8 0.939 0.981	Spike %R [D] 88 95 93 95 94 98	Added [E] 1.00 1.00 25.0 1.00 1.00	Spike Duplicate Result [F] 0.907 0.974 0.961 24.4 0.960 1.01	Dup. %R [G] 91 97 96 98 96 101	% 3 3 2 2 3	Limits %R 85-115 85-115 85-115 85-115 85-115 85-115	Limits %RPD 20 20 20 20 20 20 20							
Analytes Arsenic Barium Cadmium Calcium Chromium Lead Magnesium		Sample Result [A] <0.0100 <0.0100 <0.00500 <0.200 <0.0100 <0.0100 <0.200	Added [B] 1.00 1.00 25.0 1.00 1.00 25.0	Spike Result [C] 0.880 0.947 0.932 23.8 0.939 0.981 23.2	Spike %R [D] 88 95 93 95 94 98 98 93	Added [E] 1.00 1.00 25.0 1.00 25.0 1.00 25.0	Spike Duplicate Result [F] 0.907 0.974 0.961 24.4 0.960 1.01 24.1	Dup. %R [G] 91 97 96 98 96 101 96	% 3 3 2 2 3 4	Limits %R 85-115 85-115 85-115 85-115 85-115 85-115 85-115	Limits %RPD 20 20 20 20 20 20 20 20							
Analytes Arsenic Barium Cadmium Calcium Chromium Lead Magnesium Potassium		Sample Result [A] <0.0100 <0.0100 <0.00500 <0.200 <0.0100 <0.200 <0.200 <0.500	Added [B] 1.00 1.00 25.0 1.00 1.00 25.0 1.00 25.0 10.0	Spike Result [C] 0.880 0.947 0.932 23.8 0.939 0.981 23.2 9.21	Spike %R %R [D] 88 95 93 95 94 98 93 93	Added [E] 1.00 1.00 25.0 1.00 25.0 1.00 25.0 10.0	Spike Duplicate Result [F] 0.907 0.974 0.961 24.4 0.960 1.01 24.1 9.51	Dup. %R [G] 91 97 96 98 96 101 96 95	% 3 3 2 2 3 4 3	Limits %R 85-115 85-115 85-115 85-115 85-115 85-115 85-115 85-115	Limits %RPD 20 20 20 20 20 20 20 20 20 20							

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes





Work Order #: 456094 Analyst: KUG		Date	e Prepar	ed: 01/23/201	3		Project ID: Date Analyzed: 01/23/2013									
Lab Batch ID: 905310	Sample: 905310-1-BKS		Batch	n#: 1			Matrix: Water									
Units: mg/L			BLAN]	K /BLANK S	PIKE / E	/ BLANK SPIKE DUPLICATE RECOVERY STUDY										
TDS by SM254	IOC Bla Sample [4	e Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Bosult (E)	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]								
Total dissolved solids	<5.	.00	1000	990	99	1000	992	99	0	80-120	30					

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: South Brine Pond

Work Order #: 456094						
Lab Batch #: 905572			Pro	oject ID:		
Date Analyzed: 01/25/2013	Date Prepared: 01/24	nalyst: M				
QC- Sample ID: 456230-002 S	Batch #: 1		Γ	Matrix: W	/ater	
Reporting Units: mg/L	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Metals per ICP by EPA 200.7	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]				
Arsenic	< 0.0100	1.00	0.923	92	70-130	
Barium	<0.0100	1.00	0.942	94	70-130	
Cadmium	<0.00500	1.00	0.935	94	70-130	
Calcium	<0.200	25.0	23.3	93	70-130	
Chromium	<0.0100	1.00	0.935	94	70-130	
Lead	< 0.0100	1.00	0.973	97	70-130	
Magnesium	<0.200	25.0	23.1	92	70-130	
Potassium	<0.500	10.0	9.16	92	70-130	
Selenium	< 0.0300	1.00	0.983	98	70-130	
Silver	<0.0200	0.500	0.444	89	70-130	
Sodium	<0.500	25.0	24.0	96	70-130	

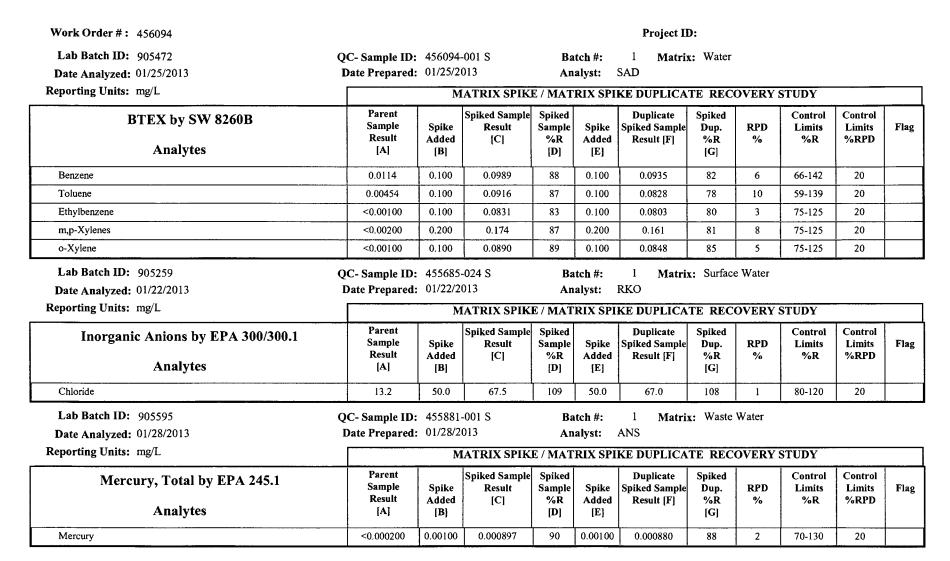
Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference $[E] = 200^{\circ}(C-A)/(C+B)$ All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: South Brine Pond



Matrix Spike Percent Recovery $[D] = 100^{+}(C-A)/B$ Relative Percent Difference RPD = $200^{+}[(C-F)/(C+F)]$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Work Order #: 456094						Project II) :								
Lab Batch ID: 905595 Date Analyzed: 01/28/2013	QC- Sample ID: Date Prepared:				tch #: alyst:	1 Matrix ANS	: Water								
Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY														
Mercury, Total by EPA 245.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Мегсигу	<0.000200	0.00100	<0.000200	0	0.00100	<0.000200	0	NC	70-130	20	x				
Lab Batch ID: 905572 Date Analyzed: 01/25/2013	QC- Sample ID:455923-002 SBatch #:1Matrix:Drinking WaterDate Prepared:01/24/2013Analyst:MKO														
Reporting Units: mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY														
Metals per ICP by EPA 200.7 Analytes	Parent Sample Result [A]	Spike Added	Spiked Sample Result [C]	Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Analytes		[B]		[D]	[E]		[G]								
Arsenic	<0.0100	1.00	0.901	90	1.00	0.907	91	1	70-130	20					
Barium	0.147	1.00	1.11	96	1.00	1.11	96	0	70-130	20					
Cadmium	< 0.00500	1.00	0.946	95	1.00	0.953	95	1	70-130	20					
Calcium	88.4	25.0	109	82	25.0	107	74	2	70-130	20					
Chromium	<0.0100	1.00	0.947	95	1.00	0.955	96	1	70-130	20					
Lead	<0.0100	1.00	0.975	98	1.00	0.993	99	2	70-130	20					
Magnesium	36.5	25.0	59.0	90	25.0	58.6	88	1	70-130	20					
Potassium	3.86	10.0	13.5	96	10.0	13.4	95	1	70-130	20					
Selenium	<0.0300	1.00	1.01	101	1.00	1.02	102	1	70-130	20					
Silver	<0.0200	0.500	0.461	92	0.500	0.467	93	1	70-130	20					
Sodium	65.1	25.0	87.3	89	25.0	86.2	84	1	70-130	20					

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: South Brine Pond

Work	Order #	456094	

Lab Batch #: 905187 Date Analyzed: 01/22/2013 10:52 QC- Sample ID: 455995-001 D	Date Prepar Batch		3 Ana Mat	Project I lyst: ALA trix: Water		
Reporting Units: mg/L		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Alkalinity by SM2320B		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte						
Alkalinity, Total (as CaCO3)		191	192	1	20	
Lab Batch #: 905187						
Date Analyzed: 01/22/2013 11:31	Date Prepar	ed: 01/22/2013	3 Ana	lyst:ALA		
QC- Sample ID: 456094-001 D	Batch	1#: 1	Mat	rix: Water	•	
Reporting Units: mg/L		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Alkalinity by SM2320B		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			(B)			
Alkalinity, Total (as CaCO3)		183	172	6	20	
Lab Batch #: 905310 Date Analyzed: 01/23/2013 17:42 QC- Sample ID: 455830-003 D	Date Prepar Batch	ed:01/23/2013		lyst:KUG rix: Water		
Reporting Units: mg/L		SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
TDS by SM2540C		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte						
Total dissolved solids		961	961	0	30	
Lab Batch #: 905615 Date Analyzed: 01/22/2013 16:05 QC- Sample ID: 456094-001 D	Date Prepar Batch	ed:01/22/2013		lyst: WRU rix: Water		
Reporting Units: Deg C	Dutth		SAMPLE			OVERY
pH, Electrometric by EPA 15 Analyte	0.2	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Temperature		23.8	23.8	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: South Brine Pond

Work Order #: 456094

Lab Batch #: 905615				Project I	D:	
Date Analyzed: 01/22/2013 16:05	Date Prepared	:01/22/2013	Anal	yst: WRU		
QC- Sample ID: 456094-001 D	Batch #	: 1	Mat	rix: Water		
Reporting Units: SU		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
pH, Electrometric by EPA 150).2 Pa	arent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	;		[B]			
pH		7.28	7.29	0	20	

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H, PA, SC, TN, UT Other -mail Results to	PM and		pa				No: 226	D		s VOAs	Other:			-2 CALL		1 Appdx	b. PCBs										6 (C)	10d 21d	Highest Hit	are pre-approved)			
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Sample ID	Sampling	Time		eite		# Container	ner S	Container Type	Preservatives	VCOS: Full-List	đ	SIM		SVOCs: Full-L	Pesticides	Metals: RCRA-	TCLP	EDB / DBCP	othor	1	L							AP	Addn: PAH above	Hold Samples	Cle		
Gampie in	Date		Depth tt' In" m	Matrix	l e	ont	Container	ntai	ser	So:	VCO's	PAHs	TX-1005	ğ		žals:	SPLP.	B/I	Å	1	0	F						TATASAP	-ind	SP	Sample		
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XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

 Client: Western Refining
 Acceptable Temperature Range: 0 - 6 degC

 Date/ Time Received: 01/21/2013 12:54:00 PM
 Air and Metal samples Acceptable Range: Ambient

 Work Order #: 456094
 Temperature Measuring device used :

 Sample Receipt Checklist
 Comments

#1 *Temperature of cooler(s)?	0
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Date: 01/21/2013

Checklist reviewed by:

Date: 01/21/2013



1 CS CONSISSIN



ENGINEERING SURVEYING TESTING DEFINING QUALITY SINCE 1965

Ken Parker, Western Refining PO Box 1345 Jal, New Mexico, 88252 575-392-2632

21 December, 2012

RE: Survey Report Western Refining Subsidence Monitoring

Dear Mr. Parker,

Please review this report of survey findings for the subject project. Please comment as necessary.

SUBSIDENCE MONUMENT MONITORING

The surveyed elevations along with deltas from established values as follows:

			·····
NAME	BASE ELEVATION 5/13/2009	ELEVATION 12/21/2012	CHANGE IN ELEVATION
CP-1	3293.47	3293.49	+ 0.02'
CP-2	3297.82	3297.82	No Change
CP-3	3293.56	3293.57	+ 0.01'
SM-1	3292.27	3292.29	+ 0.02'
SM-2	3294.56	3294.57	+ 0.01'
SM-3	3294.85	3294.86	+ 0.01'
SM-4	3294.86	3294.87	+ 0.01'
SMF-1 (Mid Flange)	3295.62	3295.65	+ 0.03'
SMF-1 (Lower Flange)	3293.67	3293.71	+ 0.04'
SMF-2 (Mid Flange)	3297.42	3297.45	+ 0.03'
SMF-2 (Lower Flange)	3295.52	3295.55	+ 0.03'
SMF-3 (Mid Flange)	3298.18	3298.17	- 0.01'
SMF-3 (Lower Flange)	3296.44	3296.44	No Change
SMF-4 (Mid Flange)	3297.73	3297.74	+ 0.01'
SMF-4 (Lower Flange)	3295.99	3296.00	+ 0.01'
BM-1	3294.30	3294.33	+ 0.03'
BM-2	3296.62	3296.64	+ 0.02'
BM-3	3297.73	3297.73	No Change

ANNUAL LPG WELL REPORT

OPERATOR: Western Refining Company

UIC CLASS LPG STORAGE WELLS API NUMBER

31055 WELL 1: 30-025-35954 31055 WELL 2: 30-025-35955 31055 WELL 3: 30-025-35956 31055 WELL 4: 30-025-35957

WESTERN REFINING JAL STORAGE FACILITY

Company Representative: Ken Parker

Date: 1-19-17

Annual LPG Well Report

Date: 1-20-17

Well Summary

Well 1

Well one was utilized 2016 injecting 128,629 barrels of LPG into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was between 230 & 250 barrels per hour with a maximum injecting pressure of 750 psig.

In 2016 133,626 barrels of LPG was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 440 & 600 psig.

In 2016 well one stored product 12 months out of the year. The maximum volume stored in the well reached 20% capacity.

Well 2

Well two was utilized in 2016 injecting 513,033 barrels of LPG into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was between 230 & 250 barrels per hour with a maximum injecting pressure of 790 psig.

In 2016 503,946 barrels of LPG was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 400 & 600 psig.

In 2016 well two stored product 12 months out of the year. The maximum volume stored in the well reached 62% capacity.

Well 3

Well three was utilized in 2016 injecting 62,613 barrels of LPG into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was between 187 barrels per hour with a maximum injecting pressure of 750 psig.

In 2016 48,946 barrels of LPG was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 600 to 680 psig.

In 2016 well three stored product 12 months out of the year. The maximum volume stored in the well reached 45% capacity.

Well 4

Well four was utilized in 2016 injecting 192,439 barrels of LPG into storage. Well was operated within the OCD guidelines without any issues. Injecting rate was between 190-194 barrels per hour with a maximum injecting pressure of 800 psig.

In 2016 170,780 barrels of LPG was withdrawn from the well. Withdraw rate was 214 barrels per hour. Operating pressure of the well was between 600 to 680 psig.

In 2016 well four stored product 9 months out of the year. The maximum volume stored in the well reached 49% capacity.

Production Volumes

See Attachments Well 1 Annual C-131B Well 2 Annual C-131B Well 3 Annual C-131B Well 4 Annual C-131B

Injecting Fluid Analysis

See Attachment 543728 Report

Deviation From Normal Production Method N/A

Leak and Spill Report N/A

Ground Water Monitoring N/A

Cavity Subsidence See Attachment

Area of Review No activity in the year 2016 Pursuant to all applicable parts of the Water Quality Control Commission (WQCC) Regulations 20.6.2 NMAC and more specifically 20.6.2.5101. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Western Refining Company Company Name

Ken Parker Company Representative

Company Representative Signature

Title: Facility Manager

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining (Company		РО Во	<u>x 1345 Jal, New</u> (Address)	Mexico
NAME OF STORAGE PROJECT		COUNTY	Lea Month/	Vear 12-16
			<u> </u>	
WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 1 30-025-35954	M32-23S-37E	750	128,629	133,626
	ΤΟΤΑΙ S			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 855

TOTAL CAPACITY (BBLS) 201,013 Barrels

NET CHANGE (BBLS) <u>4,997</u>

BEGINNING STORAGE (BBLS) 18,489

ENDING STORAGE (BBLS) $\underline{13,492}$ I hereby certify that this report is true and complete to the best of my knowledge and belief.

1 Signature ĽN L

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date <u>1-21-17</u> Telephone No. <u>575-395-2632</u>

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company		PO Box 1345 Jal, New Mexico			
(Company))		(Address)		
NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	LeaMonth	/Year <u>12-16</u>	
WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)	
31055 State LPG Storage Well No. 2 30-025-35955	M32-23S-37E	790	513,033	503,946	
	ΤΟΤΔΙ S				

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 908

TOTAL CAPACITY (BBLS) 144,443 Barrels

NET CHANGE (BBLS) <u>9,087</u>

BEGINNING STORAGE (BBLS) 41,018

ete to the best of my

Signature Ten Huber

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date 1-21-17 Telephone No. 575-395-2632

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining		PO Bo	<u>x 1345 Jal, New I</u>	Mexico
(Company))		(Address)	
NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lea Month/	Year <u>12-16</u>
WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 3 30-025-35956	M32-23S-37E	750	62,613	48,946
	ΤΟΤΔΙ S			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 467

TOTAL CAPACITY (BBLS) 79,692 Barrels

NET CHANGE (BBLS) <u>13,667</u>

BEGINNING STORAGE (BBLS) 0

ENDING STORAGE (BBLS) <u>13,667</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature M Zn

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date 1-21-17 Telephone No. 575-395-2632

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Company	PO Bo	x 1345 Jal, New (Address)	Mexico
Jal Terminal	COUNTY	Lea Month	/Year <u>12-16</u>
LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
M32-23S-37E	800	192,439	170,780
)	Jal Terminal LOCATION UNIT SEC. TWP. RANGE	Jal Terminal COUNTY LOCATION UNIT SEC. TWP. RANGE MAXIMUM INJECTION PRESSURE M32-23S-37E 800	Jal Terminal COUNTY Lea Month LOCATION MAXIMUM NJECTION UNIT SEC. TWP. RANGE MAXIMUM NJECTION M32-23S-37E 800 192,439

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1,007

TOTAL CAPACITY (BBLS) 136,626 Barrels

NET CHANGE (BBLS) 21,659

BEGINNING STORAGE (BBLS) 27,158

ENDING STORAGE (BBLS) <u>48,817</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature Un

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date <u>1-21-17</u> Telephone No. <u>575-395-2632</u>

Analytical Report 543728

for Western Refining

Project Manager: Ken Parker South Brine Pond

17-JAN-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)



17-JAN-17

Project Manager: Ken Parker Western Refining P.O. Box 1345 Jal, NM 88252

Reference: XENCO Report No(s): 543728 South Brine Pond Project Address: Jal, NM

Ken Parker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 543728. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 543728 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kinsk

Kelsey Brooks Project Manager Recipient of the Prest

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Sample Cross Reference 543728



Western Refining, Jal, NM

South Brine Pond

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Pond	W	01-10-17 13:00	- 1 ft	543728-001



CASE NARRATIVE



Client Name: Western Refining Project Name: South Brine Pond

Project ID: Work Order Number(s): 543728

Report Date: *17-JAN-17* Date Received: *01/10/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3007540 Metals by EPA 200.8 Sample diluted because of high Sodium leading to the failure of internal standard. DEP 011717



Ken Parker

Jal, NM

Project Id:

Project Location:

Contact:

Certificate of Analysis Summary 543728

Western Refining, Jal, NM Project Name: South Brine Pond



Date Received in Lab:Tue Jan-10-17 04:48 pmReport Date:17-JAN-17Project Manager:Kelsey Brooks

	Lab Id:	543728-001				
Analysis Requested	Field Id:	South Pond				
Analysis Kequesteu	Depth:	-1 ft				
	Matrix:	WATER				
	Sampled:	Jan-10-17 13:00				
Alkalinity by SM2320B	Extracted:					
SUB: TX104704215	Analyzed:	Jan-12-17 11:27	-			
	Units/RL:	mg/L RL	-			
Alkalinity, Total (as CaCO3)		122 4.00				
BTEX by EPA 8021B	Extracted:	Jan-11-17 16:00				
	Analyzed:	Jan-11-17 21:40				
	Units/RL:	mg/L RL				
Benzene		ND 0.00200				N CAR I III IIII IIII IIIII
Toluene		ND 0.00200				
Ethylbenzene		ND 0.00200				
m_p-Xylenes		ND 0.00200				
o-Xylene		ND 0.00200				
Total Xylenes		ND 0.00200				
Total BTEX		ND 0.00200				
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-11-17 21:08				
	Analyzed:	Jan-11-17 21:08				
	Units/RL:	mg/L RL				
Chloride		189000 500		and the second sec		
Mercury, Total by EPA 245.1	Extracted:	Jan-13-17 10:00				
SUB: TX104704215	Analyzed:	Jan-13-17 15:22				
	Units/RL:	mg/L RL				
Mercury	· · · · · · · · · · · · · · · · · · ·	ND 0.00200				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Huns Roah

Kelsey Brooks Project Manager

Final 1.000



Ken Parker

Jal, NM

Project Id:

Project Location:

Contact:

Certificate of Analysis Summary 543728

Western Refining, Jal, NM Project Name: South Brine Pond



Date Received in Lab:Tue Jan-10-17 04:48 pmReport Date:17-JAN-17Project Manager:Kelsey Brooks

	Lab Id:	543728-001
	Field Id:	South Pond
Analysis Requested	Depth:	-1 ft
	Matrix:	WATER
	Sampled:	Jan-10-17 13:00
Metals by EPA 200.8	Extracted:	Jan-13-17 10:30
SUB: TX104704215	Analyzed:	Jan-13-17 17:20
	Units/RL:	mg/L RL
Arsenic	1	ND 0.0200
Barium		0.0858 0.0400
Cadmium		ND 0.0200
Chromium		ND 0.0400
Lead		ND 0.0400
Selenium		ND 0.0200
Silver		ND 0.0200
Metals per ICP by EPA 200.7		
SUB: TX104704215	Extracted:	Jan-13-17 10:35
50B. 1A104/04215	Analyzed:	Jan-16-17 14:33
	Units/RL:	mg/L RL
Calcium		575 10.0
Magnesium		1810 20.0
Potassium		4460 500
Sodium		93200 500
TDS by SM2540C	Extracted:	
SUB: TX104704215	Analyzed:	Jan-12-17 10:55
	Units/RL:	mg/L RL
Total Dissolved Solids	Unus/RL:	310000 5.00
		510000 5.00
рН by SM4500-Н SUB: TX104704215	Extracted:	
SUD: 1A104/04215	Analyzed:	Jan-12-17 13:25
	Units/RL:	Deg C RL
Temperature		19.0 K

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kms Roah

Kelsey Brooks Project Manager



Contact:

Project Location:

Ken Parker

Jal, NM

Certificate of Analysis Summary 543728

Western Refining, Jal, NM Project Name: South Brine Pond



Date Received in Lab:Tue Jan-10-17 04:48 pmReport Date:17-JAN-17Project Manager:Kelsey Brooks

	Lab Id:	543728-001			
Anglusis Baguastad	Field Id:	South Pond			
Analysis Requested	Depth:	-1 ft			
	Matrix:	WATER			
	Sampled:	Jan-10-17 13:00			
рН by SM4500-Н	Extracted:				
SUB: TX104704215	Analyzed:	Jan-12-17 13:25			
	Units/RL:	SU RL			
pH		7.44 K	 	1101	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Huns Boah

Kelsey Brooks Project Manager

Final 1.000



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and OA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit	SDL Sample Detection Limit	LOD Limit of Detection

- POL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: South Brine Pond

	ders: 54372 #: 3007394	8, Sample: 543728-001 / SMP	Batch:	Project ID	: Water		
Units:	mg/L	Date Analyzed: 01/11/17 21:40	SUR	ROGATE R	ECOVERY	STUDY	
	втех	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor			0.0267	0.0300	89	80-120	
4-Bromoflu			0.0320	0.0300	107	80-120	
Lab Batch	#: 3007394	Sample: 718351-1-BLK / BLK	Batch:	1 Matrix	: Water		
Units:	mg/L	Date Analyzed: 01/11/17 21:56	SUR	ROGATE R	ECOVERY	STUDY	
	втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	benzene		0.0257	0.0300	86	80-120	
4-Bromoflu			0.0257	0.0300	86	80-120	
	#: 3007394	Sample: 718351-1-BKS / BKS	1		: Water		
Units:	mg/L	Date Analyzed: 01/11/17 17:38					
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0286	0.0300	95	80-120	
4-Bromoflu	orobenzene		0.0301	0.0300	100	80-120	
Lab Batch	#: 3007394	Sample: 718351-1-BSD / BSD	Batch:	1 Matrix	: Water		
Units:	mg/L	Date Analyzed: 01/11/17 17:54	SUF	ROGATE R	ECOVERY	STUDY	
	BTE	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R {D}	Control Limits %R	Flags
		Analytes					
1,4-Difluor			0.0304	0.0300	101	80-120	
4-Bromoflu			0.0312	0.0300	104	80-120	
	#: 3007394	Sample: 543688-001 S / MS	Batch:		: Ground Wate		
Units:	mg/L	Date Analyzed: 01/11/17 18:10	SUF	ROGATE R	RECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analytes					
1,4-Difluor			0.0285	0.0300	95	80-120	
4-Bromoflu	orobenzene		0.0331	0.0300	110	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: South Brine Pond

	rders : 54372 #: 3007394	8, Sample: 543688-001 SD / M	ISD Batcl	Project ID n: 1 Matrix	: Ground Wate	er			
Units:	mg/L	Date Analyzed: 01/11/17 18:27	8:27 SURROGATE RECOVERY STUDY						
		K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor			0.0292	0.0300	97	80-120			
4-Bromoflu	uorobenzene		0.0337	0.0300	112	80-120			

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.





Project Name: South Brine Pond

Work Order	r #: 543728							Proj	ject ID:			
Analyst:	MJP	D	ate Prepar	ed: 01/12/20	17			Date A	nalyzed:	01/12/2017		
Lab Batch ID	Sample: 3007474 Sample: 300	7474-1-BKS	Batel	n#: 1					Matrix:	Water		
Units:	mg/L		BLAN	K/BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
	Alkalinity by SM2320B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result (F)	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analy	y Total (as CaCO3)	<4.00	250	263	105	250	267	107	2	80-120	20	
Analyst: Lab Batch ID Units:	ALJ 3007394 Sample: 718. mg/L		Batcl	ed: 01/11/20 n #: 1 K /BLANK		BLANK	SPIKE DUP		Matrix:		DY	
Analy	BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ytes	<0.00200	0.100	0.125	125	0.100	0.122	122	2	70-125	25	
Toluene		<0.00200	0.100	0.117	117	0.100	0.113	113	3	70-125	25	
Ethylbenz	zene	< 0.00200	0.100	0.118	118	0.100	0.126	115	7	71-129	25	
m_p-Xyle	enes	<0.00200	0.200	0.253	127	0.200	0.246	123	3	70-131	25	1
o-Xylene	· · · · · · · · · · · · · · · · · · ·	<0.00200	0.100	0.117	117	0.100	0.115	115	2	71-133	25	
L							1	_				·

Relative Percent Difference RPD = 200*[(C-F)/(C+F)]Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes





Project Name: South Brine Pond

Work Order #: 543728							Proj	ject ID:			
Analyst: MNR	D	ate Prepar	ed: 01/11/20	17			Date A	nalyzed:	01/11/2017		
Lab Batch ID: 3007405 Sample: 718362-	I-BKS	Batch	n#: 1					Matrix:	Water		
Units: mg/L		BLAN	K /BLANK	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	25.0	26.6	106	25.0	26.7	107	0	90-110	20	
Analyst: DHE	D	ate Prepar	ed: 01/13/20	17	- L		Date A	nalyzed:	01/13/2017		
Lab Batch ID: 3007542 Sample: 718425-	I-BKS	Batch	h#: 1					Matrix:	Water		
Units: mg/L		BLAN	K /BLANK	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
Mercury, Total by EPA 245.1	Blank Sample Result [A]		Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Mercury	<0.000200	0.00200	0.00203	102	0.00200	0.00196	98	4	85-115	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)| Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes





Project Name: South Brine Pond

Work Order #: 543728							Proj	ect ID:			
Analyst: DEP	D	ate Prepar	ed: 01/13/20	17			Date A	nalyzed:	01/13/2017		
ab Batch ID: 3007540 Sample: 71844	3-1-BKS	Batel	1#: 1					Matrix:	Water		
J nits: mg/L		BLAN	K/BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STU	ЭY	
Metals by EPA 200.8 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	<0.00200	0.100	0.0974	97	0.100	0.103	103	6	85-115	20	
Barium	<0.00400	0.100	0.0994	99	0.100	0.105	105	5	85-115	20	-
Cadmium	<0.00200	0.100	0.0997	100	0.100	0.106	106	6	85-115	20	
Chromium	< 0.00400	0.100	0.101	101	0.100	0.106	106	5	85-115	20	
Lead	< 0.00200	0.100	0.0992	99	0.100	0.105	105	6	85-115	20	
Selenium	<0.00200	0.100	0.101	101	0.100	0.107	107	6	85-115	20	
Silver	<0.00200	0.0500	0.0494	99	0.0500	0.0521	104	5	85-115	20	
Analyst: DEP	D	ate Prepar	ed: 01/13/20	17			Date A	nalyzed:	01/13/2017		
Lab Batch ID: 3007616 Sample: 71844	4-1-BKS	Bate	h #: 1					Matrix:	Water		
J nits: mg/L		BLAN	K/BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
Metals per ICP by EPA 200.7	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes									00.115		
Calcium	<0.200	25.0	24.0	96	25.0	23.9	96	0	85-115	20	
Magnesium	<0.400	25.0	24.1	96	25.0	23.9	96	1	85-115	20	
Potassium	<0.500	10.0	9.59	96	10.0	9.43	94	2	85-115	20	
Sodium	<0.500	25.0	22.9	92	25.0	22.7	91	1	85-115	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100*(C)/[B]Blank Spike Duplicate Recovery [G] = 100*(F)/[E]All results are based on MDL and Validated for QC Purposes





Project Name: South Brine Pond

Work Order #: 543728							Proj	ect ID:			
Analyst: YAV	D	ate Prepar	ed: 01/12/20)17		Date Analyzed: 01/12/2017					
Lab Batch ID: 3007401 Sample: 3007401	-1-BKS	Batch	1 #: 1					Matrix:	Water		
Units: mg/L		BLAN	K/BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
TDS by SM2540C	Blank Sample Result [A]		Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Total Dissolved Solids	<5.00	1000	1020	102	1000	1030	103	1	80-120	10	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)| Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

1

Date Prepared: 01/13/2017

Batch #:



Project Name: South Brine Pond

Work Order #: 543728 Lab Batch #: 3007540 Date Analyzed: 01/13/2017 QC- Sample ID: 543700-001 S Reporting Units: mg/L

Project ID:

Analyst: DEP

Matrix: Waste Water

Reporting Units: mg/L	MATH	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY	
Metals by EPA 200.8 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Arsenic	<0.00200	0.100	0.0901	90	70-130	1	
Barium	<0.00400	0.100	0.107	107	70-130		
Cadmium	<0.00200	0.100	0.0922	92	70-130		
Chromium	<0.00400	0.100	0.0987	99	70-130		
Lead	<0.00200	0.100	0.103	103	70-130		
Selenium	<0.00200	0.100	0.0908	91	70-130		
Silver	<0.00200	0.0500	0.0463	93	70-130		
Lab Batch #: 3007616							
Date Analyzed: 01/13/2017	Date Prepared: 01/1	3/2017	Α	nalyst: D	DEP		
QC- Sample ID: 543798-006 S	Batch #: 1		Ν	Aatrix: (Ground Water		
Reporting Units: mg/L	MATH	RIX / MA	TRIX SPIKE	RECO	VERY STU	JDY	
Metals per ICP by EPA 200.7 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag	
Calcium	6.33	25.0	29.8	94	70-130	+	
Magnesium	1.16	25.0	24.6	94	70-130		
Potassium	<0.500	10.0	0.0 9.94 99 70-130				
Sodium	7.94	25.0	30.6	91	70-130		

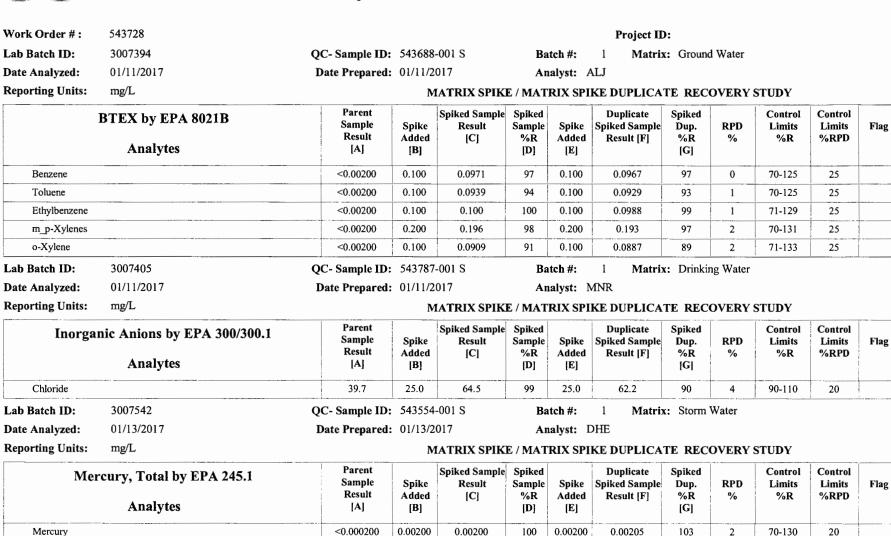
Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: South Brine Pond



Matrix Spike Percent Recovery $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD = $200^{\circ}[(C-F)/(C+F)]$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

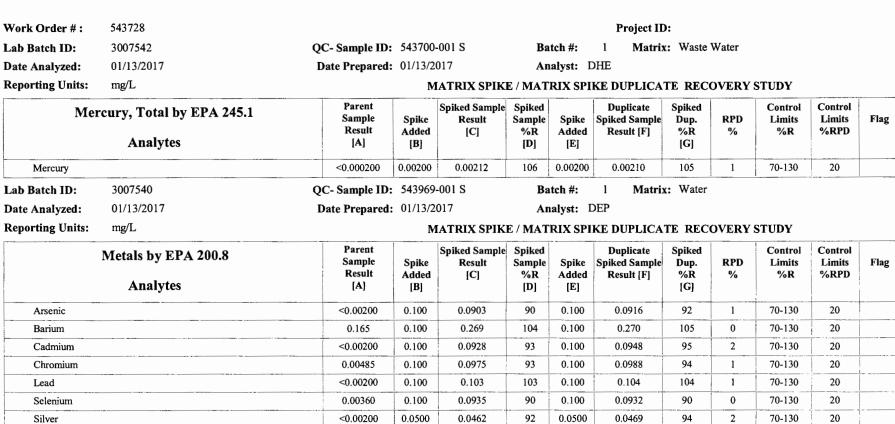
ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

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Final 1.000
```



Form 3 - MS / MSD Recoveries

Project Name: South Brine Pond



Matrix Spike Percent Recovery $[D] = 100^{+}(C-A)/B$ Relative Percent Difference RPD = $200^{+}(C-F)/(C+F)$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: South Brine Pond

Work Order # :	543728	Project ID:										
Lab Batch ID:	3007616	QC- Sample ID:	543690-	001 S	Ba	tch #:	l Matrix	c: Drinki	ng Water			
Date Analyzed:	01/13/2017	Date Prepared: 01/13/2017 Analyst: DEP										
Reporting Units:	mg/L	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
Met	als per ICP by EPA 200.7	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]		[D]	[E]	Result [F]	[G]	70	761	/0111.0	
Calcium		223	25.0	240	68	25.0	239	64	0	70-130	20	X
Magnesium		95.5	25.0	118	90	25.0	117	86	1	70-130	20	
Potassium		14.1	10.0	25.4	113	10.0	25.8	117	2	70-130	20	
Sodium		193	25.0	218	100	25.0	216	92	1	70-130	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, <math>NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Work Order #: 543728

Sample Duplicate Recovery



Project Name: South Brine Pond

Lab Batch #: 3007474 Date Analyzed: 01/12/2017 11:16 QC- Sample ID: 543616-001 D	Date Prepar Batch	ed:01/12/2017		Project I lyst:MJP trix: Water		
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Alkalinity by SM2320B Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (as CaCO3)		79.6	80.0	1	20	
Lab Batch #: 3007474 Date Analyzed: 01/12/2017 12:36	Date Prepar Batcl	ed:01/12/2017		lyst:MJP trix: Water	I	I
QC- Sample ID: 543854-002 D	Dater				_	OVEDV
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC		OVERY
Alkalinity by SM2320B Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (as CaCO3)		421	418	1	20	
		421	410	1	20	
Lab Batch #: 3007401 Date Analyzed: 01/12/2017 10:55	-	ed:01/12/2017		lyst:YAV		
QC- Sample ID: 543684-001 D	Batch			trix: Drink	-	
Reporting Units: mg/L		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
TDS by SM2540C Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total Dissolved Solids		665	684	3	10	
Lab Batch #: 3007495						
Date Analyzed: 01/12/2017 13:25	Date Prepar	ed:01/12/2017	/ Ana	lyst:YAV		
QC- Sample ID: 543690-001 D	Batch			trix: Drink	ing Water	
Reporting Units: Deg C		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
pH by SM4500-H Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Temperature		19.1	19.1	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



Work Order #: 543728

Sample Duplicate Recovery



Project Name: South Brine Pond

Lab Batch #: 3007495 Date Analyzed: 01/12/2017 13:25 Date QC- Sample ID: 543690-001 D	Prepared: 01/12/2017 Batch #: 1		Project I alyst: YAV trix: Drinki		
Reporting Units: SU		/ SAMPLE			OVERY
pH by SM4500-H Analyte	Parent Sample Result [A]		RPD	Control Limits %RPD	Flag
pH	7.65	7.67	0	20	
Lab Batch #: 3007495 Date Analyzed: 01/12/2017 13:25 Date QC- Sample ID: 543728-001 D	Prepared: 01/12/201 Batch #: 1		alyst: YAV trix: Water		
Reporting Units: Deg C	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
pH by SM4500-H Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
	19.0	19.1		20	
Temperature	19.0	19.1		20	
Lab Batch #: 3007495 Date Analyzed: 01/12/2017 13:25 Date QC- Sample ID: 543728-001 D	Prepared: 01/12/201 Batch #: 1		alyst:YAV atrix: Water		
Reporting Units: SU	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
pH by SM4500-H Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
рН	7.44	7.45	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

		CHA	Page _ Of _	CUSTOD	Y		
Setting the Standard since 1990 Stafford, Texas (281-240-4200)					Odessa, Texas (43)	2.562.1900)	Lakeland, Florida (863-646-8526)
Dallas, Texas (214-902-0300)					Norcross, Georgia		Tampa, Florida (813-620-2000)
Service Center - San Antonio, Texas (210-509-3334)			www.xenco.com		Xenco Quote #	Xenco Job #	
			WWW.Xendo.com				A STATE OF A
Client / Reporting Information		Project Inf	ormation		i Analyt	ical Information	Matrix Codes
Company Name / Branch: Western Refining Company Address:	Proj	ject Name/Number:	buth Brid	ve Bard	L.005		A= Air S = Soil/Sed/Solid GW =Ground Water DW = Drinking Water
POBOX 1345 JAL, NM 8 Email: Phone No:	8252	oice To:	AL, NM		1 32,		P = Product
NEW. PATHOR WWR. COM 375-3 Project Contact: HEN PArker	<u>95-263</u> 2 PO	Number:		99. 99. 199. 199. 199. 199. 199. 199. 1	NES ES	inity	SW = Surface water SL = Siudge WW= Waste Water W = Wipe O = Oil
Samplers's Name: Ken Parker			1		XAA	1 201	WW= Waste Water
No. Field ID / Point of Collection	Sample	Nate Time Matri	D OHIZO OHIZO etate	H2SO4 Nach MECH MECH MECH NONE	1222	ERE!	Field Comments
1 South Pond		Date Time Matrix		X			Piero Commerks
2		0 10 1.00111-					
3							
4							
5							
6							
7							
8							
9							
10							
Turnaround Time (Business days)			Data Deliverable Information	1	A State State	Notes:	
Same Day TAT S Day TAT		Level II St	a QC	Lovel IV (Full Data Pkg	(/raw data)	CATTI	19 IN DROGRESS
Next Day EMERGENCY		Lovei III S	td QC+ Forms	TRRP Level IV			
2 Day EMERGENCY Contract TAT		Level 3 (C	LP Forms)	UST / RG -411			
3 Day EMERGENCY		TRRP Che	ecklist				
TAT Starts Day received by Lab, if received by 3:0	0 pm					FED-EX / UPS: Tracking	3 #
Rolinguished by Sampler:	MUST BE DOCUL	Received By	ME SAMPLES CHANGE POS	SESSION, INCLUDING COU Relinguished By:	JRIER DELIVERY Date Time	Received By	-
1 Jen Kilen	1-10-1	17 1 1920	Utilin	2	1-10-17	16.482	
Relinguished by:	Date Time:	Received By:		Relinquished By:	Date Time	Received By	Temp: IR ID:R-8
3 Ralinquished by: 5	Date Time:	3 Received By: 5		4 Custody Seal #	Preserved when	A applicable (CF:+ 0.1 14.2 C Corrected Temp: 14.3 C



XENCO Laboratories ABURATURIES Prelogin/Nonconformance Report- Sample Log-In



Client: Western Refining	Acceptable Temperature F	Range: 0 - 6 degC
Date/ Time Received: 01/10/2017 04:48:00 PM	Air and Metal samples Acc	
Work Order #: 543728	Temperature Measuring de	evice used: R8
Sample Rece	ipt Checklist	Comments
#1 *Temperature of cooler(s)?	14.3	
#2 *Shipping container in good condition?	N/A	
#3 *Samples received on ice?	Yes	chilling in progress
#4 *Custody Seal present on shipping container/ cooler?	N/A	
#5 *Custody Seals intact on shipping container/ cooler?	N/A	
#6 Custody Seals intact on sample bottles?	N/A	
#7 *Custody Seals Signed and dated?	N/A	
#8 *Chain of Custody present?	Yes	
#9 Sample instructions complete on Chain of Custody?	Yes	
#10 Any missing/extra samples?	No	
#11 Chain of Custody signed when relinquished/ received?	Yes	
#12 Chain of Custody agrees with sample label(s)?	Yes	
#13 Container label(s) legible and intact?	Yes	
#14 Sample matrix/ properties agree with Chain of Custody?	Yes	
#15 Samples in proper container/ bottle?	Yes	
#16 Samples properly preserved?	Yes	
#17 Sample container(s) intact?	Yes	
#18 Sufficient sample amount for indicated test(s)?	Yes	
#19 All samples received within hold time?	Yes	
#20 Subcontract of sample(s)?	Yes	Houston
#21 VOC samples have zero headspace (less than 1/4 inch	bubble)? Yes	
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? samples for the analysis of HEM or HEM-SGT which are verif analysts.		
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnA	c+NaOH? N/A	

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: JKR

PH Device/Lot#: 213315

Checklist completed by: Jessica Kramer Checklist reviewed by: Kelsey Brooks

Date: 01/11/2017

Date: 01/11/2017



TTTC TISSN

ENGINEERING SURVEYING TESTING DEFINING QUALITY SINCE 1965

Ken Parker, Western Refining PO Box 1345 Jal, New Mexico, 88252 575-392-2632

14 January, 2016

RE: Survey Report Western Refining Subsidence Monitoring

Dear Mr. Parker,

Please review this report of survey findings for the subject project. Please comment as necessary.

SUBSIDENCE MONUMENT MONITORING

The surveyed elevations along with deltas from established values as follows:

		EL EVATION	
NAME	BASE ELEVATION	ELEVATION	CHANGE IN
	5/13/2009	12/21/2012	ELEVATION
CP-1	3293.47	3293.48	+ 0.01'
CP-2	3297.82	3297.82	No Change
CP-3	3293.56	3293.55	- 0.01 '
SM-1	3292.27	3292.27	No Change
SM-2	3294.56	3294.57	+ 0.01'
SM-3	3294.85	3294.86	+ 0.01'
SM-4	3294.86	3294.89	+ 0.02'
SMF-1 (Mid Flange)	3295.62	3295.63	+ 0.01'
SMF-1 (Lower Flange)	3293.67	3293.70	+ 0.03'
SMF-2 (Mid Flange)	3297.42	3297.43	+ 0.01'
SMF-2 (Lower Flange)	3295.52	3295.51	- 0.01
SMF-3 (Mid Flange)	3298.18	3298.18	No Change
SMF-3 (Lower Flange)	3296.44	3296.44	No Change
SMF-4 (Lower Flange)	3295.99	3296.00	+ 0.01'
BM-1	3294.30	3294.31	+ 0.01'
BM-2	3296.62	3296.61	- 0.01 '
BM-3	3297.73	3297.74	+ 0.01'





ENGINEERING SURVEYING TESTING DEFINING QUALITY SINCE 1965

Ken Parker, Western Refining PO Box 1345 Jal, New Mexico, 88252 575-392-2632

14 January, 2016

RE: Survey Report Western Refining Subsidence Monitoring

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NAME	BASE ELEVATION	ELEVATION	CHANGE IN
	5/13/2009	12/21/2012	ELEVATION
CP-1	3293.47	3293.48	+ 0.01'
CP-2	3297.82	3297.82	No Change
CP-3	3293.56	3293.55	- 0.01 '
SM-1	3292.27	3292.27	No Change
SM-2	3294.56	3294.57	+ 0.01 '
SM-3	3294.85	3294.86	+ 0.01 '
SM-4	3294.86	3294.89	+ 0.02'
SMF-1 (Mid Flange)	3295.62	3295.63	+ 0.01'
SMF-1 (Lower Flange)	3293.67	3293.70	+ 0.03'
SMF-2 (Mid Flange)	3297.42	3297.43	+ 0.01'
SMF-2 (Lower Flange)	3295.52	3295.51	- 0.01 '
SMF-3 (Mid Flange)	3298.18	3298.18	No Change
SMF-3 (Lower Flange)	3296.44	3296.44	No Change
SMF-4 (Lower Flange)	3295.99	3296.00	+ 0.01 '
BM-1	3294.30	3294.31	+ 0.01 '
BM-2	3296.62	3296.61	- 0.01 '
BM-3	3297.73	3297.74	+ 0.01 '

Chavez, Carl J, EMNRD

From: Sent: To: Cc: Subject: Chavez, Carl J, EMNRD Friday, February 03, 2012 7:25 AM 'Parker, Ken' Gonzales, Elidio L, EMNRD; Griswold, Jim, EMNRD Western Refining Jal Storage Facility (GW-007) Annual Report

Ken:

Č\$

Good morning. The OCD is in receipt of your Annual LPG Well Report.

Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505 Office: (505) 476-3490 Fax: (505) 476-3462 E-mail: CarlJ.Chavez@state.nm.us Website: <u>http://www.emnrd.state.nm.us/ocd/</u> "Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:

1

http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

ANNUAL LPG WELL REPORT

DOC GEWED OCL

1W1 32 P H: 06

OPERATOR: Western Refining Company

GW PERMIT NUMBER: GW-007

UIC CLASS LPG STORAGE WELLS API NUMBER

31055 WELL 1: 30-025-35954 31055 WELL 2: 30-025-35955 31055 WELL 3: 30-025-35956 31055 WELL 4: 30-025-35957

WESTERN REFINING JAL STORAGE FACILITY

Company Representative: Ken Parker

Date: 1-31-2012

Annual LPG Well Report

Date: 1-31-12

Well Summary

Well 1

Well one wasn't in service in 2011. In the past this well was used to store mix butane and was on standby to receive mix if necessary.

In the last quarter of this year well one passed its annual cavern pressure test. All test results were filed with OCD and well one was approved for service.

Well 2

Well two was in normal butane service in 2011. Within the year 226,606 barrels of normal butane was injected into the well and 163,017 was withdrawn. The well operating pressures were within the guidelines set by OCD and therefore there was no need for any remedial work.

In the last quarter of this year well two passed its annual cavern pressure test. All test results were filed with OCD and well two was approved for service.

Well 3

Normal butane was stored in this cavern this past year. Moving product in and out of this well has been continuous and trouble free. Operating pressures are within the OCD guidelines for this well. Approximately 179,476 barrels was injected into well three and 202,856 barrels were withdrawn in 2011.

In the last quarter of this year well three passed the annual cavern pressure test. All test results were filed with OCD and well three was approved for service.

Well 4

Iso-butane was stored in this cavern this past year. Approximately 112,103 barrels was injected into well four and 92,279 barrels was withdrawn. Well four operating pressures were with in the guidelines set by OCD and therefore trouble free.

In the last quarter of this year well four passed the annual cavern pressure test. All test results were filed with OCD and well four was approved for service.

Production Volumes

See Attachments Well 1 Annual C-131B Well 2 Annual C-131B Well 3 Annual C-131B Well 4 Annual C-131B

Injecting Fluid Analysis

See Attachment Report 435161

Deviation From Normal Production Method N/A

Leak and Spill Report N/A

Ground Water Monitoring N/A

Cavity Subsidence See Attachment

Area of Review No activity in the year 2011.

Pursuant to all applicable parts of the Water Quality Control Commission (WQCC) Regulations 20.6.2 NMAC and more specifically 20.6.2.5101. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Western Refining Company Company Name

Ken Parker Company Representative

Company Representative Signature

Title: Facility Manager

27.5.7

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT Jal Terminal COUNTY Lea Month/Year 12-11

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 1 30-025-35954	M32-23S-37E	0	0	0
· .				
				•
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 795

TOTAL CAPACITY (BBLS) 201,013 Barrels

NET CHANGE (BBLS) <u>0</u>

BEGINNING STORAGE (BBLS) 0

ENDING STORAGE (BBLS) $\underline{0}$ I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature Su

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal	<u>, New Mexico</u>
(Company)	(Add	ress)

NAME OF STORAGE PROJECT <u>Jal Terminal</u> COUNTY <u>Lea</u> Month/Year <u>12-11</u>

WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 2 30-025-35955	M32-238-37E	760	226,606	163,017
	•			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 868

TOTAL CAPACITY (BBLS) 130,201 Barrels

NET CHANGE (BBLS) 63,589

BEGINNING STORAGE (BBLS) 4,937

ENDING STORAGE (BBLS) <u>68,526</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

ber Signature En ai

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT <u>Jal Terminal</u> COUNTY <u>Lea</u> Month/Year <u>12-11</u>

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 3 30-025-35956	M32-238-37E	760	179,476	202,856
	:			

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 967

TOTAL CAPACITY (BBLS) 79,692 Barrels

NET CHANGE (BBLS) 23,380

BEGINNING STORAGE (BBLS) 76,362

ENDING STORAGE (BBLS) <u>52,982</u> I hereby certify that this report is true and complete to the best of my knowledge and belief:

Signature

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-131B Revised June 10, 2003

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Image: Company) (Address) Image: Company) Image: Company) COUNTY Lea Month/Year 12-11 Image: Company State LPG Storage Well No. 4 UNIT SEC. TWP. RANGE Image: Company State LPG Storage Well No. 4 Image: Company State LPG Storage State LPG Storage Well No. 4 Image: Company State LPG Storage State LPG	<u>Western Refining</u>	Company	<u>PO Bo</u>	<u>x 1345 Jal, New</u>	Mexico
WELL NAME AND NUMBER LOCATION UNIT SEC. TWP. RANGE MAXIMUM INJECTION PRESSURE INJECTION (BBLS) WITHDRAWAL (BBLS) 31055 State LPG Storage Well No. 4 30-025-35957 M32-23S-37E 740 112,103 92,279				(Address)	
WELL NAME AND NUMBER LOCATION UNIT SEC. TWP. RANGE INJECTION PRESSURE INJECTION (BBLS) WITHDRAWAL (BBLS) 31055 State LPG Storage Well No. 4 30-025-35957 M32-23S-37E 740 112,103 92,279	NAME OF STORAGE PROJECT _	Jal Terminal	COUNTY	Lea Month	/Year <u>12-11</u>
Well No. 4 30-025-35957	WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	INJECTION		
	Well No. 4	M32-23S-37E	740	112,103	92,279
			· .		
		·			
	· · ·				
	L		l		· · · · · · · · · · · · · · · · · · ·

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1.017

TOTAL CAPACITY (BBLS) <u>136,626 Barrels</u>

NET CHANGE (BBLS) 19,824

BEGINNING STORAGE (BBLS) 7,980

ENDING STORAGE (BBLS) <u>27,804</u> 1 hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Analytical Report 435161

for Western Refining

Project Manager: Ken Parker North Brine Pond Water

26-JAN-12

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00989): Arizona (AZ0758)



26-JAN-12

Project Manager: **Ken Parker Western Refining** P.O. Box 1345 Jal, NM 88252

Reference: XENCO Report No: 435161 North Brine Pond Water Project Address:

Ken Parker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 435161. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 435161 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron II Odessa Laboratory Manager

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Sample Cross Reference 435161



Western Refining, Jal, NM

North Brine Pond Water

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
North Pond	W	01-17-12 10:18		435161-001

Page 3 of 19

CASE NARRATIVE



Client Name: Western Refining Project Name: North Brine Pond Water



Project ID: Work Order Number: 435161 Report Date: 26-JAN-12 Date Received: 01/17/2012

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-879495 Anions by E300 E300MI

Batch 879495, Chloride recovered above QC limits in the Matrix Spike. Samples affected are: 435161-001. The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-879550 BTEX-MTBE by SW 8260B SW8260BTX

Batch 879550, Ethylbenzene, m,p-Xylenes, o-Xylene recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 435161-001.

The Laboratory Control Sample for m,p-Xylenes; Ethylbenzene, o-Xylene is within laboratory Control Limits

Batch: LBA-879835 Metals per ICP by SW846 6010B SW6010B IC

Batch 879835, Calcium, Magnesium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Sodium recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 435161-001.

The Laboratory Control Sample for Magnesium, Calcium, Sodium is within laboratory Control Limits



Certificate of Analysis Summary 435161 Western Refining, Jal, NM Project Name: North Brine Pond Water



Project Id: Contact: Ken Parker Project Location:

Date Received in Lab: Tue Jan-17-12 02:16 pm Report Date: 26-JAN-12

				Project Manager: Brent Barron II	Brent Barron II	
	Lab Id:	435161-001	-			
Analysis Dogustad	Field Id:	North Pond				
naicanhay sistinut	Depth:					
	Matrix:	WATER				
	Sampled:	Jan-17-12 10:18				
Alkalinity by SM2320B	Extracted:					
SUB: E871002	Analyzed:	Jan-20-12 16:54		-		
	Units/RL:	mg/L RL				
Alkalinity, Total (as CaCO3)		ND 4.00				
Anions by E300	Extracted:					
	Analyzed:	Jan-20-12 09:57	-			
•	Units/RL:	mg/L RL				
Chloride		167000 D 5000				
BTEX by SW 8260B	Extracted:	Jan-20-12 13:46				
SUB: E871002	Analyzed:	Jan-20-12 18:53				
	Units/RL:	· mg/L RL				
Benzene		ND 0.00100	•			-
Toluene		00100 ⁻⁰ ON				
Ethylbenzene		00100 ON				
m,p-Xylenes		ND 0.00200				
o-Xylene		· ND 0.00100				•
Total Xylenes		ND 0.00100			-	-
Total BTEX		ND 0.00100				
Mercury by EPA 7470A	Extracted:	Jan-20-12 11:00				
SUB: E871002	Analyzed:	Jan-20-12 14:45				
	Units/RL:	mg/L RL				-
Mercury		ND 0.000100				1
				-		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our flability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Brent Barron II

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Contact: Ken Parker

Project Id:

Certificate of Analysis Summary 435161 Western Refining, Jal, NM Project Name: North Brine Pond Water



Date Received in Lab: Tue Jan-17-12 02:16 pm Report Date: 26-JAN-12 Project Manager: Brent Barron II

Project Location:					R	eport Date:	Report Date: 26-JAN-12	
					Projec	t Manager:	Project Manager: Brent Barron II	
	Lab Id:	435161-001	01					
Analysis Dogustad	Field Id:	North Pond	pu		•			
naicanhay ciclinur	Depth:							
	Matrix:	WATER	~				-	
	Sampled:	Jan-17-12 10.18	0:18					
Metals per ICP by SW846 6010B	Extracted:	Jan-26-12 06:00	00:90					
SUB: T104704295-TX	Analyzed:	Jan-26-12 10:27	0:27					
	Units/RL:	mg/L	RL					
Arsenic		DN	0.500					
Barium		QN	0.500					
Cadmium		QN	0.250					
Calcium		693	5.00					
Chromium		DN	0.250					
Lead		QN	0.600					
Magncsium .		1410	5.00					
Potassium		3780	25.0					
Selenium		QN	0.500					
Silver		QN	0.200					
Sodium		132000 D	1250					
TDS by SM2540C	Extracted:							
SUB: E871002	Analyzed:	Jan-23-12 13:00	3:00					
	Units/RL:	mg/L	RL					
Total dissolved solids		329000	5.00					
pH, Electrometric by EPA 150.2	Extracted:	-		•				
	Analyzed:	Jan-17-12 17:30	7:30					
-	Units/RL:	SU	RL					
рН		1.60	1.00					
Temperature		10.2	2.00					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENOO Laboratories. XENOO Laboratorics assumes no responsibility and makes no warrangy to the end use of the data hereby presented. Our liability is litniced to the amount invoiced for this work order unless otherwise agreed to in writing.

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Final 1.000

Brent Barron II Odessa Laboratory Manager



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit

PQL Practical Quantitation Limit MQL Method Quantitation Limit

mit LOQ Limit of Quantitation

LOD Limit of Detection

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

^ NELAC or State program does not offer Accreditation at this time.

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Form 2 - Surrogate Recoveries

Project Name: North Brine Pond Water

Vork Orders : 435161 Lab Batch #: 879550	, Sample: 435161-001 / SMP	Batch	Project I	D: Water		
	Date Analyzed: 01/20/12 18:53		ROGATE R		STUDY	
Units: mg/L BTE	X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene		0.0520	0.0500	104	74-124	
Dibromofluoromethane		0.0606	0.0500	121	75-131	
1,2-Dichloroethane-D4		0.0569	0.0500	114	63-144	
Toluene-D8		0.0480	0.0500	96	80-117	
Lab Batch #: 879550	Sample: 616840-1-BLK / B	LK Batch	1 Matrix	:Water	·	
Units: mg/L	Date Analyzed: 01/20/12 13:02	SUR	ROGATE R	ECOVERY S	STUDY	
BTE	X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene		0.0520	0.0500	104	74-124	
Dibromofluoromethane		0.0493	0.0500	99	75-131	
1,2-Dichloroethane-D4		0.0457	0.0500	91	63-144	
Toluene-D8		0.0547	0.0500	109	80-117	
Lab Batch #: 879550	Sample: 616840-1-BKS / B)	KS Batch	1 Matrix	:Water		
Units: mg/L	Sample: 616840-1-BKS / B Date Analyzed: 01/20/12 12:11		: 1 Matrix ROGATE R True	COVERY	STUDY Control	
Units: mg/L	•	SUR	ROGATE R			Flags
Units: mg/L	Date Analyzed: 01/20/12 12:11 X by SW 8260B	SUR Amount Found	ROGATE R True Amount	ECOVERY S Recovery %R	Control Limits	Flags
Units: mg/L BTE2	Date Analyzed: 01/20/12 12:11 X by SW 8260B	SUR Amount Found [A]	ROGATE R True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Units: mg/L BTE2 4-Bromofluorobenzene	Date Analyzed: 01/20/12 12:11 X by SW 8260B	SUR Amount Found [A] 0.0537	ROGATE R True Amount [B] 0.0500	Recovery %R [D] 107	Control Limits %R 74-124	Flags
Units: mg/L BTE2 4-Bromofluorobenzene Dibromofluoromethane	Date Analyzed: 01/20/12 12:11 X by SW 8260B	SUR Amount Found [A] 0.0537 0.0462	ROGATE R True Amount [B] 0.0500 0.0500	Recovery %R [D] 107 92	Control Limits %R 74-124 75-131	Flags
Units: mg/L BTE2 4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	Date Analyzed: 01/20/12 12:11 X by SW 8260B	SUR Amount Found [A] 0.0537 0.0462 0.0393 0.0491 Batch	ROGATE R True Amount [B] 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 1	Recovery %R [D] 107 92 79 98 c: Water	Control Limits %R 74-124 75-131 63-144 80-117	Flags
Units: mg/L BTE2 4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	Date Analyzed: 01/20/12 12:11 X by SW 8260B Analytes	SUR Amount Found [A] 0.0537 0.0462 0.0393 0.0491 Batch	ROGATE R True Amount [B] 0.0500 0.0500 0.0500 0.0500 0.0500	Recovery %R [D] 107 92 79 98 c: Water	Control Limits %R 74-124 75-131 63-144 80-117	Flags
Units: mg/L BTE2 4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 879550 Units: mg/L	Date Analyzed: 01/20/12 12:11 X by SW 8260B Analytes Sample: 435211-010 S / MS Date Analyzed: 01/20/12 14:29 X by SW 8260B	SUR Amount Found [A] 0.0537 0.0462 0.0393 0.0491 Batch	ROGATE R True Amount [B] 0.0500 0.0500 0.0500 0.0500 0.0500 0.0500 1	ECOVERY S Recovery %R [D] 107 92 79 98 c: Water ECOVERY S Recovery %R	Control Limits %R 74-124 75-131 63-144 80-117	
Units: mg/L BTE2 4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 879550 Units: mg/L	Date Analyzed: 01/20/12 12:11 X by SW 8260B Analytes Sample: 435211-010 S / MS Date Analyzed: 01/20/12 14:29	SUR Amount Found [A] 0.0537 0.0462 0.0393 0.0491 SUR Amount Found	ROGATE R True Amount [B] 0.0500 0.0500 0.0500 0.0500 0.0500 1 Matrix ROGATE R True Amount	ECOVERY S Recovery %R [D] 107 92 79 98 c: Water ECOVERY S Recovery	Control Limits %R 74-124 75-131 63-144 80-117 STUDY Control Limits	
Units: mg/L BTE2 4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 879550 Units: mg/L BTE2	Date Analyzed: 01/20/12 12:11 X by SW 8260B Analytes Sample: 435211-010 S / MS Date Analyzed: 01/20/12 14:29 X by SW 8260B	SUR Amount Found [A] 0.0537 0.0462 0.0393 0.0491 SUR Amount Found	ROGATE R True Amount [B] 0.0500 0.0500 0.0500 0.0500 0.0500 1 Matrix ROGATE R True Amount	ECOVERY S Recovery %R [D] 107 92 79 98 c: Water ECOVERY S Recovery %R	Control Limits %R 74-124 75-131 63-144 80-117 STUDY Control Limits	
Units: mg/L BTE2 4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 879550 Units: mg/L BTE2 4-Bromofluorobenzene	Date Analyzed: 01/20/12 12:11 X by SW 8260B Analytes Sample: 435211-010 S / MS Date Analyzed: 01/20/12 14:29 X by SW 8260B	SUR Amount Found [A] 0.0537 0.0462 0.0393 0.0491 Batch SUR Amount Found [A]	ROGATE R True Amount [B] 0.0500 0.0500 0.0500 0.0500 1 Matrix ROGATE R True Amount [B]	ECOVERY S Recovery %R [D] 107 92 79 98 c: Water ECOVERY S Recovery %R [D]	Control Limits %R 74-124 75-131 63-144 80-117 STUDY Control Limits %R	
BTE: 4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 879550 Units: mg/L	Date Analyzed: 01/20/12 12:11 X by SW 8260B Analytes Sample: 435211-010 S / MS Date Analyzed: 01/20/12 14:29 X by SW 8260B	SUR Amount Found [A] 0.0537 0.0462 0.0393 0.0491 SUR Amount Found [A] 0.0528	ROGATE R True Amount [B] 0.0500 0.0500 0.0500 0.0500 1 Matrix ROGATE R True Amount [B] 0.0500	ECOVERY S Recovery %R [D] 107 92 79 98 C: Water ECOVERY S Recovery %R [D] 106	Control Limits %R 74-124 75-131 63-144 80-117 STUDY Control Limits %R 74-124	Flags

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: North Brine Pond Water

Work Orders : 435161 Lab Batch #: 879550	Sample: 435211-010 SD / M		Project I h: ¹ Matrix RROGATE R	x:Water	etunv	
Units: mg/L BTE	Date Analyzed: 01/20/12 14:53 X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	······································	0.0538	0.0500	108	74-124	
Dibromofluoromethane	· · · · · · · · · · · · · · · · · · ·	0.0514	0.0500	103	75-131	
1,2-Dichloroethane-D4		0.0447	0.0500	89	63-144	ι
Toluene-D8		0.0519	0.0500	104	80-117	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.





Project Name: North Brine Pond Water

Work Order #: 435161			· Pro	oject ID:			
Lab Batch #: 879550	Sa	ample: 616840-	I-BKS	Matrix:	Water		
Date Analyzed: 01/20/2012	Date Pre	pared: 01/20/20)12	Analyst:	ROL		
Reporting Units: mg/L	Ba	atch #: 1	BLANK /B	BLANK SPI	KE REC	OVERYS	STUDY
BTEX by SW 8260B		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes				[C]	[D]		•
Benzene		<0.00100	0.100	0.0822	82	66-142	
Toluene		<0.00100	0.100	0.0957	96	59-139	
Ethylbenzene		<0.00100	0.100	0.110	110	75-125	
m,p-Xylenes		<0.00200	0.200	0.215	108	75-125	
o-Xylene		<0.00100	0.100	0.116	116	75-125	
Lab Batch #: 879486	Sa	ample: 616776-	1-BKS	Matrix:	Water		
Date Analyzed: 01/20/2012	Date Pre	pared: 01/20/20)12	Analyst:	KKO		
Reporting Units: mg/L	Ba	atch #: 1	BLANK /B	BLANK SPI	KE REC	COVERYS	STUDY
Mercury by EPA 7470A		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes				[C]	[D]		
Mercury		<0.000100	0.00400	0.00410	103	80-120	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit



BS / BSD Recoveries



Project Name: North Brine Pond Water

Work Order #: 435161 Analyst: MAB Lab Batch ID: 879524 Sample: 879524-1-BKS Units: mg/L Alkalinity by SM2320B Analytes

Date Prepared: 01/20/2012

Batch #: 1

Project ID: Date Analyzed: 01/20/2012 · Matrix: Water BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Alkalinity by SM2320B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[4]	[8]	Result [C]	%R [D]	[E]	Duplicate Result [F]	%R [G]	%	%R	%RPD)
Alkalinity, Total (as CaCO3)	<4.00	250	254	102	250	254	102	0	80-120	20	
Analyst: BRB	Da	te Prepare	Date Prepared: 01/20/2012	2			Date A	nalyzed: (Date Analyzed: 01/20/2012		
Lab Batch ID: 879495 Sample: 879495-1-BKS	sks	Batch #: 1	1#: 1					Matrix: Water	Vater		
Units: mg/L		BLANI	K /BLANK S	SPIKE / B	ILANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	CRY STUD	Y	
Anions by E300	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	,	[B]	[C]	a	[E]	Result [F]	פ				
Chloride	<0.500	10.0	10.2	102	10.0	9.99	100	5	80-120	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)| Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries



Project Name: North Brine Pond Water

Work Order #: 435161 Lab Batch ID: 879835 Analyst: DAT

Date Prepared: 01/26/2012

Batch #: 1

Sample: 616972-1-BKS

Date Analyzed: 01/26/2012 Matrix: Water

Project ID:

Units: mg/L			BLANI	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / B	LANK S	PIKE DUPL	ICATE I	RECOVE	RY STUD	Y.	
Metals per ICP by SW846 6010B	W846 6010B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Dunlicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	a	[E]	Result [F]	5	2			-
Arsenic		<0.0100	1.00	1.05	105	1.00	1.03	103	2	85-115	20	
Barium		<0.0100	1.00	1.04	104	1.00	1.03	103	1	85-115	20	
Cadmium		<0.00500	1.00	1.05	105	1.00	1.04	104	1	85-115	20	
Calcium		<0.100	1.00	1.06	106	1.00	1.06	106	0	85-115	20	
Chronnium		<0.00500	1.00	10.1	101	1.00	10.1	101	0	85-115	20	
Lead		<0.0120	1.00	1.03	103	1.00	1.02	102	1	85-115	20	
Magnesium		<0.0100	1.00	0.992	66	1.00	0.969	67	2	85-115	20	
Potassium		<0.500	10.0	10.3	103	10.0	10.2	102	1	85-115	20	
Selenium		<0.0100	1.00	1.03	103	1.00	10.1	101	2	85-115	20	
Silver		<0.00400	1.00	1.02	102	1.00	10.1	101	1	85-115	20	
Sodiun		<0.500	11.0	11.5	105	11.0	11.3	103	2	85-115	20	
Analyst: MAB		Ds	ite Prepare	Date Prepared: 01/23/2012	2			Date Ar	alyzed: 0	Date Analyzed: 01/23/2012		
Lab Batch ID: 879609	Sample: 879609-1-BKS	KS	Batch #:	1 #: 1					Matrix: Water	Vater		
Units: mg/L			BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	SPIKE / B	LANK S	PIKE DUPL	ICATE 1	RECOVE	RY STUD	X	

Flag Control Limits %RPD 30 Control Limits %R 80-120 RPD % Blk. Spk Dup. %R [G] 102 Blank Spike Duplicate Result [F] 1020 Spike Added 1000 Ξ Blank Spike %R [D] 101 Blank Spike Result [C] 1010 Spike Added 1000 [**B**] Blank Sample Result <5.00 Ē TDS by SM2540C Total dissolved solids Analytes

Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes Relative Percent Difference $RPD = 200^{4}[(C-F)/(C+F)]$

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Form 3 - MS Recoveries



Project Name: North Brine Pond Water

Work Order #: 435161 Lab Batch #: 879495				Pr	oject ID:	· .	
Date Analyzed: 01/20/2012	Date F	Prepared: 01/2	0/2012	A	alyst: B	RB	
QC- Sample ID: 435359-001 S		Batch #: 1		I	Matrix: W	/ater	
Reporting Units: mg/L		MATH	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	. <u> </u>	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride		500	200	769	135	80-120	x
Lab Batch #: 879495						· · · · · · · · · · · · · · · · · · ·	· · · · · ·
Date Analyzed: 01/20/2012	Date F	repared: 01/2	0/2012	A	nalyst: B	RB	
QC- Sample ID: 435372-006 S		Batch #: 1		ľ	Matrix: W	/ater	
Reporting Units: mg/L		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300		Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride		459	250	729	108	80-120	
		439	230	129	108	00-120	i

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference $[E] = 200^{*}(C-A)/(C+B)$ All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries



Project Name: North Brine Pond Water

Work Order #: 435161

Date Analyzed: 01/20/2012 Lab Batch ID: 879550

QC- Sample ID: 435211-010 S Date Prepared: 01/20/2012

-

Matrix: Water

Project ID:

Batch #:

Analyst: ROL

Reporting Units: mg/L		Z	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	C/MATI	RIX SPII	KE DUPLICA	TE RECO	OVERY	STUDY		
BTEX by SW 8260B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	[B]	<u>-</u>	ž.	Added [E]	Kesult [F]	3°K	%	%K	%KPD	
Benzene	<0.00100	0.100	0.117	117	0.100	0.114	114	3	66-142	20	
Toluene	<0.00100	0.100	0.134	134	0.100	0.132	132	2	59-139	20	
Ethylbenzene	<0.00100	0.100	0.134	134	0.100	0.134	134	0	75-125	20	×
m,p-Xylenes	<0.00200	0.200	0.274	137 -	0.200	0.280	140	2	75-125	20	x
o-Xylene	<0.00100	0.100	0.142	142	0.100	0.141	141	1	75-125	20	х
Lab Batch ID: 879486 Date Analyzed: 01/20/2012	QC- Sample ID: 435352-001 S Date Prepared: 01/20/2012	435352	-001 S 012	Bat Ans	Batch #: Analyst:]	l Matrix KKO	Matrix: Ground Water	Water			

Reporting Units: mg/L		M	ATRIX SPIKI	E / MAT	RIX SPII	AATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	OVERY (STUDY		
Mercurv by EPA 7470A	Parent	:	Spiked Sample	Spiked	:	Duplicate			Control	Control	Ī
	Sample Result	Spike	Kesult Sample	Sample %R	Spike	Spiked Sample Result IFI	Dup.	KPD %	Limits %R	Limits %RPD	Hag
Analytes	[Y]	[B]	5	a	Ξ			2			_ <u>.</u>
Mercury	<0.000100	0.00100	0.00110	110	110 0.00100	0.00110	110	0	75-125	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected. J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000

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XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: North Brine Pond Water



Work Order #: 435161 Lab Batch ID: 879835

Date Analyzed: 01/26/2012

 QC-Sample ID:
 435372-006 S
 Batch #:

 Date Prepared:
 01/26/2012
 Analyst:

1 Matrix: Water

DAT

Project ID:

Reporting Units: mg/L		M	ATRIX SPIK	E / MATI	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE RECO	DVERY S	STUDY		
Metals per ICP by SW846 6010B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Kesult [A]	Added [B]		8% [0]	Added [E]	Result [F]	%R [G]	°.	%R	%RPD	
Arsenic	0.0226	1.00	1.13	111	1.00	1.12	110	-	75-125	20	
Barium	0.0304	1.00	1.09	106	1.00	1.08	105	1	75-125	20	
Cadmium	<0.00500	1.00	1.04	104	1.00	1.02	102	2	75-125	20	
Calcium	140	1.00	. 140	0	1.00	139	0	-	75-125	20	x
Chromium	<0.00500	1.00	. 1.01	101	1.00	0.997	100	-	75-125	20	
Lead	<0.0120	1 00	1.06	106	1.00	1.05	105	-	75-125	20	
Magnesium	95.2	1.00	94.8	0	1.00	94.1	0	1	75-125	20	x
Potassium	13.4	10.0	24.2	108	10.0	24.2	108	0	75-125	20	
Selenium	0.0247	1.00	1.11	109	1.00	1.09	. 107	2	75-125	20	
Silver	<0.00400	1.00	1.03	103	1.00	1.03	103	0	75-125	20	
Sodiun	233	11.0	247	127	11.0	247	127	• 0	75-125	20	х

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*((C-F)/(C+F))

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected. J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = Sec Narrative, EQL = Estimated Quantitation Limit

Final 1.000

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Sample Duplicate Recovery



Project Name: North Brine Pond Water

Work Order #: 435161						
Lab Batch #: 879524 Date Analyzed: 01/20/2012 16:57 QC- Sample ID: 435161-001 D	Date Prepar Batch		Ma	Project I lyst:MAB trix: Water		
Reporting Units: mg/L		SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
Alkalinity by SM2320B Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (as CaCO3)		<4.00	<4.00	0	20	U
Lab Batch #: 879524 Date Analyzed: 01/20/2012 15:39 QC- Sample ID: 435188-001 D Reporting Units: mg/L	Date Prepar Batch			llyst: MAB trix: Water DUPLIC		OVERY
Alkalinity by SM2320B Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (as CaCO3)		219	218	0	20	
Lab Batch #: 879495 Date Analyzed: 01/20/2012 09:57 QC- Sample ID: 435359-001 D Reporting Units: mg/L	Date Prepar Batch			lyst: BRB trix: Water		OVERV
Anions by E300 Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride		500	515	3	20	
Lab Batch #: 879609 Date Analyzed: 01/23/2012 13:00 QC- Sample ID: 435159-004 D	Date Prepar Batch		Ma	llyst: MAB trix: Water		OVEDV
Reporting Units: mg/L TDS by SM2540C Analyte		SAMPLE / Parent Sample Result [A]	SAMPLE Sample Duplicate Result [B]	RPD	ATE REC Control Limits %RPD	Flag
			()			

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

.

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: North Brine Pond Water

Work Order #: 435161

Lab Batch #: 879609			Project I	D:	
Date Analyzed: 01/23/2012 13:00 Date Prepar	red: 01/23/2012	Anal	yst:MAB		
QC- Sample ID: 435161-001 D Bate	h#: 1	Mat	rix: Water		
Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE RECO	OVERY
TDS by SM2540C Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag .
Total dissolved solids	329000	331000	<u> </u>	30	
	529000	551000	(50	
Lab Batch #: 879224					
Date Analyzed: 01/17/2012 17:30 Date Prepar	red: 01/17/2012	Anal	lyst: BRB		
QC- Sample ID: 435159-001 D Bate	h #: 1	Mat	rix: Water		
Reporting Units: SU	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
pH, Electrometric by EPA 150.2 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Temperature	16.7	17.8	6	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Xenco	Xenco Laboratories	es .								CHA	IN OI	no :	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	REC	0RD	AND	ANA	IC VSI	S RE	in bi	EST				
The Environme	The Environmental Lab of Texas							1260 Odei	12600 West I-20 East Odessa, Texas 79765	st I-2('exas) East 79766						e —	Phone: 432-563-1800 Fax: 432-563-1713	432	563- 563-	432-563-1713 432-563-1713				
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8pectal instructions:	tions:]]			ł									Laboi Samp VOCs	Laboratory Comments: Sample Containers Intacl? VOCs Free of Headspace?	Comi tainer of Het	nenta s inta dspa	: C 63		09	\mathcal{A}	z z z	
Relinquished by		Date 1,17. [L	11.6	me	Time Received by:								Date	<u>الج</u>	1 me	Custo Custo Custo	Labela on container(e) Custody seals on container(e) Custody seals on cooler(s)	ls on	ooler Sontal	ner(8) (8)		51	à.		<u> </u>
Relinquished by:		Date	Ime	0	Received by:								Date		fime	Samp	Sample Hand Delivered by Sampler/Client Rep.		vered nt Rej LIPS	°. 0	Ŧ	<u>کرت</u>	r Rac	N N Lone Star	<u>م</u>
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XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas

Houston, Miami, Odessa, Philadelphia

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

client Wtg	tern Refin	iria	
Date/Time: 1/1	7/12 216		
Lab ID # :	435161		
Initiais: AH	-	<u></u>	
1112010. /111		·······	

Sample Receipt Checklist

1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?		No	N/A	
13. Sample container intact?	Yes	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?		No		
16. Subcontract of sample(s)?		No	N/A	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 N	0.	Cooler 5 No.	
	lbs	℃	lbs	°C

Nonconformance Documentation

υU	n	ud	С	ι.

Contacted by:

Date/Time:

Regarding:

Uetals, rations, BTEX 8260 + TDS Xenco Corrective Action Taken: AT

Check all that apply: Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

□Initial and Backup Temperature confirm out of temperature conditions

Client understands and would like to proceed with analysis

Pettigrew & Associates, P.A. ENGINEERING - SURVEYING - MATERIALS TESTING

1110 N Grimes St Hobbs, NM 88240

575.393.9827 Ph 575.393.1643 Fx

www.pettigrew.us

Ken Parker Western Refining PO Box 1345 Jal, New Mexico, 88252 575-392-2632

18 May, 2011

RE: Survey Report Western Refining Subsidence Monitoring

Dear Mr. Parker,

Please review this report of survey findings for the subject project.

SUBSIDENCE MONUMENT MONITORING

The surveyed elevations along with deltas from the previous survey values, letter dated 17 November 2010 and as surveyed on 29 October 2010, are as follows:

	SURVEY ELEVATIONS	SURVEY ELEVATIONS	DELTA
NAME	AS OF 10/29/2010	AS OF 04/15/2011	ELEVATION
CP-1	3293.45	3293.47	+0.02'
CP-2	3297.82	3297.82	NO CHANGE
CP-3	3293.56	3293.56	NO CHANGE
SM-1	3292.27	3292.28	+0.01'
SM-2	3294.56	3294.56	NO CHANGE
SM-3	3294.84	3294.86	+0.02'
SM-4	3294.86	3294.87	+0.01'
SMF-1 (Middle Flange)	3295.64	3295.64	NO CHANGE
SMF-1 (Lower Flange)	3293.69	3293.70	+0.01'
SMF-2 (Middle Flange)	3297/43	3297.43	NO CHANGE
SMF-2 (Lower Flange)	3295.53	3295.53	NO CHANGE
SMF-3 (Middle Flange)	3298.16	3298.19	+0.03'
SMF-3 (Lower Flange)	3296.42	3296.44	+0.02'
SMF-4 (Middle Flange)	3297.73	3297.74	+0.01'
SMF-4 (Lower Flange)	3296.00	3296.00	NO CHANGE
BM-1	3294.31	3294.31	NO CHANGE
BM-2	3296.63	3296.63	NO CHANGE
BM-3	3297.73	3297.73	NO CHANGE



Pettigrew & Associates, P.A.

1110 N Grimes St 5/5.393,9827 Ph Hobbs, NM 88240 575,393,1543 Fx

waw.pettigrew

Please feel free to call me anytime if you have any questions or comments.

,

Sincerely,

Robert Wi. Howest

÷.,

Robert Michael Howett, PS NM 19680 Survey Manager (575)393-7881 bhowett@pettigrew.tts erew & Associates. P.A

Jal, New Mexico, 88252 575-392-2632

14 November, 2011

RE: Survey Report Western Refining Subsidence Monitoring

Dear Mr. Parker,

Please review this report of survey findings for the subject project.

SUBSIDENCE MONUMENT MONITORING

The surveyed elevations along with deltas from the previous survey values, letter dated 18 May 2011 and as surveyed on 15 April 2011, are as follows:

NAME	SURVEY ELEVATIONS AS OF 04/15/2011	SURVEY ELEVATIONS AS OF 11/10/2011	DELTA ELEVATION
CP-1	3293.47	3293.46	-0.01'
CP-2	3297.82	3297.82	NO CHANGE
CP-3	3293.56	3293.55	-0.01'
`SM-1	3292.28	3292.26	-0.02'
SM-2	3294.56	3294.56	NO CHANGE
SM-3	3294.86	3294.85	-0.01'
SM-4	3294.87	3294.85	-0.02'
SMF-1 (Middle Flange)	3295.64	3295.61	-0.03'
SMF-1 (Lower Flange)	3293.70	3293.66	+0.04'
SMF-2 (Middle Flange)	3297.43	3297.43	NO CHANGE
SMF-2 (Lower Flange)	3295.53	3295.53	NO CHANGE
SMF-3 (Middle Flange)	3298.19	3298.17	-0.02'
SMF-3 (Lower Flange)	3296.44	3296.43	-0.01'
SMF-4 (Middle Flange)	3297.74	3297.72	-0.02'
SMF-4 (Lower Flange)	3296.00	3295.98	-0.02'
BM-1	3294.31	3294.30	-0.01'
BM-2	3296.63	3296:63	NO CHANGE
BM-3	3297.73	3297.73	NO CHANGE
		l	Same in the second s



www.pettigrew.us

Please feel free to call me anytime if you have any questions or comments. Sincerely,

Poblet N. Howelt

Robert Michael Howett, PS NM 19680 Professional Surveyor (575)393-7881 bhowett@pettigrew.us

Chavez, Carl J, EMNRD

From: Sent: To: Cc: Subject: Chavez, Carl J, EMNRD Wednesday, February 02, 2011 1:52 PM 'Parker, Ken' Hill, Larry, EMNRD Western Refining Company Jal LPG Storage Facility (GW-007) Annual Report

Mr. Parker:

The OCD is in receipt of your Annual Report.

You will be contacted if we have questions or need additional information.

Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505 Office: (505) 476-3490 Fax: (505) 476-3462 E-mail: <u>CarlJ.Chavez@state.nm.us</u> Website: <u>http://www.emnrd.state.nm.us/ocd/</u>index.htm (Pollution Prevention Guidance is under "Publications")

File: OCD Online "GW-7 Annual Reports"

RECEIVED OCD 2011 FEB - 2 P 12: 55

ANNUAL LPG WELL REPORT

OPERATOR: Western Refining Company

GW PERMIT NUMBER: GW-007

UIC CLASS LPG STORAGE WELLS API NUMBER

31055 WELL 1: 30-025-35954 31055 WELL 2: 30-025-35955 31055 WELL 3: 30-025-35956 31055 WELL 4: 30-025-35957

WESTERN REFINING JAL STORAGE FACILITY

Company Representative: Ken Parker

Date: 1-31-2011

Annual LPG Well Report

Date: 1-31-11

Well Summary

Well 1

Well no.1 was used sparingly in 2010. Only 6,194 barrels of mix butane was stored for the year and the operating pressures are within the guidelines set by OCD.

In the last quarter of this year well no.1 passed the MIT. All test results were filed with OCD and well no. 1 was approved for use.

Well 2

Well no. 2 was used sparingly in 2010. Only 4,937 barrels of normal butane was stored for the year and the operating pressures are within the guidelines set by OCD.

In the last quarter of this year well no. 2 passed the MIT. All test results were filed with OCD and well no. 2 was approved for use.

.Well 3

Normal butane was stored in this cavern this past year. Moving product in and out of this well has been continuous and trouble free. Operating pressures are within the OCD guidelines for this well. Approximately 349,350 barrels was injected into well no.3 and 297,943 barrels were withdrawn in 2010.

In the last quarter of this year well no. 3 passed the MIT. All test results were filed with OCD and well no. 3 was approved for use.

Well 4

Iso-butane was stored in this cavern this past year. Approximately 119,028 barrels was injected into well no.4 and 146,208 barrels was withdrawn. Well no. 4 operating pressures were with in the guidelines set by OCD.

In the last quarter of this year well no. 4 passed the MIT. All test results were filed with OCD and well no. 4 was approved for use.

Production Volumes

See Attachments Well 1 Annual 10 Well 2 Annual 10 Well 3 Annual 10 Well 4 Annual 10

Injecting Fluid Analysis

See Attachment Report 403710

Deviation From Normal Production Method N/A

Leak and Spill Report N/A

Ground Water Monitoring N/A

Cavity Subsidence See Attachment

Area of Review No activity in the year 2010.

Pursuant to all applicable parts of the Water Quality Control Commission (WQCC) Regulations 20.6.2 NMAC and more specifically 20.6.2.5101. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Western Refining Company Company Name

Ken Parker Company Representative

En 1

Company Representative Signature

Title: Facility Manager

Date:1-31-11

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT <u>Jal Terminal</u> COUNTY <u>Lea</u> Month/Year <u>12-10</u>

WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 1 30-025-35954	M32-23S-37E	600	3,067	6,194
			- - -	
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 845

TOTAL CAPACITY (BBLS) 201,013 Barrels

NET CHANGE (BBLS) <u>3,127</u>

BEGINNING STORAGE (BBLS) 3,127

ENDING STORAGE (BBLS) <u>0</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature a Ren

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lea	Month/Year <u>12-10</u>
-------------------------	--------------	--------	-----	-------------------------

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 2 30-025-35955	M32-23S-37E	790	4,937	0
	TOTALS			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1,018

TOTAL CAPACITY (BBLS) 130,201 Barrels

NET CHANGE (BBLS) 4,937

BEGINNING STORAGE (BBLS) 0

ENDING STORAGE (BBLS) 4.937I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature Æn

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)

NAME OF STORAGE PROJECT	Jal Terminal	COUNTY	Lea Month	/Year <u>12-10</u>
WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 3 30-025-35956	M32-23S-37E	780	349,350	297,943

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1,067

TOTAL CAPACITY (BBLS) 79,692 Barrels

NET CHANGE (BBLS) 51,407 BEGINNING STORAGE (BBLS) 24,955

ENDING STORAGE (BBLS) 76,362 I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature Val.

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Date 1-31-11 Telephone No. 575-395-2632

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

ANNUAL LPG STORAGE REPORT

Western Refining CompanyPO Box 1345 Jal, New Mexico (Address)(Company)(Address)			Mexico	
NAME OF STORAGE PROJECT _	Jal Terminal	COUNTY	Lea Month/	Year <u>12-10</u>
WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 4 30-025-35957	M32-238-37E	790	119,028	146,208
	ΤΟΤΑΙ S			

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 997

TOTAL CAPACITY (BBLS) 136,626 Barrels

NET CHANGE (BBLS) <u>27,180</u>

BEGINNING STORAGE (BBLS) 35,160

ENDING STORAGE (BBLS) <u>7,980</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature _ 7X1

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

Analytical Report 403710

for Western Refining

Project Manager: Ken Parker

Brine Pond Water

26-JAN-11



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370) Xenco-Boca Raton (EPA Lab Code: FL01273): Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917) North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

> Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



26-JAN-11



Project Manager: Ken Parker Western Refining P.O. Box 1345 Jal, NM 88252

Reference: XENCO Report No: 403710 Brine Pond Water Project Address: Jal, Terminal

Ken Parker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 403710. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 403710 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II Odessa Laboratory Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



Sample Cross Reference 403710



Western Refining, Jal, NM

Brine Pond Water

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
North Pond	W	Jan-13-11 10:30		403710-001



Client Name: Western Refining Project Name: Brine Pond Water



Project ID: Work Order Number: 403710 Report Date: 26-JAN-11 Date Received: 01/14/2011

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-839872 Anions by E300 E300MI

Batch 839872, Chloride recovered below QC limits in the Matrix Spike. Samples affected are: 403710-001. The Laboratory Control Sample for Chloride is within laboratory Control Limits

Batch: LBA-839904 Mercury by EPA 7470A

Batch: LBA-840198 TDS by SM2540C

Batch: LBA-840288 BTEX-MTBE by SW 8260B

Batch: LBA-840396 Select Metals by SW-846 6010B

Batch: LBA-840813 Total RCRA Metals by SW6020A



Certificate of Analysis Summary 403710 Western Refining, Jal, NM Project Name: Brine Pond Water



Project Id: Contact: Ken Parker Project Location: Jal, Terminal

Date Received in Lab: Fri Jan-14-11 02:09 pm Report Date: 26-JAN-11 Deviced Managery, Berron 11

		Pr	Project Manager: Brent Barron, II
	Lab Id:	403710-001	
Analysis Ronnostod	Field Id:	North Pond	
main have credimited	Depth:		
	Matrix:	WATER	
	Sampled:	Jan-13-11 10:30	
Alkalinity by SM2320B	Extracted:		
	Analyzed:	Jan-17-11 10:45	
	Units/RL:	mg/L RL	
Alkalinity, Total (as CaCO3)		900 4.00	
Anions by E300	Extracted:		
	Analyzed:	Jan-14-11 16:43	
	Units/RL:	mg/L RL	
Chloride		180000 5000	
BTEX by SW 8260B	Extracted:	Jan-18-11 11:12	
	Analyzed:	Jan-18-11 14:44	
	Units/RL:	mg/L RL	
Benzene		0.0088 0.0010	
Toluene		0.0021 0.0010	
Ethylbenzene		ND 0.0010	
m,p-Xylenes		ND 0.0020	
o-Xylene		ND 0.0010	
Total Xylcnes		ND 0.0010	
Total BTEX		0.0109 0.0010	
Mercury by EPA 7470A	Extracted:	Jan-17-11 07:45	
	Analyzed:	Jan-17-11 11:25	
	Units/RL:	mg/L RL	
Mercury		ND 0.0003	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout its analytical report represent the best juggment of XENCO Laboratories. XENCO Laboratories assumes no reponsibility and makes no warmany to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Odessa Laboratory Manager Brent Barron, II

Final 1.000



Certificate of Analysis Summary 403710 Western Refining, Jal, NM Project Name: Brine Pond Water



Project Id: Contact: Ken Parker Project Location: Jal, Terminal

Date Received in Lab: Fri Jan-14-11 02:09 pm Report Date: 26-JAN-11

			Project Manager: Brent Barron, II
	Lab Id:	403710-001	
Analysis Ronnestod	Field Id:	North Pond	
main have sighting	Depth:		
	Matrix:	WATER	
	Sampled:	Jan-13-11 10:30	
Select Metals by SW-846 6010B	Extracted:	Jan-19-11 07:14	
SUB: E87429	Analyzed:	Jan-19-11 12:38	
	Units/RL:	mg/L RL	
Calcium		722 D 500	
Magnesium		1390 D 500	
Potassium		4950 D 500	
Sodium		103000 D 10000	
TDS by SM2540C	Extracted:		
	Analyzed:	Jan-17-11 16:00	
	Units/RL:	mg/L RL	
Total dissolved solids		97100 5.00	
Total RCRA Metals by SW6020A	Extracted:	Jan-19-11 10:25	
SUB: T104704215-TX	Analyzed:	Jan-19-11 17:32	
	Units/RL:	mg/L RL	
Arsenic		ND 0.0200	
Barium		0.1170 D 0.0500	
Cadmium		ND 0.0060	
Chromium		ND 0.0300	
Lead		ND 0.0200	
Sclenium		ND 0.0300	
Silver		ND 0.0200	
pH, Electrometric by EPA 150.2	Extracted:		
SUB: T104704400-TX	Analyzed:	Jan-17-11 08:15	
	Units/RL:	SU RL	
PH		7.54 2.00	

ł.

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The integrations and results expressed throughout this analytical report repressed the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warmany to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Brent Barron, II

Final 1.000



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: Brine Pond Water

Lab Batch #: 840288	Sample: 593740-1-BKS / B	KS Bate	h: 1 Matrix	:Water		
Units: mg/L	Date Analyzed: 01/18/11 10:12	SU	RROGATE R	ECOVERY S	STUDY	
ВТЕ	X by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
4-Bromofluorobenzene		0.0476	0.0500	95	74-124	
Dibromofluoromethane		0.0504	0.0500	101	75-131	
1,2-Dichloroethane-D4		0.0485	0.0500	97	63-144	
Toluene-D8		0.0501	0.0500	100	80-117	
Lab Batch #: 840288	Sample: 593740-1-BLK / B	LK Bate	h: ¹ Matrix	k :Water		
Units: mg/L	Date Analyzed: 01/18/11 11:26	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by SW 8260B Analytes	Amount Found]A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
4-Bromofluorobenzene		0.0490	0.0500	98	74-124	
Dibromofluoromethane		0.0491	0.0500	98	75-131	
1,2-Dichloroethane-D4		0.0508	0.0500	102	63-144	
Toluene-D8		0.0475	0.0500	95	80-117	
Lab Batch #: 840288 Units: mg/L	Sample: 403835-001 S / MS Date Analyzed: 01/18/11 13:04		h: ¹ Matrix RROGATE R	K: Water ECOVERY S	STUDY	
	· · · · · · · · · · · · · · · · · · ·		,			
~~~	X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
	-	Found	Amount	%R	Limits	Flag
4-Bromofluorobenzene Dibromofluoromethane	-	Found [A]	Amount [B]	%R [D]	Limits %R	Flag
4-Bromofluorobenzene	-	Found [A] 0.0477	Amount [B] 0.0500	%R [D] 95	Limits %R 74-124	Flag
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4	-	Found [A] 0.0477 0.0502	Amount [B] 0.0500 0.0500	%R [D] 95 100	Limits %R 74-124 75-131	Flag
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	-	Found [A] 0.0477 0.0502 0.0481 0.0479	Amount [B] 0.0500 0.0500 0.0500 0.0500	%R [D] 95 100 96	Limits %R 74-124 75-131 63-144	Flag
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	Analytes	Found [A] 0.0477 0.0502 0.0481 0.0479 4SD Batc	Amount [B] 0.0500 0.0500 0.0500 0.0500	%R [D] 95 100 96 96 x: Water	Limits %R 74-124 75-131 63-144 80-117	Flag
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 840288 Units: mg/L	Analytes Sample: 403835-001 SD / N Date Analyzed: 01/18/11 13:29 X by SW 8260B	Found [A] 0.0477 0.0502 0.0481 0.0479 4SD Batc	Amount [B] 0.0500 0.0500 0.0500 h: 1 Matri	%R           [D]           95           100           96           96           96           96           8           ECOVERY S           Recovery %R	Limits %R 74-124 75-131 63-144 80-117	
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 840288 Units: mg/L BTE	Analytes Sample: 403835-001 SD / N Date Analyzed: 01/18/11 13:29	Found [A] 0.0477 0.0502 0.0481 0.0479 4SD Batc SU Amount Found [A]	Amount [B] 0.0500 0.0500 0.0500 h: 1 Matri: RROGATE R Amount [B]	%R         [D]           95         100           96         96           96         96           x: Water         ECOVERY S           Recovery         %R           [D]         9	Limits %R 74-124 75-131 63-144 80-117 STUDY Control Limits %R	
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 840288 Units: mg/L BTE 4-Bromofluorobenzene	Analytes Sample: 403835-001 SD / N Date Analyzed: 01/18/11 13:29 X by SW 8260B	Found [A] 0.0477 0.0502 0.0481 0.0479 4SD Batc SU Amount Found [A] 0.0476	Amount [B] 0.0500 0.0500 0.0500 h: 1 Matri: RROGATE R True Amount [B] 0.0500	%R         100         95           95         100         96           96         96         96           96         8         8           ECOVERY         8         101           95         95         95	Limits %R 74-124 75-131 63-144 80-117 STUDY Control Limits %R 74-124	
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 840288 Units: mg/L BTE 4-Bromofluorobenzene Dibromofluoromethane	Analytes Sample: 403835-001 SD / N Date Analyzed: 01/18/11 13:29 X by SW 8260B	Found [A] 0.0477 0.0502 0.0481 0.0479 4SD Batc SU Amount Found [A] 0.0476 0.0495	Amount [B] 0.0500 0.0500 0.0500 h: 1 Matri: RROGATE R True Amount [B] 0.0500 0.0500	%R         100           95         100           96         96           96         96           96         96           98         96           99         96           96         96           96         96           96         96           8         Recovery           %R         1D1           95         99	Limits %R 74-124 75-131 63-144 80-117 STUDY Control Limits %R	
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 Lab Batch #: 840288 Units: mg/L	Analytes Sample: 403835-001 SD / N Date Analyzed: 01/18/11 13:29 X by SW 8260B	Found [A] 0.0477 0.0502 0.0481 0.0479 4SD Batc SU Amount Found [A] 0.0476	Amount [B] 0.0500 0.0500 0.0500 h: 1 Matri: RROGATE R True Amount [B] 0.0500	%R         100         95           95         100         96           96         96         96           96         8         8           ECOVERY         8         101           95         95         95	Limits %R 74-124 75-131 63-144 80-117 STUDY Control Limits %R 74-124	Flag

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



### Form 2 - Surrogate Recoveries

### Project Name: Brine Pond Water

<b>Ork Orders :</b> 403710 Lab Batch #: 840288 Units: mg/L	, Sample: 403710-001 / SMP Date Analyzed: 01/18/11 14:44	Batc SU	Project I h: ¹ Matrix RROGATE R	x:Water	STUDY	
BTE	X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene		0.0480	0.0500	96	74-124	·
Dibromofluoromethane		0.0514	0.0500	103	75-131	
1,2-Dichloroethane-D4		0.0582	0.0500	116	63-144	
Toluene-D8		0.0481	0.0500	96	80-117	

* Surrogate outside of Laboratory QC limits
 ** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B All results are based on MDL and validated for QC purposes.





### Project Name: Brine Pond Water

Work Order #: 403710		Pro	oject ID:				
Lab Batch #: 839923	Sample: 839923-	-1-BKS	Matrix:	Water			
Date Analyzed: 01/17/2011 Date I	Prepared: 01/17/20	011	Analyst:	WRU			
Reporting Units: mg/L	Batch #: 1	BLANK /E	BLANK SPI	KE REC	OVERY S	JUDY	
Alkalinity by SM2320B	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags	
Analytes			[C]	[D]			
Alkalinity, Total (as CaCO3)	<4.00	200	172	86	80-120		
Lab Batch #: 840288	Sample: 593740	-1-BKS	Matrix:	Water			
Date Analyzed: 01/18/2011 Date 1	Prepared: 01/18/2	011	Analyst:	MCH			
Reporting Units: mg/L	Batch #: 1	BLANK /E	BLANK SPI	KE REC	OVERY S	STUDY	
BTEX by SW 8260B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	
Benzene	<0.0010	0.1000	0.0888	89	66-142		
Toluene	<0.0010	0.1000	0.0875	88	59-139	[	
Ethylbenzene	<0.0010	0.1000	0.0888	89	75-125		
m,p-Xylenes	<0.0020	0.2000	0.1821	91	75-125		
o-Xylene	<0.0010	0.1000	0.1019	102	75-125		
Lab Batch #: 840813	Sample: 593708	-1-BKS	Matrix:	Water			
Date Analyzed: 01/19/2011 Date 1	Prepared: 01/19/2011 Ar		Analyst: HAT				
Reporting Units: mg/L			BLANK SPI	NK SPIKE RECOVERY STUDY			
Total RCRA Metals by SW6020A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	
Arsenic	<0.0020	0.0500	0.0478	96	75-125		
Barium	<0.0050	0.0500	0.0446	89	75-125		
Cadmium	<0.0006	0.0200	0.0190	95	75-125		
Chromium	<0.0030	0.0500	0.0560	112	75-125	<u> </u>	
Lead	< 0.0020	0.0500	0.0527	105	75-125		
Selenium	< 0.0030	0.0500	0.0482	96	75-125		
Silver	<0.0020	0.0200	0.0211	106	75-125		

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

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(1000) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100) (100)	
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## **BS / BSD Recoveries**



## **Project Name: Brine Pond Water**

Date Prepared: 01/14/2011

Batch #: 1

Project ID: Date Analyzed: 01/14/2011 Matrix: Water

Units: mg/L		BLANI	BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	ICATE I	RECOVE	RY STUD	Y	
Anions by E300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD			Flag
Analytes	<u>[</u>	B	Kesult [C]	¥ []	E	Duplicate Result [F]	2%K	%	%K	%KFU	
Chloride	<0.200	10.0	10.2	102	10	10.3	103	1	80-120	20	
Analyst: LATCOR	Da	te Prepare	Date Prepared: 01/17/2011				Date Ar	Date Analyzed: 01/17/2011	1/12/2011		
Lab Batch ID: 839904 Sample: 593495-1-BKS	KS	Batch #: 1	1 #: 1					Matrix: Water	Vater		
Units: mg/L		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANK S	PIKE DUPI	ICATE I	RECOVE	RY STUD	Y	
Mercury by RPA 7470A	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk		Control	Control Control	

Arr. Suno											
Mercury by EPA 7470A	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[ <b>B</b> ]	[C]	[a]	( <u>a</u> )	Result [F]	[0]				
Mercury	<0.0003	0.0010	0.0010	100	0.001	0.0011	110	10	75-125	20	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[F] All results are based on MDL and Validated for QC Purposes Page 11 of 19



BS / BSD Recoveries



## Project Name: Brine Pond Water

 Work Order #: 403710

 Analyst: 4150

 Lab Batch ID: 840396
 Sample: 593671-1-BKS

 Units: mg/L

Date Prepared: 01/19/2011 Batch #: 1

Project ID: Date Analyzed: 01/19/2011 Matrix: Water

Units: mg/L			BLANF	K/BLANK S	PIKE / B	LANK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE I	RECOVE	RY STUD	Y	
Select Metals by SW-846 6010B		Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			 8		<u>e</u>	Ē	Result [F]	<u>5</u>				
Calcium		<5.00	9.00	9.21	102	6	9.12	101	-	75-125	20	
Magnesium		<5.00	9.00	9.39	104	6	9.36	104	0	75-125	20	
Potassium		<5.00	18.0	19.0	106	18	18.6	103	2	75-125	20	
Sodiun		<5.00	9.00	9.26	103	6	9.30	103	0	75-125	20	
Analyst: WRU		Da	te Prepare	Date Prepared: 01/17/2011	1		-	Date Ar	Date Analyzed: 01/17/2011	1/17/2011		
Lab Batch ID: 840198 Sample	Sample: 840198-1-BKS	ξS	Batch #: ]	#: 1					Matrix: Water	Vater		
Units: mg/L			BLAN	K/BLANK S	SPIKE / B	<b>LANK S</b>	<b>BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY</b>	ICATE I	RECOVE	<b>RY STUD</b>	Y	

Units: mg/L		BLAN	<b>BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUD</b>	PIKE / B	LANK S	PIKE DUPL	ICATE I	RECOVE	CRY STUD	Y	
TDS by SM2540C	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		B	[]	[ <u>a]</u>	Ξ	Result [F]	<u>[</u> 0]				
Total dissolved solids	<5.00	1000	918	92	1000	930	93	1	80-120	30	_

Rclative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes Page 12 of 19

Final 1.000



### Form 3 - MS Recoveries



**Project Name: Brine Pond Water** 

Lab Batch #: 839872		4/2011		ject ID:		
Date Analyzed: 01/14/2011	Date Prepared: 01/14	4/2011		nalyst: L		
QC- Sample ID: 403647-001 S	Batch #: 1			1atrix: W		
Reporting Units: mg/L	MATR	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	{A]	<b>[B</b> ]				
Chloride	73.4	100	140	67	80-120	x

Matrix Spike Percent Recovery [D] =  $100^{(C-A)/B}$ Relative Percent Difference [E] =  $200^{(C-A)/(C+B)}$ All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



# Form 3 - MS / MSD Recoveries



**Project Name: Brine Pond Water** 

Work Order #: 403710

Date Analyzed: 01/18/2011 Lab Batch ID: 840288

Reporting Units: mg/L

Batch #:

Matrix: Water -

Project ID:

Analyst: MCH QC- Sample ID: 403835-001 S Date Prepared: 01/18/2011

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.0010	0.1000	0.0847	85	0.1000	0.0838	84	-	66-142	20	
Toluene	<0.0010	0.1000	0.0804	80	0.1000	0.0873	87	8	59-139	20	
Ethylbenzene	<0.0010	0.1000	0.0906	16	0.1000	0.0907	91	0	75-125	20	
m,p-Xylenes	<0.0020	0.2000	0.1791	96	0.2000	0.1902	95	6	75-125	20	
o-Xylene	<0.0010	0.1000	0.0946	95	0.1000	0.1018	102	7	75-125	20	
Lab Batch ID: 840396 Q	QC- Sample ID: 403731-008 S	403731	-008 S	Ba	Batch #:	l Matrix	Matrix: Ground Water	Water			

Date Analyzed: 01/19/2011	Date Prepared: 01/19/2011	01/19/20	11	Ans	Analyst: 4	4150					
Reporting Units: mg/L		W	ATRIX SPIKI	E / MATI	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	<b>TE RECO</b>	<b>VERY S</b>	TUDY		
Select Metals by SW-846 6010B	Parent Sample		Spiked Sample Spiked Result Sample	Spiked Sample		Duplicate Spiked Sample	Spiked Dup.	RPD		Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]		Added Result [F] [E]		%	%R	%RPD	1
Calcium	8.72	9.00	17.4	96	9.00	17.5	98	-	75-125	20	
Magnesium	5.96	9.00	15.2	103	9.00	15.9	110	s	75-125	20	
Potassium	10.6	18.0	28.8	101	18.0	30.0	108	4	75-125	20	
Sodium	7.15	9.00	17.0	109	9.00	17.1	111	-	75-125	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected. J = Present Below Reporting Limit, B = Present in Blank. NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000



# Form 3 - MS / MSD Recoveries

**Project Name: Brine Pond Water** 



Project ID:

QC- Sample ID: 403956-001 S Date Prepared: 01/19/2011

Lab Batch ID: 840813 Work Order #: 403710

Matrix: Water -HAT Batch #: Analyst:

/2011	Date Prepared: 01/19/2011	01/19/20	110	An	Analyst: H	HAT					
Reporting Units: mg/L		W	ATRIX SPIKI	E / MAT	RIX SPH	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	<b>FE RECO</b>	<b>DVERY</b>	STUDY		
Total RCRA Metals by SW6020A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	0.0113	0.0500	0.0547	87	0.0500	0.0538	85	2	75-125	25	1
Barium	0.0239	0.0500	0.0687	90	0.0500	0.0683	89	-	75-125	25	
Cadmium	<0.0006	0.0200	0.0156	78	0.0200	0.0155	78	1	75-125	25	
Chromium	<0.0030	0.0500	0.0529	106	0.0500	0.0523	105	-	75-125	25	
Lead	0.0207	0.0500	0.0706	100	0.0500	0.0711	101		75-125	25	
Selenium	0.0194	0.0500	0.0573	76	0.0500	0.0578	77	-	75-125	25	
Silver	<0.0020	0.0200	0.0181	16	0.0200	0.0181	61	0	75-125	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*((C-F)/(C+F))

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000



Sample Duplicate Recovery



### **Project Name: Brine Pond Water**

Work	ndan H.	403710
Work O	rder #:	403/10

Lab Batch #: 839923			Project I		
Date Analyzed: 01/17/2011 10:45 Date	Prepared: 01/17/2011	f Ana	lyst: WRU		
QC- Sample ID: 403718-001 D	Batch #: 1		trix: Water		
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Alkalinity by SM2320B Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (as CaCO3)	160	164	2	20	
Lab Batch #: 839872	<b>1</b> ,		•	<u> </u>	·
	Prepared: 01/14/2011	l Ana	lyst:LATC	COR	
QC- Sample ID: 403647-001 D	Batch #: 1	Ma	trix: Water	Ĩ	
Reporting Units: mg/L	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result JBJ	RPD	Control Limits %RPD	Flag
Chloride	73.4	73.9	1	20	
Lab Batch #: 839904					
Date Analyzed:         01/17/2011         11:25         Date           QC- Sample ID:         403710-001         D	Prepared: 01/17/2011 Batch #: 1	Ma	lyst:LATC	7	<u></u>
Date Analyzed: 01/17/2011 11:25 Date	Batch #: 1		trix: Water	7	OVERY
Date Analyzed:         01/17/2011         11:25         Date           QC- Sample ID:         403710-001         D	Batch #: 1	Ma / SAMPLE	trix: Water	7	OVERY Flag
Date Analyzed:         01/17/2011 11:25         Date           QC- Sample ID:         403710-001 D         Base           Reporting Units:         mg/L         Mercury by EPA 7470A	Batch #: 1 SAMPLE / Parent Sample Result	Ma / SAMPLE Sample Duplicate Result	trix: Water DUPLIC	ATE REC Control Limits	
Date Analyzed:         01/17/2011 11:25         Date           QC- Sample ID:         403710-001 D            Reporting Units:         mg/L            Mercury by EPA 7470A         Analyte           Mercury             Lab Batch #:         840396	Batch #: 1 SAMPLE / Parent Sample Result [A] <0.0003 Prepared: 01/19/2011 Batch #: 1	Ma / SAMPLE Sample Duplicate Result [B] <0.0003 Ana	trix: Water DUPLIC RPD NC lyst: 4150 trix: Grour	ATE REC Control Limits %RPD 20	Flag
Date Analyzed:         01/17/2011 11:25         Date           QC- Sample ID:         403710-001 D            Reporting Units:         mg/L            Mercury by EPA 7470A         Analyte           Mercury             Lab Batch #:         840396            Date Analyzed:         01/19/2011 12:18         Date           QC- Sample ID:         403731-008 D	Batch #: 1 SAMPLE / Parent Sample Result [A] <0.0003 Prepared: 01/19/2011 Batch #: 1	Mar SAMPLE Sample Duplicate Result [B] <0.0003 Ana Mar	trix: Water DUPLIC RPD NC lyst: 4150 trix: Grour	ATE REC Control Limits %RPD 20	Flag
Date Analyzed: 01/17/2011 11:25DateQC- Sample ID: 403710-001 DReporting Units: mg/LMercury by EPA 7470AAnalyteMercuryLab Batch #: 840396Date Analyzed: 01/19/2011 12:18QC- Sample ID: 403731-008 DReporting Units: mg/LSelect Metals by SW-846 6010B	Batch #: 1 SAMPLE / Parent Sample Result [A] <0.0003 Prepared: 01/19/2011 Batch #: 1 SAMPLE / Parent Sample Result	Ma SAMPLE Sample Duplicate Result [B] <0.0003 Ana Mat SAMPLE Sample Duplicate Result	trix: Water DUPLIC RPD NC lyst: 4150 trix: Grour DUPLIC	ATE REC Control Limits %RPD 20 20 ATE REC Control Limits	Flag
Date Analyzed: 01/17/2011 11:25       Date         QC- Sample ID: 403710-001 D       Reporting Units: mg/L         Mercury by EPA 7470A       Analyte         Mercury       Lab Batch #: 840396         Date Analyzed: 01/19/2011 12:18       Date         QC- Sample ID: 403731-008 D       Reporting Units: mg/L         Select Metals by SW-846 6010B       Analyte	Batch #: 1 SAMPLE / Parent Sample Result [A] <0.0003 Prepared: 01/19/2011 Batch #: 1 SAMPLE / Parent Sample Result [A]	Mar / SAMPLE Sample Duplicate Result [B] <0.0003 Ana Mar / SAMPLE Sample Duplicate Result [B]	trix: Water DUPLIC RPD NC lyst: 4150 trix: Grour DUPLIC RPD	ATE REC Control Limits %RPD 20 20 ATE REC Control Limits %RPD	Flag
Date Analyzed: 01/17/2011 11:25       Date         QC- Sample ID: 403710-001 D       Reporting Units: mg/L         Mercury by EPA 7470A       Analyte         Mercury       Lab Batch #: 840396         Date Analyzed: 01/19/2011 12:18       Date         QC- Sample ID: 403731-008 D       Reporting Units: mg/L         Select Metals by SW-846 6010B       Analyte         Calcium       Calcium	Batch #: 1 SAMPLE / Parent Sample Result [A] <0.0003 Prepared: 01/19/2011 Batch #: 1 SAMPLE / Parent Sample Result [A] 8.72	Mar / SAMPLE Sample Duplicate Result [B] <0.0003 Ana Mar / SAMPLE Sample Duplicate Result [B] 8.72	trix: Water DUPLIC RPD NC Ilyst: 4150 trix: Grour DUPLIC RPD 0	ATE REC Control Limits %RPD 20 20 Ad Water ATE REC Control Limits %RPD 20	Flag

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

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Sample Duplicate Recovery



### **Project Name: Brine Pond Water**

Work Order #: 403710

Lab Batch #: 840198			<b>Project I</b>	D:	
	ed: 01/17/2011	Ana	lyst: WRU		
QC- Sample ID: 403646-001 D Batch	n#: 1	Mat	trix: Water		
Reporting Units: mg/L	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
TDS by SM2540C Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	2440	2500	2	30	
Lab Batch #:         840813           Date Analyzed:         01/19/2011         16:52         Date Prepar           QC- Sample ID:         403956-001 D         Batch           Reporting Units:         mg/L         Img/L			lyst:HAT trix: Water		OVERV
	l			1	
Total RCRA Metals by SW6020A Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Arsenic	0.0113	0.0109	4	20	
Barium	0.0239	0.0245	2	20	
Cadmium	<0.0006	<0.0006	NC	20	
Chromium	<0.0030	<0.0030	NC	20	
Lead	0.0207	0.0209	1	20	
Selenium	0.0194	0.0170	13	20	
Silver	<0.0020	<0.0020	NC	20	
Lab Batch #:         839877           Date Analyzed:         01/17/2011 08:15         Date Prepar           QC- Sample ID:         403646-001 D         Batch	ed:01/17/2011		lyst:LATC		
Reporting Units: SU	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
pH, Electrometric by EPA 150.2 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
pH	7.64	7.63	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST						Ř		TCLP:	TOTAL:	Aniona (C):SO4, (Ukalinity)	2			+				Laboratory Comments	Sample Containers Intact? VOCs Free of Headspace?	Labels on container(s) Custody seals on container(s) Custody seals on cooler(s)	Sample Hand Delivered by Sampler/Client Rei by Courier? UPS	Temperature Upon Receipt:
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XENCO Laboratories

Atlanta, Boca Raton, Corpus Christi, Dallas

Houston, Miami, Odessa, Philadelphia

Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1

### Prelogin / Nonconformance Report - Sample Log-In

client: Western Refining	
Date/Time:  - 4-   2:09	es
Lab 1D #: 203710	
Initials: LM	

### Sample Receipt Checklist

1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	Yes	No		
5. Sample instructions complete on chain of custody?	Yes	No		
6. Any missing / extra samples?	Yes	No		
7. Chain of custody signed when relinquished / received?	Yes	No		
8. Chain of custody agrees with sample label(s)?	Yes	No		
9. Container labels legible and intact?	Yes	No		
10. Sample matrix / properties agree with chain of custody?	(Yes	No		
11. Samples in proper container / bottle?	Yes	No		
12. Samples properly preserved?	Yes	No	N/A	
13. Sample container intact?	Yes	No		
14. Sufficient sample amount for indicated test(s)?	Yes	No		
15. All samples received within sufficient hold time?	Yes	No		
16. Subcontract of sample(s)?	Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No	N/A	
18. Cooler 1 No. Cooler 2 No. Cooler 3 No.	Cooler 4 N	0.	Cooler 5 No.	
Ibs /7.6 °C Ibs °C Ibs	°C lbs	°C	lbs	°C

### **Nonconformance Documentation**

Contact:	Contacted by:	Date/Time:	h
Regarding:	······································		
Corrective Action Take	n:		
	······	· · · · · · · · · · · · · · · · · · ·	

condition acceptable by NELAC 5.5.8.3.1.a.1.

□ Initial and Backup Temperature confirm out of temperature conditions

Client understands and would like to proceed with analysis

Pettigrew & Associates, P.A. Engineering - SURVEYING - MATERIALS TESTING

www.palligrew

Ken Parker Western Refining PO Box 1345 Jal, New Mexico, 88252 575-392-2632

01 April, 2010

Survey Report RE: Western Refining Subsidence Monitoring

Dear Mr. Parker,

Please review this report of survey findings for the subject project.

### SUBSIDENCE MONUMENT MONITORING

The surveyed elevations along with deltas from the previous survey values, letter dated 9 October 2009 and as surveyed on 25 September 2009, are as follows:

NAME	ELEVATION 9/25/2009	ELEVATION 3/09/2010	DELTA ELEVATION
CP-1	3293.46	3293.46	NO CHANGE
CP-2	3297.82	3297.82	NO CHANGE
CP-3	3293.54	3293.55	+0.01
SM-1	3292.26	3292.27	+0.01'
SM-2	3294.56	3294.56	NO CHANGE
SM-3	3294.83	3294.85	+0.02'
SM-4	3294.84	3294.86	+0.02'
SMF-1 (Middle Flange)	3295.62	3295.61	-0.01
SMF-1 (Lower Flange)	3293.67	3293.66	-0.01'
SMF-2 (Middle Flange)	3297.43	3297.42	-0.01'
SMF-2 (Lower Flange)	3295.53	3295:52	-0.01′
SMF-3 (Middle Flange)	3298.17	3298.16	-0.01
SMF-3 (Lower Flange)	3296.43	3296.43	NO CHANGE
SMF-4 (Middle Flange)	3297.72	3297.73	+0.01
SMF-4 (Lower Flange)	3295.98	3295.99	+0.01'
BM-1	3294.30	3294.30	NO CHANGE
BM-2	3296.62	3296.62	NO CHANGE
BM-3	3297.73	3297.73	NO CHANGE

Ken Parker Western Refining PO Box 1345

Pettigrew & Associates, P.A.

Jal, New Mexico. 88252 -575-392-2632

17 November, 2010

RE: Survey Report Western Refining Subsidence Monitoring

Dear Mr. Parker,

Please review this report of survey findings for the subject project.

### SUBSIDENCE MONUMENT MONITORING

The surveyed elevations along with deltas from the previous survey values, letter dated 01 April 2010 and as surveyed on 09 March 2010, are as follows:

NAME	SURVEY ELEVATIONS AS OF 3/09/2010	SURVEY ELEVATIONS AS OF 10/29/2010	DELTA ELEVATION
CP-1	3293.46	3293,45	-0.01
CP-2	3297.82	3297.82	NO CHANGE
CP-3	3293.55	3293.56	+0.01'
SM-1	3292.27	3292.27	NO CHANGE
SM-2	3294.56	3294.58	NO CHANGE
SM-3	3294.85	3294.84	-0.01'
SM-4	3294.86	3294.86	NO CHANGE
SMF-1 (Middle Fiange)	3295.61	3295.64	+0.03'
SMF-1 (Lower Flange)	3293.66	3293.69	+0.03'
SMF-2 (Middle Flange)	3297.42	3297.43	+0.01'
SMF-2 (Lower Flange)	3295.52	3295.53	+0.01'
SMF-3 (Middle Flange)	3298.16	3295.16	NO CHANGE
SMF-3 (Lower Flange)	3296.43	3296.42	-0,01*
SMF-4 (Middle Flange)	3297.73	3297.73	NO CHANGE
SMF-4 (Lower Flange)	3295.99	3296.00	+0.01'
BM-1	3294.30	3294.31	+0.01'
BM-2	3296.62	3296.63	+0.01'
BM-3	3297.73	3297.73	NO CHANGE

### RECEIVED 2010 FEB 1 PM 2 00

بالمرفق فبجاري الرابة بالمعدان العمري مصافرية الهارات

### **ANNUAL LPG WELL REPORT**

### **OPERATOR:** Western Refining Company

### **GW PERMIT NUMBER: GW-007**

### UIC CLASS LPG STORAGE WELLS API NUMBER

31055 WELL 1: 30-025-35954 31055 WELL 2: 30-025-35955 31055 WELL 3: 30-025-35956 31055 WELL 4: 30-025-35957

### WESTERN REFINING JAL STORAGE FACILITY

**Company Representative: Ken Parker** 

Date: 1-29-2010

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### Annual LPG Well Report

### Well Summary

Well 1

Well one was utilized for storing mix butane in 2009. Maximum injecting pressure was 750 pounds and normal operating pressure was 500 pounds.

It wasn't until product was being recovered that we had an operating issue. The well would not take water with the onsite equipment. We discovered that the drill bit was attached to the bottom of the tubing and the well wouldn't operate under this condition. The water flow wasn't enough to maintain the operating pressure to load trucks or railcars. The well was perforated and the issue was resolved.

### Well 2

Different gravities of LPG product were stored in this cavern the first half of 2009. The products were injected into the cavern without any operating issues with this well. The last half of the year the well wasn't needed. We maintained the cavern pressure between 250 and 450 pounds.

### Well 3

Normal butane was stored in this cavern this past year. Moving product in and out of this well has been continuous and trouble free. Operating pressures are within the OCD guidelines for this well.

### Well 4

Iso-butane was stored in this cavern in 2009. This well is operating within the OCD guidelines and has been trouble free.

### **Production Volumes**

See Attachments Well 1 Annual 09 Well 2 Annual 09 Well 3 Annual 09 Well 4 Annual 09

### **Injecting Fluid Analysis**

See Attachment 359452

**Deviation From Normal Production Method** N/A

Leak and Spill Report N/A

**Ground Water Monitoring** N/A

Cavity Subsidence See Attachment

**Area of Review** No activity in the year 2009.

Pursuant to all applicable parts of the Water Quality Control Commission (WQCC) Regulations 20.6.2 NMAC and more specifically 20.6.2.5101. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Western Refining Company Company Name

Ken Parker Company Representative

ten I

Company Representative Signature

Title: Facility Manager

Date: 1-29-10

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

### ANNUAL LPG STORAGE REPORT

Western Refining	Company	PO	Box 1345	Jal, New Mexico
(Company	)		(.	Address)
NAME OF STORAGE PROJECT	Jal Terminal	COUNTY _	Lea	Month/Year <u>12-09</u>

LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
M32-238-37E	750	23,924	210,180
	UNIT SEC. TWP. RANGE	UNIT SEC. TWP. RANGE INJECTION PRESSURE	UNIT SEC. TWP. RANGE INJECTION (BBLS)

TOTALS

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 635

TOTAL CAPACITY (BBLS) 201,013 Barrels

NET CHANGE (BBLS) <u>186,256</u>

BEGINNING STORAGE (BBLS) <u>189,383</u>

ENDING STORAGE (BBLS) <u>3,127</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature ____

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenuc, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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### ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)
NAME OF STORAGE PROJECT <u>Jal Terminal</u>	COUNTY <u>Lea</u> Month/Year <u>12-09</u>

WELL NAME AND NUMBER	LOCATION UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 2 30-025-35955	M32-23S-37E	700	34,944	36,696
	TOTALS	<u> </u>		

CALCULATED RESERVOIR PRESSURE @ END OF YEAR 468

TOTAL CAPACITY (BBLS) 130,201 Barrels

NET CHANGE (BBLS) <u>1,752</u>

BEGINNING STORAGE (BBLS) <u>1,752</u>

ENDING STORAGE (BBLS)  $\underline{0}$ I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

### ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)
NAME OF STORAGE PROJECT Jal Terminal	COUNTY Lea Month/Year 12-09

WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 3 30-025-35956	M32-23S-37E	730	150,556	146,274
	TOTALS			

TOTALS

### CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1,007

TOTAL CAPACITY (BBLS) 79,692 Barrels

NET CHANGE (BBLS) <u>4,282</u>

BEGINNING STORAGE (BBLS) 20,673

ENDING STORAGE (BBLS) <u>24,955</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit one copy to Santa Fe and one copy to appropriate District Office postmarked by 24th Day of succeeding month. See Rule 1131.

### ANNUAL LPG STORAGE REPORT

Western Refining Company	PO Box 1345 Jal, New Mexico
(Company)	(Address)
NAME OF STORAGE PROJECT <u>Jal Terminal</u>	COUNTY Lea Month/Year 12-09

WELL NAME AND NUMBER	<u>LOCATION</u> UNIT SEC. TWP. RANGE	MAXIMUM INJECTION PRESSURE	INJECTION (BBLS)	WITHDRAWAL (BBLS)
31055 State LPG Storage Well No. 4 30-025-35957	M32-238-37E	760	80,324	75,789
	TOTALS			

TOTALS

### CALCULATED RESERVOIR PRESSURE @ END OF YEAR 1,027

TOTAL CAPACITY (BBLS) 136,626 Barrels

NET CHANGE (BBLS) 4,535

BEGINNING STORAGE (BBLS) 30,625

ENDING STORAGE (BBLS) <u>35,160</u> I hereby certify that this report is true and complete to the best of my knowledge and belief.

Signature

Printed Name & Title Ken Parker, Manager

E-mail Address ken.parker@wnr.com

### Analytical Report 359452

for

Western Refining

Project Manager: Ken Parker

**Brine Pond Water** 

### 29-JAN-10





### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), West Virginia (362), Kentucky (85) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330) Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX) Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX) Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240), South Carolina(96031001), Louisiana(04154), Georgia(917)



29-JAN-10



Project Manager: **Ken Parker Western Refining** P.O. Box 1345 Jal, NM 88252

Reference: XENCO Report No: 359452 Brine Pond Water Project Address: Jal Terminal

### Ken Parker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 359452. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 359452 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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### Sample Cross Reference 359452



### Western Refining, Jal, NM

2010000

Brine Pond Water

Sample 1d	Matrix	Date Collected	Sample Depth	Lab Sample 1d
South Pond	W	Jan-21-10 10:00		359452-001

### CASE NARRATIVE



Client Name: Western Refining Project Name: Brine Pond Water

Project ID: Work Order Number: 359452 Report Date: 29-JAN-10 Date Received: 01/21/2010

Sample receipt non conformances and Comments: None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-790632 Anions by E300 None

Batch: LBA-790717 BTEX by SW 8260B None

Batch: LBA-790721 Mercury by EPA 7470A None

Batch: LBA-790731 pH, Electrometric by EPA 150.2 None

Batch: LBA-790843 Total RCRA Metals by SW6020A SW6020

Batch 790843, Arsenic, Barium, Cadmium, Chromium, Selenium, Silver recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Samples affected are: 359452-001. The Laboratory Control Sample for Silver, Chromium, Arsenic, Selenium, Barium, Cadmium is within laboratory Control Limits

Batch: LBA-790910 Metals per ICP by SW846 6010B None

Batch: LBA-790914 TDS by SM2540C None

Batch: LBA-791431 Alkalinity by SM2320B None



## **Certificate of Analysis Summary 359452** Western Refining, Jal, NM



Project Location: Jal Terminal **Project Id:** Contact: Ken Parker

H **Project Name: Brine Pond Water** iangreg L jonnoj J

Date Received in Lab: Thu Jan-21-10 04:05 pm Report Date: 29-JAN-10

			Project Manager: Brent Barron, II	
	Lab Id:	359452-001		
A section Decision and	Field Id:	South Pond		
Anaiysis Nequesiea	Depth:			
	Matrix:	WATER		
	Sampled:	Jan-21-10 10:00		
Alkalinity by SM2320B	Extracted:			
	Analyzed:	Jan-28-10 15:20		
	Units/RL:	mg/L RL		
Alkalinity, Total (as CaCO3) *		212 4.00		
Anions by E300	Extracted:			
	Analyzed:	Jan-22-10 14:35		
	Units/RL:	mg/L RL		
Chloride		119000 5000		
BTEX by SW 8260B	Extracted:	Jan-23-10 13:00		
SUB: T104704215-08B-TX	Analyzed:	Jan-23-10 23:36		
	Units/RL:	mg/L RL		
Benzene		ND 0.0010		
Toluene		ND 0.0010		
Ethylbenzene		ND 0.0010		
m,p-Xylenes		ND 0.0020		
o-Xylene		ND 0.0010		
Total Xylenes		ND 0.001		
Total BTEX		ND 0.001		
Mercury by EPA 7470A	Extracted:	Jan-22-10 10:30		
	Analyzed:	Jan-25-10 10:45		
	Units/RL:	mg/L RL		

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This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Mercury

ND 0.0001

Odessa Laboratory Manager Brefit Barron, II

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## **Certificate of Analysis Summary 359452** Western Refining, Jal, NM



**Project Id:** Contact: Ken Parker

**Project Name: Brine Pond Water** 2 J 

Contact: Ken Parker	ens)		Date Received in Lab: 1nu Jan-21-10 04:05 pm Report Date: 29-JAN-10
	.33 40.00		
	Lab Id:	359452-001	1
Analuain Daaraatad	Field Id:	South Pond	
Anuiysis Kequestea	Depth:		
	Matrix:	WATER	
	Sampled:	Jan-21-10 10:00	
Metals per ICP by SW846 6010B	Extracted:		
	Analyzed:	Jan-26-10 13:56	
	Units/RL:	mg/L RL	
Calcium		4860 2000	
Magnesium	-	2500 200	
Potassium		ND 10000	
Sodium		108000 10000	
TDS by SM2540C	Extracted:		
	Analyzed:	Jan-25-10 16:50	
	Units/RL:	mg/L RL	
Total dissolved solids		189000 5.00	
Total RCRA Metals by SW6020A	Extracted:	Jan-26-10 09:20	
SUB: T104704215-08B-TX	Analyzed:	Jan-26-10 12:20	
	Units/RL:	mg/L RL	
Arsenic		EDU 0.010	
Barium		0.093 D 0.025	
Cadmium		EDU 0.005	
Chromium		0.052 D 0.015	
Lead		0.014 D 0.010	
Selenium		EDU 0.015	
Silver		EDU 0.010	
pH, Electrometric by EPA 150.2	Extracted:		
	Analyzed:	Jan-25-10 13:00	
	Units/RL:	SU RL	
3		7 60	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Manager Breht Barron, II

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- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated. E
- RPD exceeded lab control limits. F
- The target analyte was positively identified below the MQL and above the SQL. J
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting OC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- **BRL** Below Reporting Limit.
- **RL** Reporting Limit
- * Outside XENCO's scope of NELAC Accreditation.

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12600 West I-20 East, Odessa, TX 79765	
842 Cantwell Lane, Corpus Christi, TX 78408	

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(281) 240-4200	(281) 240-4280
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(361) 884-0371	(361) 884-9116



### Form 2 - Surrogate Recoveries

### Project Name: Brine Pond Water

ork Orders : 359452 Lab Batch #: 790717	2, Sample: 548422-1-BKS / B	KS Bate	Project I th: 1 Matrix	<b>x:</b> Water			
Units: mg/L	Date Analyzed: 01/23/10 21:32	SURROGATE RECOVERY STUDY					
BTE	X by SW 8260B	Amount Found [A]	True Amount {B}	Recovery %R	Control Limits %R	Flags	
<u> </u>	Analytes			[D]			
4-Bromofluorobenzene		0.0492	0.0500	98	74-124		
Dibromofluoromethane		0.0515	0.0500	103	75-131		
1,2-Dichloroethane-D4		0.0454	0.0500	91	63-144		
Toluene-D8		0.0504	0.0500	101	80-117		
Lab Batch #: 790717	Sample: 548422-1-BSD / B	SD Bate	ch: 1 Matri	x:Water			
Units: mg/L	Date Analyzed: 01/23/10 21:57	SURROGATE RECOVERY STUDY					
BTE	X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
4-Bromofluorobenzene		0.0484	0.0500	97	74-124		
Dibromofluoromethane		0.0551	0.0500	110	75-131		
1,2-Dichloroethane-D4		0.0507	0.0500	101	63-144		
Toluene-D8		0.0498	0.0500	100	80-117		
Lab Batch #: 790717	Sample: 548422-1-BLK / B	LK Bate	h: Matri	w:Water	<u> </u>		
Units: mg/L	Date Analyzed: 01/23/10 23:11	BLK Batch: 1 Matrix: Water SURROGATE RECOVERY STUDY					
BTE	X by SW 8260B Analytes	Amount Found [A]	True Amount  B	Recovery %R [D]	Control Limits %R	Flags	
4-Bromofluorobenzene		0.0481	0.0500	96	74-124		
Dibromofluoromethane		0.0518	0.0500	104	75-131		
1,2-Dichloroethane-D4		0.0478	0.0500	96	63-144	·	
Toluene-D8		0.0515	0.0500	103	80-117		
Lab Batch #: 790717	Sample: 359452-001 / SMP	Batch: 1 Matrix: Water					
Units: mg/L	Date Analyzed: 01/23/10 23:36	SURROGATE RECOVERY STUDY					
BTE	X by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag	
	Analytes			[D]			
1.5. 0	· · · · · · · · · · · · · · · · · · ·	0.0490	0.0500	98	74-124		
4-Bromofluorobenzene			0.0500	109	75-131		
		0.0545	0.0500				
4-Bromofluorobenzene Dibromofluoromethane 1,2-Dichloroethane-D4		0.0545	0.0500	108	63-144		

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



### Form 2 - Surrogate Recoveries

### Project Name: Brine Pond Water

ork Orders : 359452 Lab Batch #: 790717	S Batc	Project I h: ¹ Matrix	<b>D:</b> Water			
Lab Batch #: 790717         Sample: 359452-001 S / MS           Units: mg/L         Date Analyzed: 01/24/10 04:05		SURROGATE RECOVERY STUDY				
BTE	X by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes					
4-Bromofluorobenzene		0.0497	0.0500	99	74-124	
Dibromofluoromethane		0.0561	0.0500	[12	75-131	
1,2-Dichloroethane-D4		0.0524	0.0500	105	63-144	
Toluene-D8		0.0504	0.0500	101	80-117	
Lab Batch #: 790717	Sample: 359452-001 SD / 1	MSD Batc	h: ¹ Matrix	:Water		
Units: mg/L	Date Analyzed: 01/24/10 04:30	SURROGATE RECOVERY STUDY				
BTE	X by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene		0.0502	0.0500	100	74-124	
Dibromofluoromethane		0.0574	0.0500	115	75-131	
1,2-Dichloroethane-D4		0.0547	0.0500	109	63-144	
Toluene-D8		0.0504	0.0500	101	80-117	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.





### **Project Name: Brine Pond Water**

Work Order #: 359452		Pr	oject ID:			
Lab Batch #: 791431 Date Analyzed: 01/28/2010 Date	Sample: 791431- e Prepared: 01/28/20		Matrix: Analyst:			
Reporting Units: mg/L	Batch #: 1		BLANK SPI		COVERY S	STUDY
Alkalinity by SM2320B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Alkalinity, Total (as CaCO3) *	ND	200	175	88	80-120	
Lab Batch #: 790632 Date Analyzed: 01/22/2010 Date Reporting Units: mg/L	Sample: 790632- e Prepared: 01/22/20 Batch #: 1	010	Matrix: Analyst: BLANK SPI	LATCOF		STUDY
Anions by E300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	11.0	11.4	104	90-110	
Lab Batch #: 790843Date Analyzed: 01/26/2010DateReporting Units:mg/L	Sample: 548500- e Prepared: 01/26/20 Batch #: 1	010	Matrix: Analyst: BLANK SPI	НАТ	OVERY S	STUDY
Total RCRA Metals by SW6020A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Arsenic	ND	0.050	0.050	100	75-125	
Barium	ND	0.050	0.050	100	75-125	
Cadmium	ND	0.020	0.020	100	75-125	
Chromium	ND	0.050	0.049	98	75-125	
Lead	ND	0.050	0.049	98	75-125	
Selenium	ND	0.050	0.050	100	75-125	
Silver	ND	0.020	0.020	100	75-125	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit



**BS / BSD Recoveries** 



178.24

### Project Name: Brine Pond Water

ate Prepared:         01/23/2010         Date Analyzed:         01/23/2010           Batch #:         1         Date Analyzed:         01/23/2010           BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE         RECOVERY STUDY           Spike         Blank Added         Spike Spike         Spike Spike Spike         Blank Spike         Spike Spike         <		% <b>RPD</b> 20	% <b>R</b> 75-125	0 %	100 <b>[G]</b>	Dupiicate Resuit [F] 0.0010	[E]	100 <b>[D]</b>	Result [C] 0.0010	<b>[B]</b>	ND [A]	Analytes Mercury	
Project IJ: Sample: 548422-1-BKS         Bate Prepared: 01/23/2010         Project IJ: Mate Analyzed: 01/23/2010           Project IJ: Mate Analyzed: 01/23/2010         Mate Analyzed: 01/23/2010 Mate Analyzed: 01/23/2010           Sample: 548422-1-BKS         Blank Sample: S48422-1-BKS         Blank Sample: S48378-1-BKS         Blank Sample: S48378-1-BKS         Blank Sample: S48378-1-BKS         Blank Blank Sample: S48378-1-BKS         Blank Blank Blank Sample: S48378-1-BKS         Blank Blank Sample: S48378-1-BKS         Blank Sample: S48378-1-BKS         Blank Blank Sample: S48378-1-BKS         Blank Sample: S48378-1-BKS         B	Flag	Control Limits	Control Limits	RPD	Bik. Spk Dup.	Blank Spike	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Sample Result	Mercury by EPA 7470A	
Project 10: Sample: 548422-1-BKS         Bare Prepared: 01/23/2010         Project 10: Date Analyzed: 01/23/2010           Sample: 548422-1-BKS         Bank Sample Sample Sample Result [A]         Spike [A]         Blank [A]         Blank [C]         Blank [P]         Blank Spike [P]         Blank Spike [P]         Blank Spike [P]         Blank Spike [P]         Blank Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Spike Duplicate Duplicate Spike Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Duplicate Du		Y	RY STUD	ECOVE	ICATE R			SPIKE / B	( /BLANK S	BLANE		Units: mg/L	
Project LD: Sample: 548422-1-BKS         Batch #: 1         Propared: 01/23/2010           Sample: 548422-1-BKS         Batch #: 1         Date Prepared: 01/23/2010           Match #: 1         Date Analyzed: 01/23/2010           Match #: 1         Blank         Spike         Blank         Spike         Blank         Spike         Blank         Spike         Blank         Spike         Spik         Spik <th cols<="" td=""><td></td><td></td><td>Vater</td><td>Matrix: V</td><td></td><td></td><td></td><td></td><td>#: ]</td><td>Batch</td><td>3KS</td><td></td></th>	<td></td> <td></td> <td>Vater</td> <td>Matrix: V</td> <td></td> <td></td> <td></td> <td></td> <td>#: ]</td> <td>Batch</td> <td>3KS</td> <td></td>			Vater	Matrix: V					#: ]	Batch	3KS	
Project-LD: Sample: 548422-1-BKS         Prepared: 01/23/2010         Prepared: 01/23/2010           Sample: 548422-1-BKS         Blank Sample Result         Samk / BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY           W 8260B         Blank [A]         Spike [A]         Blank Added [B]         Blank [C]         Blank [P]         Blank Spike [P]         Blank Added Duplicate [P]         Blank Dup, [E]         Blank Spike Duplicate [P]         Blank Dup, [C]         Blank Dup, PR         Blank PR         Control Dun, PR         Control PNR         Control PNR         Control PNR         Limits PNR         Limits PNR         Limits PNR         Dup, PNR         Control PNR         Limits PNR         Limits PNR         Limits PNR         Limits PNR         Dup, PNR         PNR         PNR <td></td> <td></td> <td>1/25/2010</td> <td>alyzed: 0</td> <td>Date An</td> <td></td> <td></td> <td>0</td> <td><b>d:</b> 01/22/201</td> <td>ite Prepare</td> <td>Ð</td> <td>Analyst: LATCOR</td>			1/25/2010	alyzed: 0	Date An			0	<b>d:</b> 01/22/201	ite Prepare	Ð	Analyst: LATCOR	
Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu:Tropertu: <th c<="" td=""><td></td><td>20</td><td>75-125</td><td>4</td><td>88</td><td>0.0878</td><td>0.1</td><td>16</td><td>0.0913</td><td>0.1000</td><td>ND</td><td>ylene</td></th>	<td></td> <td>20</td> <td>75-125</td> <td>4</td> <td>88</td> <td>0.0878</td> <td>0.1</td> <td>16</td> <td>0.0913</td> <td>0.1000</td> <td>ND</td> <td>ylene</td>		20	75-125	4	88	0.0878	0.1	16	0.0913	0.1000	ND	ylene
Project LD: Project LD: Date Prepared: 01/23/2010Project LD: Date Analyzed: 01/23/2010Sample: 548422-1-BKSBLANK /BLANK SPIKE / BLANK SPIKE DUPLICATERECOVERY STUDYMatrix: WaterVSW 8260BBlank Aded IAIBlank Spike ResultBlank Spike NDBlank Spike NDBlank Spike Spike NDBlank Spike Spike Spike Spike NDBlank Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike Spike		20	75-125	7	82	0.1634	0.2	77	0.1531	0.2000	DN	-Xylenes	
Project LD:		20	75-125	5	100	0.0999	0.1	95	0.0952	0.1000	ND	ylbenzene	
Project LD:		20	59-139	4	103	0.1031	0.1	107	0.1071	0.1000	ND	иеле	
Project LD:		20	66-142	2	16	0.0913	0.1	90	0.0898	0.1000	ND	izene	
Project LD:       Project LD:         Date Prepared:       01/23/2010       Date Analyzed:       01/23/2010         Sample:       548422-1-BKS       Batch #:       1       Matrix:       Water         BLANK /BLANK SPIKE / BLANK SPIKE / BLANK SPIKE DUPLICATE       RECOVERY STUDY         Blank       Spike       Blank       Blank       Blank       Blank       Control       Control         VSW 8260B       Blank       Spike       Blank       Spike       Blank       Spike       Blank       Blank       Blank       Limits       Limits		%RPD	%R	%	%R [G]	Duplicate Result [F]	E	%R [D]	Result [C]	[B]	[A]	Analytes	
Date Prepared: 01/23/2010 Sample: 548422-1-BKS Batch #: 1 BLANK /BLANK SPIKE / BLANK S	Flag	Control Limits	Control Limits	RPD	Bik. Spk Dup.	Blank Spike	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Sample Result	BTEX by SW 8260B	
+52 Date Prepared: 01/23/2010 Sample: 548422-1-BKS Batch #: 1		Y	RY STUD	ECOVE	JICATE R	PIKE DUPI	LANK S	SPIKE / E	C/BLANK S	BLANF		Units: mg/L	
Date Prepared: 01/23/2010			Vater	Matrix: V					#: 1	Batch	3KS		
			1/23/2010	alyzed: 0	Proj Date An			0	<b>d:</b> 01/23/201	ite Prepare	D	Analyst: MCH	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



### **BS / BSD Recoveries**



ù.

## Project Name: Brine Pond Water

Analytes		•	TDS by SM2540C	Units: mg/L	Lab Batch ID: 790914	Work Order #: 359452 Analyst: WRU	
			2540C		Sample: 790914-1-BKS		
	[A]	Sample Result	Blank		KS	D	
[B]		Added	Spike	BLANH	Batch #:	ate Prepare	
[C]	Result	Spike	Blank	BLANK /BLANK SPIKE / BLANK SPI	#: 1	Date Prepared: 01/25/2010	
וםן	%R	Spike	Blank	SPIKE / B		10	
[E]		Added	Spike	BLANK S			
Result [F]	Duplicate	Spike	Blank	PIKE DUPI			
G	%R	Dup.	Blk. Spk	JCATE I		Proj Date Ai	
	%	RPD		RECOVE	Matrix: Water	Project ID: Date Analyzed: 01/25/2010	
	%R	Limits	Control	IKE DUPLICATE RECOVERY STUDY	Water	01/25/2010	
	%RPD	Limits	Control	Υ			
		Flag					

Total dissolved solids

ND

1000

928

93

1000

930

93

0

80-120

30

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



Work Order #: 359452

### Form 3 - MS Recoveries

### Project Name: Brine Pond Water



Lab Batch #: 790632			Pro	oject ID:	:	
Date Analyzed: 01/22/2010	Date Prepared: 01/22	2/2010	Α	nalyst: L	ATCOR	
QC- Sample ID: 359452-001 S	Batch #: 1		N	Aatrix: V	Vater	
Reporting Units: mg/L	MATR	IX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	<b> B </b>		1.1		
Chloride	119000	100000	213000	94	90-110	

Matrix Spike Percent Recovery  $[D] = 100^{*}(C-A)/B$ Relative Percent Difference  $[E] = 200^{*}(C-A)/(C+B)$ All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



## Form 3 - MS / MSD Recoveries



### **Project Name: Brine Pond Water**

Mercury	Analytes	Mercury by EPA 7470A	Reporting Units: mg/L	Date Analyzed: 01/25/2010	Lab Batch ID: 790721	o-Xylene	m,p-Xylenes	Ethylbenzene	Toluene	Benzene	Analytes	BTEX by SW 8260B	Reporting Units: mg/L	Lab Batch ID: 790717 Date Analyzed: 01/24/2010	Work Order #: 359452
ND	[A]	Parent Sample		Date Prepared: 01/22/2010	OC- Sample ID: 357625-001 S	ND	ND	ND	ND	dN	Result [A]	Parent		<b>QC- Sample ID:</b> 359452-001 S <b>Date Prepared:</b> 01/23/2010	
0.0010	Added [B]	Spike	N	: 01/22/2	• 357625	0.1000	0.2000	0.1000	0.1000	0.1000	Added [B]	Chillo	N	359452 01/23/2	
0.0010	[C]	Spiked Sample Result	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	010	-001 S	0.0965	0.1619	0.1012	0.1137	0.0990	[C]	Spiked Sample	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	-001 S	
100	[D]	s s	E / MAT	An	B	97	81	101	114	66	%R [D]		E / MAT	Ba An	
0.0010	Added [E]	Spike	RIX SPII		Batch #:	0.1000	0.2000	0.1000	0.1000	0.1000	Added [E]	Chille	RIX SPII	Batch #: Analyst: 1	
0.0010	Result [F]	Duplicate Spiked Sample	KE DUPLICA	LATCOR	1 Matrix: Soil	0.0950	0.1573	0.0970	0.1077	0.0938	Result [F]	Duplicate	KE DUPLICA	l Matri MCH	Project ID:
100	G	Spiked Dup.	TE REC		e Soil	95	79	97	108	94	%R  G	Spiked	TE REC	Matrix: Water	
0	%	RPD	OVERY S			2	3	4	5	S	%	naa	OVERY :		
75-125	%R	Control Limits	STUDY			75-125	75-125	75-125	59-139	66-142	%R	Control	STUDY		
20	%RPD	Control Limits				20	20	20	20	20	%RPD	Control			
		Flag									1.148	Elan			

 Matrix Spike Percent Recovery
 [D] = 100*(C-A)/B
 Matrix Spike Dupli

 Relative Percent Difference
 RPD = 200*((C-F)/(C+F))
 ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

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Draft Ver. 1.000



Work Order #: 359452

Lab Batch ID: 790843

# Form 3 - MS / MSD Recoveries



### **Project Name: Brine Pond Water**

**Project ID:** 

QC- Sample ID: 359452-001 S Date Prepared: 01/26/2010 Batch #:

Analyst: HAT -Matrix: Water

Date Analyzed: 01/26/2010	Date Prepared: 01/26/2010	: 01/26/2	010	An	Analyst:	HAT					
Reporting Units: mg/L		N	MATRIX SPIKE / MATRIX SI	E/MAT	RIX SPI	PIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY :	STUDY		
<b>Total RCRA Metals by SW6020A</b>	Parent Sample	Spike	Spiked Sample Spiked Result Sample	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added  B	lc	[D]	Added [E]	Result [F]	G	%	%R	%RPD	
Arsenic	ND	0.050	ND	0	0.050	ND	0	NC	75-125	25	×
Barium	0.054	0.050	0.069	30	0.050	0.070	32	1	75-125	25	×
Cadmium	ND	0.020	0.007	35	0.020	0.008	40	13	75-125	25	×
Chromium	0.039	0.050	0.043	8	0.050	0.043	8	0	75-125	25	×
Lead	0.010	0.050	0.055	90	0.050	0.058	96	S	75-125	25	
Selenium	DN	0.050	ND	0	0.050	ND	0	NC	75-125	25	×
Silver	ND	0.020	0.007	35	0.020	0.007	35	0	75-125	25	×

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*((C-F)/(C+F))

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E



Sample Duplicate Recovery



### **Project Name: Brine Pond Water**

Lab Batch #:         791431         Project ID: Analyse: WRU           QC- Sample ID:         359452-001 D         Batch #:         1         Matrix: Water           Reporting Units:         mg/L         SAMPLE / SAMPLE DUPLICATE RECOVEI           Alkalinity by SM2320B         Parent Sample Result         Sample RPD Limits         Control Limits         Fla           Analyte         212         208         2         20         20           Lab Batch #:         790632         Date Prepared: 01/22/2010         Analyst: LATCOR         Control Limits         Fla           QC- Sample ID:         359452-001 D         Batch #:         1         Matrix: Water         Recover           Reporting Units:         mg/L         SAMPLE / SAMPLE DUPLICATE RECOVEI         Analyst: LATCOR         Recover           QC- Sample ID:         359452-001 D         Batch #:         1         Matrix: Water           Reporting Units:         mg/L         SAMPLE / SAMPLE DUPLICATE RECOVEI         Fla           Analyte         1/4         Batch #:         1         Matrix: Water           Chloride         119000         121000         2         20         20           Lab Batch #:         790914         Date Prepared: 01/25/2010         Analyst: WRU         200<
Alkalinity by SM2320B       Parent Sample Result       Sample Duplicate Result       Sample Duplicate Result       RPD       Control Limits       Fla         Alkalinity, Total (as CaCO3) *       212       208       2       20         Lab Batch #: 790632       Date Analyzed:       01/22/2010       Date Prepared:       01/22/2010       Analyst: LATCOR         QC- Sample ID: 359452-001 D       Batch #: 1       Matrix: Water       Matrix: Water         Reporting Units:       mg/L       Sample Result [A]       Sample Result [B]       RPD       Control Limits       Fla         Anions by E300       Parent Sample Result [A]       Sample Duplicate Result [B]       RPD       Control Limits       Fla         Chloride       119000       121000       2       20       20         Lab Batch #: 790914       Date Prepared:       01/25/2010       Analyst: WRU       Fla         QC- Sample ID: 359452-001 D       Batch #: 1       Matrix: Water       Matrix: Water         Reporting Units: mg/L       SAMPLE / SAMPLE DUPLICATE RECOVEI       Sample Result       Control Limits       Fla         Total dissolved solids       189000       206000       9       30       1         Lab Batch #: 790843       189000       206000       9       30
AnalyteDuplicate Result [A]RPDLimits %RPDFlaAlkalinity, Total (as CaCO3) *212208220Lab Batch #: 790632 Date Analyzed: 01/22/2010Date Prepared: 01/22/2010Analyst: LATCORQC- Sample ID: 359452-001 DBatch #: 1Matrix: WaterReporting Units: mg/LSAMPLE / SAMPLE DUPLICATE RECOVEIAnalyteParent Sample Result [A]Sample NePDAnalyte1190001210002Lab Batch #: 790914 Date Analyzed: 01/25/2010Date Prepared: 01/25/2010 Analyst: WRU QC- Sample ID: 359452-001 DBatch #: 1Mater X: WaterMatrix: WaterChloride1190001210002Lab Batch #: 790914 Date Analyzed: 01/25/2010Date Prepared: 01/25/2010 Batch #: 1Analyst: WRU Matrix: WaterReporting Units: mg/LSAMPLE / SAMPLE DUPLICATE RECOVEITDS by SM2540C Result [A]Parent Sample Result [A]Sample Duplicate Result [A]Total dissolved solids189000206000930Lab Batch #: 790843189000206000930
Alkalinity, Total (as CaCO3) *212208220Alkalinity, Total (as CaCO3) *212208220Lab Batch #: 790632Date Prepared: 01/22/2010Analyst: LATCORQC- Sample ID: 359452-001 DBatch #: 1Matrix: WaterReporting Units: mg/LSAMPLE / SAMPLE DUPLICATE RECOVEIAnions by E300Parent Sample Result [B]RPDControl Limits %RPDAnalyte119000121000220Lab Batch #: 790914Date Prepared: 01/25/2010 Date Analyzed: 01/25/2010Date Prepared: 01/25/2010 Batch #: 1Analyst: WRU Matrix: WaterQC- Sample ID: 359452-001 DBatch #: 1Matrix: WaterReporting Units: mg/LSAMPLE / SAMPLE DUPLICATE RECOVEITDS by SM2540CParent Sample Result [A]Sample Duplicate Result [B]Control 
Lab Batch #: 790632         Date Analyzed: 01/22/2010       Analyst: LATCOR         QC- Sample ID: 359452-001 D       Batch #: 1       Matrix: Water         Reporting Units: mg/L       SAMPLE / SAMPLE DUPLICATE RECOVEI         Anions by E300       Parent Sample Result [A]       Sample Duplicate Result [B]       RPD       Control Limits %RPD       Fla         Chloride       119000       121000       2       20       20         Lab Batch #: 790914         Date Analyzed:       01/25/2010       Date Prepared:       01/25/2010       Analyst: WRU         QC- Sample ID:       359452-001 D       Batch #:       1       Matrix: Water         Reporting Units: mg/L       SAMPLE / SAMPLE DUPLICATE RECOVEI         TDS by SM2540C       Parent Sample Result [A]       Sample Parent Sample Duplicate Result [A]       Sample Matrix: Water         Total dissolved solids       189000       206000       9       30         Lab Batch #: 790843
Date Analyzed:01/22/2010Date Prepared:01/22/2010Analyst:LATCORQC- Sample ID:359452-001 DBatch #:1Matrix:WaterReporting Units:mg/LSAMPLE / SAMPLE DUPLICATE RECOVEIAnions by E300Parent Sample Result [A]Sample Duplicate Result [B]RPDControl Limits %RPDFlaAnalyte119000121000220Lab Batch #:790914 Date Analyzed:01/25/2010 Date Prepared:01/25/2010 Matrix:Analyst:WRU WRU WRUQC- Sample ID:359452-001 D Sig452-001 DBatch #:1Matrix:WaterReporting Units:mg/LSAMPLE / SAMPLE DUPLICATE RECOVEITDS by SM2540CParent Sample Result [A]Sample Matrix:Control Limits WRUTotal dissolved solids189000206000930Lab Batch #:790843189000206000930
QC- Sample ID:359452-001 DBatch #:1Matrix: WaterReporting Units:mg/LSAMPLE / SAMPLEDUPLICATERECOVEIAnions by E300Parent Sample ResultSample Uplicate ResultRPDControl Limits %RPDFlaAnalyte119000121000220Chloride119000121000220Lab Batch #:790914 125/2010Date Prepared:01/25/2010 01/25/2010Analyst: WRU WRU WRU QC- Sample ID:359452-001 D 359452-001 DBatch #:1Matrix:WaterReporting Units:mg/LSAMPLE / SAMPLE DUPLICATE RECOVEISample Duplicate ResultControl LimitsFlaTDS by SM2540CParent Sample ResultSample Duplicate ResultRPD NampleControl LimitsFlaTotal dissolved solids189000206000930Eastch #:790843
Reporting Units: mg/LSAMPLE / SAMPLE DUPLICATE RECOVEIAnions by E300Parent Sample Result [A]Sample Duplicate Result [B]RPDControl Limits %RPDFlaAnalyte1190001210002200Chloride1190001210002200Lab Batch #:790914 Date Analyzed:Date Prepared:01/25/2010 01/25/2010Analyst: WRU WRU Batch #:1Matrix: WaterReporting Units:mg/LSAMPLE / SAMPLE DUPLICATE RECOVEIFlaTDS by SM2540CParent Sample Result [A]Sample Duplicate Result [A]Control Duplicate Result [B]FlaTotal dissolved solids18900020600093010Lab Batch #:790843189000206000930
Anions by E300Parent Sample Result [A]Sample Duplicate Result [B]Control Limits %RPDFlaAnalyte119000121000220Chloride119000121000220Lab Batch #: 790914 Date Analyzed: 01/25/2010Date Prepared: 01/25/2010 Batch #: 1Analyst: WRU Matrix: WaterQC- Sample ID: 359452-001 DBatch #: 1Matrix: WaterReporting Units: mg/LSAMPLE / SAMPLE DUPLICATE RECOVEITDS by SM2540CParent Sample Result [A]Sample Matrix: %RPDTotal dissolved solids189000206000930Lab Batch #: 790843189000206000930
AnalyteDuplicate Result [A]RPDLimits %RPDFlaAnalyte119000121000220Chloride119000121000220Lab Batch #: 790914Date Prepared: 01/25/2010Analyst: WRUQC- Sample ID: 359452-001 DBatch #: 1Matrix: WaterReporting Units: mg/LSAMPLE / SAMPLE DUPLICATE RECOVEITDS by SM2540CParent Sample Result [A]Sample Parent Sample Result [A]Total dissolved solids1890002060009Lab Batch #: 7908431890002060009
Lab Batch #: 790914         Date Analyzed: 01/25/2010       Date Prepared: 01/25/2010       Analyst: WRU         QC- Sample ID: 359452-001 D       Batch #: 1       Matrix: Water         Reporting Units: mg/L       SAMPLE / SAMPLE DUPLICATE RECOVEI         TDS by SM2540C       Parent Sample Result IAI       Control Limits %         Analyte       Sample Duplicate RPD Control Limits %         Total dissolved solids       189000       206000       9       30         Lab Batch #: 790843
Date Analyzed:       01/25/2010       Analyst:       WRU         QC- Sample ID:       359452-001 D       Batch #:       1       Matrix:       Water         Reporting Units:       mg/L       SAMPLE       DUPLICATE       RECOVEI         TDS by SM2540C       Parent Sample Result       Sample Duplicate Result       Sample Duplicate Result       Control Limits       Fla         Total dissolved solids       189000       206000       9       30       Easther         Lab Batch #:       790843       790843       Result       Result<
Date Analyzed:       01/25/2010       Analyst:       WRU         QC- Sample ID:       359452-001 D       Batch #:       1       Matrix:       Water         Reporting Units:       mg/L       SAMPLE       DUPLICATE       RECOVEI         TDS by SM2540C       Parent Sample Result       Sample Duplicate Result       Sample Duplicate Result       Control Limits       Fla         Total dissolved solids       189000       206000       9       30       Easther         Lab Batch #:       790843       790843       Result       Result<
QC- Sample ID: 359452-001 D       Batch #:       1       Matrix: Water         Reporting Units: mg/L       SAMPLE / SAMPLE DUPLICATE RECOVEI         TDS by SM2540C       Parent Sample Result [A]       Sample Duplicate Result [B]       Control Limits %RPD       Fla         Analyte       189000       206000       9       30         Lab Batch #:       790843       790843
Reporting Units: mg/L     SAMPLE / SAMPLE DUPLICATE RECOVEI       TDS by SM2540C     Parent Sample Result     Sample Duplicate Result     Control Limits     Fla       Analyte     181     206000     9     30       Total dissolved solids     189000     206000     9     30
TDS by SM2540CParent Sample Result [A]Sample Duplicate Result [B]RPDControl Limits %RPDFlaTotal dissolved solids189000206000930Lab Batch #: 790843
Total dissolved solids         189000         206000         9         30           Lab Batch #:         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843         790843 <td< th=""></td<>
Lab Batch #: ⁷⁹⁰⁸⁴³
Date Analyzed: 01/26/2010 Date Prepared: 01/26/2010 Analyst: HAT
QC- Sample ID: 359452-001 D Batch #: 1 Matrix: Water
Reporting Units: mg/L SAMPLE / SAMPLE DUPLICATE RECOVER
Total RCRA Metals by SW6020AParent Sample ResultSample DuplicateControl LimitsAnalyteParent SampleSample DuplicateRPDLimits %RPDFla
Arsenic ND ND NC 25
Barium 0.054 0.043 23 25
Cadmium ND ND NC 25
Chromium 0.039 0.047 19 25
Lead 0.010 0.010 0 25
Lead         0.010         0.010         0         25           Selenium         ND         ND         NC         25

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit



Sample Duplicate Recovery



### **Project Name: Brine Pond Water**

**Work Order #:** 359452

Lab Batch #: 790731			Project I		
Date Analyzed: 01/25/2010 Da	te Prepared: 01/25/2010	) Ana	lyst:LATC	COR	
QC- Sample ID: 359452-001 D	Batch #: 1	Ma	trix: Water		
Reporting Units: SU	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
pH, Electrometric by EPA 150.2	Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
рН	7.60	7.61	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Relinquished by	Relinquished by	Relinquished by	Special										١O	LAB # (lab use only)	ORDER #:	(lab use only)							Xenco
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		h	ons:										South		y	5 ]	Sampler Signature:	Telephone No:	ate/Zip:	Company Address:	Company Name	Project Manager:	Laboratories
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0			1										E	DW=Drinking Water SL=Sludge GW = Groundwater S=Soi/Solid	Matrix		ß	Re					g
		{	1											NP=Non-Potable Specify Other	X	·	2	port		ס		Рго	자지
ILU-US	lime													TPH: 418.1 8015M 8	015B			Report Format:		Project Loc:	Pro	Project Name:	- CO
		1			<u> </u>			<u> </u>	<b> </b>	_	<b> </b>	4.		TPH: TX 1005 TX 1006	3 			nat:	PO #:	н Б	Project #:	Nam	Ŕ
Temperature Upon Receipt	Sample Hand Leilvered by Sampler/Client Rep by Counter? UPS	Custody seals on container(s) Craticity seals on container(s)	Sampe Conterners Intel® VOCs Free of Headspace?	<u>}</u>				┣		∔—		<u> </u>		Cations (Ca, Mg, Na, K)				_	* 	I	· 카	ā.	AN
Dera	by Sampler/ by Counter?	No.	o Fre	<u> </u>	+-	╂	+		–	┼	╀──		12	SAR / ESP / CEC		TOTAL:		LE Standard	1				D A
	nplei	eals		<u>-</u>	+	+	+		<u> </u>	┼──	+	+	R	Metals: As Ag Ba Cd Cr Pb Ha	a Se	r.		and		\$		Bring	
L DO	) UClie	99	Hea		┿╴	+	╉──	+	<u> </u>	┼──	┼──	+	$\uparrow$	Volatiles	<u>.</u>	$\uparrow$	Analyze	ard	ļ	5		E	1LYS hone Fax:
	by Sempler/Client Rep by Counter? UPS	Soon			+	1	╂──	+	1	1-	╂──	1-	╀─	Semivolatiles						10		r	: IS F
	0 g 0	aine	ace	7		+-	$\uparrow$	+	<u>†</u>	†	╀─	+	1	BTEX 8021B/5030 or BTEX 8	260)		For			6 min		<u>6</u> 0	IAL YSIS REQUEST Phone: 432-563-1800 Fax: 432-563-1713
<b>P</b>	₽ ₽	(s)			+-	1			1	$\uparrow$	1	$\uparrow$		RCI		┺┈╱╼┖═╾╸		TRRP		i.		Bud	9UE 63-1 63-1
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റ്	N N Lone Star	劉석			$\square$			$\square$	ļ		Ļ			RUSH TAT (Pre-Schedule) 2	4, 48	, 72 hrs		DES					
				ф.	1	<u> </u>			<u> </u>		L		1	Standard TAT					1	ļ	ļ	ļ	
														$\mathbf{X}$									

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### Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:	Western Refining
Date/ Time:	121.10 16:05
Lab ID # :	359452
Initials:	AL

 $\square$ 

### Sample Receipt Checklist

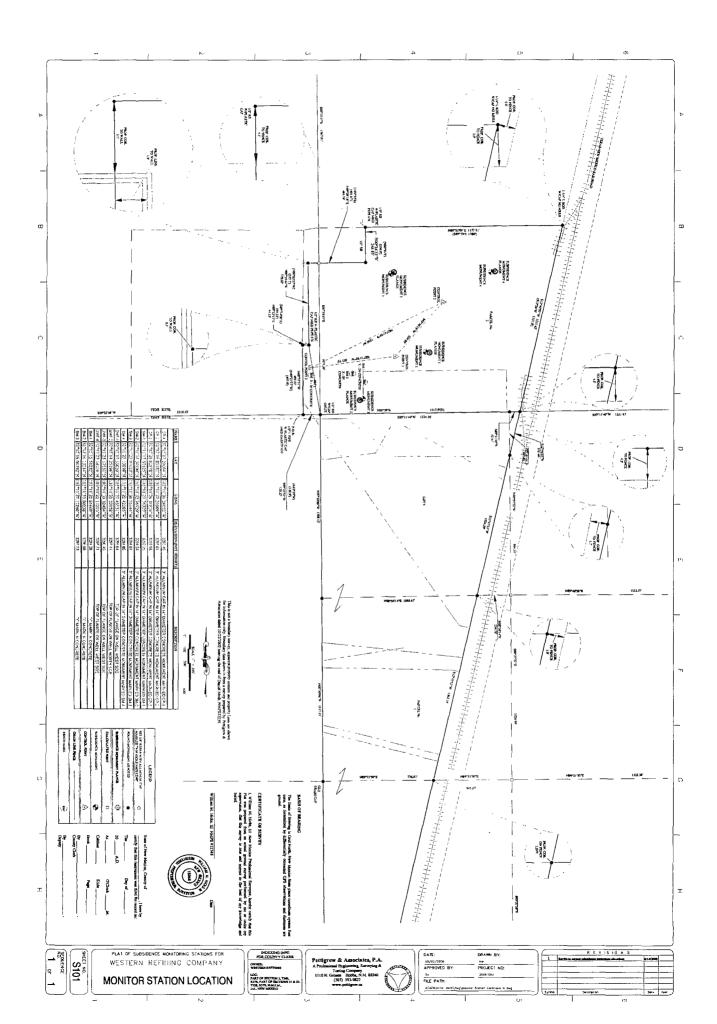
#1	Temperature of container/ cooler?	(Yes)	No	0	°C	
#2	Shipping container in good condition?	Yes	No			
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Pres	ient>	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Pres	ients	
#5	Chain of Custody present?	Tes	No			
#6	Sample instructions complete of Chain of Custody?	Yes	No			
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No			
#8	Chain of Custody agrees with sample label(s)?	Yes	No	iD written on (	Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Appli	cable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No			
#11	Containers supplied by ELOT?	Yes	No			
#12	Samples in proper container/ bottle?	Tes	No	See Bel	ow	
#13	Samples properly preserved?	(Yes)	No	See Be	low	
#14	Sample bottles intact?	Yes	No			
#15	Preservations documented on Chain of Custody?	(Yes)	No	1		
#16	Containers documented on Chain of Custody?	(Yes)	No			
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Be	low	
#18	All samples received within sufficient hold time?	Yes	No	See Be	ow	
#19	Subcontract of sample(s)?	Yes	No	Not Appli	cable	
#20	VOC samples have zero headspace?	Yes	No	Not Appli		

### Variance Documentation

Contact:			Contacted	by:	·····	I	Date/ Time:	
Regarding:	6070	Total	7 metals	subbed to	X-enco-	Houston.		
Corrective Ac	tion Taker	ר:						
				· · · · · · · · · · · · · · · · · · ·				
Check all tha	t Apply:		See attached	e-mail/ fax			· .	

Client understands and would like to proceed with analysis

Cooling process had begun shortly after sampling event



"X" MARK IN CONCRETE	3297.73	103°11'37.17860''W	BM-3 32°15'16.04792"N 103°11'37.17860"W	BM-3
"X" MARK IN CONCRETE	3296.59	32°15'16.13214"N 103°11'33.80238"W		BM-2
"X" MARK IN CONCRETE	3294.28	103°11'32.84660"W	32°15'15.51232"N 103°11'32.84660"W	BM-1
TOP OF FLANGE ON WELL WEST SIDE	3297.71	32°15'23.18524"N 103°11'22.17225"W		SMF-4
TOP OF FLANGE ON WELL WEST SIDE	3296.45	103°11'30.32484"W	3MF-3 32°15'23.17531"N 103°11'30.32484"W	3MF-5
TOP OF FLANGE ON WELL NORTH SIDE	3297.41	103°11'33.22058"W	3MF-2 32°15'14.25196"N 103°11'33.22058"W	SME-2
TOP OF FLANGE ON WELL WEST SIDE	3295.64	32°15'17.55020"N 103°11'27.45531"W	1 32°15' 17. 55020''N	SMF-1
3" ALUMINUM CAP IN 14" DIAMETER CONCRETE MONUMENT MARKED SM-4	3294.85	32°15'23.10898"N 103°11'22.42205"W		SM-4
3" ALUMINUM CAP IN 14" DIAMETER CONCRETE MONUMENT MARKED SM-3	3294.84	32°15'23.07023"N 103°11'30.55344"W		SM-3
3" ALUMINUM CAP IN 14" DIAMETER CONCRETE MONUMENT MARKED SM-2	3294.54	32°15'14.34990"N 103°11'32.96920"W		SM-2
3" ALUMINUM CAP IN 14" DIAMETER CONCRETE MONUMENT MARKED SM-1	3292.25	32°15'17.58125"N 103°11'27.76727"W		SM-1
3" ALUMINUM CAP IN 14" DIAMETER CONCRETE MONUMENT MARKED CP-3	3293.55	32°15'21.02878"N 103°11'26.34824"W		СР-З
3" ALUMINUM CAP IN 14" DIAMETER CONCRETE MONUMENT MARKED CP-2	3297.81	32°15'16.85182"N 103°11'37.21909"W		CP-2
3" ALUMINUM CAP IN 14" DIAMETER CONCRETE MONUMENT MARKED CP-1	3293.45	32°15'17.29664"N 103°11'30.24052"W	32°15'17.29664"N	CP-1
DESCRIPTION	ELEVATION (NOT HEIGHT)	LONG	LAT	NAME

SCALE 1" = 200' 100' 200' 400' 7TION

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Pettigrew & Associates, P.A. ENGINEERING - SURVEYING - MATERIALS TESTING

1110 N Grimes St Hotos, NM 88,740 575.393.9827 Ph 575.393.1643 Fx

www.pettigrew.us

Ken Parker Western Refining PO Box 1345 Jal, New Mexico, 88252 575-392-2632

09 October, 2009

RE: Survey Report Western Refining Subsidence Monitoring

Dear Mr. Parker,

Please review this report of survey findings for the subject project.

### SUBSIDENCE MONUMENT MONITORING

The surveyed elevations along with deltas from the previous survey values, letter dated 14 August 2009 and as surveyed on 13 May 2009, are as follows:

NAME	ELEVATION 5/13/2009	ELEVATION 9/25/2009	DELTA ELEVATION
CP-1	3293.47	3293.46	-0.01'
CP-2	3297.82	3297.82	NO CHANGE
CP-3	3293.56	3293.54	-0.02'
SM-1	3292.27	3292.26	-0.01'
SM-2	3294.56	3294.56	NO CHANGE
SM-3	3294.85	3294.83	-0.02'
SM-4	3294.86	3294.84	-0.02'
SMF-1 (Middle Flange)	3295.62	3295.62	NO CHANGE
SMF-1 (Lower Flange)	3293.67	3293,67	NO CHANGE
SMF-2 (Middle Flange)	3297.42	3297.43	+0.01'
SMF-2 (Lower Flange)	3295.52	3295.53	+0.01'
SMF-3 (Middle Flange)	3298.18	3298.17	-0.01'
SMF-3 (Lower Flange)	3296.44	3296.43	-0.01'
SMF-4 (Middle Flange)	3297.73	3297.72	-0.01'
SMF-4 (Lower Flange)	3295.99	3295,98	-0.01'
BM-1	3294.30	3294.30	NO CHANGE
BM-2	3296.62	3296.62	NO CHANGE
BM-3	3297.73	3297,73	NO CHANGE

### ANNUAL LPG WELL REPORT

### **OPERATOR:** Western Refining Company

### **GW PERMIT NUMBER: GW-007**

### **UIC CLASS LPG STORAGE WELLS API NUMBER**

31055 WELL 1: 30-025-35954 31055 WELL 2: 30-025-35955 31055 WELL 3: 30-025-35956 31055 WELL 4: 30-025-35957

### WESTERN REFINING JAL STORAGE FACILITY

**Company Representative: Ken Parker** 

Date: 1-30-09

### Annual LPG Well Report

### Date 1-30-09

### Well Summary

Well 1:

In 2008 well one was due an MIT. In early spring the well was emptied and made ready. The tubing was pulled and the well head was replaced. The 2-7/8 tubing was replaced with 3-1/2 so that we could sonar the well. The well passed the MIT.

There was an attempt to sonar the cavern but the sonar tool couldn't drop below 1750 feet due to a bend in the pipe. Sonar was completed to 1750 feet and we know that the cavern to this point holds about 29,049.5 barrels and the maximum radius is 35.6 feet. Between 1750 feet and 1796 feet the caver holds 171,963.5 barrels of product and is estimated to have a radius of 81.76 feet.

The cavern was filled to 96 percent of its capacity this year. According to the reading taken by plant employee's pressure reading are within the standards set by the Discharge Plan.

Well 2:

In 2008 well two was due an MIT. The well was made ready and the tubing was pulled. The well head was designed for 2-7/8 tubing and was replaced to accept 3-1/2 tubing. The well passed the MIT and was made ready for service.

The sonar was run on the well and all data was filed on the C-103. The cavern holds 144,443 barrels of product and has a max radius of 70.2 feet.

The cavern was filled to 31 percent of its capacity and has been emptied twice this year. This well is being operated within its pressure ranges set by the Discharge Plan.

Well 3:

The MIT on well three was completed in 2007. The C-103 was filed in October 2007. This well is operating within the pressure limits set by the Discharge Plan and as of this date without issues.

Well 4:

The MIT on well four was completed in 2007. The C-103 was filed in September 2007. The well is operating within the limits set by the Discharge Plan and as of this date without issues.

### **Production Volumes**

See Attachments Well 1 Annual 08 Well 2 Annual 08 Well 3 Annual 08 Well 4 Annual 08

### **Injection Fluid Analysis:**

See Attachment 2009-323008

### MIT 2008

Well 1 C-103 submitted on July 15, 2008 Well 2 C-103 submitted on July 9, 2008

### **MIT 2007**

Well 3 C-103 submitted on October 31, 2007 Well 4 C-103 submitted on September 14, 2007

### **Deviation From Normal Production Method** NA

Leak and Spill Report See Attachment C-141, 5-20-08

### **Ground Water Monitoring**

See Attachment Monitor Well analysis 081212

### **Cavity Subsidence**

See Attachment Subsidence, Jal Second set of reading scheduled for February 2009.

### Area of Review

No activity in the year 2008

Pursuant to all applicable parts of the Water Quality Control Commission (WQCC) Regulations 20.6.2 NMAC and more specifically 20.6.2.5101. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Western Refining Company Company Name

Ken Parker Company Representative

s fa

Company Representative Signature

Title: Facility Manager

Date: 1-30-09

### Analytical Report 323008

for

### Western Refining

Project Manager: Ken Parker

Western Refining Inj. Line

28-JAN-09



### 12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta



28-JAN-09

The Accord

Project Manager: Ken Parker Western Refining P.O. Box 1345 Jal, NM 88252

Reference: XENCO Report No: **323008 Western Refining Inj. Line** Project Address: #4 Plant

### Ken Parker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 323008. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 323008 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

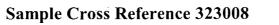
We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II Odessa Laboratory Manager

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### Western Refining, Jal, NM

Western Refining Inj. Line

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Inj. Pump	W	Jan-20-09 13:30		323008-001

XENCO Internation	

Since 1990

### Certificate of Analysis Summary 323008 Western Refining, Jal, NM



Project Name: Western Refining Inj. Line

Project Id:	
Contact:	Ken Parker

Project Location: #4 Plant

inning mj. Line	
Date Received in Lab:	Jan-21-09 01:08 pm
<b>Report Date:</b>	28-JAN-09
<b>Project Manager:</b>	Brent Barron, II

	Lab Id:	323008-001			
Analysis Requested	Field Id:	Inj. Pump			
	Depth:				
	Matrix:	WATER			
	Sampled:	Jan-20-09 13:30			
Alkalinity by SM2320B	Extracted:				
	Analyzed:	Jan-26-09 11:10			
	Units/RL:	mg/L RL			
Alkalinity, Total (as CaCO3)		180 4.00			_
Alkalinity, phenolphthalcin		ND 4.00			
Alkalinity, Carbonate		ND 4.00	,		
Alkalinity, Bicarbonate		180 4.00			
Anions by EPA 300	Extracted:	_			
	Analyzed:	Jan-21-09 15:51			
	Units/RL:	mg/L RL			
Chloride		63.8 2.50			
BTEX by SW 8260B	Extracted:	Jan-23-09 10:10			
	Analyzed:	Jan-23-09 14:21			
	Units/RL:	mg/L RL		1	
Benzene		ND 0.0010			
Toluene		ND 0.0010			
Ethylbenzene		ND 0.0010			
m,p-Xylene		ND 0.0020			
o-Xylene		ND 0.0010			
Total Xylenes		ND			
Total BTEX		ND		i	
Mercury by EPA 7470A	Extracted:	Jan-23-09 08:00			
	Analyzed:	Jan-23-09 11:19			
	Units/RL:	mg/L RL			
Mercury		ND 0.0001			·
Metals per ICP by SW846 6010B	Extracted:	Jan-27-09 06:15			
	Analyzed:	Jan-27-09 11:21			
	Units/RL:	mg/L RL			
Calcium		51.0 0.100			
Magnesium		7.86 0.010			
Potassium		5.30 0.500			
Sodium		65.6 0.500			
TDS by SM2540C	Extracted:				
-	Analyzed:	Jan-21-09 16:05		[	
	Units/RL:	mg/L RL			
Total dissolved solids		338 5.00		<u> </u>	<u> </u>

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

Brent Barron

Odessa Laboratory Director



Since 1990

### Certificate of Analysis Summary 323008 Western Refining, Jal, NM



Project Name: Western Refining Inj. Line

. . .

Project Id:	
Contact:	Ken Parker

**Report Date:** Project Manager:

Date Received in Lab: Jan-21-09 01:08 pm 28-JAN-09 Brent Barron, II

Project Location: #4 Plant				Project Mana	ger: Brent Barron, II
	Lab Id:	323008-0	01		
Analysis Requested	Field Id:	Inj. Pum	p		
	Depth:				
	Matrix:	WATER	٤		
	Sampled:	Jan-20-09 1	3:30		
Total RCRA Metals by SW6020A	Extracted:	Jan-26-09 1	0:30		
	Analyzed:	Jan-26-09 15:28			
	Units/RL:	mg/L	RL		
Arsenic		0.007	0.002		
Barium		0.073	0.005		
Cadmium		ND	0.001		
Chromium		ND	0.003		
Lead		ND	0.002		
Selenium		ND	0.003		
Silver		ND	0.002		
pH, Electrometric by EPA 150.2	Extracted:				
	Analyzed:	Jan-21-09 1	6:00		
	Units/RL:	SU	RL	,	
рҢ		7.46			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Brent Barron

Odessa Laboratory Director

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- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the MQL and above the SQL.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- * Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lanc, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



### Form 2 - Surrogate Recoveries

\$-

Project Name: Western Refining Inj. Line

Work Orders : 323008,		Project I	D:		
Lab Batch #: 747515 Sample: 323008-001	/ SMP Ba	teh: l Matr	ix: Water		
Units: mg/L	SU	RROGATE R	ECOVERY	STUDY	
BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0519	0.0500	104	70-130	
Dibromofluoromethane	0.0504	0.0500	101	70-130	
1,2-Dichloroethanc-D4	0.0492	0.0500	98	70-130	
Toluenc-D8	0.0488	0.0500	98	70-130	
Lab Batch #: 747515 Sample: 323008-001	S/MS Ba	tch: l Matr	ix: Water	<u>.                                    </u>	
Units: mg/L	SU	RROGATE R	ECOVERYS	STUDY	
BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0483	0.0500	97	70-130	
Dibromofluoromethane	0.0488	0.0500	98	70-130	
1,2-Dichloroethane-D4	0.0498	0.0500	100	70-130	
Toluene-D8	0.0485	0.0500	97	70-130	
Lab Batch #: 747515 Sample: 323008-001	SD / MSD Ba	tch: []] Matr	ix: Water		
Units: mg/L	SU	RROGATE R	ECOVERY S	STUDY	
BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0493	0.0500	99	70-130	
Dibromofluoromethane	0.0483	0.0500	97	70-130	
1,2-Dichloroethane-D4	0.0502	0.0500	100	70-130	
Toluene-D8	0.0482	0.0500	96	70-130	
Lab Batch #: 747515 Sample: 523580-1-Bi	KS/BKS Ba	tch: 1 Matr	ix: Water		
Units: mg/L	SURROGATE RECOVERY STUDY				
BTEX by SW 8260B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
4-Bromofluorobenzene	0.0500	0.0500	100	70-130	
Dibromofluoromethane	0.0490	0.0500	98	70-130	
1,2-Dichloroethane-D4 Toluene-D8	0.0507	0.0500	101 99	70-130 70-130	
L LOIUCHC-DA	1 0.0/07	0.0500	1 (10)	i m 120	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution Surrogate Recovery [D] = 100 * A / B All results are based on MDL and validated for QC purposes.



### Form 2 - Surrogate Recoveries

Project Name: Western Refining Inj. Line

### Work Orders: 323008,

### Project ID:

Lab Batch #: 747515 Sample: 523580-1 Units: mg/L		tch: 1 Mat	rix: Water	STUDY	
BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0515	0.0500	103	70-130	
Dibromofluoromethane	0.0497	0.0500	99	70-130	
1,2-Dichloroethane-D4	0.0467	0.0500	93	70-130	
Tolucne-D8	0.0500	0.0500	100	70-130	

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.





### Project Name: Western Refining Inj. Line

Work Order #: 323008			Pr	oject ID:			
Lab Batch #: 747693	Sa	mple: 747693	-1-BKS	Matr	ix: Water		
Date Analyzed: 01/26/2009	Date Prep	ared: 01/26/2	009	Analy	st: WRU		
Reporting Units: mg/L	Ba	tch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY
Alkalinity by SM2320B		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes				[C]	[D]		
Alkalinity, Total (as CaCO3)		ND	200	170	85	80-120	
Lab Batch #: 747515	Sa	mple: 523580	-1-BKS	Matr	ix: Water		
<b>Date Analyzed:</b> 01/23/2009		ared: 01/23/2		Analy	st: JEA		
Reporting Units: mg/L	Ba	tch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY
BTEX by SW 8260B		Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes		[A]	[0]	[C]	[D]	701	
Benzene		ND	0.1000	0.0935	94	66-142	
Tolucne		ND	0.1000	0.0912	91	59-139	
Ethylbenzene		ND	0.1000	0.0970	97	75-125	
m,p-Xylene		ND	0.2000	0.1946	97	75-125	
o-Xylene		ND	0.1000	0.1010	101	75-125	
Lab Batch #: 747182	Sa	mple: 747182	-1-BKS	Matri	ix: Water		
Date Analyzed: 01/21/2009	Date Prep	ared: 01/21/2	009	Analy	st: LATCO	OR	
Reporting Units: mg/L	Ba	tch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY
Anions by EPA 300		Blank Result	Spike Added	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes		[A]	[B]	[C]	%R [D]	70 K	
Chloride		ND	10.0	10.1	101	90-110	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes.





### Project Name: Western Refining Inj. Line

Work Order #: 323008		Рі	roject ID:			
Lab Batch #:         747489           Date Analyzed:         01/26/2009         D           Reporting Units:         mg/L	Sample: 523564 ate Prepared: 01/26/2 Batch #: 1	009		ix: Water st: HAT KE REC	OVERY S	TUDY
Total RCRA Metals by SW6020A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Arsenie	ND	0.050	0.051	102	85-115	
Barium	ND	0.050	0.056	112	85-115	
Cadmium	ND	0.020	0.022	110	85-115	
Chromium	ND	0.050	0.052	104	85-115	
Lead	ND	0.050	0.050	100	85-115	
Sclenium	ND	0.050	0.051	102	85-115	
Silver	ND	0.020	0.021	105	85-115	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes.

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**BS / BSD Recoveries** 



Project Name: Western Refining Inj. Line

Work Order #: 323008 Analyst: DAT

Lab Batch ID: 747299

Date Prepared: 01/23/2009 Batch #: 1 Sample: 523446-1-BKS

Project ID: Date Analyzed: 01/23/2009 Matrix: Water

Units: mg/L		BLAN	K /BLANK S	SPIKE / E	S NNK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
Mercury by EPA 7470A	Blank Sample Result Al	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[ <b>B</b> ]	[c]	[0]	[E]	Result [F]	[0]				
Mcreury	ND	0.0050	0.0051	102	0.005	0.0049	98	4	75-125	20	
Analyst: DAT	Da	ite Prepar	Date Prepared: 01/27/2009	6			Date A	Date Analyzed: 01/27/2009	1/27/2009		
Lab Batch ID: 747613 Sample: 523593-1-B1	-BKS	Batch	Batch #: 1					Matrix: Water	Vater		
Units: mg/L		BLAN	K /BLANK S	SPIKE / E	S XNK S	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE	RECOVE	RY STUD	Y	
Metals per ICP by SW846 6010B	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	. Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[ <b>v</b> ]	[8]	Result [C]	%R% [D]	[E]	Duplicate Result [F]	%R [G]	%	%R	%RPD	)

25 25 25 25

75-125

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100 66 96 4

75-125 75-125

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0.989 1.00

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66 95 92

0.994 1.01

9.53 10.1

11.0

101

1.00 1.00 10.0

ΩN QN QN DN

Analytes

Magnesium Potassium

Sodium

Calcium

9.60 10.3

10 Ξ

75-125

2

-

Relative Percent Difference RPD = 200*((C-F)/(C+F)) Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



### Form 3 - MS Recoveries



### Project Name: Western Refining Inj. Line

Work Order #: 323008 Lab Batch #: 747182 Date Analyzed: 01/21/2009 QC- Sample ID: 323008-001 S Re

**Project ID:** Date Prepared: 01/21/2009 Analyst: LATCOR Batch #: 1

Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	63.8	50.0	122	116	80-120	

Matrix Spike Percent Recovery  $[D] = 100^{*}(C-A)/B$ Relative Percent Difference  $[E] = 200^{*}(C-A)/(C+B)$ All Results are based on MDL and Validated for QC Purposes

XGN CO Laboratorites Work Order #: 323008

Form 3 - MS / MSD Recoveries



Project Name: Western Refining Inj. Line

Project ID:

Flag

Lab Batch ID: 747515	QC- Sample ID: 323008-001 S	323008-(	S 100	Ba	Batch #:	l Matri	Matrix: Water				
Date Analyzed: 01/23/2009	Date Prepared: 01/23/2009	01/23/20	60(	An	Analyst: JEA	JEA					
Reporting Units: mg/L		W.	ATRIX SPIKI	E / MATI	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY S	STUDY		
BTEX by SW 8260B	Parent Sample		ample It	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	
Analytes	Result [A]	Added [B]	<u>[</u> ]	8% [U]	Added [E]	Result [F]	s. 16	%	%R	%RPD	
Benzene	QN	0.1000	0.0934	93	0.1000	0.0959	96	3	66-142	20	
Toluenc	DN	0.1000	0.0926	93	0.1000	0.0937	94	-	59-139	20	
Ethylbenzene	QN	0.1000	0.0983	98	0.1000	0.1001	100	2	75-125	20	
m,p-Xylenc	QN	0.2000	0.2030	102	0.2000	0.2040	102	0	75-125	20	
o-Xylcnc	DN	0.1000	0.1045	105	0.1000	0.1052	105	0	75-125	20	
Lab Batch ID: 747299 -Date Analyzed: 01/23/2009	QC- Sample ID: 322651-001 S Date Prepared: 01/23/2009	322651-0	001 S 009	Ba An	Batch #: Analyst:	l Matri DAT	Matrix: Water				
Reporting Units: mg/L		W	ATRIX SPIKI	E / MAT	RIX SPI	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY :	STUDY		

Flag × Control Limits %RPD 20 Control Limits %R 75-125 RPD % × 
 Duplicate
 Spiked

 Spike Spiked Sample
 Dup.

 Added
 Result [F]
 %R

 [E]
 [G]
 74 0.0042 0.0050 Spiked Sample Spiked Result Sample [C] %R 68 0.0039 Spike Added [B] 0.0050 Parent Sample Result [A] 0.0005 Mercury by EPA 7470A Analytes Mercury

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*((C-F)/(C+F)] ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

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## Form 3 - MS / MSD Recoveries



Project Name: Western Refining Inj. Line

Work Order #: 323008

Lab Batch ID: 747613 Date Analyzed: 01/27/2009 Renorting Units: mo/L

Batch #: 1 Analvst: DAT

QC- Sample ID: 323177-002 S

Date Prepared: 01/27/2009

Matrix: Water

Project ID:

Analyst: DAT

Keporting Units: mg/L		E	ATRIX SPIKI	E / MATI	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	re reco	<b>DVERY</b>	STUDY		
Metals per ICP by SW846 6010B	Parent Sample	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	<u>[</u> ]	%R [D]	Added [E]	Result [F]	/SR  G]	%	%R	%RPD	-
Calcium	45.6	1.00	44.7	0	1.00	45.9	30	200	75-125	20	XF
Magnesium	69.5	1.00	67.2	0	1.00	68.2	0	хС	75-125	20	x
Potassium	21.9	10.0	34.1	122	10.0	34.7	128	5	75-125	20	×
Sodium	348	11.0	345	0	11.0	355	64	200	75-125	20	XF
Lab Batch ID: 747489 Date Analyzed: 01/26/2009	QC- Sample ID: 322865-001 S Date Prepared: 01/26/2009	322865- 01/26/2(	00 S	Bat Ans	Batch #: 1 Analyst: HAT		Matrix: Water				
Reporting Units: mg/L		M	ATRIX SPIKI	E / MATI	RIX SPH	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	re reco	<b>DVERY S</b>	STUDY		
Total RCRA Metals by SW6020A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result ICI	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	MPN W	Control Limits %R	Control Limits %RPD	Flag
Arscnic	0.003	0.050	0.051	96	0.050	0.055	104	œ	85-115	20	

×

85-115

9 2 2 0

116 105 106 100

0.122

0.050

0.117

0.050 0.020 0.050 0.050 0.050

0.064

0.004 0.007

Cadmium

Lead

Barium

Selenium

Silver

QN QN

Q N 85-115 85-115

0.060

0.050 0.050 0.050

0.021

0.020

0.020 0.056 0.060 0.043

85-115

85-115

17

0.051

0.020

0.020

86 100

0.020

85-115

0

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Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*(C-F)/(C+F)]

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative. EQL = Estimated Quantitation Limit



### Sample Duplicate Recovery



### Project Name: Western Refining Inj. Line

Work Order #: 323008

Lab Batch #: 747693 Date Analyzed: 01/26/2009 QC- Sample ID: 323008-001 D Reporting Units: mg/L	Date Pr F	atch #: 1		Matr	ID: yst: WRU rix: Water CATE REC	OVERY
Alkalinity by SM2320B Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Alkalinity, Total (as CaCO3)		180	184	2	20	
Alkalinity, Bicarbonate		180	184	2	20	
Alkalinity, Carbonate		ND	ND	NC 2	20	
Alkalinity, phenolphthalein		ND	ND	NC	20	
Date Analyzed: 01/21/2009 QC- Sample ID: 323008-001 D Reporting Units: mg/L Anions by EPA 300	Date Pro	atch #: 1			ix: Water	OVERY
Analyte		[A]	Result [B]		%RPD	Ū
Chloride		63.8	64.0	0	20	
Lab Batch #: 747236 Date Analyzed: 01/21/2009 QC- Sample ID: 322927-001 D	Date Pro B	epared: 01/2 atch #: 1	1/2009	ı	vst: WRU ix: Water	-
Reporting Units: mg/L		SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
TDS by SM2540C Analyte		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids		528	538	2	30	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.



### Sample Duplicate Recovery



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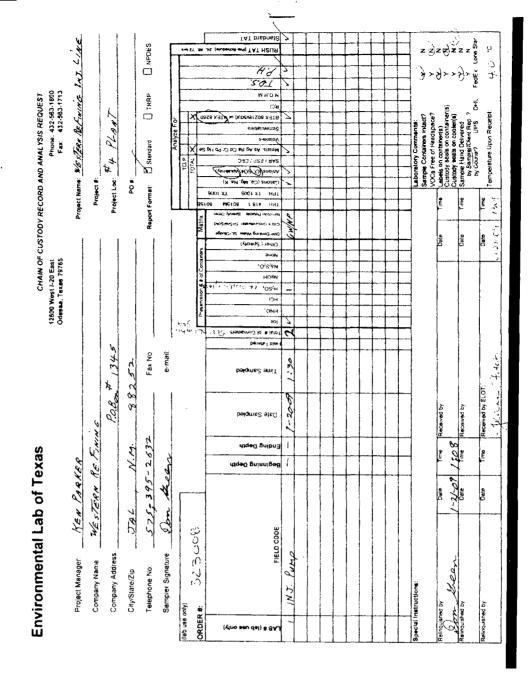
### Project Name: Western Refining Inj. Line

Work Order #: 323008

Lab Batch #: 747489 Date Analyzed: 01/26/2009	Date Prepared:	01/26/2009		yst: HAT	
QC- Sample ID: 322865-001 D Reporting Units: mg/L	Batch #:	1 PLE / SAMPL		rix: Water	OVERV
Total RCRA Metals by SW6020A		mple Sample t Duplicat Result		Control Limits %RPD	Flag
Analyte		[B]			
Arsenic	0.003	0.004	29	20	·F
Barium	0.064	0.064	0	20	
Cadmium	ND	ND	NC	20	
Chromium	0.004	0.004	0	20	
Lead	0.007	0.007	0	20	
Selenium	ND	ND	NC	20	·
Silver	ND	ND	NC	20	1

Date Analyzed. 01/21/2009	Dute Trepared. 002	112007	, thai	st. Enteon	
QC- Sample 1D: 323008-001 D	Batch #: 1		Matr	ix: Water	
Reporting Units: SU	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
pH, Electrometric by EPA 150.2	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	1.3	<b>[B]</b>			
рН	7.46	7.49	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes.



### Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client:	Nesters Receing	
Date/ Time:	Sr 01-09 6 1301	
Lab ID # :	323008	
Initials:	J 5-3 pT	

### Sample Receipt Checklist

		,		с	lient Initial
#1	Temperature of container/ cooler?	IYes	No	4.0 °C	
#2	Shipping container in good condition?	Yes	No	6.00	
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present ( ··	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	CYes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(IYes,	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	(Yes	No		
#12	Samples In proper container/ bottle?	Yes	No	See Below 🔸	54
#13	Samples properly preserved?	Yes	No	See Below 🛪	1.15
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	CYes:	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	!Yes	No	See Below	2.55
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

### Variance Documentation

Contact: <u>Der Guernen</u> Contacted by: <u>Der verne Titue</u> Date/ Time: <u>OP 20071 G 190</u> é Regarding: <u>Lourple Dereventation (PH HD - ANAP)</u> Corrective Action Taken: <u>Actor of an analytical formation and a community of States</u> as for Breat

Check all that Apply:

### See attached e-mail/ fax

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event