GW-033

POND REMOVAL

REPORT

YEAR(S):
2008

Wednesday, 02 April 2008

Leonard Lowe
NMOCD
Santa Fe, NM

RE: South Evaporation Pond
San Juan River Gas Plant

The following is an update on the status of the south evaporation pond located at Western Gas Resources' San Juan River Gas Plant.

With the advance of warmer weather we have begun to catch water in the #2 inspection pipe again. The attached spreadsheet details inspections and sampling events. In the course of future planning, Kent McEvers, the Plant Superintendent and I have agreed rather than to repair the liner it would be in our best interest to close the pond and route the water to a tank battery. The battery would be constructed more central to the plant and would include separation equipment so that any oil could be removed from the water and sold. Our main concern is whether the water will be considered exempt for downhole disposal/injection. The fluids collected are water and hydrocarbons from pigging operations and blow down water from the cooling tower and dehy units. The economics to properly dispose of the water is a major consideration in whether we close the pond or repair the liner. Could you please confirm for us if the water from such operations can be disposed of in typical water injection facilities?

To close the pond, we would begin with pulling all fluids out and separating the oil and water. The oil would be sold and the water would be disposed of by down hole injection at an approved facility. Any remaining solids will be removed and disposed of at an approved land farm. The liners and geomat would then be removed and properly disposed of or reused it integrity remains intact. Delineation sampling of the exposed floor and walls will be preformed prior to final closure to insure compliance with all NMOCD regulations. Any impacted soils identified beneath the liner will be removed and hauled to an approved land farm. Once all analytical has cleared, the pond will be closed with packed caliche and 1-2 feet of clean topsoil. The area will be capped in case of future subsidence. In addition, the former pond area will be reseeded with an appropriate vegetation blend to prevent erosion from wind or rain.

Final closure of the pond is tentative until the economics of the process water disposal can be established. The alternative to closing the pond is to drain and clean as described above and repair the liner. The bird netting would be replaced and we would continue to use the pond under the current discharge plan.

Work could begin as soon as we are notified of our disposal options and a corresponding work plan approved. Our tentative goal is to have final closure or repairs of the pond be completed the week of May 12th. If you have any questions or suggestions please contact me at 432-684.2808 or Kent McEvers at the plant, 505.598.5601. We appreciate any assistance you may be able to provide in this matter.

Deleted: April 2, 2008

Best regards,

Weaver, Eric
Sr EHS Analyst
Anadarko Petroleum Corporation

Fifth Avenue Place 425 1st Street S.W.
P.O. Box 2595 STN M
CALGARY, AB T2P 4V4
CANADA

General Telephone: (403) 231-0111
General Facsimile: (403) 231-0187

Analytical Report 300305

for

Etech Environmental & Safety Solutions, Inc

Project Manager: James Wilson

San Juan River Plant

31-MAR-08

12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215

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 - Austin - Tampa - Miami - Latin America
Midland - Corpus Christi - Atlanta

31-MAR-08

Project Manager: **James Wilson**
Etech Environmental & Safety Solutions, Inc
12800 E. Hwy 80 W.
Odessa, TX 79765

Reference: XENCO Report No: **300305**
San Juan River Plant
Project Address:

James Wilson:

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 300305. 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. 300305 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

Sample Cross Reference 300305

Etech Environmental & Safety Solutions, Inc, Odessa, TX

San Juan River Plant

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
# 2 Leak Detection Pipe	W	Mar-17-08 00:00		300305-001

Certificate of Analysis Summary 300305

Etech Environmental & Safety Solutions, Inc, Odessa, TX

Project Name: San Juan River Plant

Project Id:
Contact: James Wilson
Project Location:

Date Received in Lab: Tue Mar-25-08 03:15 pm
Report Date: 31-MAR-08
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	300305-001					
	Field Id:	# 2 Leak Detection Pipe					
	Depth:						
	Matrix:	WATER					
	Sampled:	Mar-17-08 00:00					
Chloride by SM4500-Cl- B	***Extracted:***						
	Analyzed:	Mar-27-08 14:40					
	Units/RL:	mg/L	RL				
Chloride		24460	0.1000				
TPH by Texas1005	***Extracted:***	Mar-29-08 10:50					
	Analyzed:	Mar-29-08 17:07					
	Units/RL:	mg/L	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	2.50				
C12-C28 Diesel Range Hydrocarbons		ND	2.50				
C28-C35 Oil Range Hydrocarbons		ND	2.50				
Total TPH 1005		ND					

Brent Barron
Odessa Laboratory Director

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(PQL) and above the SQL(MDL).

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.

* Outside XENCO'S scope of NELAC Accreditation

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	Phone	Fax
11381 Meadowglen Lane Suite L Houston, Tx 77082-2647	(281) 589-0692	(281) 589-0695
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. 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
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477

Form 2 - Surrogate Recoveries

Project Name: San Juan River Plant

Work Order #: 300305 **Project ID:**

Lab Batch #: 718599 **Sample:** 300305-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	8.37	10.0	84	70-135	
o-Terphenyl	4.44	5.00	89	70-135	

Lab Batch #: 718599 **Sample:** 300337-004 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.40	10.0	94	70-135	
o-Terphenyl	4.48	5.00	90	70-135	

Lab Batch #: 718599 **Sample:** 506685-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	7.86	10.0	79	70-135	
o-Terphenyl	3.70	5.00	74	70-135	

Lab Batch #: 718599 **Sample:** 506685-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	8.46	10.0	85	70-135	
o-Terphenyl	4.51	5.00	90	70-135	

Lab Batch #: 718599 **Sample:** 506685-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	8.46	10.0	85	70-135	
o-Terphenyl	3.96	5.00	79	70-135	

** 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: San Juan River Plant

Work Order #: 300305 **Project ID:**

Lab Batch #: 718337 **Sample:** 718337-1-BKS **Matrix:** Water

Date Analyzed: 03/27/2008 **Date Prepared:** 03/27/2008 **Analyst:** IRO

Reporting Units: mg/L **Batch #:** 1

Chloride by SM4500-CI- B Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	100.0	85.08	85	70-125	

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

BS / BSD Recoveries

Project Name: San Juan River Plant

Work Order #: 300305 **Project ID:**

Analyst: ASA **Date Prepared:** 03/29/2008 **Date Analyzed:** 03/29/2008

Lab Batch ID: 718599 **Sample:** 506685-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005 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
C6-C12 Gasoline Range Hydrocarbons	ND	100	79.6	80	100	82.6	83	4	70-135	25	
C12-C28 Diesel Range Hydrocarbons	ND	100	74.6	75	100	76.9	77	3	70-135	25	

Relative Percent Difference RPD = 200*|(D-F)/(D+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: San Juan River Plant

Work Order #: 300305
Lab Batch #: 718599
Project ID:
Date Analyzed: 03/29/2008 **Date Prepared:** 03/29/2008 **Analyst:** ASA
QC- Sample ID: 300337-004 S **Batch #:** 1 **Matrix:** Water
Reporting Units: mg/L

TPH by Texas1005 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
	MATRIX / MATRIX SPIKE RECOVERY STUDY					
C6-C12 Gasoline Range Hydrocarbons	ND	100	88.5	89	70-135	
C12-C28 Diesel Range Hydrocarbons	ND	100	84.7	85	70-135	

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

Form 3 - MS / MSD Recoveries

Project Name: San Juan River Plant

Work Order # : 300305 **Project ID:**

Lab Batch ID: 718337 **QC- Sample ID:** 300463-001 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 03/27/2008 **Date Prepared:** 03/27/2008 **Analyst:** IRO

Reporting Units: mg/L

Chloride by SM4500-CI- B	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
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
Chloride	372.2	5000	5211	97	5000	5211	97	0	70-125	25	

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

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: J.K. Wilson

Project Name: San Juan River Plant

Company Name: eTech Environmental & Safety Solutions, Inc.

Project #:

Company Address: 12600 W. Hwy 80 E

Project Loc:

City/State/Zip: Odessa TX 79765

PO #:

Telephone No: (432) 563-2200 Fax No: (432) 563-2213

Report Format: ☐ Standard ☐ TRRP ☐ NPDES

Sampler Signature: e-mail: jk@etechenv.com

(lab use only)
ORDER #: 300305

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: 8015M TPH 418.1	TX 1005 TPH	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 802? 8260 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	#2 leak detection pipe (vac)			3-17-08			2	X		X						W		X												X
02	#2 leak detection pipe (pump)			3-17-08			1	X								W					X									X

Special Instructions:

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s)? Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep.? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt 1.0 °C

Relinquished by	Date	Time	Received by	Date	Time
Kristi Garcia	3/25/08	3:15pm			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by ELOT	Date	Time
			Andrea Law	3-25-08	3:15

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Etech Env

Date/ Time: 3 25 08 15 15

Lab ID #: 300505

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	1.0 °C	
#2	Shipping container in good condition?	(Yes)	No		
#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?	(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 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	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	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	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	(Yes)	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: #11 sample container for Cl was not supplied by ELOT.

Corrective Action Taken:

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

Inspection Date	Amount Collected		#2 Leak Dection Pipe @ South Pond	San Juan I
	Inches	*Ounces*		
8/1/2007	0.25	4.65		
9/4/2007	2.00	37.20		
9/28/2007	1.25	23.25	**Sample Taken	
10/8/2007	0.00	0.00		
10/12/2007	0.00	0.00		
10/15/2007	0.00	0.00		
10/19/2007	4.00	74.40		
10/22/2007	4.00	74.40		
10/29/2007	4.00	74.40		
11/8/2007	0.00	0.00		
11/12/2007	1.00	18.60		
11/19/2007	1.00	18.60		
11/26/2007	1.00	18.60		
12/3/2007	0.00	0.00		
12/1/2007	2.00	37.20		
12/17/2007	0.00	0.00		
12/27/2007	4.50	83.70		
12/31/2007	0.25	4.65		
1/2/2008	0.00	0.00		
1/7/2008	0.25	4.65		
1/14/2008	0.00	0.00		
1/21/2008	0.25	4.65		
1/25/2008	0.00	0.00		
1/28/2008	0.00	0.00		
2/1/2008	0.00	0.00		
2/4/2008	0.00	0.00		
2/8/2008	0.00	0.00		
2/11/2008	0.00	0.00		
2/14/2008	0.00	0.00		
2/22/2008	0.00	0.00		
2/25/2008	1.00	18.60		
2/29/2008	3.55	66.03		
3/3/2008	3.82	71.05		
3/7/2008	4.00	74.40		
3/10/2008	3.90	72.54		
3/14/2008	3.82	71.05		
3/17/2008	4.25	79.05	**Sample Taken	
		0.00		
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		0.00		
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Totals	**50.09**	**931.67**