

HOBBSOC

FEB 02 2015

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M. Brown
2/3/2015

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: 1-30-15

FEB 04 2015

Well Summary

Well 1

Well one was operated within the guidelines set by New Mexico State Oil Conservation Division. Average well pressure during storage was 550 pounds of pressure. Maximum injection rate was 130 barrels per hour at 600 pounds of pressure. Product was stored in this cavern for 289 days.

Storage volume of well one at the beginning of 2014 was 43,338 barrels. Within the physical year an additional 43,742 barrels was added withdrawing 88,080 barrels by the end of the year. The maximum daily volume stored in this well was 43,338 barrels or 22% of the caverns total volume capacity.

Well 2

Well two was operated within the guidelines set by New Mexico State Oil Conservation Division. Average well pressure during storage was 660 pounds of pressure. Maximum injection rate was 240 barrels per hour at 720 pounds of pressure. Product was stored in this cavern for 365 days.

Storage volume of well two at the beginning of 2014 was 12,506 barrels. Within the physical year an additional 350,332 barrels was added withdrawing 291,982 barrels by the end of the year. The maximum daily volume stored in this well was 75,606 barrels or 58% of the caverns total volume capacity.

Well 3

Well three was operated within the guidelines set by New Mexico State Oil Conservation Division. Average well pressure during storage was 640 pounds of pressure. Maximum injection rate was 181 barrels per hour at 720 pounds of pressure. Product was stored in this cavern for 365 days.

Storage volume of well Three at the beginning of 2014 was 30,581 barrels. Within the physical year an additional 56,784 barrels was added withdrawing 75,630 barrels by the end of the year. The maximum daily volume stored in this well was 30,581 barrels or 38% of the caverns total volume capacity.

Well 4

Well four was operated within the guidelines set by New Mexico State Oil Conservation Division. Average well pressure during storage was 620 pounds of pressure. Maximum injection rate was 181 barrels per hour at 760 pounds of pressure. Product was stored in this cavern for 281 days.

Storage volume of well Three at the beginning of 2014 was 30,837 barrels. Within the physical year an additional 29,254 barrels was added withdrawing 53,555 barrels by the end of the year. The maximum volume stored in this well on any date was 30,837 barrels or 23% of the caverns total volume 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

Report 500412

Deviation from Normal Production Method

N/A

Leak and Spill Report

N/A

Ground Water Monitoring

N/A

Subsidence Survey

See Attachment

No changes from last survey

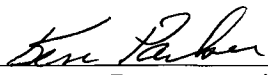
Area of Review

No activity in the year 2014

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

Date 1-28-15 Telephone No. 575-395-2632

Analytical Report 500412

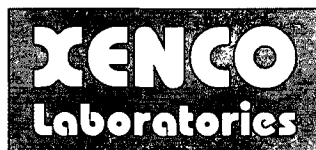
for
Western Refining

Project Manager: Ken Parker

South Brine Pond

29-JAN-15

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-14-18), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

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-15

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

Reference: XENCO Report No(s): **500412**
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) 500412. 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. 500412 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,

Kelsey Brooks
Project Manager

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 500412



Western Refining, Jal, NM

South Brine Pond

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Pond	W	01-14-15 10:00		500412-001



CASE NARRATIVE



Client Name: Western Refining

Project Name: South Brine Pond

Project ID:

Work Order Number(s): 500412

Report Date: 29-JAN-15

Date Received: 01/14/2015

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-959868 Mercury, Total by EPA 245.1

Sample diluted due to reactivity. AS 1/20/15

Batch: LBA-960021 TDS by SM2540C

SM2540C

Batch 960021,

Total dissolved solids recovered below QC limits in the laboratory control sample. Samples affected are:
500412-001.



Certificate of Analysis Summary 500412

Western Refining, Jal, NM



Project Id:

Contact: Ken Parker

Project Location:

Project Name: South Brine Pond

Date Received in Lab: Wed Jan-14-15 01:30 pm

Report Date: 29-JAN-15

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	500412-001					
	Field Id:	South Pond					
	Depth:						
	Matrix:	WATER					
	Sampled:	Jan-14-15 10:00					
Alkalinity by SM2320B SUB: TX104704215	Extracted:						
	Analyzed:	Jan-16-15 10:05					
	Units/RL:	mg/L RL					
Alkalinity, Total (as CaCO3)		120 4.00					
BTEX by EPA 8021B	Extracted:	Jan-14-15 15:00					
	Analyzed:	Jan-14-15 19:45					
	Units/RL:	mg/L RL					
Benzene		0.00185 0.00100					
Toluene		ND 0.00200					
Ethylbenzene		ND 0.00100					
m_p-Xylenes		ND 0.00200					
o-Xylene		ND 0.00100					
Total Xylenes		ND 0.00100					
Total BTEX		0.00185 0.00100					
Inorganic Anions by EPA 300/300.1	Extracted:	Jan-20-15 18:33					
	Analyzed:	Jan-20-15 18:33					
	Units/RL:	mg/L RL					
Chloride		198000 5000					
Mercury, Total by EPA 245.1 SUB: TX104704215	Extracted:	Jan-20-15 11:20					
	Analyzed:	Jan-20-15 14:41					
	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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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 500412

Western Refining, Jal, NM



Project Id:

Contact: Ken Parker

Project Location:

Project Name: South Brine Pond

Date Received in Lab: Wed Jan-14-15 01:30 pm

Report Date: 29-JAN-15

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	500412-001					
	Field Id:	South Pond					
	Depth:						
	Matrix:	WATER					
	Sampled:	Jan-14-15 10:00					
Metals by EPA 200.8 SUB: TX104704215	Extracted:	Jan-16-15 11:10					
	Analyzed:	Jan-20-15 21:20					
	Units/RL:	mg/L RL					
Arsenic		ND 0.0800					
Barium		ND 0.320					
Cadmium		ND 0.160					
Chromium		ND 0.160					
Lead		ND 0.160					
Selenium		ND 0.0800					
Silver		ND 0.160					
Metals per ICP by EPA 200.7 SUB: TX104704295	Extracted:	Jan-29-15 06:15					
	Analyzed:	Jan-29-15 12:25					
	Units/RL:	mg/L RL					
Calcium		518 50.0					
Magnesium		1550 5.00					
Potassium		4490 250					
Sodium		105000 250					
TDS by SM2540C	Extracted:						
	Analyzed:	Jan-20-15 11:00					
	Units/RL:	mg/L RL					
Total dissolved solids		283000 5.00					
pH by SM4500-H	Extracted:						
	Analyzed:	Jan-16-15 10:00					
	Units/RL:	Deg C RL					
Temperature		21.4					

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Kelsey Brooks
Project Manager



Certificate of Analysis Summary 500412

Western Refining, Jal, NM



Project Id:

Contact: Ken Parker

Project Name: South Brine Pond

Date Received in Lab: Wed Jan-14-15 01:30 pm

Report Date: 29-JAN-15

Project Location:

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	500412-001					
	Field Id:	South Pond					
	Depth:						
	Matrix:	WATER					
pH by SM4500-H	Sampled:	Jan-14-15 10:00					
	Extracted:						
	Analyzed:	Jan-16-15 10:00					
	Units/RL:	SU RL					
pH		7.37					

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Kelsey Brooks
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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(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: South Brine Pond

Work Orders : 500412,

Lab Batch #: 959553

Sample: 500412-001 / SMP

Project ID:

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 01/14/15 19:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 959553

Sample: 667097-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 01/14/15 18:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 959553

Sample: 667097-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 01/14/15 18:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0252	0.0300	84	80-120	

Lab Batch #: 959553

Sample: 667097-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 01/14/15 18:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 959553

Sample: 500339-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 01/14/15 18:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: South Brine Pond

Work Orders : 500412,

Lab Batch #: 959553

Sample: 500339-001 SD / MSD

Project ID:

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 01/14/15 19:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	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] = $100 * A / B$

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



Blank Spike Recovery

Project Name: South Brine Pond



Work Order #: 500412

Project ID:

Lab Batch #: 960021

Sample: 960021-1-BKS

Matrix: Water

Date Analyzed: 01/20/2015

Date Prepared: 01/20/2015

Analyst: MHS

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	<5.00	1000	1160	116	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: South Brine Pond

Work Order #: 500412

Project ID:

Analyst: ARM

Date Prepared: 01/14/2015

Date Analyzed: 01/14/2015

Lab Batch ID: 959553

Sample: 667097-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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
Analytes											
Benzene	<0.00100	0.100	0.0959	96	0.100	0.0983	98	2	70-125	25	
Toluene	<0.00200	0.100	0.111	111	0.100	0.114	114	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.122	122	0.100	0.126	126	3	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.232	116	0.200	0.240	120	3	70-131	25	
o-Xylene	<0.00100	0.100	0.110	110	0.100	0.114	114	4	71-133	25	

Analyst: JUM

Date Prepared: 01/20/2015

Date Analyzed: 01/20/2015

Lab Batch ID: 959952

Sample: 667316-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	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											
Chloride	<1.00	25.0	23.0	92	25.0	22.8	91	-1	90-110	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: South Brine Pond

Work Order #: 500412

Analyst: ANS

Lab Batch ID: 959868

Units: mg/L

Date Prepared: 01/20/2015

Sample: 667301-1-BKS

Batch #: 1

Project ID:

Date Analyzed: 01/20/2015

Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Mercury, Total by EPA 245.1	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											
Mercury	<0.000200	0.00200	0.00219	110	0.00200	0.00217	109	1	85-115	20	

Analyst: DAB

Date Prepared: 01/16/2015

Date Analyzed: 01/16/2015

Lab Batch ID: 959695

Sample: 667164-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Metals by EPA 200.8	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											
Arsenic	<0.00200	0.100	0.102	102	0.100	0.102	102	0	85-115	20	
Barium	<0.00400	0.100	0.0985	99	0.100	0.106	106	7	85-115	20	
Chromium	<0.00400	0.100	0.0958	96	0.100	0.0999	100	4	85-115	20	
Lead	<0.00200	0.100	0.102	102	0.100	0.110	110	8	85-115	20	
Selenium	<0.00200	0.100	0.106	106	0.100	0.103	103	3	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



BS / BSD Recoveries



Project Name: South Brine Pond

Work Order #: 500412

Analyst: DAB

Lab Batch ID: 959910

Units: mg/L

Date Prepared: 01/20/2015

Sample: 667305-1-BKS

Batch #: 1

Project ID:

Date Analyzed: 01/20/2015

Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Metals by EPA 200.8	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											
Cadmium	<0.00200	0.100	0.105	105	0.100	0.108	108	3	85-115	20	
Silver	<0.00200	0.0500	0.0527	105	0.0500	0.0535	107	2	85-115	20	

Analyst: DAT

Date Prepared: 01/29/2015

Date Analyzed: 01/29/2015

Lab Batch ID: 960563

Sample: 667689-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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											
Calcium	<0.100	1.00	1.01	101	1.00	1.01	101	0	85-115	20	
Magnesium	<0.0100	1.00	0.893	89	1.00	0.919	92	3	85-115	20	
Potassium	<0.500	10.0	9.32	93	10.0	9.38	94	1	85-115	20	
Sodium	<0.500	11.0	10.7	97	11.0	10.7	97	0	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



BS / BSD Recoveries



Project Name: South Brine Pond

Work Order #: 500412

Analyst: DHE

Lab Batch ID: 959648

Units: mg/L

Date Prepared: 01/16/2015

Sample: 959648-1-BKS

Batch #: 6

Project ID:

Date Analyzed: 01/16/2015

Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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
Analytes											
Alkalinity, Total (as CaCO ₃)	<4.00	250	256	102	250	257	103	0	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



Form 3 - MS Recoveries

Project Name: South Brine Pond



Work Order #: 500412

Lab Batch #: 959952

Date Analyzed: 01/20/2015

QC- Sample ID: 500694-001 S

Reporting Units: mg/L

Date Prepared: 01/20/2015

Batch #: 1

Project ID:

Analyst: JUM

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	222	500	661	88	80-120	

Lab Batch #: 959695

Date Analyzed: 01/16/2015

QC- Sample ID: 500382-001 S

Reporting Units: mg/L

Date Prepared: 01/16/2015

Batch #: 1

Analyst: DAB

Matrix: Ground Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Metals by EPA 200.8	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Arsenic	0.00428	0.100	0.107	103	70-130	
Barium	0.0801	0.100	0.195	115	70-130	
Chromium	0.0140	0.100	0.107	93	70-130	
Lead	<0.00200	0.100	0.114	114	70-130	
Selenium	0.00560	0.100	0.104	98	70-130	
Silver	<0.00200	0.0500	0.0524	105	70-130	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$

Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$

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

Work Order #: 500412
Lab Batch ID: 959553
Date Analyzed: 01/14/2015
Reporting Units: mg/L

Project ID:
QC- Sample ID: 500339-001 S
Batch #: 1 Matrix: Water
Date Prepared: 01/14/2015
Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00100	0.100	0.0973	97	0.100	0.0986	99	1	70-125	25	
Toluene	<0.00200	0.100	0.113	113	0.100	0.116	116	3	70-125	25	
Ethylbenzene	<0.00100	0.100	0.125	125	0.100	0.102	102	20	71-129	25	
m_p-Xylenes	<0.00200	0.200	0.238	119	0.200	0.248	124	4	70-131	25	
o-Xylene	<0.00100	0.100	0.113	113	0.100	0.117	117	3	71-133	25	

Lab Batch ID: 959868
Date Analyzed: 01/20/2015
Reporting Units: mg/L

QC- Sample ID: 500160-001 S
Batch #: 1 Matrix: Waste Water
Date Prepared: 01/20/2015
Analyst: ANS

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
Mercury	<0.000200	0.00200	0.00248	124	0.00200	0.00249	125	0	70-130	20	

Lab Batch ID: 959868
Date Analyzed: 01/20/2015
Reporting Units: mg/L

QC- Sample ID: 500308-001 S
Batch #: 1 Matrix: Drinking Water
Date Prepared: 01/20/2015
Analyst: ANS

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
Mercury	<0.000200	0.00200	0.00190	95	0.00200	0.00193	97	2	70-130	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 Applicable
N = 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 #: 500412
Lab Batch ID: 959695
Date Analyzed: 01/16/2015
Reporting Units: mg/L

Project ID:
QC- Sample ID: 500370-001 S
Batch #: 1 Matrix: Ground Water
Date Prepared: 01/16/2015
Analyst: DAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Metals by EPA 200.8 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	0.0266	0.100	0.125	98	0.100	0.124	97	1	70-130	20	
Barium	0.175	0.100	0.286	111	0.100	0.283	108	1	70-130	20	
Cadmium <01/20/2015 20:04>	<0.00200	0.100	0.106	106	0.100	0.104	104		70-130	20	
Chromium	0.0298	0.100	0.119	89	0.100	0.118	88	1	70-130	20	
Lead	0.00275	0.100	0.113	110	0.100	0.111	108	2	70-130	20	
Selenium	<0.00200	0.100	0.0979	98	0.100	0.0969	97	1	70-130	20	
Silver <01/20/2015 20:04>	<0.00200	0.0500	0.0512	102	0.0500	0.0507	101		70-130	20	

Lab Batch ID: 960563
Date Analyzed: 01/29/2015
Reporting Units: mg/L

QC- Sample ID: 501096-001 S
Batch #: 1 Matrix: Water
Date Prepared: 01/29/2015
Analyst: DAT

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Metals per ICP by EPA 200.7 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
Calcium	30.4	1.00	31.1	70	1.00	31.1	70	0	75-125	20	X
Magnesium	2.63	1.00	3.44	81	1.00	3.41	78	1	75-125	20	
Potassium	15.8	10.0	25.2	94	10.0	25.2	94	0	75-125	20	
Sodium	32.3	11.0	43.2	99	11.0	43.4	101	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Sample Duplicate Recovery



Project Name: South Brine Pond

Work Order #: 500412

Lab Batch #: 959648

Project ID:

Date Analyzed: 01/16/2015 10:05

Date Prepared: 01/16/2015

Analyst: DHE

QC- Sample ID: 500257-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Alkalinity by SM2320B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Alkalinity, Total (as CaCO ₃)	196	198	1	20	

Lab Batch #: 960021

Date Analyzed: 01/20/2015 11:00

Date Prepared: 01/20/2015

Analyst: MHS

QC- Sample ID: 500523-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	1300	1250	4	10	

Lab Batch #: 959621

Date Analyzed: 01/16/2015 10:00

Date Prepared: 01/16/2015

Analyst: WRU

QC- Sample ID: 500348-001 D

Batch #: 1

Matrix: Water

Reporting Units: Deg C

SAMPLE / SAMPLE DUPLICATE RECOVERY					
pH by SM4500-H	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Temperature	21.7	21.7	0	20	U

Lab Batch #: 959621

Date Analyzed: 01/16/2015 10:00

Date Prepared: 01/16/2015

Analyst: WRU

QC- Sample ID: 500348-001 D

Batch #: 1

Matrix: Water

Reporting Units: SU

SAMPLE / SAMPLE DUPLICATE RECOVERY					
pH by SM4500-H	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
pH	7.72	7.72	0	20	U

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



Setting the Standard since 1990

Stafford, Texas (281-240-4200)

Dallas, Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

Page 1 of 1

CHAIN OF CUSTODY

www.xenco.com

Odessa, Texas (432-563-1800)

Lakeland, Florida (863-646-8526)

Norcross, Georgia (770-449-8800)

Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job #

500412

Client / Reporting Information		Project Information		Analytical Information										Matrix Codes			
Company Name / Branch: <i>Western Refining</i>		Project Name/Number:		<i>Metals AA-AH-8</i> <i>CATIONS (CA, MG, NA, K)</i> <i>CL ALKALINITY</i> <i>TDS</i> <i>PH</i>										<div>A = Air S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge WW = Waste Water W = Wipe O = Oil WW = Waste Water</div>			
Company Address: <i>PO Box 1345 IAL, NM</i>		Project Location: <i>South Brine Pond</i>															
Email: <i>Ken.Parker@wvr.com 575-631-2933</i>		Invoice To: <i>Western Refining</i> <i>PO Box 1345</i> <i>IAL, NM 88252</i>															
Project Contact: <i>Ken Parker</i>		PO Number:															
Samplers's Name: <i>Ken Parker</i>																	
No.	Field ID / Point of Collection	Collection			# of bottles	Number of preserved bottles										Field Comments	
		Sample Depth	Date	Time		Matrix	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE			
1	<i>South Pond</i>		<i>1-14-15</i>	<i>10:00A</i>	<i>W 5</i>												
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
Turnaround Time (Business days)		Data Deliverable Information		Notes:													
<input type="checkbox"/> Same Day TAT		<input checked="" type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std QC		<input type="checkbox"/> Level IV (Full Data Pkg /raw data)											
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std QC+ Forms		<input type="checkbox"/> TRRP Level IV											
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level 3 (CLP Forms)		<input type="checkbox"/> UST / RG -411											
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist													
TAT Starts Day received by Lab, if received by 3:00 pm				FED-EX / UPS: Tracking #													
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																	
Relinquished by Sampler:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:	
1 <i>Ken Parker</i>		1-14-15 1:30PM		<i>[Signature]</i>		2		1/14/15 1:30		<i>[Signature]</i>		3					
Relinquished by:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:		Relinquished By:		Date Time:		Received By:	
3				3		4				4							
Relinquished by:		Date Time:		Received By:		Custody Seal #		Preserved where applicable		On Ice		Cooler Temp.		Thermo Corr Factor			
5				5						<input checked="" type="checkbox"/>						<i>50</i>	

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: Western Refining

Date/ Time Received: 01/14/2015 01:30:00 PM

Work Order #: 500412

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5
#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 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? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

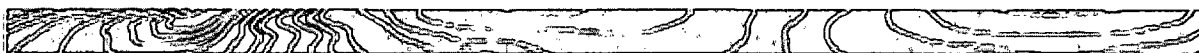
Kelsey Brooks
Kelsey Brooks

Date: 01/14/2015

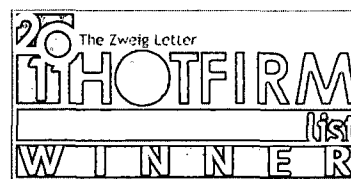
Checklist reviewed by:

Kelsey Brooks
Kelsey Brooks

Date: 01/14/2015



ENGINEERING | SURVEYING | TESTING
DEFINING QUALITY SINCE 1965



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

12 November 2014

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 (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