

AP - 110

**ANNUAL
REPORT**

2011

SUPPLEMENT 3

Monthly Analytical Reports for Waste Water Transferred to City
of Lovington POTW

RECEIVED OGD

2012 APR 16 A 10:30



14-Feb-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1102106

Dear Darrell,

ALS Environmental received 2 samples on 03-Feb-2011 10:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 18.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS 10450 Standliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

© 2011 ALS Environmental, Inc. All rights reserved. This document is the property of ALS Environmental, Inc. and is not to be distributed outside of the company.



www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

Date: 14-Feb-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1102106

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1102106-01	City Waste Water	Water		1/31/2011 09:00	2/3/2011 10:45	☐
1102106-02	Trip Blank	Water		1/31/2011 09:00	2/3/2011 10:45	☒

ALS Environmental

Date: 14-Feb-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Sample ID: City Waste Water
Collection Date: 1/31/2011 09:00 AM

Work Order: 1102106
Lab ID: 1102106-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: KKP
Benzene	0.068		0.0010	mg/L	1	2/10/2011 06:17 AM
Toluene	0.088		0.0010	mg/L	1	2/10/2011 06:17 AM
Ethylbenzene	0.035		0.0010	mg/L	1	2/10/2011 06:17 AM
Xylenes, Total	0.058		0.0030	mg/L	1	2/10/2011 06:17 AM
METALS			SW6020			Prep Date: 2/9/2011 Analyst: ALR
Arsenic	0.0780		0.00500	mg/L	1	2/9/2011 10:51 PM
Barium	0.148		0.00500	mg/L	1	2/9/2011 10:51 PM
Cadmium	ND		0.00200	mg/L	1	2/9/2011 10:51 PM
Calcium	223		25.0	mg/L	50	2/10/2011 04:03 PM
Chromium	0.00903		0.00500	mg/L	1	2/10/2011 06:34 PM
Lead	ND		0.00500	mg/L	1	2/9/2011 10:51 PM
Magnesium	38.0		0.200	mg/L	1	2/10/2011 06:34 PM
Potassium	17.0		0.200	mg/L	1	2/9/2011 10:51 PM
Selenium	0.0243		0.00500	mg/L	1	2/9/2011 10:51 PM
Silver	ND		0.00500	mg/L	1	2/9/2011 10:51 PM
Sodium	854		10.0	mg/L	50	2/10/2011 04:03 PM
ANIONS			E300			Analyst: TDW
Nitrate/Nitrite (as N)	1.75		0.100	mg/L	1	2/8/2011 11:05 PM
Surr: Selenate (surr)	106		85-115	%REC	1	2/8/2011 11:05 PM
AMMONIA AS N			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	0.243		0.0250	mg/L	1	2/9/2011 10:00 AM
OIL AND GREASE			E1664			Analyst: CMC
Oil and Grease	8.62		2.00	mg/L	1	2/10/2011 01:00 PM
SULFIDE			SM4500 S2-F			Analyst: JBA
Sulfide	10.2		1.00	mg/L	1	2/7/2011 08:00 AM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: JKP
Total Dissolved Solids (Residue, Filterable)	3,530		10.0	mg/L	1	2/7/2011 08:00 AM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: CMC
Nitrogen, Total Kjeldahl	11.3		1.00	mg/L	1	2/8/2011 09:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 14-Feb-11

Client: Navajo Refining Company

Work Order: 1102106

Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R105074 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW2-020911-R105074 Units: µg/L Analysis Date: 2/10/2011 04:51 AM

Client ID: Run ID: BTEX1_110209B SeqNo: 2275125 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								

LCS Sample ID: BLCSW2-020911-R105074 Units: µg/L Analysis Date: 2/10/2011 04:17 AM

Client ID: Run ID: BTEX1_110209B SeqNo: 2275123 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.74	1.0	20	0	114	77-126	0			
Toluene	22.48	1.0	20	0	112	80-124	0			
Ethylbenzene	22.58	1.0	20	0	113	76-125	0			
Xylenes, Total	63.41	3.0	60	0	106	79-124	0			

MS Sample ID: 1102246-06AMS Units: µg/L Analysis Date: 2/10/2011 12:43 PM

Client ID: Run ID: BTEX1_110209B SeqNo: 2275154 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	24.24	1.0	20	0	121	77-126	0			
Toluene	24.14	1.0	20	0	121	80-124	0			
Ethylbenzene	24.63	1.0	20	0	123	76-125	0			
Xylenes, Total	69.1	3.0	60	0	115	79-124	0			

MSD Sample ID: 1102246-06AMSD Units: µg/L Analysis Date: 2/10/2011 01:01 PM

Client ID: Run ID: BTEX1_110209B SeqNo: 2275156 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	24.69	1.0	20	0	123	77-126	24.24	1.82	20	
Toluene	24.54	1.0	20	0	123	80-124	24.14	1.66	20	
Ethylbenzene	24.85	1.0	20	0	124	76-125	24.63	0.878	20	
Xylenes, Total	69.44	3.0	60	0	116	79-124	69.1	0.5	20	

The following samples were analyzed in this batch:

1102106-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 1 of 11

Client: Navajo Refining Company
 Work Order: 1102106
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 49917 Instrument ID ICPMS03 Method: SW6020

MBLK Sample ID: MBLKW3-020911-49917 Units: mg/L Analysis Date: 2/9/2011 09:02 PM

Client ID: Run ID: ICPMS03_110209A SeqNo: 2274292 Prep Date: 2/9/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								

LCS Sample ID: MLCSW3-020911-49917 Units: mg/L Analysis Date: 2/9/2011 09:07 PM

Client ID: Run ID: ICPMS03_110209A SeqNo: 2274295 Prep Date: 2/9/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04818	0.0050	0.05	0	96.4	80-120	0			
Barium	0.04743	0.0050	0.05	0	94.9	80-120	0			
Cadmium	0.04662	0.0020	0.05	0	93.2	80-120	0			
Calcium	4.786	0.50	5	0	95.7	80-120	0			
Chromium	0.04792	0.0050	0.05	0	95.8	80-120	0			
Lead	0.04627	0.0050	0.05	0	92.5	80-120	0			
Magnesium	4.777	0.20	5	0	95.5	80-120	0			
Potassium	4.702	0.20	5	0	94	80-120	0			
Selenium	0.0451	0.0050	0.05	0	90.2	80-120	0			
Silver	0.04702	0.0050	0.05	0	94	80-120	0			
Sodium	4.723	0.20	5	0	94.5	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1102106
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 49917 Instrument ID ICPMS03 Method: SW6020

MS Sample ID: 1102096-07DMS Units: mg/L Analysis Date: 2/9/2011 09:28 PM

Client ID: Run ID: ICPMS03_110209A SeqNo: 2274304 Prep Date: 2/9/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.0522	0.0050	0.05	0.004692	95	80-120	0			
Barium	0.2219	0.0050	0.05	0.172	99.8	80-120	0			
Cadmium	0.04594	0.0020	0.05	0.0001533	91.6	80-120	0			
Calcium	106.1	0.50	5	86.43	393	80-120	0			SO
Chromium	0.05038	0.0050	0.05	0.004304	92.2	80-120	0			
Lead	0.04644	0.0050	0.05	0.0004141	92.1	80-120	0			
Magnesium	17.04	0.20	5	12.01	101	80-120	0			
Potassium	7.056	0.20	5	2.268	95.8	80-120	0			
Selenium	0.04751	0.0050	0.05	-0.0003221	95.7	80-120	0			
Silver	0.0461	0.0050	0.05	0.0000774	92	80-120	0			
Sodium	45.98	0.20	5	40.36	112	80-120	0			O

MSD Sample ID: 1102096-07DMSD Units: mg/L Analysis Date: 2/9/2011 09:33 PM

Client ID: Run ID: ICPMS03_110209A SeqNo: 2274307 Prep Date: 2/9/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05093	0.0050	0.05	0.004692	92.5	80-120	0.0522	2.46	15	
Barium	0.2257	0.0050	0.05	0.172	107	80-120	0.2219	1.7	15	
Cadmium	0.0454	0.0020	0.05	0.0001533	90.5	80-120	0.04594	1.18	15	
Calcium	110.5	0.50	5	86.43	481	80-120	106.1	4.06	15	SO
Chromium	0.04848	0.0050	0.05	0.004304	88.4	80-120	0.05038	3.84	15	
Lead	0.04676	0.0050	0.05	0.0004141	92.7	80-120	0.04644	0.687	15	
Magnesium	16.91	0.20	5	12.01	98	80-120	17.04	0.766	15	
Potassium	7.025	0.20	5	2.268	95.1	80-120	7.056	0.44	15	
Selenium	0.04346	0.0050	0.05	-0.0003221	87.6	80-120	0.04751	8.9	15	
Silver	0.04544	0.0050	0.05	0.0000774	90.7	80-120	0.0461	1.44	15	
Sodium	45.88	0.20	5	40.36	110	80-120	45.98	0.218	15	O

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1102106
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 49917 Instrument ID ICPMS03 Method: SW6020

DUP Sample ID: 1102096-07DDUP Units: mg/L Analysis Date: 2/9/2011 09:17 PM

Client ID: Run ID: ICPMS03_110209A SeqNo: 2274299 Prep Date: 2/9/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.005091	0.0050	0	0	0	0-0	0.004692	8.16	25	
Barium	0.1805	0.0050	0	0	0	0-0	0.172	4.82	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.0001533	0	25	
Calcium	102.6	0.50	0	0	0	0-0	86.43	17.1	25	
Chromium	0.004112	0.0050	0	0	0	0-0	0.004304	0	25	J
Lead	ND	0.0050	0	0	0	0-0	0.0004141	0	25	
Magnesium	12.55	0.20	0	0	0	0-0	12.01	4.4	25	
Potassium	2.376	0.20	0	0	0	0-0	2.268	4.65	25	
Selenium	ND	0.0050	0	0	0	0-0	-0.0003221	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.0000774	0	25	
Sodium	42.19	0.20	0	0	0	0-0	40.36	4.43	25	

The following samples were analyzed in this batch:

1102106-01B

Client: Navajo Refining Company
Work Order: 1102106
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R104970** Instrument ID: **WetChem** Method: **M4500 NH3 D**

MBLK Sample ID: **WBLKW1-020811-R104970** Units: **mg/L** Analysis Date: **2/8/2011 09:00 AM**

Client ID: Run ID: **WETCHEM_110208H** SeqNo: **2272174** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: **WLCSW1-020811-R104970** Units: **mg/L** Analysis Date: **2/8/2011 09:00 AM**

Client ID: Run ID: **WETCHEM_110208H** SeqNo: **2272175** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.4	1.0	20	0	102	80-120	0			

LCSD Sample ID: **WLCSDW1-020811-R104970** Units: **mg/L** Analysis Date: **2/8/2011 09:00 AM**

Client ID: Run ID: **WETCHEM_110208H** SeqNo: **2272181** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.4	1.0	20	0	102	80-120	20.4	0	20	

MS Sample ID: **1102054-02FMS** Units: **mg/L** Analysis Date: **2/8/2011 09:00 AM**

Client ID: Run ID: **WETCHEM_110208H** SeqNo: **2272180** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	19.06	1.0	20	0.738	91.6	75-125	0			

DUP Sample ID: **1102054-02FDUP** Units: **mg/L** Analysis Date: **2/8/2011 09:00 AM**

Client ID: Run ID: **WETCHEM_110208H** SeqNo: **2272179** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	0.716	1.0	0	0	0	0-0	0.738	0	20	J

The following samples were analyzed in this batch:

1102106-01D

Client: Navajo Refining Company
Work Order: 1102106
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R104972 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R104972 Units: mg/L Analysis Date: 2/7/2011 08:00 AM

Client ID: Run ID: BALANCE1_110207E SeqNo: 2272201 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: LCS-R104972 Units: mg/L Analysis Date: 2/7/2011 08:00 AM

Client ID: Run ID: BALANCE1_110207E SeqNo: 2272202 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1044	10	1000	0	104	85-115	0			

DUP Sample ID: 1102096-07BDUP Units: mg/L Analysis Date: 2/7/2011 08:00 AM

Client ID: Run ID: BALANCE1_110207E SeqNo: 2272197 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	490	10	0	0	0	0-0	482	1.65	20	

The following samples were analyzed in this batch:

1102106-01C

Client: Navajo Refining Company
 Work Order: 1102106
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R104978 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: WBLKW-020711-R104978 Units: mg/L Analysis Date: 2/7/2011 08:00 AM

Client ID: Run ID: WETCHEM_110207P SeqNo: 2272344 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: WLCSW-020711-R104978 Units: mg/L Analysis Date: 2/7/2011 08:00 AM

Client ID: Run ID: WETCHEM_110207P SeqNo: 2272345 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	24.6	1.0	25	0	98.4	80-120	0			

LCSD Sample ID: WLCSDW-020711-R104978 Units: mg/L Analysis Date: 2/7/2011 08:00 AM

Client ID: Run ID: WETCHEM_110207P SeqNo: 2272350 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	24	1.0	25	0	96	80-120	24.6	2.47	20	

MS Sample ID: 1102106-01FMS Units: mg/L Analysis Date: 2/7/2011 08:00 AM

Client ID: City Waste Water Run ID: WETCHEM_110207P SeqNo: 2272349 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	33	1.0	25	10.2	91.2	80-120	0			

DUP Sample ID: 1102106-01FDUP Units: mg/L Analysis Date: 2/7/2011 08:00 AM

Client ID: City Waste Water Run ID: WETCHEM_110207P SeqNo: 2272348 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	10.4	1.0	0	0	0	0-0	10.2	1.94	20	

The following samples were analyzed in this batch:

1102106-01F

Client: Navajo Refining Company
 Work Order: 1102106
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R105050 Instrument ID ICS3K2 Method: E300

MBLK Sample ID: WBLKW1-020811-R105050 Units: mg/L Analysis Date: 2/8/2011 03:51 PM

Client ID: Run ID: ICS3K2_110208B SeqNo: 2274136 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.10								
Surr: Selenate (surr)	5.428	0.10	5	0	109	85-115	0			

LCS Sample ID: WLCSW1-020811-R105050 Units: mg/L Analysis Date: 2/8/2011 04:12 PM

Client ID: Run ID: ICS3K2_110208B SeqNo: 2274137 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.008	0.10	8	0	100	90-110	0			
Surr: Selenate (surr)	5.438	0.10	5	0	109	85-115	0			

LCSD Sample ID: WLCSDW1-020811-R105050 Units: mg/L Analysis Date: 2/8/2011 04:34 PM

Client ID: Run ID: ICS3K2_110208B SeqNo: 2274138 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.55	0.10	8	0	107	90-110	8.008	6.55	20	
Surr: Selenate (surr)	5.745	0.10	5	0	115	85-115	5.438	5.49	20	

MS Sample ID: 1102177-04BMS Units: mg/L Analysis Date: 2/8/2011 08:11 PM

Client ID: Run ID: ICS3K2_110208B SeqNo: 2274148 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.936	0.10	4	1.714	106	80-120	0			
Surr: Selenate (surr)	5.732	0.10	5	0	115	85-115	0			

MS Sample ID: 1102197-01CMS Units: mg/L Analysis Date: 2/9/2011 05:15 PM

Client ID: Run ID: ICS3K2_110208B SeqNo: 2274169 Prep Date: DF: 40

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	503.4	4.0	160	344.2	99.5	80-120	0			
Surr: Selenate (surr)	213.5	4.0	200	0	107	85-115	0			

MSD Sample ID: 1102177-04BMSD Units: mg/L Analysis Date: 2/8/2011 08:33 PM

Client ID: Run ID: ICS3K2_110208B SeqNo: 2274149 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	5.943	0.10	4	1.714	106	80-120	5.936	0.118	20	
Surr: Selenate (surr)	5.736	0.10	5	0	115	85-115	5.732	0.0698	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1102106
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R105050 Instrument ID ICS3K2 Method: E300

MSD Sample ID: 1102197-01CMSD Units: mg/L Analysis Date: 2/9/2011 05:37 PM

Client ID: Run ID: ICS3K2_110208B SeqNo: 2274170 Prep Date: DF: 40

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	502.9	4.0	160	344.2	99.2	80-120	503.4	0.104	20	
Surr: Selenate (surr)	213.5	4.0	200	0	107	85-115	213.5	0.0262	20	

The following samples were analyzed in this batch:

1102106-01C

Client: Navajo Refining Company
Work Order: 1102106
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R105078 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-020911-R105078 Units: mg/L Analysis Date: 2/9/2011 10:00 AM

Client ID: Run ID: UV-2450_110209B SeqNo: 2275196 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-020911-R105078 Units: mg/L Analysis Date: 2/9/2011 10:00 AM

Client ID: Run ID: UV-2450_110209B SeqNo: 2275197 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.204	0.025	0.2	0	102	80-120	0			

LCSD Sample ID: WLCSDW-020911-R105078 Units: mg/L Analysis Date: 2/9/2011 10:00 AM

Client ID: Run ID: UV-2450_110209B SeqNo: 2275205 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.206	0.025	0.2	0	103	80-120	0.204	0.976	20	

MS Sample ID: 1102206-02FMS Units: mg/L Analysis Date: 2/9/2011 10:00 AM

Client ID: Run ID: UV-2450_110209B SeqNo: 2275206 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.306	0.025	0.2	0.12	93	80-120	0			

The following samples were analyzed in this batch:

1102106-01D

Client: Navajo Refining Company
Work Order: 1102106
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R105123 Instrument ID: WetChem Method: E1664

MBLK Sample ID: WBLKW1-021011-R105123 Units: mg/L Analysis Date: 2/10/2011 01:00 PM

Client ID: Run ID: WETCHEM_110210I SeqNo: 2276157 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: WLCSW1-021011-R105123 Units: mg/L Analysis Date: 2/10/2011 01:00 PM

Client ID: Run ID: WETCHEM_110210I SeqNo: 2276158 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	38.67	2.0	40		0	96.7	78-114	0		

MS Sample ID: 1102096-07FMS Units: mg/L Analysis Date: 2/10/2011 01:00 PM

Client ID: Run ID: WETCHEM_110210I SeqNo: 2276165 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	41.19	2.0	40		0	103	78-114	0		

MSD Sample ID: 1102096-07FMSD Units: mg/L Analysis Date: 2/10/2011 01:00 PM

Client ID: Run ID: WETCHEM_110210I SeqNo: 2276166 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	39.02	2.0	40		0	97.6	78-114	41.19	5.4	20

The following samples were analyzed in this batch:

1102106-01E

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1102106

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter

**ALS Laboratory Group**

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form☐ **ALS Laboratory Group**

3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

Page 1 of 1

Customer Information				Project Information				Parameter/Method Request for Analysis											
Purchase Order		Project Name	Lovington Lea Refining-Monthly	A	BTEX (8021)														
Work Order		Project Number		B	Total Metals (6020/7000) Select														
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Anions (300) NO3,NO2														
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore	D	Ammonia														
Address	501 East Main	Address	501 East Main	E	TKN														
				F	Oil & Grease														
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	TDS														
Phone	(505) 748-3311	Phone	(505) 748-3311	H	Sulfide														
Fax	(505) 746-5421	Fax	(505) 746-5421	I															
e-Mail Address		e-Mail Address		J															

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste Water	1-31-11	9 ⁰⁰	W	Y	9	✓	✓	✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Steve Terry</i>		Shipment Method		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour				Results Due Date:	
Relinquished by: <i>Steve Terry</i>	Date: 1-31-11	Time: 10	Received by:	Notes: 10 Day TAT.					
Relinquished by:	Date:	Time:	Received by (Laboratory): <i>DLG</i>	Cooler ID:	Cooler Temp:	QC Package: (Check One Box Below) ☒ Level II Std QC ☐ TRRP Check List ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SW846/CLP ☐ Other / EDD			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):						
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₃ 7-Other 8-4°C 9-5035									

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2008 by ALS Laboratory Group.

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING**

Date/Time Received: **03-Feb-11 10:45**

Work Order: **1102106**

Received by: **SAY**

Checklist completed by *Parish M. Giga*
eSignature

03-Feb-11
Date

Reviewed by: *Jay Lynn F. Thibault*
eSignature

08-Feb-11
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

3.1C

002

Cooler(s)/Kit(s):

3297

Water - VOA vials have zero headspace?

Yes ☐

No ☒

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☒

N/A ☐

pH adjusted by:

Login Notes: Head Space in all 3 Voa Vials

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

**ALS Environmental**

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5897

Date: 12/31/2011
Name: S. Leveaux
Company: ALA

CUSTODY SEAL

Seal Broken By: 04

Date: 2/3/11

This portion can be removed for Recipient's records.

to 1/31/11

FedEx Tracking Number

865910938437

Order's
Name

KADY TRUETT

Phone

878 344-5821

Company

NAJASO REFINING CO (LLC)

Address

7406 S MAIN ST

City

LOVINGTON

State

NM

ZIP

88260

Our Internal Billing Reference



11-Mar-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1102744

Dear Darrell,

ALS Environmental received 2 samples on 25-Feb-2011 10:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

JayLynn F Thibault

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS: 10450 Standish Rd. Suite 210 Houston, Texas 77036-4338 ; PHONE (281) 539-5050 ; FAX (281) 539-5887

CONTACT: For more information, go to www.alsglobal.com or call 800-452-6644 (toll-free) or 281-539-5050 (local).



www.alsglobal.com

RIGHT SOLUTIONS. RIGHT PARTNER.

ALS Environmental

Date: 11-Mar-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1102744

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1102744-01	C-Tank Inlet	Water		2/24/2011 09:00	2/25/2011 10:15	☐
1102744-02	Trip Blank	Water		2/25/2011	2/25/2011 10:15	☐

ALS Environmental

Date: 11-Mar-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Sample ID: C-Tank Inlet
Collection Date: 2/24/2011 09:00 AM

Work Order: 1102744
Lab ID: 1102744-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B		Analyst: KKP	
Benzene	0.25		0.010	mg/L	10	3/9/2011 01:17 PM
Toluene	0.12		0.010	mg/L	10	3/9/2011 01:17 PM
Ethylbenzene	0.048		0.0010	mg/L	1	3/9/2011 03:15 AM
Xylenes, Total	0.088		0.0030	mg/L	1	3/9/2011 03:15 AM
Surr: 4-Bromofluorobenzene	121		77-129	%REC	1	3/9/2011 03:15 AM
Surr: 4-Bromofluorobenzene	123		77-129	%REC	10	3/9/2011 01:17 PM
Surr: Trifluorotoluene	130		75-130	%REC	1	3/9/2011 03:15 AM
Surr: Trifluorotoluene	122		75-130	%REC	10	3/9/2011 01:17 PM
METALS			SW6020		Prep Date: 3/1/2011	Analyst: ALR
Arsenic	0.0899		0.00500	mg/L	1	3/1/2011 09:32 PM
Barium	0.202		0.00500	mg/L	1	3/1/2011 09:32 PM
Cadmium	ND		0.00200	mg/L	1	3/1/2011 09:32 PM
Calcium	262		25.0	mg/L	50	3/2/2011 01:51 PM
Chromium	0.0207		0.00500	mg/L	1	3/1/2011 09:32 PM
Lead	ND		0.00500	mg/L	1	3/1/2011 09:32 PM
Magnesium	39.9		0.200	mg/L	1	3/1/2011 09:32 PM
Potassium	13.6		0.200	mg/L	1	3/1/2011 09:32 PM
Selenium	0.0167		0.00500	mg/L	1	3/1/2011 09:32 PM
Silver	ND		0.00500	mg/L	1	3/1/2011 09:32 PM
Sodium	679		10.0	mg/L	50	3/2/2011 01:51 PM
ANIONS			E300		Analyst: TDW	
Nitrate/Nitrite (as N)	1.37		0.100	mg/L	1	2/25/2011 02:15 PM
Surr: Selenate (surr)	108		85-115	%REC	1	2/25/2011 02:15 PM
AMMONIA AS N			SM4500 NH3-B-F		Analyst: IAB	
Nitrogen, Ammonia (as N)	1.22		0.125	mg/L	5	3/9/2011 08:00 AM
OIL AND GREASE			E1664		Analyst: JKP	
Oil and Grease	7.35		2.00	mg/L	1	3/8/2011 10:15 AM
SULFIDE			SM4500 S2-F		Analyst: JBA	
Sulfide	15.4		1.00	mg/L	1	3/3/2011 08:40 AM
TOTAL DISSOLVED SOLIDS			M2540C		Analyst: JKP	
Total Dissolved Solids (Residue, Filterable)	3,480		10.0	mg/L	1	3/1/2011 03:00 PM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D		Analyst: JBA	
Nitrogen, Total Kjeldahl	13.8		1.00	mg/L	1	3/9/2011 03:30 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 11-Mar-11

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R106546 Instrument ID BTEX3 Method: SW8021B

MBLK Sample ID: BBLKW2-030811-R106546 Units: µg/L Analysis Date: 3/8/2011 10:10 PM

Client ID: Run ID: BTEX3_110308B SeqNo: 2305346 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	34.94	1.0	30	0	116	77-129	0			
Surr: Trifluorotoluene	36.14	1.0	30	0	120	75-130	0			

LCS Sample ID: BLCSW2-030811-R106546 Units: µg/L Analysis Date: 3/8/2011 09:24 PM

Client ID: Run ID: BTEX3_110308B SeqNo: 2305344 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	19.94	1.0	20	0	99.7	76-125	0			
Xylenes, Total	57.72	3.0	60	0	96.2	79-124	0			
Surr: 4-Bromofluorobenzene	36.07	1.0	30	0	120	77-129	0			
Surr: Trifluorotoluene	36.14	1.0	30	0	120	75-130	0			

MS Sample ID: 1103061-05AMS Units: µg/L Analysis Date: 3/8/2011 11:33 PM

Client ID: Run ID: BTEX3_110308B SeqNo: 2305351 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	22.48	1.0	20	0	112	76-125	0			
Xylenes, Total	66.87	3.0	60	0	111	79-124	0			
Surr: 4-Bromofluorobenzene	36.81	1.0	30	0	123	77-129	0			
Surr: Trifluorotoluene	36.35	1.0	30	0	121	75-130	0			

MSD Sample ID: 1103061-05AMSD Units: µg/L Analysis Date: 3/8/2011 11:50 PM

Client ID: Run ID: BTEX3_110308B SeqNo: 2305352 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	22.49	1.0	20	0	112	76-125	22.48	0.0573	20	
Xylenes, Total	67.2	3.0	60	0	112	79-124	66.87	0.491	20	
Surr: 4-Bromofluorobenzene	36.44	1.0	30	0	121	77-129	36.81	0.988	20	
Surr: Trifluorotoluene	36.41	1.0	30	0	121	75-130	36.35	0.159	20	

The following samples were analyzed in this batch:

1102744-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 1 of 12

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R106551 Instrument ID BTEX3 Method: SW8021B

MBLK Sample ID: BBLKW1-030911-R106551 Units: µg/L Analysis Date: 3/9/2011 12:39 PM
 Client ID: Run ID: BTEX3_110309A SeqNo: 2305432 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Surr: 4-Bromofluorobenzene	33.58	1.0	30	0	112	77-129	0			
Surr: Trifluorotoluene	37.28	1.0	30	0	124	75-130	0			

LCS Sample ID: BLCSW1-030911-R106551 Units: µg/L Analysis Date: 3/9/2011 02:24 PM
 Client ID: Run ID: BTEX3_110309A SeqNo: 2305438 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.16	1.0	20	0	101	77-126	0			
Toluene	19.99	1.0	20	0	99.9	80-124	0			
Surr: 4-Bromofluorobenzene	35.41	1.0	30	0	118	77-129	0			
Surr: Trifluorotoluene	36.98	1.0	30	0	123	75-130	0			

MS Sample ID: 1102744-01AMS Units: µg/L Analysis Date: 3/9/2011 01:34 PM
 Client ID: C-Tank Inlet Run ID: BTEX3_110309A SeqNo: 2305435 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	428.5	10	200	254.4	87	77-126	0			
Toluene	309.8	10	200	124.5	92.7	80-124	0			
Surr: 4-Bromofluorobenzene	360.6	10	300	0	120	77-129	0			
Surr: Trifluorotoluene	384.4	10	300	0	128	75-130	0			

MSD Sample ID: 1102744-01AMSD Units: µg/L Analysis Date: 3/9/2011 01:51 PM
 Client ID: C-Tank Inlet Run ID: BTEX3_110309A SeqNo: 2305436 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	429.8	10	200	254.4	87.7	77-126	428.5	0.304	20	
Toluene	309.4	10	200	124.5	92.5	80-124	309.8	0.141	20	
Surr: 4-Bromofluorobenzene	359.2	10	300	0	120	77-129	360.6	0.407	20	
Surr: Trifluorotoluene	371.5	10	300	0	124	75-130	384.4	3.42	20	

The following samples were analyzed in this batch: 1102744-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 50431 Instrument ID ICPMS03 Method: SW6020

MBLK Sample ID: MBLKW3-030111-50431 Units: mg/L Analysis Date: 3/2/2011 01:36 PM

Client ID: Run ID: ICPMS03_110302A SeqNo: 2296228 Prep Date: 3/1/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								

LCS Sample ID: MLCSW3-030111-50431 Units: mg/L Analysis Date: 3/1/2011 08:09 PM

Client ID: Run ID: ICPMS03_110301A SeqNo: 2295251 Prep Date: 3/1/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04547	0.0050	0.05	0	90.9	80-120	0			
Barium	0.04549	0.0050	0.05	0	91	80-120	0			
Cadmium	0.04608	0.0020	0.05	0	92.2	80-120	0			
Calcium	4.649	0.50	5	0	93	80-120	0			
Chromium	0.04609	0.0050	0.05	0	92.2	80-120	0			
Lead	0.04523	0.0050	0.05	0	90.5	80-120	0			
Magnesium	4.498	0.20	5	0	90	80-120	0			
Potassium	4.453	0.20	5	0	89.1	80-120	0			
Selenium	0.04729	0.0050	0.05	0	94.6	80-120	0			
Silver	0.04531	0.0050	0.05	0	90.6	80-120	0			
Sodium	4.422	0.20	5	0	88.4	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 50431 Instrument ID ICPMS03 Method: SW6020

MS		Sample ID: 1102797-09BMS				Units: mg/L		Analysis Date: 3/1/2011 08:30 PM		
Client ID:		Run ID: ICPMS03_110301A				SeqNo: 2295255		Prep Date: 3/1/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04393	0.0050	0.05	0.00005955	87.7	80-120	0			
Barium	0.04269	0.0050	0.05	0.00003693	85.3	80-120	0			
Cadmium	0.04391	0.0020	0.05	0.00001169	87.8	80-120	0			
Calcium	4.453	0.50	5	-0.01256	89.3	80-120	0			
Chromium	0.04423	0.0050	0.05	0.0001684	88.1	80-120	0			
Lead	0.04262	0.0050	0.05	0.0002192	84.8	80-120	0			
Magnesium	4.233	0.20	5	-0.01723	85	80-120	0			
Potassium	4.183	0.20	5	0.003823	83.6	80-120	0			
Selenium	0.04584	0.0050	0.05	-0.0002233	92.1	80-120	0			
Silver	0.04301	0.0050	0.05	-0.0001411	86.3	80-120	0			
Sodium	4.153	0.20	5	-0.01901	83.4	80-120	0			

MSD		Sample ID: 1102797-09BMSD				Units: mg/L		Analysis Date: 3/1/2011 08:35 PM		
Client ID:		Run ID: ICPMS03_110301A				SeqNo: 2295256		Prep Date: 3/1/2011		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04316	0.0050	0.05	0.00005955	86.2	80-120	0.04393	1.77	15	
Barium	0.0422	0.0050	0.05	0.00003693	84.3	80-120	0.04269	1.15	15	
Cadmium	0.04326	0.0020	0.05	0.00001169	86.5	80-120	0.04391	1.49	15	
Calcium	4.4	0.50	5	-0.01256	88.3	80-120	4.453	1.2	15	
Chromium	0.04347	0.0050	0.05	0.0001684	86.6	80-120	0.04423	1.73	15	
Lead	0.04254	0.0050	0.05	0.0002192	84.6	80-120	0.04262	0.188	15	
Magnesium	4.292	0.20	5	-0.01723	86.2	80-120	4.233	1.38	15	
Potassium	4.253	0.20	5	0.003823	85	80-120	4.183	1.66	15	
Selenium	0.04375	0.0050	0.05	-0.0002233	87.9	80-120	0.04584	4.67	15	
Silver	0.04357	0.0050	0.05	-0.0001411	87.4	80-120	0.04301	1.29	15	
Sodium	4.202	0.20	5	-0.01901	84.4	80-120	4.153	1.17	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 50431 Instrument ID ICPMS03 Method: SW6020

DUP Sample ID: 1102797-09BDUP Units: mg/L Analysis Date: 3/1/2011 08:20 PM
 Client ID: Run ID: ICPMS03_110301A SeqNo: 2295253 Prep Date: 3/1/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050	0	0	0	-0 0	0.00005955	0	25	
Barium	ND	0.0050	0	0	0	-0 0	0.00003693	0	25	
Cadmium	ND	0.0020	0	0	0	-0 0	0.00001169	0	25	
Calcium	ND	0.50	0	0	0	-0 0	-0.01256	0	25	
Chromium	ND	0.0050	0	0	0	-0 0	0.0001684	0	25	
Lead	ND	0.0050	0	0	0	-0 0	0.0002192	0	25	
Magnesium	ND	0.20	0	0	0	-0 0	-0.01723	0	25	
Potassium	ND	0.20	0	0	0	-0 0	0.003823	0	25	
Selenium	ND	0.0050	0	0	0	-0 0	-0.0002233	0	25	
Silver	ND	0.0050	0	0	0	-0 0	-0.0001411	0	25	
Sodium	ND	0.20	0	0	0	-0 0	-0.01901	0	25	

The following samples were analyzed in this batch:

1102744-01C

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R106075 Instrument ID ICS3K2 Method: E300

MBLK Sample ID: WBLKW1-022511-R106075 Units: mg/L Analysis Date: 2/25/2011 12:05 PM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295380 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.10								
Surr: Selenate (surr)	4.932	0.10	5	0	98.6	85-115	0			

LCS Sample ID: WLCSW1-022511-R106075 Units: mg/L Analysis Date: 2/25/2011 12:27 PM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295381 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.739	0.10	8	0	96.7	90-110	0			
Surr: Selenate (surr)	5.106	0.10	5	0	102	85-115	0			

LCSD Sample ID: WLCSDW1-022511-R106075 Units: mg/L Analysis Date: 2/25/2011 12:48 PM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295382 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.733	0.10	8	0	96.7	90-110	7.739	0.0776	20	
Surr: Selenate (surr)	5.09	0.10	5	0	102	85-115	5.106	0.314	20	

MS Sample ID: 1102742-01DMS Units: mg/L Analysis Date: 2/25/2011 01:32 PM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295384 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.508	0.10	4	5.481	75.7	80-120	0			S
Surr: Selenate (surr)	5.55	0.10	5	0	111	85-115	0			

MS Sample ID: 1102725-01BMS Units: mg/L Analysis Date: 2/26/2011 02:11 AM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295419 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	2.084	0.10	4	0	52.1	80-120	0			SH
Surr: Selenate (surr)	5.403	0.10	5	0	108	85-115	0			

MSD Sample ID: 1102742-01DMSD Units: mg/L Analysis Date: 2/25/2011 01:54 PM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295385 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.209	0.10	4	5.481	43.2	80-120	8.508	16.5	20	S
Surr: Selenate (surr)	5.459	0.10	5	0	109	85-115	5.55	1.65	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R106075 Instrument ID ICS3K2 Method: E300

MSD Sample ID: 1102725-01BMSD Units: mg/L Analysis Date: 2/26/2011 02:33 AM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295420 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	2.042	0.10	4	0	51	80-120	2.084	2.04	20	SH
Surr: Selenate (surr)	5.193	0.10	5	0	104	85-115	5.403	3.96	20	

MSD Sample ID: 1102703-11AZMS Units: mg/L Analysis Date: 2/26/2011 07:15 AM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295435 Prep Date: DF: 100

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	376.6	10	400	0	94.1	80-120	0			H
Surr: Selenate (surr)	477.4	10	500	0	95.5	85-115	0			

MSD Sample ID: 1102703-11AZMSD Units: mg/L Analysis Date: 2/26/2011 01:00 PM

Client ID: Run ID: ICS3K2_110225A SeqNo: 2295437 Prep Date: DF: 100

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	378.6	10	400	0	94.6	80-120	376.6	0.524	20	H
Surr: Selenate (surr)	509.7	10	500	0	102	85-115	477.4	6.55	20	

The following samples were analyzed in this batch: 1102744-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1102744
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R106143** Instrument ID **Balance1** Method: **M2540C**

MBLK Sample ID: **BLANK-R106143** Units: **mg/L** Analysis Date: **3/1/2011 03:00 PM**

Client ID: Run ID: **BALANCE1_110301H** SeqNo: **2296281** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: **LCS-R106143** Units: **mg/L** Analysis Date: **3/1/2011 03:00 PM**

Client ID: Run ID: **BALANCE1_110301H** SeqNo: **2296282** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1080	10	1000	0	108	85-115	0			

DUP Sample ID: **1102690-01EDUP** Units: **mg/L** Analysis Date: **3/1/2011 03:00 PM**

Client ID: Run ID: **BALANCE1_110301H** SeqNo: **2296271** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	3592	10	0	0	0	0-0	3312	8.11	20	

The following samples were analyzed in this batch: 1102744-01D

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R106418 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: WBLK-030311-R106418 Units: mg/L Analysis Date: 3/3/2011 08:40 AM

Client ID: Run ID: WETCHEM_110303K SeqNo: 2302162 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: WLCS-030311-R106418 Units: mg/L Analysis Date: 3/3/2011 08:40 AM

Client ID: Run ID: WETCHEM_110303K SeqNo: 2302163 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	23.2	1.0	25	0	92.8	80-120	0			

LCSD Sample ID: WLCSD-030311-R106418 Units: mg/L Analysis Date: 3/3/2011 08:40 AM

Client ID: Run ID: WETCHEM_110303K SeqNo: 2302168 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	24	1.0	25	0	96	80-120	23.2	3.39	20	

MS Sample ID: 1102744-01EMS Units: mg/L Analysis Date: 3/3/2011 08:40 AM

Client ID: C-Tank Inlet Run ID: WETCHEM_110303K SeqNo: 2302167 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	39	1.0	25	15.4	94.4	80-120	0			

DUP Sample ID: 1102744-01EDUP Units: mg/L Analysis Date: 3/3/2011 08:40 AM

Client ID: C-Tank Inlet Run ID: WETCHEM_110303K SeqNo: 2302166 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	15.2	1.0	0	0	0	-0 0	15.4	1.31	20	

The following samples were analyzed in this batch:

1102744-01E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R106543 Instrument ID WetChem Method: E1664

MBLK Sample ID: WMBLK-030811-R106543 Units: mg/L Analysis Date: 3/8/2011 10:15 AM

Client ID: Run ID: WETCHEM_1103081 SeqNo: 2305240 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: WLCS-030811-R106543 Units: mg/L Analysis Date: 3/8/2011 10:15 AM

Client ID: Run ID: WETCHEM_1103081 SeqNo: 2305241 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	40.51	2.0	40	0	101	78-114	0			

MS Sample ID: 1102742-01FMS Units: mg/L Analysis Date: 3/8/2011 10:15 AM

Client ID: Run ID: WETCHEM_1103081 SeqNo: 2305276 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	57.85	2.0	40	13.97	110	78-114	0			

The following samples were analyzed in this batch:

1102744-01F

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R106565 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-030911-R106565 Units: mg/L Analysis Date: 3/9/2011 08:00 AM

Client ID: Run ID: UV-2450_110309C SeqNo: 2305853 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLC5W-030911-R106565 Units: mg/L Analysis Date: 3/9/2011 08:00 AM

Client ID: Run ID: UV-2450_110309C SeqNo: 2305854 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.203	0.025	0.2	0	102	80-120	0			

LCSD Sample ID: WLC5DW-030911-R106565 Units: mg/L Analysis Date: 3/9/2011 08:00 AM

Client ID: Run ID: UV-2450_110309C SeqNo: 2305870 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.196	0.025	0.2	0	98	80-120	0.203	3.51	20	

MS Sample ID: 1103097-01DMS Units: mg/L Analysis Date: 3/9/2011 08:00 AM

Client ID: Run ID: UV-2450_110309C SeqNo: 2305871 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.356	0.025	0.2	0.143	106	80-120	0			

The following samples were analyzed in this batch:

1102744-01B

Client: Navajo Refining Company
 Work Order: 1102744
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R106625 Instrument ID WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW-031011-R106625 Units: mg/L Analysis Date: 3/9/2011 03:30 PM

Client ID: Run ID: WETCHEM_110309M SeqNo: 2307480 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLCSW-031011-R106625 Units: mg/L Analysis Date: 3/9/2011 03:30 PM

Client ID: Run ID: WETCHEM_110309M SeqNo: 2307481 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	18.5	1.0	20	0	92.5	80-120	0			

LCSD Sample ID: WLCSDW-031011-R106625 Units: mg/L Analysis Date: 3/9/2011 03:30 PM

Client ID: Run ID: WETCHEM_110309M SeqNo: 2307511 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	18.38	1.0	20	0	91.9	80-120	18.5	0.651	20	

MS Sample ID: 1103117-01FMS Units: mg/L Analysis Date: 3/9/2011 03:30 PM

Client ID: Run ID: WETCHEM_110309M SeqNo: 2307505 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	17.74	1.0	20	0.4	86.7	75-125	0			

DUP Sample ID: 1103117-01FDUP Units: mg/L Analysis Date: 3/9/2011 03:30 PM

Client ID: Run ID: WETCHEM_110309M SeqNo: 2307504 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	0.386	1.0	0	0	0	-0 0	0.4	0	20	J

The following samples were analyzed in this batch:

1102744-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1102744

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



ALS Laboratory Group

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of 1

ALS Laboratory Group

3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

Customer Information		Project Information		Parameter/Method Request for Analysis																
Purchase Order		Project Name	Lovington Lea Refining-Monthly	A	BTEX (8021)															
Work Order		Project Number		B	Total Metals (6020/7000) Select															
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Anions (300) NO3,NO2															
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore	D	Ammonia															
Address	501 East Main	Address	501 East Main	E	TKN															
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	F	Oil & Grease															
Phone	(505) 748-3311	Phone	(505) 748-3311	G	TDS															
Fax	(505) 746-5421	Fax	(505) 746-5421	H	Sulfide															
e-Mail Address		e-Mail Address		I																
J																				

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste Water	2-24-11	9 ⁰⁰	W	Y	9	X	X	X	X	X	X	X	X			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:				
STEVE TERRA				☒ Std-10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour								
Relinquished by:	Date:	Time:	Received by:	Notes:								
Steve Terry	2-24-11	10 ⁰⁰		10 Day TAT.								
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID:	Cooler Temp:	QC Package: (Check One Box Below)						
			Steve Terry 2/25/11 10:15			☒ Level II Std QC ☐ TRRP CheckList						
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	☐ Level III Std QC/Raw Data ☐ TRRP Level IV								
				☐ Level IV SW846/CLP								
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4°C 9-5035				☐ Other / EDD								

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2008 by ALS Laboratory Group.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 25-Feb-11 10:15

Work Order: 1102744

Received by: SAY

Checklist completed by David Hightower
eSignature

25-Feb-11
Date

Reviewed by: Lay Ann F. Thibault
eSignature

28-Feb-11
Date

Matrices: water

Carrier name: FedEx

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

1.7c 002

Cooler(s)/Kit(s):

3297

Water - VOA vials have zero headspace?

Yes ☒

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☒

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:

**ALS Environmental**

10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Date: 2-24-11
Name: STEVE TERRY
Company: NAVAJO-LOVINGTON

CUSTODY SEALTime: 10:40Seal Broken By: STDate: 2/25/11

1102744

This portion can be removed for Recipient's records.

File 2/24/11

FedEx Tracking Number

865910938390Order's
nameKATHY TULETT

Phone

870 396-5821

Company

NAVAJO REFINING CO (LLC)

Address

7406 S MAIN ST

Reg/Office/Store/Room

City LOVINGTON

State

NM

ZIP

88260

Our Internal Billing Reference



18-Apr-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: **1104096**

Dear Darrell,

ALS Environmental received 2 samples on 05-Apr-2011 08:50 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 20.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Makenzie L. Henderson

JayLynn F Thibault
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS 10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

ALSO PROVIDES ANALYSIS FOR PETROLEUM AND INDUSTRIAL WASTEWATER



www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1104096

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1104096-01	City Waste Water	Water		4/4/2011 09:00	4/5/2011 08:50	☐
1104096-02	Trip Blank	Water		4/4/2011	4/5/2011 08:50	☒

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1104096

Case Narrative

Batch R107802, Method 300_W, Sample 1104096-01CMS: 1104096-01C MS/MSD- Spike recoveries out of cvontrol due to matrix inteference

Batch R107802, Method 300_W, Sample CCV: 1

Batch R107802, Method 300_W, Sample 1104096-01CMS: 1104096-01C MS/MSD- Spike recoveries out of cvontrol due to matrix inteference

Batch R107816, Method 300_W, Sample 1104096-01CMS: 1104096-01C MS/MSD- Spike recoveries out of cvontrol due to matrix inteference

Batch R107962, Ammonia as N, Sample 1104096-01D: MS FAILED DUE TO SX.
INTERFERENCE

ALS Environmental

Date: 18-Apr-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Sample ID: City Waste Water
Collection Date: 4/4/2011 09:00 AM

Work Order: 1104096
Lab ID: 1104096-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX						
			SW8021B			Analyst: KKP
Benzene	0.040		0.0010	mg/L	1	4/14/2011 06:55 PM
Toluene	0.014		0.0010	mg/L	1	4/14/2011 06:55 PM
Ethylbenzene	0.021		0.0010	mg/L	1	4/14/2011 06:55 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	4/14/2011 06:55 PM
Xylenes, Total	0.051		0.0030	mg/L	1	4/14/2011 06:55 PM
Surr: 4-Bromofluorobenzene	115		77-129	%REC	1	4/14/2011 06:55 PM
Surr: Trifluorotoluene	97.8		75-130	%REC	1	4/14/2011 06:55 PM
MERCURY						
			SW7470			Prep Date: 4/12/2011 Analyst: JCJ
Mercury	ND		0.000200	mg/L	1	4/13/2011 01:20 PM
METALS						
			SW6020			Prep Date: 4/14/2011 Analyst: IGF
Arsenic	0.125		0.00500	mg/L	1	4/15/2011 06:54 AM
Barium	0.242		0.00500	mg/L	1	4/15/2011 06:54 AM
Cadmium	ND		0.00200	mg/L	1	4/15/2011 06:54 AM
Calcium	321		5.00	mg/L	10	4/15/2011 01:40 PM
Chromium	0.0267		0.00500	mg/L	1	4/15/2011 06:54 AM
Lead	ND		0.00500	mg/L	1	4/15/2011 06:54 AM
Magnesium	47.0		0.200	mg/L	1	4/15/2011 06:54 AM
Potassium	15.7		0.200	mg/L	1	4/15/2011 06:54 AM
Selenium	0.0122		0.00500	mg/L	1	4/15/2011 06:54 AM
Silver	ND		0.00500	mg/L	1	4/15/2011 06:54 AM
Sodium	768		2.00	mg/L	10	4/15/2011 01:40 PM
ANIONS						
			E300			Analyst: TDW
Nitrate/Nitrite (as N)	4.19		0.100	mg/L	1	4/5/2011 01:02 PM
Surr: Selenate (surr)	102		85-115	%REC	1	4/5/2011 01:02 PM
AMMONIA AS N						
			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	4.80		0.125	mg/L	5	4/7/2011 01:00 PM
OIL AND GREASE						
			E1664			Analyst: JKP
Oil and Grease	8.59		2.00	mg/L	1	4/15/2011 10:35 AM
SULFIDE						
			SM4500 S2-F			Analyst: JKP
Sulfide	ND		1.00	mg/L	1	4/10/2011 12:15 PM
TOTAL DISSOLVED SOLIDS						
			M2540C			Analyst: JKP
Total Dissolved Solids (Residue, Filterable)	3,600		10.0	mg/L	1	4/8/2011 04:00 PM
TOTAL KJELDAHL L NITROGEN						
			M4500 NH3 D			Analyst: JBA
Nitrogen, Total Kjeldahl	15.5		1.00	mg/L	1	4/12/2011 09:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 18-Apr-11

Client: Navajo Refining Company
Work Order: 1104096
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R108312 Instrument ID BTEX1 Method: SW8021B

MBLK	Sample ID: BBLKW1-041411-R108312				Units: µg/L		Analysis Date: 4/14/2011 02:13 PM			
Client ID:	Run ID: BTEX1_110414A				SeqNo: 2347256		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether	ND	5.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	30.34	1.0	30	0	101	77-129	0			
Surr: Trifluorotoluene	27.19	1.0	30	0	90.6	75-130	0			

LCS	Sample ID: BLCSW1-041411-R108312					Units: µg/L		Analysis Date: 4/14/2011 01:36 PM			
Client ID:	Run ID: BTEX1_110414A					SeqNo: 2347255		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	18.68	1.0	20	0	93.4	77-126	0				
Toluene	19.02	1.0	20	0	95.1	80-124	0				
Ethylbenzene	19.28	1.0	20	0	96.4	76-125	0				
Methyl tert-butyl ether	105.8	5.0	100	0	106	75-128	0				
Xylenes, Total	56.5	3.0	60	0	94.2	79-124	0				
Surr: 4-Bromofluorobenzene	31.14	1.0	30	0	104	77-129	0				
Surr: Trifluorotoluene	28.42	1.0	30	0	94.7	75-130	0				

MS	Sample ID: 1104340-08AMS				Units: µg/L		Analysis Date: 4/14/2011 05:34 PM			
Client ID:	Run ID: BTEX1_110414A				SeqNo: 2347591		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.08	1.0	20	0	95.4	77-126	0			
Toluene	19.02	1.0	20	0	95.1	80-124	0			
Ethylbenzene	19.22	1.0	20	0	96.1	76-125	0			
Methyl tert-butyl ether	112.9	5.0	100	6.486	106	75-128	0			
Xylenes, Total	54.85	3.0	60	0	91.4	79-124	0			
Surr: 4-Bromofluorobenzene	31.59	1.0	30	0	105	77-129	0			
Surr: Trifluorotoluene	26.31	1.0	30	0	87.7	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1104096
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R108312 Instrument ID BTEX1 Method: SW8021B

MSD Sample ID: 1104340-08AMSD Units: µg/L Analysis Date: 4/14/2011 05:53 PM

Client ID: Run ID: BTEX1_110414A SeqNo: 2347592 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.4	1.0	20	0	97	77-126	19.08	1.63	20	
Toluene	19.4	1.0	20	0	97	80-124	19.02	1.98	20	
Ethylbenzene	19.65	1.0	20	0	98.3	76-125	19.22	2.21	20	
Methyl tert-butyl ether	116.3	5.0	100	6.486	110	75-128	112.9	2.97	20	
Xylenes, Total	56.32	3.0	60	0	93.9	79-124	54.85	2.65	20	
Surr: 4-Bromofluorobenzene	31.75	1.0	30	0	106	77-129	31.59	0.507	20	
Surr: Trifluorotoluene	26.25	1.0	30	0	87.5	75-130	26.31	0.237	20	

The following samples were analyzed in this batch:

1104096-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1104096
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 51486 Instrument ID Mercury Method: SW7470

MBLK Sample ID: GBLKW2-041211-51486 Units: mg/L Analysis Date: 4/13/2011 12:49 PM

Client ID: Run ID: MERCURY_110413A SeqNo: 2344981 Prep Date: 4/12/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020								

LCS Sample ID: GLCSW2-041211-51486 Units: mg/L Analysis Date: 4/13/2011 12:51 PM

Client ID: Run ID: MERCURY_110413A SeqNo: 2344982 Prep Date: 4/12/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00447	0.00020	0.005	0	89.4	85-115	0			

MS Sample ID: 1104264-03DMS Units: mg/L Analysis Date: 4/13/2011 01:02 PM

Client ID: Run ID: MERCURY_110413A SeqNo: 2344991 Prep Date: 4/12/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00451	0.00020	0.005	0.000017	89.9	85-115	0			

MSD Sample ID: 1104264-03DMSD Units: mg/L Analysis Date: 4/13/2011 01:04 PM

Client ID: Run ID: MERCURY_110413A SeqNo: 2344993 Prep Date: 4/12/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00463	0.00020	0.005	0.000017	92.3	85-115	0.00451	2.63	20	

DUP Sample ID: 1104264-03DDUP Units: mg/L Analysis Date: 4/13/2011 01:00 PM

Client ID: Run ID: MERCURY_110413A SeqNo: 2344985 Prep Date: 4/12/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	0.000017	0	20	

The following samples were analyzed in this batch: 1104096-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1104096
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 51576 Instrument ID ICPMS04 Method: SW6020

MBLK Sample ID: MBLKW3-041411-51576 Units: mg/L Analysis Date: 4/15/2011 05:29 AM

Client ID: Run ID: ICPMS04_110414A SeqNo: 2348004 Prep Date: 4/14/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0020								
Calcium	0.06973	0.50								J
Chromium	ND	0.0050								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								

LCS Sample ID: MLCW3-041411-51576 Units: mg/L Analysis Date: 4/15/2011 05:35 AM

Client ID: Run ID: ICPMS04_110414A SeqNo: 2348005 Prep Date: 4/14/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04569	0.0050	0.05	0	91.4	80-120	0			
Barium	0.04538	0.0050	0.05	0	90.8	80-120	0			
Cadmium	0.04432	0.0020	0.05	0	88.6	80-120	0			
Calcium	4.707	0.50	5	0	94.1	80-120	0			
Chromium	0.0453	0.0050	0.05	0	90.6	80-120	0			
Lead	0.04635	0.0050	0.05	0	92.7	80-120	0			
Magnesium	4.603	0.20	5	0	92.1	80-120	0			
Potassium	4.56	0.20	5	0	91.2	80-120	0			
Selenium	0.04455	0.0050	0.05	0	89.1	80-120	0			
Silver	0.04553	0.0050	0.05	0	91.1	80-120	0			
Sodium	4.576	0.20	5	0	91.5	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1104096
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 51576 Instrument ID ICPMS04 Method: SW6020

MS Sample ID: 1104320-13CMS Units: mg/L Analysis Date: 4/15/2011 06:22 AM

Client ID: Run ID: ICPMS04_110414A SeqNo: 2348012 Prep Date: 4/14/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04726	0.0050	0.05	0.000831	92.9	80-120	0			
Barium	0.07058	0.0050	0.05	0.02543	90.3	80-120	0			
Cadmium	0.04652	0.0020	0.05	0.000029	93	80-120	0			
Calcium	258.4	0.50	5	259.6	-22.2	80-120	0			SEO
Chromium	0.047	0.0050	0.05	0.001633	90.7	80-120	0			
Lead	0.04758	0.0050	0.05	0.00075	93.7	80-120	0			
Magnesium	90.02	0.20	5	84.82	104	80-120	0			O
Potassium	12.14	0.20	5	7.368	95.4	80-120	0			
Selenium	0.04568	0.0050	0.05	0.000168	91	80-120	0			
Silver	0.04443	0.0050	0.05	0.000005	88.8	80-120	0			
Sodium	79.75	0.20	5	74.73	100	80-120	0			O

MSD Sample ID: 1104320-13CMSD Units: mg/L Analysis Date: 4/15/2011 06:28 AM

Client ID: Run ID: ICPMS04_110414A SeqNo: 2348013 Prep Date: 4/14/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04928	0.0050	0.05	0.000831	96.9	80-120	0.04726	4.18	15	
Barium	0.07341	0.0050	0.05	0.02543	96	80-120	0.07058	3.94	15	
Cadmium	0.04648	0.0020	0.05	0.000029	92.9	80-120	0.04652	0.0925	15	
Calcium	267.7	0.50	5	259.6	162	80-120	258.4	3.5	15	SEO
Chromium	0.04976	0.0050	0.05	0.001633	96.3	80-120	0.047	5.71	15	
Lead	0.04848	0.0050	0.05	0.00075	95.5	80-120	0.04758	1.87	15	
Magnesium	89.59	0.20	5	84.82	95.6	80-120	90.02	0.479	15	O
Potassium	12.17	0.20	5	7.368	96.1	80-120	12.14	0.271	15	
Selenium	0.04833	0.0050	0.05	0.000168	96.3	80-120	0.04568	5.63	15	
Silver	0.04541	0.0050	0.05	0.000005	90.8	80-120	0.04443	2.19	15	
Sodium	79.27	0.20	5	74.73	90.9	80-120	79.75	0.599	15	O

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1104096
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 51576 Instrument ID ICPMS04 Method: SW6020

DUP Sample ID: 1104320-13CDUP Units: mg/L Analysis Date: 4/15/2011 06:02 AM

Client ID: Run ID: ICPMS04_110414A SeqNo: 2348009 Prep Date: 4/14/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050	0	0	0	0-0	0.000831	0	25	
Barium	0.0249	0.0050	0	0	0	0-0	0.02543	2.1	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.000029	0	25	
Calcium	261.5	0.50	0	0	0	0-0	259.6	0.73	25	E
Chromium	0.002219	0.0050	0	0	0	0-0	0.001633	0	25	J
Lead	ND	0.0050	0	0	0	0-0	0.00075	0	25	
Magnesium	85.58	0.20	0	0	0	0-0	84.82	0.891	25	
Potassium	7.425	0.20	0	0	0	0-0	7.368	0.761	25	
Selenium	ND	0.0050	0	0	0	0-0	0.000168	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.000005	0	25	
Sodium	75.02	0.20	0	0	0	0-0	74.73	0.384	25	

The following samples were analyzed in this batch:

1104096-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1104096
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R107816 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKS1-040411-R107816 Units: mg/L Analysis Date: 4/5/2011 11:37 AM

Client ID: Run ID: ICS3000_110405A SeqNo: 2335061 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.10								
Surr: Selenate (surr)	5.288	0.10	5	0	106	85-115	0			

LCS Sample ID: WLC SW1-040511-R107816 Units: mg/L Analysis Date: 4/5/2011 11:58 AM

Client ID: Run ID: ICS3000_110405A SeqNo: 2335062 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.646	0.10	8	0	95.6	90-110	0			
Surr: Selenate (surr)	5.319	0.10	5	0	106	85-115	0			

LCSD Sample ID: WLCSDW1-040511-R107816 Units: mg/L Analysis Date: 4/5/2011 12:19 PM

Client ID: Run ID: ICS3000_110405A SeqNo: 2335063 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.675	0.10	8	0	95.9	90-110	7.646	0.379	20	
Surr: Selenate (surr)	5.349	0.10	5	0	107	85-115	5.319	0.562	20	

MS Sample ID: 1104096-01CMS Units: mg/L Analysis Date: 4/5/2011 01:23 PM

Client ID: City Waste Water Run ID: ICS3000_110405A SeqNo: 2335066 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.463	0.10	4	4.186	107	80-120	0			
Surr: Selenate (surr)	5.106	0.10	5	0	102	85-115	0			

MSD Sample ID: 1104096-01CMSD Units: mg/L Analysis Date: 4/5/2011 01:44 PM

Client ID: City Waste Water Run ID: ICS3000_110405A SeqNo: 2335067 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.569	0.10	4	4.186	84.6	80-120	8.463	11.2	20	
Surr: Selenate (surr)	5.092	0.10	5	0	102	85-115	5.106	0.275	20	

The following samples were analyzed in this batch: 1104096-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1104096
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R107962 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-040711-R107962 Units: mg/L Analysis Date: 4/7/2011 01:00 PM

Client ID: Run ID: UV-2450_110407A SeqNo: 2338458 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-040711-R107962 Units: mg/L Analysis Date: 4/7/2011 01:00 PM

Client ID: Run ID: UV-2450_110407A SeqNo: 2338459 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.187	0.025	0.2	0	93.5	80-120	0			

LCSD Sample ID: WLCSW-040711-R107962 Units: mg/L Analysis Date: 4/7/2011 01:00 PM

Client ID: Run ID: UV-2450_110407A SeqNo: 2338472 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.195	0.025	0.2	0	97.5	80-120	0.187	4.19	20	

MS Sample ID: 1104141-01AMS Units: mg/L Analysis Date: 4/7/2011 01:00 PM

Client ID: Run ID: UV-2450_110407A SeqNo: 2338485 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.236	0.025	0.2	0.158	39	80-120	0			S

The following samples were analyzed in this batch:

1104096-01D

Client: Navajo Refining Company
 Work Order: 1104096
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R108034 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R108034 Units: mg/L Analysis Date: 4/8/2011 04:00 PM
 Client ID: Run ID: BALANCE1_110408G SeqNo: 2340440 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: LCS-R108034 Units: mg/L Analysis Date: 4/8/2011 04:00 PM
 Client ID: Run ID: BALANCE1_110408G SeqNo: 2340441 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1040	10	1000	0	104	85-115	0			

DUP Sample ID: 1104180-01CDUP Units: mg/L Analysis Date: 4/8/2011 04:00 PM
 Client ID: Run ID: BALANCE1_110408G SeqNo: 2340433 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	17510	10	0	0	0	0-0	17040	2.73	20	

The following samples were analyzed in this batch:

1104096-01C

Client: Navajo Refining Company
 Work Order: 1104096
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R108206 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: WBLK-041011-R108206 Units: mg/L Analysis Date: 4/10/2011 12:15 PM

Client ID: Run ID: WETCHEM_110410E SeqNo: 2344640 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: LCS-041011-R108206 Units: mg/L Analysis Date: 4/10/2011 12:15 PM

Client ID: Run ID: WETCHEM_110410E SeqNo: 2344641 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.4	1.0	25	0	89.6	80-120	0			

LCSD Sample ID: LCSD-041011-R108206 Units: mg/L Analysis Date: 4/10/2011 12:15 PM

Client ID: Run ID: WETCHEM_110410E SeqNo: 2344644 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.4	1.0	25	0	89.6	80-120	22.4	0	20	

DUP Sample ID: 1104096-01FDUP Units: mg/L Analysis Date: 4/10/2011 12:15 PM

Client ID: City Waste Water Run ID: WETCHEM_110410E SeqNo: 2344645 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0	0	0	0	0-0	0	0	20	

The following samples were analyzed in this batch:

1104096-01F

Client: Navajo Refining Company
 Work Order: 1104096
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R108238 Instrument ID WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW-041211-R108238 Units: mg/L Analysis Date: 4/12/2011 09:00 AM

Client ID: Run ID: WETCHEM_110412J SeqNo: 2345303 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLCSW-041211-R108238 Units: mg/L Analysis Date: 4/12/2011 09:00 AM

Client ID: Run ID: WETCHEM_110412J SeqNo: 2345304 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	23.6	1.0	20	0	118	80-120	0			

LCSD Sample ID: WLCSDW-041211-R108238 Units: mg/L Analysis Date: 4/12/2011 09:00 AM

Client ID: Run ID: WETCHEM_110412J SeqNo: 2345305 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	21.6	1.0	20	0	108	80-120	23.6	8.85	20	

MS Sample ID: 1104150-02FMS Units: mg/L Analysis Date: 4/12/2011 09:00 AM

Client ID: Run ID: WETCHEM_110412J SeqNo: 2345308 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	21.2	1.0	20	0.526	103	75-125	0			

MSD Sample ID: 1104150-02FMSD Units: mg/L Analysis Date: 4/12/2011 09:00 AM

Client ID: Run ID: WETCHEM_110412J SeqNo: 2345309 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	19.96	1.0	20	0.526	97.2	75-125	21.2	6.03	30	

The following samples were analyzed in this batch: 1104096-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1104096
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R108379** Instrument ID **WetChem** Method: **E1664**

MBLK Sample ID: **MB-R108379-R108379** Units: **mg/L** Analysis Date: **4/15/2011 10:35 AM**

Client ID: Run ID: **WETCHEM_110415J** SeqNo: **2348967** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: **LCS-R108379-R108379** Units: **mg/L** Analysis Date: **4/15/2011 10:35 AM**

Client ID: Run ID: **WETCHEM_110415J** SeqNo: **2348968** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	38.98	2.0	40	0	97.4	78-114	0			

MS Sample ID: **1104094-01EMS** Units: **mg/L** Analysis Date: **4/15/2011 10:35 AM**

Client ID: Run ID: **WETCHEM_110415J** SeqNo: **2349032** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	55.64	2.0	40	12.69	107	78-114	0			

The following samples were analyzed in this batch:

1104096-01E

ALS Environmental

Date: 18-Apr-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1104096

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



ALS Environmental
10450 Standcliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of 1

COC ID: 27627

1104096

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly



ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Lovington Lea Refining-Monthly
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore
Address	501 East Main	Address	501 East Main
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(505) 748-3311	Phone	(505) 748-3311
Fax	(505) 748-5421	Fax	(505) 748-5421
e-Mail Address		e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste Water	4-4-11	9:00	W	Y	9											
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign STEVE TERRY		Shipment Method		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ Other				Results Due Date:	
Relinquished by: Steve Terry		Date: 4-4-11	Time: 9:30	Received by:		Notes: 10 Day TAT.			
Relinquished by:		Date:	Time:	Received by (Laboratory): 4/5/11		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory): 5850				☒ Level II Std QC ☐ TRRP CheckList	
								☐ Level III Std QC/Raw Data ☐ TRRP Level IV	
								☐ Level IV SW846/CLP	
								☐ Other / EDD	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035									

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2010 by ALS Environmental.

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 05-Apr-11 08:50

Work Order: 1104096

Received by: PMG

Checklist completed by Parish M. Giza 05-Apr-11
eSignature Date

Reviewed by: Jay Lynn F Thibault 06-Apr-11
eSignature Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s): 2.9C 002

Cooler(s)/Kit(s): 3419

Water - VOA vials have zero headspace? Yes ☐ No ☒ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☒ N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 4-11-11 Time: 9:30
Name: ALAN TERRY
Company: HAARUP-LOUISIANA

Seal Broken By: 6-

Date: 4-11-11

This portion can be removed for recipient's records.

Date: 4/11/11 FedEx Tracking Number: 865910938367

Sender's Name: ALAN TERRY Phone: 575 395-0021

Company: HAARUP-LOUISIANA CO (L.P.)

Address: 7400 S. MAIN ST

Dept./Floor/Suite/Room

City: LOUISIANA State: LA ZIP: 70004

Our Internal Billing Reference



11-May-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1104871

Dear Darrell,

ALS Environmental received 2 samples on 28-Apr-2011 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 21.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

JayLynn F Thibault

Electronically approved by: Makenzie L. Henderson

JayLynn F Thibault
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS 10450 Stencil Rd, Suite 210 Houston, Texas 77036-1459 | PHONE (281) 630-6656 | FAX (281) 630-6047

EMAILS: info@alsglobal.com | sales@alsglobal.com | support@alsglobal.com | quality@alsglobal.com | hr@alsglobal.com



www.alsglobal.com

RIGHT SOLUTIONS. RIGHT PARTNER.

ALS Environmental

Date: 11-May-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1104871

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1104871-01	City Waste Water	Water		4/27/2011 09:00	4/28/2011 09:00	☐
1104871-02	Trip Blank	Water		4/27/2011	4/28/2011 09:00	☐

ALS Environmental*Date: 11-May-11*

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1104871

Case Narrative

Batch 52225, Metals, Sample 1105082-13 : MS/MSD is for an unrelated sample.

Batch R109111, Anions, Sample 1104520-50 : MS/MSD results, which are flagged with an H qualifier, are for an unrelated sample.

Batch R109111, Anions, Sample 1104520-46 : MSD result, which is flagged with an H qualifier, is for an unrelated sample.

Batch R109111, Anions, Sample 1104520-46 : MSD RPD is for an unrelated sample.

ALS Environmental

Date: 11-May-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Work Order: 1104871

Sample ID: City Waste Water

Lab ID: 1104871-01

Collection Date: 4/27/2011 09:00 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX						
			SW8021B			Analyst: KKP
Benzene	0.015		0.0010	mg/L	1	4/29/2011 08:33 PM
Toluene	0.0090		0.0010	mg/L	1	4/29/2011 08:33 PM
Ethylbenzene	0.034		0.0010	mg/L	1	4/29/2011 08:33 PM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	4/29/2011 08:33 PM
Xylenes, Total	0.055		0.0030	mg/L	1	4/29/2011 08:33 PM
Surr: 4-Bromofluorobenzene	118		77-129	%REC	1	4/29/2011 08:33 PM
Surr: Trifluorotoluene	93.2		75-130	%REC	1	4/29/2011 08:33 PM
METALS						
			SW6020		Prep Date: 5/6/2011	Analyst: ALR
Aluminum	0.0148		0.0100	mg/L	1	5/10/2011 02:59 AM
Arsenic	0.118		0.00500	mg/L	1	5/10/2011 02:59 AM
Barium	0.287		0.00500	mg/L	1	5/10/2011 02:59 AM
Boron	0.658		0.0500	mg/L	1	5/10/2011 03:55 PM
Cadmium	ND		0.00200	mg/L	1	5/10/2011 02:59 AM
Chromium	0.0294		0.00500	mg/L	1	5/10/2011 02:59 AM
Copper	ND		0.00500	mg/L	1	5/10/2011 02:59 AM
Lead	ND		0.00500	mg/L	1	5/10/2011 02:59 AM
Manganese	0.0760		0.00500	mg/L	1	5/10/2011 02:59 AM
Molybdenum	0.0119		0.00500	mg/L	1	5/10/2011 03:55 PM
Nickel	ND		0.00500	mg/L	1	5/10/2011 02:59 AM
Selenium	0.0117		0.00500	mg/L	1	5/10/2011 02:59 AM
Silver	ND		0.00500	mg/L	1	5/10/2011 02:59 AM
Zinc	0.164		0.00500	mg/L	1	5/10/2011 02:59 AM
ANIONS						
			E300			Analyst: TDW
Nitrate/Nitrite (as N)	1.14		0.100	mg/L	1	4/28/2011 10:47 PM
Surr: Selenate (surr)	112		85-115	%REC	1	4/28/2011 10:47 PM
AMMONIA AS N						
			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	1.62		0.0500	mg/L	2	5/5/2011 11:00 AM
OIL AND GREASE						
			E1664			Analyst: JKP
Oil and Grease	4.81		2.00	mg/L	1	4/29/2011 09:45 AM
SULFIDE						
			SM4500 S2-F			Analyst: JKP
Sulfide	ND		1.00	mg/L	1	5/3/2011 06:05 PM
TOTAL DISSOLVED SOLIDS						
			M2540C			Analyst: JKP
Total Dissolved Solids (Residue, Filterable)	2,830		10.0	mg/L	1	5/3/2011 05:00 PM
TOTAL KJELDAHL L NITROGEN						
			M4500 NH3 D			Analyst: JBA

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 11-May-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Work Order: 1104871

Sample ID: City Waste Water

Lab ID: 1104871-01

Collection Date: 4/27/2011 09:00 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Nitrogen, Total Kjeldahl	4.78		1.00	mg/L	1	5/9/2011 08:20 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 11-May-11

Client: Navajo Refining Company
Work Order: 1104871
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R109212** Instrument ID **BTEX1** Method: **SW8021B**

MBLK	Sample ID: BBLKW1-042911-R109212				Units: µg/L		Analysis Date: 4/29/2011 02:52 PM			
Client ID:	Run ID: BTEX1_110429A				SeqNo: 2370697		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether	ND	5.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	31.86	1.0	30	0	106	77-129	0			
Surr: Trifluorotoluene	27.21	1.0	30	0	90.7	75-130	0			

LCS	Sample ID: BLCSW1-042911-R109212				Units: µg/L		Analysis Date: 4/29/2011 02:15 PM			
Client ID:	Run ID: BTEX1_110429A				SeqNo: 2370695		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.05	1.0	20	0	95.2	77-126	0			
Toluene	19.36	1.0	20	0	96.8	80-124	0			
Ethylbenzene	19.57	1.0	20	0	97.9	76-125	0			
Methyl tert-butyl ether	111.4	5.0	100	0	111	75-128	0			
Xylenes, Total	57.64	3.0	60	0	96.1	79-124	0			
Surr: 4-Bromofluorobenzene	34.01	1.0	30	0	113	77-129	0			
Surr: Trifluorotoluene	28.23	1.0	30	0	94.1	75-130	0			

MS	Sample ID: 1104729-11AMS				Units: µg/L		Analysis Date: 4/29/2011 05:03 PM			
Client ID:	Run ID: BTEX1_110429A				SeqNo: 2370703		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.81	1.0	20	0	94.1	77-126	0			
Toluene	23.36	1.0	20	4.231	95.7	80-124	0			
Ethylbenzene	19.29	1.0	20	0	96.4	76-125	0			
Methyl tert-butyl ether	109.6	5.0	100	0	110	75-128	0			
Xylenes, Total	56.9	3.0	60	0	94.8	79-124	0			
Surr: 4-Bromofluorobenzene	33.83	1.0	30	0	113	77-129	0			
Surr: Trifluorotoluene	27.62	1.0	30	0	92.1	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1104871
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R109212** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **1104729-11AMSD** Units: **µg/L** Analysis Date: **4/29/2011 05:21 PM**

Client ID: Run ID: **BTEX1_110429A** SeqNo: **2370704** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.55	1.0	20	0	92.8	77-126	18.81	1.39	20	
Toluene	23.17	1.0	20	4.231	94.7	80-124	23.36	0.82	20	
Ethylbenzene	19.16	1.0	20	0	95.8	76-125	19.29	0.662	20	
Methyl tert-butyl ether	107.8	5.0	100	0	108	75-128	109.6	1.67	20	
Xylenes, Total	56.55	3.0	60	0	94.2	79-124	56.9	0.628	20	
Surr: 4-Bromofluorobenzene	33.41	1.0	30	0	111	77-129	33.83	1.22	20	
Surr: Trifluorotoluene	27.33	1.0	30	0	91.1	75-130	27.62	1.05	20	

The following samples were analyzed in this batch:

1104871-01A

Client: Navajo Refining Company
Work Order: 1104871
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 52225 Instrument ID ICPMS03 Method: SW6020

MBLK Sample ID: MBLKW4-050611-52225 Units: mg/L Analysis Date: 5/10/2011 02:31 PM
 Client ID: Run ID: ICPMS03_110510A SeqNo: 2381593 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	0.010								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Boron	0.006673	0.050								J
Cadmium	ND	0.0020								
Chromium	ND	0.0050								
Copper	ND	0.0050								
Lead	ND	0.0050								
Manganese	ND	0.0050								
Molybdenum	0.002123	0.0050								J
Nickel	ND	0.0050								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Zinc	ND	0.0050								

LCS Sample ID: MLCSW4-050611-52225 Units: mg/L Analysis Date: 5/9/2011 10:24 PM
 Client ID: Run ID: ICPMS03_110509A SeqNo: 2380949 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09654	0.010	0.1	0	96.5	80-120	0			
Arsenic	0.05246	0.0050	0.05	0	105	80-120	0			
Barium	0.05025	0.0050	0.05	0	100	80-120	0			
Cadmium	0.0498	0.0020	0.05	0	99.6	80-120	0			
Chromium	0.0496	0.0050	0.05	0	99.2	80-120	0			
Copper	0.0512	0.0050	0.05	0	102	80-120	0			
Lead	0.04824	0.0050	0.05	0	96.5	80-120	0			
Manganese	0.04893	0.0050	0.05	0	97.9	80-120	0			
Molybdenum	0.04475	0.0050	0.05	0	89.5	80-120	0			
Nickel	0.05065	0.0050	0.05	0	101	80-120	0			
Selenium	0.04725	0.0050	0.05	0	94.5	80-120	0			
Silver	0.04979	0.0050	0.05	0	99.6	80-120	0			
Zinc	0.05626	0.0050	0.05	0	113	80-120	0			

LCS Sample ID: MLCSW4-050611-52225 Units: mg/L Analysis Date: 5/10/2011 02:36 PM
 Client ID: Run ID: ICPMS03_110510A SeqNo: 2381594 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4737	0.050	0.5	0	94.7	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1104871
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 52225 Instrument ID ICPMS03 Method: SW6020

MS Sample ID: 1105082-13BMS Units: mg/L Analysis Date: 5/9/2011 10:46 PM

Client ID: Run ID: ICPMS03_110509A SeqNo: 2380953 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09547	0.010	0.1	0.002738	92.7	80-120	0			
Arsenic	0.05868	0.0050	0.05	0.007942	101	80-120	0			
Barium	0.4517	0.0050	0.05	0.3834	137	80-120	0			SO
Cadmium	0.04754	0.0020	0.05	0.00006373	95	80-120	0			
Chromium	0.04748	0.0050	0.05	0.0004722	94	80-120	0			
Copper	0.04584	0.0050	0.05	-0.0001048	91.9	80-120	0			
Lead	0.04712	0.0050	0.05	0.0002535	93.7	80-120	0			
Manganese	0.9867	0.0050	0.05	0.8861	201	80-120	0			SO
Molybdenum	0.04655	0.0050	0.05	0.005879	81.3	80-120	0			
Nickel	0.04656	0.0050	0.05	0.0002394	92.6	80-120	0			
Selenium	0.04703	0.0050	0.05	0.002809	88.4	80-120	0			
Silver	0.04532	0.0050	0.05	-0.0001815	91	80-120	0			
Zinc	0.04927	0.0050	0.05	0.001792	95	80-120	0			

MS Sample ID: 1105082-13BMS Units: mg/L Analysis Date: 5/10/2011 03:10 PM

Client ID: Run ID: ICPMS03_110510A SeqNo: 2381600 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.02	0.050	0.5	0.4828	107	80-120	0			

MSD Sample ID: 1105082-13BMSD Units: mg/L Analysis Date: 5/9/2011 10:51 PM

Client ID: Run ID: ICPMS03_110509A SeqNo: 2380954 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1007	0.010	0.1	0.002738	98	80-120	0.09547	5.33	15	
Arsenic	0.06402	0.0050	0.05	0.007942	112	80-120	0.05868	8.7	15	
Barium	0.466	0.0050	0.05	0.3834	165	80-120	0.4517	3.12	15	SO
Cadmium	0.04982	0.0020	0.05	0.00006373	99.5	80-120	0.04754	4.68	15	
Chromium	0.05007	0.0050	0.05	0.0004722	99.2	80-120	0.04748	5.31	15	
Copper	0.04904	0.0050	0.05	-0.0001048	98.3	80-120	0.04584	6.75	15	
Lead	0.04928	0.0050	0.05	0.0002535	98.1	80-120	0.04712	4.48	15	
Manganese	1.05	0.0050	0.05	0.8861	328	80-120	0.9867	6.22	15	SO
Molybdenum	0.05186	0.0050	0.05	0.005879	92	80-120	0.04655	10.8	15	
Nickel	0.04878	0.0050	0.05	0.0002394	97.1	80-120	0.04656	4.66	15	
Selenium	0.05014	0.0050	0.05	0.002809	94.7	80-120	0.04703	6.4	15	
Silver	0.04746	0.0050	0.05	-0.0001815	95.3	80-120	0.04532	4.61	15	
Zinc	0.05381	0.0050	0.05	0.001792	104	80-120	0.04927	8.81	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1104871
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 52225 Instrument ID ICPMS03 Method: SW6020

MSD Sample ID: 1105082-13BMSD Units: mg/L Analysis Date: 5/10/2011 03:15 PM

Client ID: Run ID: ICPMS03_110510A SeqNo: 2381601 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.093	0.050	0.5	0.4828	122	80-120	1.02	6.91	15	S

DUP Sample ID: 1105082-13BDUP Units: mg/L Analysis Date: 5/9/2011 10:35 PM

Client ID: Run ID: ICPMS03_110509A SeqNo: 2380951 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	0.010	0	0	0	0-0	0.002738	0	25	
Arsenic	0.008387	0.0050	0	0	0	0-0	0.007942	5.45	25	
Barium	0.4186	0.0050	0	0	0	0-0	0.3834	8.78	25	
Cadmium	ND	0.0020	0	0	0	0-0	0.00006373	0	25	
Chromium	0.002867	0.0050	0	0	0	0-0	0.0004722	0	25	J
Copper	ND	0.0050	0	0	0	0-0	-0.0001048	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.0002535	0	25	
Manganese	0.9894	0.0050	0	0	0	0-0	0.8861	11	25	
Molybdenum	0.004881	0.0050	0	0	0	0-0	0.005879	0	25	J
Nickel	ND	0.0050	0	0	0	0-0	0.0002394	0	25	
Selenium	0.002732	0.0050	0	0	0	0-0	0.002809	0	25	J
Silver	ND	0.0050	0	0	0	0-0	-0.0001815	0	25	
Zinc	0.002579	0.0050	0	0	0	0-0	0.001792	0	25	J

DUP Sample ID: 1105082-13BDUP Units: mg/L Analysis Date: 5/10/2011 02:59 PM

Client ID: Run ID: ICPMS03_110510A SeqNo: 2381598 Prep Date: 5/6/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5337	0.050	0	0	0	0-0	0.4828	10	25	

The following samples were analyzed in this batch:

1104871-01B

Client: Navajo Refining Company
Work Order: 1104871
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R109111 Instrument ID: ICS3000 Method: E300

MBLK Sample ID: WBLKW1-042811-R109111 Units: mg/L Analysis Date: 4/28/2011 07:14 PM

Client ID: Run ID: ICS3000_110428A SeqNo: 2368388 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.10								
Surr: Selenate (surr)	5.734	0.10	5	0	115	85-115	0			

LCS Sample ID: WLCSW1-042811-R109111 Units: mg/L Analysis Date: 4/28/2011 07:35 PM

Client ID: Run ID: ICS3000_110428A SeqNo: 2368389 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.938	0.10	8	0	99.2	90-110	0			
Surr: Selenate (surr)	5.62	0.10	5	0	112	85-115	0			

LCSD Sample ID: WLCSDW1-042811-R109111 Units: mg/L Analysis Date: 4/28/2011 07:56 PM

Client ID: Run ID: ICS3000_110428A SeqNo: 2368390 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.913	0.10	8	0	98.9	90-110	7.938	0.315	20	
Surr: Selenate (surr)	5.251	0.10	5	0	105	85-115	5.62	6.79	20	

MS Sample ID: 1104520-50EMS Units: mg/L Analysis Date: 4/29/2011 10:30 AM

Client ID: Run ID: ICS3000_110428A SeqNo: 2368647 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	3.872	0.10	4	0	96.8	80-120	0			H
Surr: Selenate (surr)	5.619	0.10	5	0	112	85-115	0			

MS Sample ID: 1104520-46MS Units: mg/L Analysis Date: 4/29/2011 02:33 PM

Client ID: Run ID: ICS3000_110428A SeqNo: 2368727 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	4.05	0.10	4	0	101	80-120	0			
Surr: Selenate (surr)	5.673	0.10	5	0	113	85-115	0			

MSD Sample ID: 1104520-46CMSD Units: mg/L Analysis Date: 4/29/2011 06:10 AM

Client ID: Run ID: ICS3000_110428A SeqNo: 2368643 Prep Date: DF: 50

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	202.2	5.0	200	0	101	80-120	4.05	192	20	RH
Surr: Selenate (surr)	286.4	5.0	250	0	115	85-115	5.673	192	20	R

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1104871
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R109111 Instrument ID ICS3000 Method: E300

MSD Sample ID: 1104520-50EMSD Units: mg/L Analysis Date: 4/29/2011 10:52 AM

Client ID: Run ID: ICS3000_110428A SeqNo: 2368648 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	3.859	0.10	4	0	96.5	80-120	3.872	0.336	20	H
Surr: Selenate (surr)	5.604	0.10	5	0	112	85-115	5.619	0.274	20	

The following samples were analyzed in this batch:

1104871-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1104871
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R109140** Instrument ID **WetChem** Method: **E1664**

MBLK Sample ID: **MB-042911-R109140** Units: **mg/L** Analysis Date: **4/29/2011 09:45 AM**

Client ID: Run ID: **WETCHEM_110429H** SeqNo: **2368896** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: **LCS-042911-R109140** Units: **mg/L** Analysis Date: **4/29/2011 09:45 AM**

Client ID: Run ID: **WETCHEM_110429H** SeqNo: **2368897** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	41.33	2.0	40	0	103	78-114	0			

MS Sample ID: **1104769-02BMS** Units: **mg/L** Analysis Date: **4/29/2011 09:45 AM**

Client ID: Run ID: **WETCHEM_110429H** SeqNo: **2368914** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	33.17	2.0	40	0.122	82.6	78-114	0			

The following samples were analyzed in this batch:

1104871-01E

Client: Navajo Refining Company
 Work Order: 1104871
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R109332 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: MB-050311-R109332 Units: mg/L Analysis Date: 5/3/2011 06:05 PM

Client ID: Run ID: WETCHEM_110503H SeqNo: 2373902 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: LCS-050311-R109332 Units: mg/L Analysis Date: 5/3/2011 06:05 PM

Client ID: Run ID: WETCHEM_110503H SeqNo: 2373903 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20.4	1.0	25	0	81.6	80-120	0			

LCSD Sample ID: LCSD-050311-R109332 Units: mg/L Analysis Date: 5/3/2011 06:05 PM

Client ID: Run ID: WETCHEM_110503H SeqNo: 2373911 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20.2	1.0	25	0	80.8	80-120	20.4	0.985	20	

DUP Sample ID: 1104871-01FDUP Units: mg/L Analysis Date: 5/3/2011 06:05 PM

Client ID: City Waste Water Run ID: WETCHEM_110503H SeqNo: 2373912 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0	0	0	0	0-0	0	0	20	

The following samples were analyzed in this batch:

1104871-01F

Client: Navajo Refining Company
Work Order: 1104871
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R109387** Instrument ID: **Balance1** Method: **M2540C**

MBLK Sample ID: **BLANK-R109387** Units: **mg/L** Analysis Date: **5/3/2011 05:00 PM**

Client ID: Run ID: **BALANCE1_110503E** SeqNo: **2375170** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	ND	10								

LCS Sample ID: **LCS-R109387** Units: **mg/L** Analysis Date: **5/3/2011 05:00 PM**

Client ID: Run ID: **BALANCE1_110503E** SeqNo: **2375171** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	1008	10	1000	0	101	85-115	0			

DUP Sample ID: **1104871-01CDUP** Units: **mg/L** Analysis Date: **5/3/2011 05:00 PM**

Client ID: **City Waste Water** Run ID: **BALANCE1_110503E** SeqNo: **2375162** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	2756	10	0	0	0	0-0	2830	2.65	20	

The following samples were analyzed in this batch:

1104871-01C

Client: Navajo Refining Company
 Work Order: 1104871
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R109473 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-050511-R109473 Units: mg/L Analysis Date: 5/5/2011 11:00 AM

Client ID: Run ID: UV-2450_110505C SeqNo: 2377154 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-050511-R109473 Units: mg/L Analysis Date: 5/5/2011 11:00 AM

Client ID: Run ID: UV-2450_110505C SeqNo: 2377155 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.198	0.025	0.2	0	99	80-120	0			

LCSD Sample ID: WLCSDW-050511-R109473 Units: mg/L Analysis Date: 5/5/2011 11:00 AM

Client ID: Run ID: UV-2450_110505C SeqNo: 2377168 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.191	0.025	0.2	0	95.5	80-120	0.198	3.6	20	

MS Sample ID: 1105015-01AMS Units: mg/L Analysis Date: 5/5/2011 11:00 AM

Client ID: Run ID: UV-2450_110505C SeqNo: 2377180 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.41	0.025	0.2	0.221	94.5	80-120	0			

The following samples were analyzed in this batch:

1104871-01D

Client: Navajo Refining Company
 Work Order: 1104871
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R109555 Instrument ID WetChem Method: M4500 NH3 D

MBLK	Sample ID: WBLKW-050511-R109555					Units: mg/L		Analysis Date: 5/9/2011 08:20 AM		
Client ID:	Run ID: WETCHEM_110509C				SeqNo: 2379717		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS	Sample ID: WLCSW-050511-R109555					Units: mg/L		Analysis Date: 5/9/2011 08:20 AM		
Client ID:	Run ID: WETCHEM_110509C				SeqNo: 2379718		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	17.64	1.0	20	0	88.2	80-120	0			

LCSD	Sample ID: WLCSDW-050511-R109555					Units: mg/L		Analysis Date: 5/9/2011 08:20 AM		
Client ID:	Run ID: WETCHEM_110509C				SeqNo: 2379720		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	17.4	1.0	20	0	87	80-120	17.64	1.37	20	

MS	Sample ID: 1104868-01JMS				Units: mg/L		Analysis Date: 5/9/2011 08:20 AM			
Client ID:	Run ID: WETCHEM_110509C				SeqNo: 2379722		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	16.84	1.0	20	0.24	83	75-125	0			

MSD	Sample ID: 1104868-01JMSD					Units: mg/L		Analysis Date: 5/9/2011 08:20 AM		
Client ID:	Run ID: WETCHEM_110509C				SeqNo: 2379723		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	16.48	1.0	20	0.24	81.2	75-125	16.84	2.16	30	

The following samples were analyzed in this batch:

1104871-01D

ALS Environmental

Date: 11-May-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1104871

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

COC ID: 27744

1104871

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

ALS Project Manager:



Customer Information		Project Information	
Purchase Order		Project Name	Lovington Lea Refining-Monthly
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore
Address	501 East Main	Address	501 East Main
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(505) 748-3311	Phone	(505) 748-3311
Fax	(505) 746-5421	Fax	(505) 746-5421
e-Mail Address		e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste Water	4-27-11	9 Am	w	Y	9	✓	✓	✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign

Kevin Crockett

Shipment Method

Required Turnaround Time: (Check Box)

☒ Std 10 WK Days

☐ 5 WK Days

☐ Other

☐ 2 WK Days

☐ 24 Hour

Results Due Date:

Relinquished by:

Date:

4-27-11

Time:

9:30 Am

Received by:

Received by (Laboratory):

Notes:

10 Day TAT.

Relinquished by:

Date:

Time:

Received by (Laboratory):

Cooler ID

Cooler Temp.

QC Package: (Check One Box Below)

☒ Level II Std QC

☐ TRRP Checklist

☐ Level III Std QC/Row Data

☐ TRRP Level IV

☐ Level IV SW846/CLP

☐ Other / EDD

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

Copyright 2010 by ALS Environmental.

2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.

3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 28-Apr-11 09:00

Work Order: 1104871

Received by: RDH

Checklist completed by Paresi M. Goya
eSignature

28-Apr-11
Date

Reviewed by: Lay Ann F. Thibault
eSignature

29-Apr-11
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>1.4</u>	<u>002</u>	
Cooler(s)/Kit(s):	<u>3550</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:	<u></u>		
Login Notes:	<u></u>		

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

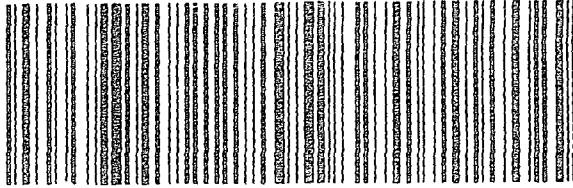
CorrectiveAction:

2 of 2
FedEx
MPS# 0260 8677 6610 2905
Mstr# 8659 1093 8356 0215

AB SGRA

THU - 28 APR A2
PRIORITY OVERNIGHT

77099
TX-US
IAH



77APR11 H0BA 50CC3/26A0/7EGB



ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 4/27/11 Time: 9:30 AM
Name: [Signature]
Company: [Signature]

Seal Broken By:

Signature



06-Jun-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1105852

Dear Darrell,

ALS Environmental received 2 samples on 26-May-2011 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 16:

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Chris Bryson

Electronically approved by: Makenzie L. Henderson

Chris Bryson
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS: 10450 Sienna Rd., Suite 210, Houston, Texas 77099-4330 | PHONE: (281) 630-0050 | FAX: (281) 630-0897

BUSINESS HOURS: 8:00 AM - 5:00 PM, Monday - Friday. Email: info@alsglobal.com | www.alsglobal.com



www.alsglobal.com

RIGHT SOLUTIONS. RIGHT PARTNER.

ALS Environmental

Date: 06-Jun-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1105852

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1105852-01	City Waste Water	Water		5/25/2011 09:30	5/26/2011 13:15	☐
1105852-02	Trip Blank	Water		5/24/2011	5/26/2011 13:15	☐

ALS Environmental

Date: 06-Jun-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1105852

Case Narrative

No Exceptions.

ALS Environmental

Date: 06-Jun-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Sample ID: City Waste Water

Collection Date: 5/25/2011 09:30 AM

Work Order: 1105852

Lab ID: 1105852-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: KKP
Benzene	0.0095		0.0010	mg/L	1	6/1/2011 02:21 AM
Toluene	0.0070		0.0010	mg/L	1	6/1/2011 02:21 AM
Ethylbenzene	0.030		0.0010	mg/L	1	6/1/2011 02:21 AM
Methyl tert-butyl ether	ND		0.0050	mg/L	1	6/1/2011 02:21 AM
Xylenes, Total	0.047		0.0030	mg/L	1	6/1/2011 02:21 AM
Surr: 4-Bromofluorobenzene	123		77-129	%REC	1	6/1/2011 02:21 AM
Surr: Trifluorotoluene	115		75-130	%REC	1	6/1/2011 02:21 AM
ANIONS			E300			Analyst: TDW
Nitrate/Nitrite (as N)	1.23		0.100	mg/L	1	5/26/2011 04:09 PM
Surr: Selenate (surr)	115		85-115	%REC	1	5/26/2011 04:09 PM
AMMONIA AS N			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	2.74		0.250	mg/L	10	6/1/2011 03:00 PM
OIL AND GREASE			E1664			Analyst: JKP
Oil and Grease	33.5		2.00	mg/L	1	6/2/2011 01:05 PM
SULFIDE			SM4500 S2-F			Analyst: JKP
Sulfide	ND		1.00	mg/L	1	5/31/2011 02:10 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: JKP
Total Dissolved Solids (Residue, Filterable)	2,890		10.0	mg/L	1	5/31/2011 10:35 AM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: JBA
Nitrogen, Total Kjeldahl	4.70		1.00	mg/L	1	6/3/2011 07:40 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 06-Jun-11

Client: Navajo Refining Company
 Work Order: 1105852
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R110713 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW2-053111-R110713 Units: µg/L Analysis Date: 6/1/2011 12:33 AM

Client ID: Run ID: BTEX1_110531D SeqNo: 2408342 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether	ND	5.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	31.69	1.0	30	0	106	77-129	0			
Surr: Trifluorotoluene	32.87	1.0	30	0	110	75-130	0			

LCS Sample ID: BLCSW2-053111-R110713 Units: µg/L Analysis Date: 5/31/2011 11:56 PM

Client ID: Run ID: BTEX1_110531D SeqNo: 2408341 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.42	1.0	20	0	102	77-126	0			
Toluene	21.31	1.0	20	0	107	80-124	0			
Ethylbenzene	21.88	1.0	20	0	109	76-125	0			
Methyl tert-butyl ether	105.9	5.0	100	0	106	75-128	0			
Xylenes, Total	65.03	3.0	60	0	108	79-124	0			
Surr: 4-Bromofluorobenzene	32.65	1.0	30	0	109	77-129	0			
Surr: Trifluorotoluene	33.35	1.0	30	0	111	75-130	0			

MS Sample ID: 1105783-02AMS Units: µg/L Analysis Date: 6/1/2011 01:45 AM

Client ID: Run ID: BTEX1_110531D SeqNo: 2408346 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.59	1.0	20	0.3056	101	77-126	0			
Toluene	21.51	1.0	20	0.7371	104	80-124	0			
Ethylbenzene	21.29	1.0	20	0	106	76-125	0			
Methyl tert-butyl ether	112.8	5.0	100	1.18	112	75-128	0			
Xylenes, Total	63.63	3.0	60	0	106	79-124	0			
Surr: 4-Bromofluorobenzene	33.32	1.0	30	0	111	77-129	0			
Surr: Trifluorotoluene	33.67	1.0	30	0	112	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1105852
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R110713 Instrument ID BTEX1 Method: SW8021B

MSD Sample ID: 1105783-02AMSD Units: µg/L Analysis Date: 6/1/2011 02:03 AM

Client ID: Run ID: BTEX1_110531D SeqNo: 2408347 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.61	1.0	20	0.3056	102	77-126	20.59	0.117	20	
Toluene	21.47	1.0	20	0.7371	104	80-124	21.51	0.18	20	
Ethylbenzene	21.27	1.0	20	0	106	76-125	21.29	0.0601	20	
Methyl tert-butyl ether	114.7	5.0	100	1.18	114	75-128	112.8	1.65	20	
Xylenes, Total	63.56	3.0	60	0	106	79-124	63.63	0.105	20	
Surr: 4-Bromofluorobenzene	33.32	1.0	30	0	111	77-129	33.32	0.025	20	
Surr: Trifluorotoluene	33.56	1.0	30	0	112	75-130	33.67	0.343	20	

The following samples were analyzed in this batch:

1105852-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1105852
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R110665 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: MB-053111-R110665 Units: mg/L Analysis Date: 5/31/2011 02:10 PM

Client ID: Run ID: WETCHEM_110531F SeqNo: 2406812 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: LCS-053111-R110665 Units: mg/L Analysis Date: 5/31/2011 02:10 PM

Client ID: Run ID: WETCHEM_110531F SeqNo: 2406813 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20.4	1.0	25	0	81.6	80-120	0			

LCSD Sample ID: LCSD-053111-R110665 Units: mg/L Analysis Date: 5/31/2011 02:10 PM

Client ID: Run ID: WETCHEM_110531F SeqNo: 2406816 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20	1.0	25	0	80	80-120	20.4	1.98	20	

DUP Sample ID: 1105852-01DDUP Units: mg/L Analysis Date: 5/31/2011 02:10 PM

Client ID: City Waste Water Run ID: WETCHEM_110531F SeqNo: 2406817 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0	0	0	0	0-0	0	0	20	

The following samples were analyzed in this batch:

1105852-01D

Client: Navajo Refining Company
 Work Order: 1105852
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R110702 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R110702 Units: mg/L Analysis Date: 5/31/2011 10:35 AM

Client ID: Run ID: BALANCE1_110531F SeqNo: 2408003 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	ND	10								

LCS Sample ID: LCS-R110702 Units: mg/L Analysis Date: 5/31/2011 10:35 AM

Client ID: Run ID: BALANCE1_110531F SeqNo: 2408004 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	1064	10	1000	0	106	85-115	0			

DUP Sample ID: 1105756-34EDUP Units: mg/L Analysis Date: 5/31/2011 10:35 AM

Client ID: Run ID: BALANCE1_110531F SeqNo: 2407982 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	2410	10	0	0	0	0-0	2412	0.083	20	

DUP Sample ID: 1105756-46EDUP Units: mg/L Analysis Date: 5/31/2011 10:35 AM

Client ID: Run ID: BALANCE1_110531F SeqNo: 2407991 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	1222	10	0	0	0	0-0	1170	4.35	20	

The following samples were analyzed in this batch:

1105852-01C

Client: Navajo Refining Company
 Work Order: 1105852
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R110782 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-060111-R110782 Units: mg/L Analysis Date: 6/1/2011 03:00 PM
 Client ID: Run ID: UV-2450_110601B SeqNo: 2410090 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-060111-R110782 Units: mg/L Analysis Date: 6/1/2011 03:00 PM
 Client ID: Run ID: UV-2450_110601B SeqNo: 2410091 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.198	0.025	0.2	0	99	80-120	0			

LCSD Sample ID: WLCSDW-060111-R110782 Units: mg/L Analysis Date: 6/1/2011 03:00 PM
 Client ID: Run ID: UV-2450_110601B SeqNo: 2410119 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.182	0.025	0.2	0	91	80-120	0.198	8.42	20	

MS Sample ID: 1105845-01CMS Units: mg/L Analysis Date: 6/1/2011 03:00 PM
 Client ID: Run ID: UV-2450_110601B SeqNo: 2410120 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.586	0.025	0.2	0.423	81.5	80-120	0			

The following samples were analyzed in this batch:

1105852-01B

Client: Navajo Refining Company
Work Order: 1105852
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R110788** Instrument ID: **WetChem** Method: **E1664**

MBLK Sample ID: **MB-060211-R110788** Units: **mg/L** Analysis Date: **6/2/2011 01:05 PM**

Client ID: Run ID: **WETCHEM_110602C** SeqNo: **2410171** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: **LCS-060211-R110788** Units: **mg/L** Analysis Date: **6/2/2011 01:05 PM**

Client ID: Run ID: **WETCHEM_110602C** SeqNo: **2410172** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	39.18	2.0	40		0	98	78-114	0		

MS Sample ID: **1106012-01DMS** Units: **mg/L** Analysis Date: **6/2/2011 01:05 PM**

Client ID: Run ID: **WETCHEM_110602C** SeqNo: **2410177** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	43.46	2.0	40		0	109	78-114	0		

The following samples were analyzed in this batch:

1105852-01E

Client: Navajo Refining Company
Work Order: 1105852
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R110841 Instrument ID: WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW-060311-R110841 Units: mg/L Analysis Date: 6/3/2011 07:40 AM

Client ID: Run ID: WETCHEM_110603A SeqNo: 2411342 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLCSW-060311-R110841 Units: mg/L Analysis Date: 6/3/2011 07:40 AM

Client ID: Run ID: WETCHEM_110603A SeqNo: 2411343 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	18.28	1.0	20	0	91.4	80-120	0			

LCSD Sample ID: WLCSDW-060311-R110841 Units: mg/L Analysis Date: 6/3/2011 07:40 AM

Client ID: Run ID: WETCHEM_110603A SeqNo: 2411345 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	18.4	1.0	20	0	92	80-120	18.28	0.654	20	

MS Sample ID: 1105858-02EMS Units: mg/L Analysis Date: 6/3/2011 07:40 AM

Client ID: Run ID: WETCHEM_110603A SeqNo: 2411352 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	15.92	1.0	20	0.336	77.9	75-125	0			

DUP Sample ID: 1105858-02EDUP Units: mg/L Analysis Date: 6/3/2011 07:40 AM

Client ID: Run ID: WETCHEM_110603A SeqNo: 2411349 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	0.316	1.0	0	0	0	0-0	0.336	0	20	J

The following samples were analyzed in this batch:

1105852-01B

Client: Navajo Refining Company
 Work Order: 1105852
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R110853 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKW1-052611-R110853 Units: mg/L Analysis Date: 5/26/2011 02:02 PM

Client ID: Run ID: ICS3000_110526A SeqNo: 2411559 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.10								
Surr: Selenate (surr)	4.81	0.10	5	0	96.2	85-115	0			

LCS Sample ID: WLCSW1-052611-R110853 Units: mg/L Analysis Date: 5/26/2011 02:23 PM

Client ID: Run ID: ICS3000_110526A SeqNo: 2411562 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.395	0.10	8	0	105	90-110	0			
Surr: Selenate (surr)	5.261	0.10	5	0	105	85-115	0			

LCSD Sample ID: WLCSDW1-052611-R110853 Units: mg/L Analysis Date: 5/26/2011 02:45 PM

Client ID: Run ID: ICS3000_110526A SeqNo: 2411564 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.359	0.10	8	0	104	90-110	8.395	0.43	20	
Surr: Selenate (surr)	5.227	0.10	5	0	105	85-115	5.261	0.648	20	

MS Sample ID: 1105851-01CMS Units: mg/L Analysis Date: 5/26/2011 03:27 PM

Client ID: Run ID: ICS3000_110526A SeqNo: 2411567 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	6.878	0.10	4	2.305	114	80-120	0			
Surr: Selenate (surr)	5.637	0.10	5	0	113	85-115	0			

MSD Sample ID: 1105851-01CMSD Units: mg/L Analysis Date: 5/26/2011 03:48 PM

Client ID: Run ID: ICS3000_110526A SeqNo: 2411568 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	6.897	0.10	4	2.305	115	80-120	6.878	0.276	20	
Surr: Selenate (surr)	5.343	0.10	5	0	107	85-115	5.637	5.36	20	

The following samples were analyzed in this batch:

1105852-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1105852

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



ALS ENVIRONMENTAL
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

COC ID: 33547

1105852

NAVAJO REFINING: Holly Energy Partners

Project: Lovington Lea Refining-Monthly



ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Lovington Lea Refining-Monthly
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore
Address	501 East Main	Address	501 East Main
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(505) 748-3311	Phone	(505) 748-3311
Fax	(505) 746-5421	Fax	(505) 746-5421
e-Mail Address		e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste Water	5-25-11	9:30AM	W	Y	8	✓		✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Kerin Crockett</i> <i>Kerin Crockett</i>		Shipment Method		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour			Results Due Date:	
Relinquished by: <i>Kerin Crockett</i>	Date: 5-25-11	Time: 9:45AM	Received by:	Notes: 10 Day TAT.				
Relinquished by: <i>Fed EX</i>	Date: 5/26/11	Time: 0930	Received by (Laboratory): <i>ALC</i>	Cooler ID: 0450	Cooler Temp. 1.1°C	QC Package: (Check One Box Below)		
Relinquished by: <i>Darrell Huddleston</i>	Date: 5/26/11	Time: 1315	Checked by (Laboratory): <i>[Signature]</i>			☒ Level II Std QC	☐ TRRP Checklist	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₃ 7-Other 8-4°C 9-5035						☐ Level III Std QC/Raw Data	☐ TRRP Level IV	
						☐ Level IV SW846/CLP		
						☐ Other / EDD		

- Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2010 by ALS Environmental.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 26-May-11 00:00

Work Order: 1105852

Received by: DWH

Checklist completed by Raymond N. Gambia
eSignature

31-May-11
Date

Reviewed by: Chris Bryson
eSignature

01-Jun-11
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>1.1c</u> <u>002</u>		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

1105852

3/2/00

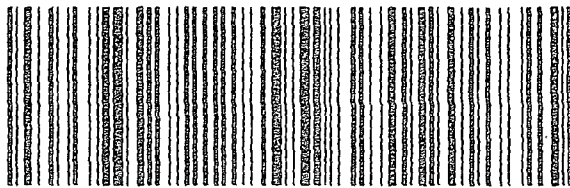
FedEx 2 of 2
MPS 8677 6610 2857
0260
Mstr# 8659 1093 8334 0215

THU - 26 MAY A2
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US
IAH

54



Emp# 164035 25MAY11 HODA 50CC1/1577/7EFB

FedEx.

MPS

25MAY 15:25

Pcs: 2

Emp#: 164035

1 of 1

Rt#: 919

MASTER TRK#:

Pkg Trk#'s: 867766102857

865910938334



12-Jul-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1107009

Dear Darrell,

ALS Environmental received 2 samples on 01-Jul-2011 08:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 22.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in cursive script that reads 'Chris Bryson'.

Electronically approved by: Makenzie L. Henderson

Chris Bryson
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS 10450 Standliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company



www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

ALS Environmental

Date: 12-Jul-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1107009

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1107009-01	City H2O	Water		6/30/2011 09:00	7/1/2011 08:45	☐
1107009-02	Trip Blank	Water		6/30/2011	7/1/2011 08:45	☐

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1107009

Case Narrative

Batch 53673, Metals, Sample 1107004-01 : MS/MSD is for an unrelated sample.

ALS Environmental

Date: 12-Jul-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Sample ID: City H2O

Collection Date: 6/30/2011 09:00 AM

Work Order: 1107009

Lab ID: 1107009-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX						
			SW8021B			Analyst: RPM
Benzene	0.0056		0.0010	mg/L	1	7/8/2011 06:32 PM
Toluene	0.0048		0.0010	mg/L	1	7/8/2011 06:32 PM
Ethylbenzene	0.0077		0.0010	mg/L	1	7/8/2011 06:32 PM
Xylenes, Total	0.013		0.0030	mg/L	1	7/8/2011 06:32 PM
Surr: 4-Bromofluorobenzene	80.0		77-129	%REC	1	7/8/2011 06:32 PM
Surr: Trifluorotoluene	94.0		75-130	%REC	1	7/8/2011 06:32 PM
METALS						
			SW6020			Prep Date: 7/5/2011 Analyst: ALR
Aluminum	0.0324		0.0100	mg/L	1	7/6/2011 01:11 AM
Arsenic	0.105		0.00500	mg/L	1	7/6/2011 01:11 AM
Barium	0.319		0.00500	mg/L	1	7/6/2011 01:11 AM
Beryllium	ND		0.00200	mg/L	1	7/6/2011 01:11 AM
Boron	0.540		0.0500	mg/L	1	7/6/2011 01:11 AM
Cadmium	ND		0.00200	mg/L	1	7/6/2011 01:11 AM
Calcium	385		25.0	mg/L	50	7/6/2011 01:08 PM
Chromium	0.0256		0.00500	mg/L	1	7/6/2011 01:11 AM
Cobalt	ND		0.00500	mg/L	1	7/6/2011 01:11 AM
Copper	0.0630		0.00500	mg/L	1	7/6/2011 01:11 AM
Iron	0.314		0.200	mg/L	1	7/6/2011 01:11 AM
Lead	ND		0.00500	mg/L	1	7/6/2011 01:11 AM
Magnesium	52.0		0.200	mg/L	1	7/6/2011 01:11 AM
Manganese	0.0415		0.00500	mg/L	1	7/6/2011 01:11 AM
Molybdenum	0.0197		0.00500	mg/L	1	7/6/2011 01:11 AM
Nickel	ND		0.00500	mg/L	1	7/6/2011 01:11 AM
Potassium	13.0		0.200	mg/L	1	7/6/2011 01:11 AM
Selenium	0.0176		0.00500	mg/L	1	7/6/2011 01:11 AM
Silver	ND		0.00500	mg/L	1	7/6/2011 01:11 AM
Sodium	616		10.0	mg/L	50	7/6/2011 01:08 PM
Vanadium	0.0509		0.00500	mg/L	1	7/6/2011 01:11 AM
Zinc	0.116		0.0100	mg/L	1	7/6/2011 01:11 AM
ANIONS - EPA 300.0 (1993)						
			E300			Analyst: TDW
Nitrate/Nitrite (as N)	3.05		0.100	mg/L	1	7/1/2011 03:13 PM
Surr: Selenate (surr)	97.9		85-115	%REC	1	7/1/2011 03:13 PM
AMMONIA AS N						
			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	4.78		0.250	mg/L	10	7/11/2011 03:00 PM
OIL AND GREASE						
			E1664			Analyst: JKP
Oil and Grease	ND		2.00	mg/L	1	7/8/2011 01:35 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 12-Jul-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Work Order: 1107009

Sample ID: City H2O

Lab ID: 1107009-01

Collection Date: 6/30/2011 09:00 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
SULFIDE			SM4500 S2-F			Analyst: JKP
Sulfide	ND		1.00	mg/L	1	7/5/2011 09:10 AM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	3,560		10.0	mg/L	1	7/1/2011 11:00 AM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: JBA
Nitrogen, Total Kjeldahl	7.86		1.00	mg/L	1	7/5/2011 07:20 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 12-Jul-11

Client: Navajo Refining Company
Work Order: 1107009
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R112710 Instrument ID BTEX1 Method: SW8021B

MBLK	Sample ID: BBLKW1-070811-R112710				Units: µg/L		Analysis Date: 7/8/2011 12:50 PM			
Client ID:	Run ID: BTEX1_110708B				SeqNo: 2451267		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	32	1.0	30	0	107	77-129	0			
Surr: Trifluorotoluene	29.88	1.0	30	0	99.6	75-130	0			

LCS	Sample ID: BLCSW1-070811-R112710					Units: µg/L		Analysis Date: 7/8/2011 12:32 PM		
Client ID:	Run ID: BTEX1_110708B				SeqNo: 2451266		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.85	1.0	20	0	109	77-126	0			
Toluene	21.7	1.0	20	0	108	80-124	0			
Ethylbenzene	21.82	1.0	20	0	109	76-125	0			
Xylenes, Total	63.48	3.0	60	0	106	79-124	0			
Surr: 4-Bromofluorobenzene	33.43	1.0	30	0	111	77-129	0			
Surr: Trifluorotoluene	29.97	1.0	30	0	99.9	75-130	0			

MS	Sample ID: 1107091-02AMS				Units: µg/L		Analysis Date: 7/8/2011 05:38 PM			
Client ID:	Run ID: BTEX1_110708B				SeqNo: 2451270		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.77	1.0	20	0.3329	107	77-126	0			
Toluene	21.21	1.0	20	1.159	100	80-124	0			
Ethylbenzene	16.75	1.0	20	0	83.8	76-125	0			
Xylenes, Total	52.13	3.0	60	0	86.9	79-124	0			
Surr: 4-Bromofluorobenzene	29.33	1.0	30	0	97.8	77-129	0			
Surr: Trifluorotoluene	27.33	1.0	30	0	91.1	75-130	0			

MSD	Sample ID: 1107091-02AMSD				Units: µg/L		Analysis Date: 7/8/2011 05:56 PM			
Client ID:	Run ID: BTEX1_110708B				SeqNo: 2451271		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.55	1.0	20	0.3329	111	77-126	21.77	3.52	20	
Toluene	22.05	1.0	20	1.159	104	80-124	21.21	3.86	20	
Ethylbenzene	18.07	1.0	20	0	90.3	76-125	16.75	7.57	20	
Xylenes, Total	55.96	3.0	60	0	93.3	79-124	52.13	7.09	20	
Surr: 4-Bromofluorobenzene	27.78	1.0	30	0	92.6	77-129	29.33	5.44	20	
Surr: Trifluorotoluene	26.81	1.0	30	0	89.4	75-130	27.33	1.94	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1107009
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R112710 Instrument ID BTEX1 Method: SW8021B

The following samples were analyzed in this batch:

1107009-01A

Client: Navajo Refining Company
Work Order: 1107009
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 53673 Instrument ID ICPMS03 Method: SW6020

MBLK Sample ID: MBLKW3-070511-53673 Units: mg/L Analysis Date: 7/5/2011 11:34 PM
 Client ID: Run ID: ICPMS03_110705A SeqNo: 2446497 Prep Date: 7/5/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	0.010								
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Boron	ND	0.050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	0.001655	0.0050								J
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	0.001598	0.0050								J
Silver	ND	0.0050								
Sodium	ND	0.20								
Vanadium	ND	0.0050								
Zinc	0.007869	0.010								J

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1107009
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 53673 Instrument ID ICPMS03 Method: SW6020

LCS Sample ID: MLCSW3-070511-53673 Units: mg/L Analysis Date: 7/5/2011 11:40 PM
 Client ID: Run ID: ICPMS03_110705A SeqNo: 2446498 Prep Date: 7/5/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1054	0.010	0.1	0	105	80-120	0			
Arsenic	0.05277	0.0050	0.05	0	106	80-120	0			
Barium	0.05093	0.0050	0.05	0	102	80-120	0			
Beryllium	0.05148	0.0020	0.05	0	103	80-120	0			
Boron	0.5004	0.050	0.5	0	100	80-120	0			
Cadmium	0.05082	0.0020	0.05	0	102	80-120	0			
Calcium	5.194	0.50	5	0	104	80-120	0			
Chromium	0.05049	0.0050	0.05	0	101	80-120	0			
Cobalt	0.05044	0.0050	0.05	0	101	80-120	0			
Copper	0.05057	0.0050	0.05	0	101	80-120	0			
Iron	4.921	0.20	5	0	98.4	80-120	0			
Lead	0.05034	0.0050	0.05	0	101	80-120	0			
Magnesium	4.958	0.20	5	0	99.2	80-120	0			
Manganese	0.05002	0.0050	0.05	0	100	80-120	0			
Molybdenum	0.04545	0.0050	0.05	0	90.9	80-120	0			
Nickel	0.05054	0.0050	0.05	0	101	80-120	0			
Potassium	5.07	0.20	5	0	101	80-120	0			
Selenium	0.05025	0.0050	0.05	0	100	80-120	0			
Silver	0.05037	0.0050	0.05	0	101	80-120	0			
Sodium	4.984	0.20	5	0	99.7	80-120	0			
Vanadium	0.05086	0.0050	0.05	0	102	80-120	0			
Zinc	0.05241	0.010	0.05	0	105	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1107009
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 53673 Instrument ID ICPMS03 Method: SW6020

MS Sample ID: 1107004-01EMS Units: mg/L Analysis Date: 7/6/2011 12:02 AM
 Client ID: Run ID: ICPMS03_110705A SeqNo: 2446502 Prep Date: 7/5/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1111	0.010	0.1	0.004141	107	80-120	0			
Arsenic	0.05402	0.0050	0.05	0.001783	104	80-120	0			
Barium	0.2906	0.0050	0.05	0.2389	103	80-120	0			O
Beryllium	0.05075	0.0020	0.05	0.0002217	101	80-120	0			
Boron	0.6938	0.050	0.5	0.2081	97.1	80-120	0			
Cadmium	0.04979	0.0020	0.05	-0.00006327	99.7	80-120	0			
Calcium	82.98	0.50	5	79.64	66.8	80-120	0			SO
Chromium	0.6739	0.0050	0.05	0.6313	85.2	80-120	0			O
Cobalt	0.04911	0.0050	0.05	0.00001328	98.2	80-120	0			
Copper	0.04801	0.0050	0.05	-0.0005002	97	80-120	0			
Iron	4.828	0.20	5	-0.001469	96.6	80-120	0			
Lead	0.05109	0.0050	0.05	0.00004911	102	80-120	0			
Magnesium	60.8	0.20	5	55.55	105	80-120	0			O
Manganese	0.04967	0.0050	0.05	0.000434	98.5	80-120	0			
Molybdenum	0.04603	0.0050	0.05	0.002246	87.6	80-120	0			
Nickel	0.04899	0.0050	0.05	0.0005432	96.9	80-120	0			
Potassium	6.41	0.20	5	1.363	101	80-120	0			
Selenium	0.05174	0.0050	0.05	0.002224	99	80-120	0			
Silver	0.04902	0.0050	0.05	-0.00008502	98.2	80-120	0			
Sodium	40.63	0.20	5	35.29	107	80-120	0			O
Vanadium	0.0579	0.0050	0.05	0.00443	107	80-120	0			
Zinc	0.05075	0.010	0.05	0.002159	97.2	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1107009
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 53673 Instrument ID ICPMS03 Method: SW6020

MSD Sample ID: 1107004-01EMSD Units: mg/L Analysis Date: 7/6/2011 12:08 AM
 Client ID: Run ID: ICPMS03_110705A SeqNo: 2446503 Prep Date: 7/5/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1103	0.010	0.1	0.004141	106	80-120	0.1111	0.723	15	
Arsenic	0.05339	0.0050	0.05	0.001783	103	80-120	0.05402	1.17	15	
Barium	0.2915	0.0050	0.05	0.2389	105	80-120	0.2906	0.309	15	O
Beryllium	0.05153	0.0020	0.05	0.0002217	103	80-120	0.05075	1.53	15	
Boron	0.7115	0.050	0.5	0.2081	101	80-120	0.6938	2.52	15	
Cadmium	0.04973	0.0020	0.05	-0.00006327	99.6	80-120	0.04979	0.121	15	
Calcium	84.49	0.50	5	79.64	97	80-120	82.98	1.8	15	O
Chromium	0.6746	0.0050	0.05	0.6313	86.6	80-120	0.6739	0.104	15	O
Cobalt	0.04908	0.0050	0.05	0.00001328	98.1	80-120	0.04911	0.0611	15	
Copper	0.04784	0.0050	0.05	-0.0005002	96.7	80-120	0.04801	0.355	15	
Iron	4.827	0.20	5	-0.001469	96.6	80-120	4.828	0.0207	15	
Lead	0.05091	0.0050	0.05	0.00004911	102	80-120	0.05109	0.353	15	
Magnesium	60.67	0.20	5	55.55	102	80-120	60.8	0.214	15	O
Manganese	0.04942	0.0050	0.05	0.000434	98	80-120	0.04967	0.505	15	
Molybdenum	0.04795	0.0050	0.05	0.002246	91.4	80-120	0.04603	4.09	15	
Nickel	0.049	0.0050	0.05	0.0005432	96.9	80-120	0.04899	0.0204	15	
Potassium	6.412	0.20	5	1.363	101	80-120	6.41	0.0312	15	
Selenium	0.05164	0.0050	0.05	0.002224	98.8	80-120	0.05174	0.193	15	
Silver	0.04893	0.0050	0.05	-0.00008502	98	80-120	0.04902	0.184	15	
Sodium	40.71	0.20	5	35.29	108	80-120	40.63	0.197	15	O
Vanadium	0.05795	0.0050	0.05	0.00443	107	80-120	0.0579	0.0863	15	
Zinc	0.05129	0.010	0.05	0.002159	98.3	80-120	0.05075	1.06	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1107009
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 53673 Instrument ID ICPMS03 Method: SW6020

DUP Sample ID: 1107004-01EDUP Units: mg/L Analysis Date: 7/5/2011 11:51 PM
 Client ID: Run ID: ICPMS03_110705A SeqNo: 2446500 Prep Date: 7/5/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.005846	0.010	0	0	0	0-0	0.004141	0	25	J
Arsenic	0.001629	0.0050	0	0	0	0-0	0.001783	0	25	J
Barium	0.2361	0.0050	0	0	0	0-0	0.2389	1.18	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.0002217	0	25	
Boron	0.1973	0.050	0	0	0	0-0	0.2081	5.33	25	
Cadmium	ND	0.0020	0	0	0	0-0	-0.00006327	0	25	
Calcium	80.02	0.50	0	0	0	0-0	79.64	0.476	25	
Chromium	0.6231	0.0050	0	0	0	0-0	0.6313	1.31	25	
Cobalt	ND	0.0050	0	0	0	0-0	0.00001328	0	25	
Copper	ND	0.0050	0	0	0	0-0	-0.0005002	0	25	
Iron	ND	0.20	0	0	0	0-0	-0.001469	0	25	
Lead	ND	0.0050	0	0	0	0-0	0.00004911	0	25	
Magnesium	56.11	0.20	0	0	0	0-0	55.55	1	25	
Manganese	ND	0.0050	0	0	0	0-0	0.000434	0	25	
Molybdenum	ND	0.0050	0	0	0	0-0	0.002246	0	25	
Nickel	ND	0.0050	0	0	0	0-0	0.0005432	0	25	
Potassium	1.354	0.20	0	0	0	0-0	1.363	0.662	25	
Selenium	0.001493	0.0050	0	0	0	0-0	0.002224	0	25	J
Silver	ND	0.0050	0	0	0	0-0	-0.00008502	0	25	
Sodium	35.63	0.20	0	0	0	0-0	35.29	0.959	25	
Vanadium	0.004592	0.0050	0	0	0	0-0	0.00443	0	25	J
Zinc	ND	0.010	0	0	0	0-0	0.002159	0	25	

The following samples were analyzed in this batch:

1107009-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1107009
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R112365 Instrument ID: WetChem Method: SM4500 S2-F

MBLK Sample ID: MB-070511-R112365 Units: mg/L Analysis Date: 7/5/2011 09:10 AM

Client ID: Run ID: WETCHEM_110705A SeqNo: 2445174 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: LCS-070511-R112365 Units: mg/L Analysis Date: 7/5/2011 09:10 AM

Client ID: Run ID: WETCHEM_110705A SeqNo: 2445175 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.4	1.0	25	0	89.6	80-120	0			

LCSD Sample ID: LCSD-070511-R112365 Units: mg/L Analysis Date: 7/5/2011 09:10 AM

Client ID: Run ID: WETCHEM_110705A SeqNo: 2445180 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.8	1.0	25	0	87.2	80-120	0	0	20	

The following samples were analyzed in this batch:

1107009-01C

Client: Navajo Refining Company
 Work Order: 1107009
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R112366 Instrument ID ICS2100 Method: E300

MBLK	Sample ID: WBLKW3-070111-R112366				Units: mg/L		Analysis Date: 7/1/2011 01:11 PM			
Client ID:	Run ID: ICS2100_110701A				SeqNo: 2445184		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.10								
Surr: Selenate (surr)	4.962	0.10	5	0	99.2	85-115	0			

LCS	Sample ID: WLCSW3-070111-R112366				Units: mg/L		Analysis Date: 7/1/2011 01:26 PM			
Client ID:	Run ID: ICS2100_110701A				SeqNo: 2445185		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.675	0.10	8	0	95.9	90-110	0			
Surr: Selenate (surr)	5.004	0.10	5	0	100	85-115	0			

LCSD	Sample ID: WLCSDW3-070111-R112366					Units: mg/L		Analysis Date: 7/1/2011 01:40 PM		
Client ID:	Run ID: ICS2100_110701A				SeqNo: 2445186		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.611	0.10	8	0	95.1	90-110	7.675	0.837	20	
Surr: Selenate (surr)	4.955	0.10	5	0	99.1	85-115	5.004	0.984	20	

MS	Sample ID: 1107009-01EMS				Units: mg/L		Analysis Date: 7/1/2011 03:28 PM			
Client ID: City H2O			Run ID: ICS2100_110701A			SeqNo: 2445191		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	6.906	0.10	4	3.054	96.3	80-120	0			
Surr: Selenate (surr)	4.9	0.10	5	0	98	85-115	0			

MSD	Sample ID: 1107009-01EMSD					Units: mg/L		Analysis Date: 7/1/2011 03:42 PM		
Client ID: City H2O			Run ID: ICS2100_110701A			SeqNo: 2445192		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.083	0.10	4	3.054	101	80-120	6.906	2.53	20	
Surr: Selenate (surr)	5.008	0.10	5	0	100	85-115	4.9	2.18	20	

The following samples were analyzed in this batch:

1107009-01E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1107009
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R112377 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: WBLK-070111-R112377 Units: mg/L Analysis Date: 7/1/2011 11:00 AM

Client ID: Run ID: BALANCE1_110701D SeqNo: 2445403 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: WLCS-070111-R112377 Units: mg/L Analysis Date: 7/1/2011 11:00 AM

Client ID: Run ID: BALANCE1_110701D SeqNo: 2445406 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1046	10	1000	0	105	85-115	0			

DUP Sample ID: 1106961-09CDUP Units: mg/L Analysis Date: 7/1/2011 11:00 AM

Client ID: Run ID: BALANCE1_110701D SeqNo: 2445374 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10	0	0	0	0-0	0	0	20	

DUP Sample ID: 1107012-01EDUP Units: mg/L Analysis Date: 7/1/2011 11:00 AM

Client ID: Run ID: BALANCE1_110701D SeqNo: 2445400 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	3812	10	0	0	0	0-0	3828	0.419	20	

The following samples were analyzed in this batch:

1107009-01E

Client: Navajo Refining Company
 Work Order: 1107009
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R112391 Instrument ID WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW1-070511-R112391 Units: mg/L Analysis Date: 7/5/2011 07:20 AM

Client ID: Run ID: WETCHEM_110705E SeqNo: 2445584 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLCBW1-070511-R112391 Units: mg/L Analysis Date: 7/5/2011 07:20 AM

Client ID: Run ID: WETCHEM_110705E SeqNo: 2445585 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.2	1.0	20	0	101	80-120	0			

LCSD Sample ID: WLCSDW1-070511-R112391 Units: mg/L Analysis Date: 7/5/2011 07:20 AM

Client ID: Run ID: WETCHEM_110705E SeqNo: 2445586 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	18.92	1.0	20	0	94.6	80-120	20.2	6.54	20	

MS Sample ID: 1106874-01FMS Units: mg/L Analysis Date: 7/5/2011 07:20 AM

Client ID: Run ID: WETCHEM_110705E SeqNo: 2445589 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	19.02	1.0	20	0.886	90.7	75-125	0			

DUP Sample ID: 1106874-01FDUP Units: mg/L Analysis Date: 7/5/2011 07:20 AM

Client ID: Run ID: WETCHEM_110705E SeqNo: 2445588 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	0.746	1.0	0	0	0	0-0	0.886	0	20	J

The following samples were analyzed in this batch:

1107009-01B

Client: Navajo Refining Company
Work Order: 1107009
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R112695** Instrument ID **WetChem** Method: **E1664**

MBLK Sample ID: **MB-070811-R112695** Units: **mg/L** Analysis Date: **7/8/2011 01:35 PM**

Client ID: Run ID: **WETCHEM_110708H** SeqNo: **2450746** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: **LCS-070811-R112695** Units: **mg/L** Analysis Date: **7/8/2011 01:35 PM**

Client ID: Run ID: **WETCHEM_110708H** SeqNo: **2450747** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	35.1	2.0	40	0	87.8	78-114	0			

MS Sample ID: **1107187-02EMS** Units: **mg/L** Analysis Date: **7/8/2011 01:35 PM**

Client ID: Run ID: **WETCHEM_110708H** SeqNo: **2450756** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	52.24	2.0	40	9.571	107	78-114	0			

The following samples were analyzed in this batch:

1107009-01F

Client: Navajo Refining Company
 Work Order: 1107009
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R112812 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-071111-R112812 Units: mg/L Analysis Date: 7/11/2011 03:00 PM

Client ID: Run ID: UV-2450_110711B SeqNo: 2453674 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-071111-R112812 Units: mg/L Analysis Date: 7/11/2011 03:00 PM

Client ID: Run ID: UV-2450_110711B SeqNo: 2453675 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.23	0.025	0.2	0	115	80-120	0			

LCSD Sample ID: WLCSDW-071111-R112812 Units: mg/L Analysis Date: 7/11/2011 03:00 PM

Client ID: Run ID: UV-2450_110711B SeqNo: 2453708 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.235	0.025	0.2	0	118	80-120	0.23	2.15	20	

MS Sample ID: 1107182-01AMS Units: mg/L Analysis Date: 7/11/2011 03:00 PM

Client ID: Run ID: UV-2450_110711B SeqNo: 2453702 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.537	0.025	0.2	0.361	88	80-120	0			

The following samples were analyzed in this batch:

1107009-01B

ALS Environmental

Date: 12-Jul-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1107009

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



☐ **ALS Environmental**

10450 Standliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

COC ID: 31009

1107009

NAVAJO REFINING: Holly Energy Partners

Project: Lovington Lea Refining-Monthly

ALS Project Manager:



Customer Information		Project Information	
Purchase Order		Project Name	Lovington Lea Refining-Monthly
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore
Address	501 East Main	Address	501 East Main
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(505) 740-3311	Phone	(505) 740-3311
Fax	(505) 743-5421	Fax	(505) 746-3421
e-Mail Address		e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City H ₂ O	6-30-11	9:00AM	W	Y	9	✓	✓	✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
0																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:			
<i>Kerry Crockett</i>				☒ 10 Wk Days ☐ 5 Wk Days ☐ Other ☐ 1 Wk Days ☐ 3 Days							
Relinquished by: <i>Zaini</i>		Date: 6-30-11	Time: 11:00AM	Received by:		Notes: 10 Day TAT.					
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID:		Cooler Temp.		QC Package: (Check One Box Below)	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):						☒ Level III Std QC ☐ TRAP Ch. dms	
										☐ Level III Std QC/Row Data ☐ TRAP Level IV	
										☐ Level IV SWIN VOLS ☐ TRAP Level V	
										☐ Other / ETC	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035											

- ote: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2010 by ALS Environmental.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 01-Jul-11 08:45

Work Order: 1107009

Received by: SAY

Checklist completed by Salvador J. Yanes
eSignature

01-Jul-11
Date

Reviewed by: Chris Bryson
eSignature

01-Jul-11
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s):

1.1c 002

Cooler(s)/Kit(s):

3875

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☒ N/A ☐

pH adjusted by: _____

Login Notes: Trip Blank not on COC, Login w/ out Analysis.

Client Contacted:

Date Contacted:

Person Contacted:

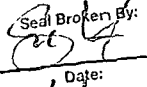
Contacted By:

Regarding:

Comments:

CorrectiveAction:

1107009

 ALS Environmental 10450 Standliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: 
	Date: <u>10-30-11</u> Name: <u>Andrew S. Subban</u> Company: <u>A-R-C</u>	Time: <u>9:30 a.m.</u>	Date: <u>7/1/11</u>

... This portion can be removed for recipient's records

ite	FedEx Tracking Number	865910938091
nder's ime	Phone	
Company		
Address	Dept./Floor/Suite/Room	
y	State	ZIP
our Internal Billing Reference		



10-Aug-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281

Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: **1107906**

Dear Darrell,

ALS Environmental received 2 samples on 28-Jul-2011 09:05 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 16.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Makenzie L. Henderson

Chris Bryson
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS 10450 Standliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

ALSO OFFICE: 10000 West Loop South, Suite 200 Houston, Texas 77042-3400 | PHONE (281) 530-5656 | FAX (281) 530-5887



www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

Date: 10-Aug-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1107906

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1107906-01	City Waste H2O	Water		7/27/2011 09:20	7/28/2011 09:05	☐
1107906-02	Trip Blank	Water		7/28/2011	7/28/2011 09:05	☐

ALS Environmental

Date: 10-Aug-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1107906

Case Narrative

Anions – EPA 300.0 (1993), Sample 1107708-04: H qualifier is for an unrelated sample.

ALS Environmental

Date: 10-Aug-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Work Order: 1107906

Sample ID: City Waste H2O

Lab ID: 1107906-01

Collection Date: 7/27/2011 09:20 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: RPM
Benzene	0.0014		0.0010	mg/L	1	8/4/2011 09:31 PM
Toluene	ND		0.0010	mg/L	1	8/4/2011 09:31 PM
Ethylbenzene	ND		0.0010	mg/L	1	8/4/2011 09:31 PM
Xylenes, Total	ND		0.0030	mg/L	1	8/4/2011 09:31 PM
Surr: 4-Bromofluorobenzene	96.1		77-129	%REC	1	8/4/2011 09:31 PM
Surr: Trifluorotoluene	127		75-130	%REC	1	8/4/2011 09:31 PM
ANIONS - EPA 300.0 (1993)			E300			Analyst: TDW
Nitrate/Nitrite (as N)	3.81		0.100	mg/L	1	7/28/2011 04:13 PM
Surr: Selenate (surr)	91.7		85-115	%REC	1	7/28/2011 04:13 PM
AMMONIA AS N			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	1.52		0.125	mg/L	5	8/8/2011 09:00 AM
OIL AND GREASE			E1664			Analyst: JKP
Oil and Grease	3.16		2.00	mg/L	1	8/8/2011 11:20 AM
SULFIDE			SM4500 S2-F			Analyst: JKP
Sulfide	ND		1.00	mg/L	1	7/29/2011 05:15 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	3,190		10.0	mg/L	1	8/1/2011 04:30 PM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: JBA
Nitrogen, Total Kjeldahl	3.27		1.00	mg/L	1	8/8/2011 03:00 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 10-Aug-11

Client: Navajo Refining Company
Work Order: 1107906
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R114182** Instrument ID **BTEX1** Method: **SW8021B**

MBLK	Sample ID: BBLKW1-110804-R114182				Units: µg/L		Analysis Date: 8/4/2011 10:17 AM			
Client ID:	Run ID: BTEX1_110804A				SeqNo: 2484988		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	29.89	1.0	30	0	99.6	77-129	0			
Surr: Trifluorotoluene	31.89	1.0	30	0	106	75-130	0			

LCS	Sample ID: BLCSW1-110804-R114182					Units: µg/L	Analysis Date: 8/4/2011 09:59 AM			
Client ID:	Run ID: BTEX1_110804A				SeqNo: 2484986		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.09	1.0	20	0	100	77-126	0			
Toluene	20.23	1.0	20	0	101	80-124	0			
Ethylbenzene	20.69	1.0	20	0	103	76-125	0			
Xylenes, Total	59.61	3.0	60	0	99.4	79-124	0			
Surr: 4-Bromofluorobenzene	31.49	1.0	30	0	105	77-129	0			
Surr: Trifluorotoluene	31.92	1.0	30	0	106	75-130	0			

MS	Sample ID: 1108058-01AMS				Units: µg/L		Analysis Date: 8/4/2011 06:31 PM			
Client ID:	Run ID: BTEX1_110804A				SeqNo: 2484997		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.83	1.0	20	0	109	77-126	0			
Toluene	21.21	1.0	20	0	106	80-124	0			
Ethylbenzene	21.83	1.0	20	0	109	76-125	0			
Xylenes, Total	61.82	3.0	60	0	103	79-124	0			
Surr: 4-Bromofluorobenzene	31.11	1.0	30	0	104	77-129	0			
Surr: Trifluorotoluene	36.73	1.0	30	0	122	75-130	0			

MSD	Sample ID: 1108058-01AMSD					Units: µg/L		Analysis Date: 8/4/2011 06:49 PM		
Client ID:	Run ID: BTEX1_110804A				SeqNo: 2484999		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.41	1.0	20	0	112	77-126	21.83	2.63	20	
Toluene	21.75	1.0	20	0	109	80-124	21.21	2.53	20	
Ethylbenzene	22.42	1.0	20	0	112	76-125	21.83	2.64	20	
Xylenes, Total	63.94	3.0	60	0	107	79-124	61.82	3.38	20	
Surr: 4-Bromofluorobenzene	33.52	1.0	30	0	112	77-129	31.11	7.46	20	
Surr: Trifluorotoluene	37.76	1.0	30	0	126	75-130	36.73	2.78	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1107906
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R114182** Instrument ID **BTEX1** Method: **SW8021B**

The following samples were analyzed in this batch:

1107906-01A

Client: Navajo Refining Company
 Work Order: 1107906
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R113723 Instrument ID ICS2100 Method: E300

MBLK Sample ID: WBLKW3-072811-R113723 Units: mg/L Analysis Date: 7/28/2011 11:51 AM

Client ID: Run ID: ICS2100_110728A SeqNo: 2475576 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.10								
Surr: Selenate (surr)	4.622	0.10	5	0	92.4	85-115	0			

LCS Sample ID: WLCSW3-072811-R113723 Units: mg/L Analysis Date: 7/28/2011 12:05 PM

Client ID: Run ID: ICS2100_110728A SeqNo: 2475577 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.147	0.10	8	0	102	90-110	0			
Surr: Selenate (surr)	4.429	0.10	5	0	88.6	85-115	0			

LCSD Sample ID: WLCSDW3-072811-R113723 Units: mg/L Analysis Date: 7/28/2011 12:20 PM

Client ID: Run ID: ICS2100_110728A SeqNo: 2475578 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.182	0.10	8	0	102	90-110	8.147	0.429	20	
Surr: Selenate (surr)	4.45	0.10	5	0	89	85-115	4.429	0.473	20	

MS Sample ID: 1107708-04BMSZ Units: mg/L Analysis Date: 7/28/2011 01:03 PM

Client ID: Run ID: ICS2100_110728A SeqNo: 2475582 Prep Date: DF: 20

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	69.53	2.0	80	0	86.9	80-120	0			H
Surr: Selenate (surr)	89.62	2.0	100	0	89.6	85-115	0			

MSD Sample ID: 1107708-04BMSDZ Units: mg/L Analysis Date: 7/28/2011 02:16 PM

Client ID: Run ID: ICS2100_110728A SeqNo: 2475601 Prep Date: DF: 20

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	70.14	2.0	80	0	87.7	80-120	69.53	0.876	20	H
Surr: Selenate (surr)	89.95	2.0	100	0	90	85-115	89.62	0.372	20	

MSD Sample ID: 1107907-01BMSD Units: mg/L Analysis Date: 7/28/2011 07:08 PM

Client ID: Run ID: ICS2100_110728A SeqNo: 2476894 Prep Date: DF: 40

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	391.6	4.0	160	232.9	99.2	80-120	383	2.24	20	
Surr: Selenate (surr)	184.6	4.0	200	0	92.3	85-115	178.9	3.13	20	

The following samples were analyzed in this batch: 1107906-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1107906
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R113832 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: MB-072911-R113832 Units: mg/L Analysis Date: 7/29/2011 05:15 PM

Client ID: Run ID: WETCHEM_110729E SeqNo: 2477770 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: LCS-072911-R113832 Units: mg/L Analysis Date: 7/29/2011 05:15 PM

Client ID: Run ID: WETCHEM_110729E SeqNo: 2477771 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22	1.0	25	0	88	80-120	0			

MS Sample ID: 1107905-01DMS Units: mg/L Analysis Date: 7/29/2011 05:15 PM

Client ID: Run ID: WETCHEM_110729E SeqNo: 2477777 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	37	1.0	25	16.8	80.8	80-120	0			

The following samples were analyzed in this batch:

1107906-01D

Client: Navajo Refining Company
 Work Order: 1107906
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R113938 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: WBLK-080111-R113938 Units: mg/L Analysis Date: 8/1/2011 04:30 PM

Client ID: Run ID: BALANCE1_110801C SeqNo: 2480910 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: WLCS-080111-R113938 Units: mg/L Analysis Date: 8/1/2011 04:30 PM

Client ID: Run ID: BALANCE1_110801C SeqNo: 2480911 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1030	10	1000		0	103	85-115	0		

DUP Sample ID: 1107862-01GDUP Units: mg/L Analysis Date: 8/1/2011 04:30 PM

Client ID: Run ID: BALANCE1_110801C SeqNo: 2480890 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	3056	10	0		0	0	0-0	3032	0.788	20

DUP Sample ID: 1107952-02FDUP Units: mg/L Analysis Date: 8/1/2011 04:30 PM

Client ID: Run ID: BALANCE1_110801C SeqNo: 2480907 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	4736	10	0		0	0	0-0	4968	4.78	20

The following samples were analyzed in this batch:

1107906-01C

Client: Navajo Refining Company
 Work Order: 1107906
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R114302 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-080811-R114302 Units: mg/L Analysis Date: 8/8/2011 09:00 AM

Client ID: Run ID: UV-2450_110808C SeqNo: 2487532 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-080811-R114302 Units: mg/L Analysis Date: 8/8/2011 09:00 AM

Client ID: Run ID: UV-2450_110808C SeqNo: 2487533 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.189	0.025	0.2	0	94.5	80-120	0			

LCSD Sample ID: WLCSDW-080811-R114302 Units: mg/L Analysis Date: 8/8/2011 09:00 AM

Client ID: Run ID: UV-2450_110808C SeqNo: 2487551 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.187	0.025	0.2	0	93.5	80-120	0.189	1.06	20	

MS Sample ID: 1107905-01BMS Units: mg/L Analysis Date: 8/8/2011 09:00 AM

Client ID: Run ID: UV-2450_110808C SeqNo: 2487550 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.647	0.025	0.2	0.429	109	80-120	0			

The following samples were analyzed in this batch:

1107906-01B

Client: Navajo Refining Company
 Work Order: 1107906
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R114309 Instrument ID WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW-080711-R114309 Units: mg/L Analysis Date: 8/8/2011 03:00 PM

Client ID: Run ID: WETCHEM_110808E SeqNo: 2487686 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLCSW-080711-R114309 Units: mg/L Analysis Date: 8/8/2011 03:00 PM

Client ID: Run ID: WETCHEM_110808E SeqNo: 2487687 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	17.92	1.0	20	0	89.6	80-120	0			

LCSD Sample ID: WLCSDW-080711-R114309 Units: mg/L Analysis Date: 8/8/2011 03:00 PM

Client ID: Run ID: WETCHEM_110808E SeqNo: 2487690 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	16.34	1.0	20	0	81.7	80-120	17.92	9.22	20	

MS Sample ID: 1108142-01FMS Units: mg/L Analysis Date: 8/8/2011 03:00 PM

Client ID: Run ID: WETCHEM_110808E SeqNo: 2487703 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	19.26	1.0	20	1.116	90.7	75-125	0			

MSD Sample ID: 1108142-01FMSD Units: mg/L Analysis Date: 8/8/2011 03:00 PM

Client ID: Run ID: WETCHEM_110808E SeqNo: 2487706 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	18.12	1.0	20	1.116	85	75-125	19.26	6.1	30	

DUP Sample ID: 1108142-01FDUP Units: mg/L Analysis Date: 8/8/2011 03:00 PM

Client ID: Run ID: WETCHEM_110808E SeqNo: 2487700 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	1.016	1.0	0	0	0	0-0	1.116	9.38	20	

The following samples were analyzed in this batch:

1107906-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1107906
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R114311 Instrument ID WetChem Method: E1664

MBLK Sample ID: MB-080811-R114311 Units: mg/L Analysis Date: 8/8/2011 11:20 AM

Client ID: Run ID: WETCHEM_110808F SeqNo: 2487715 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: LCS-080811-R114311 Units: mg/L Analysis Date: 8/8/2011 11:20 AM

Client ID: Run ID: WETCHEM_110808F SeqNo: 2487716 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	39.49	2.0	40	0	98.7	78-114	0			

MS Sample ID: 1107907-01FMS Units: mg/L Analysis Date: 8/8/2011 11:20 AM

Client ID: Run ID: WETCHEM_110808F SeqNo: 2487721 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	43.59	2.0	40	1.084	106	78-114	0			

The following samples were analyzed in this batch:

1107906-01E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 10-Aug-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1107906

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



ALS Environmental
10450 Standliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

COC ID: 25760

110/906

NAVAJO REFINING: Holly Energy Partners

Project: Lovington Lea Refining-Monthly



ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Navajo Lea Refining-Monthly
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Navajo Refining	Invoice Attn	Navajo Refining
Address	Navajo Refining	Address	Navajo Refining
City/State/Zip	Navajo Refining	City/State/Zip	Navajo Refining
Phone	Navajo Refining	Phone	Navajo Refining
Fax	Navajo Refining	Fax	Navajo Refining
e-Mail Address		e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste H ₂ O	7-27-11	9:20AM	W	Y	7	✓		✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Kevin Crockett</i>		Shipment Method		Required Turnaround Time: (Check Box) ☐ 24 Hrs. ☐ 48 Hrs. ☐ 72 Hrs. ☐ 1 Week		Results Due Date:	
Relinquished by: <i>Kevin Crockett</i>	Date: 7-27-11	Time: 9:40AM	Received by: <i>[Signature]</i>		Notes: [Blank]		
Relinquished by:	Date:	Time:	Received by (Laboratory): 7-28-11 9:30		Cooler ID: 9633		QC Package: (Check One Box Below) ☐ Unopened ☐ Opened
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		Cooler Temp.: 34.2		☐ Unopened ☐ Opened
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035							

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 28-Jul-11 09:05

Work Order: 1107906

Received by: PMG

Checklist completed by Robert D. Harris
eSignature

28-Jul-11
Date

Reviewed by: Chris Bryson
eSignature

29-Jul-11
Date

Matrices: waters

Carrier name: FedEx

Not Present ☐

Not Present ☐

Not Present ☒

No ☐No ☐No ☐No ☐No ☐No ☐No ☐

No ☐

002

9639, 3442

No ☐ No VOA vials submitted ☐

No ☐ N/A ☐

No ☐ N/A ☒

Login Notes: Trip blank not on COC; logged in without analysis.

Person Contacted:

Regarding:

1107106

 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887 <i>9639</i>	CUSTOMER		SEAL Time: <i>9:40 AM</i>	Seal Broken By: <i>[Signature]</i> Date: <i>7-29-11</i>
	Date: <i>7-29-11</i>	Name: <i>[Signature]</i>		
	Company: <i>[Signature]</i>			

 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887 <i>[Signature]</i>	CUSTODY SEAL		Seal Broken By: <i>[Signature]</i> Date: <i>7-29-11</i>
	Date: <i>7-11</i>	Time: <i>9:40 AM</i>	
	Name: <i>[Signature]</i>		
	Company: <i>[Signature]</i>		

ite _____ FedEx Tracking Number **865920938140**

nder's _____
ime _____ Phone _____

Company _____

Address _____
Dept./Floor/Suite/Room _____

y _____ State _____ ZIP _____

ur Internal Billing Reference _____



02-Sep-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1108827

Dear Darrell,

ALS Environmental received 2 samples on 26-Aug-2011 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 17.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in cursive script that reads "Chris Bryson".

Electronically approved by: Makenzie L. Henderson

Chris Bryson
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS 10450 Standliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

DO NOT REPRODUCE OR TRANSMIT THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF ALS ENVIRONMENTAL



www.alsglobal.com

RIGHT SOLUTIONS. RIGHT PARTNER.

ALS Environmental

Date: 02-Sep-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1108827

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1108827-01	City Waste H2O	Water		8/25/2011 09:15	8/26/2011 09:00	☐
1108827-02	Trip Blank	Water		8/25/2011	8/26/2011 09:00	☒

ALS Environmental

Date: 02-Sep-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1108827

Case Narrative

Batch R115324, BTEX : CCV %D was above the control limits for Toluene and xylenes. The associated sample results are Non Detect.

ALS Environmental

Date: 02-Sep-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Work Order: 1108827

Sample ID: City Waste H2O

Lab ID: 1108827-01

Collection Date: 8/25/2011 09:15 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: JFT
Benzene	ND		0.0010	mg/L	1	8/29/2011 02:58 PM
Toluene	ND		0.0010	mg/L	1	8/29/2011 02:58 PM
Ethylbenzene	ND		0.0010	mg/L	1	8/29/2011 02:58 PM
Xylenes, Total	ND		0.0030	mg/L	1	8/29/2011 02:58 PM
Surr: 4-Bromofluorobenzene	83.3		77-129	%REC	1	8/29/2011 02:58 PM
Surr: Trifluorotoluene	118		75-130	%REC	1	8/29/2011 02:58 PM
ANIONS - EPA 300.0 (1993)			E300			Analyst: JBA
Nitrate/Nitrite (as N)	3.16		0.100	mg/L	1	8/26/2011 02:50 PM
Surr: Selenate (surr)	101		85-115	%REC	1	8/26/2011 02:50 PM
AMMONIA AS N			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	2.33		0.125	mg/L	5	9/1/2011 01:00 PM
OIL AND GREASE			E1664			Analyst: JKP
Oil and Grease	4.20		2.00	mg/L	1	8/30/2011 03:25 PM
SULFIDE			SM4500 S2-F			Analyst: JKP
Sulfide	1.80		1.00	mg/L	1	8/31/2011 10:55 AM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	3,140		10.0	mg/L	1	8/31/2011 04:00 PM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: JBA
Nitrogen, Total Kjeldahl	7.22		1.00	mg/L	1	9/2/2011

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 02-Sep-11

Client: Navajo Refining Company
Work Order: 1108827
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R115324 Instrument ID BTEX3 Method: SW8021B

MBLK Sample ID: BBLKW1-110829-R115324 Units: µg/L Analysis Date: 8/29/2011 12:11 PM

Client ID: Run ID: BTEX3_110829A SeqNo: 2509160 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	26.1	1.0	30	0	87	77-129	0			
Surr: Trifluorotoluene	32.39	1.0	30	0	108	75-130	0			

LCS Sample ID: BLCSW1-110829-R115324 Units: µg/L Analysis Date: 8/29/2011 11:36 AM

Client ID: Run ID: BTEX3_110829A SeqNo: 2509158 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22	1.0	20	0	110	77-126	0			
Toluene	22.42	1.0	20	0	112	80-124	0			
Ethylbenzene	22.36	1.0	20	0	112	76-125	0			
Xylenes, Total	66.53	3.0	60	0	111	79-124	0			
Surr: 4-Bromofluorobenzene	26.22	1.0	30	0	87.4	77-129	0			
Surr: Trifluorotoluene	33.15	1.0	30	0	110	75-130	0			

LCSD Sample ID: BLCSDW1-110829-R115324 Units: µg/L Analysis Date: 8/29/2011 11:53 AM

Client ID: Run ID: BTEX3_110829A SeqNo: 2509159 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.41	1.0	20	0	107	77-126	22	2.72	20	
Toluene	21.96	1.0	20	0	110	80-124	22.42	2.07	20	
Ethylbenzene	21.86	1.0	20	0	109	76-125	22.36	2.25	20	
Xylenes, Total	65.51	3.0	60	0	109	79-124	66.53	1.54	20	
Surr: 4-Bromofluorobenzene	27.63	1.0	30	0	92.1	77-129	26.22	5.23	20	
Surr: Trifluorotoluene	34.98	1.0	30	0	117	75-130	33.15	5.39	20	

MS Sample ID: 1108786-01AMS Units: µg/L Analysis Date: 8/29/2011 01:02 PM

Client ID: Run ID: BTEX3_110829A SeqNo: 2509162 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.05	1.0	20	0	110	77-126	0			
Toluene	22.4	1.0	20	0	112	80-124	0			
Ethylbenzene	22.36	1.0	20	0	112	76-125	0			
Xylenes, Total	67.34	3.0	60	0	112	79-124	0			
Surr: 4-Bromofluorobenzene	27.48	1.0	30	0	91.6	77-129	0			
Surr: Trifluorotoluene	33.86	1.0	30	0	113	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1108827
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R115324 Instrument ID BTEX3 Method: SW8021B

MSD Sample ID: 1108786-01AMSD Units: µg/L Analysis Date: 8/29/2011 01:20 PM

Client ID: Run ID: BTEX3_110829A SeqNo: 2509163 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.08	1.0	20	0	105	77-126	22.05	4.51	20	
Toluene	21.65	1.0	20	0	108	80-124	22.4	3.39	20	
Ethylbenzene	21.91	1.0	20	0	110	76-125	22.36	2.06	20	
Xylenes, Total	64.48	3.0	60	0	107	79-124	67.34	4.34	20	
Surr: 4-Bromofluorobenzene	26.56	1.0	30	0	88.5	77-129	27.48	3.41	20	
Surr: Trifluorotoluene	32.81	1.0	30	0	109	75-130	33.86	3.15	20	

The following samples were analyzed in this batch:

1108827-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1108827
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R115387 Instrument ID ICS3K2 Method: E300

MBLK Sample ID: WBLKW2-082611-R115387 Units: mg/L Analysis Date: 8/26/2011 04:43 PM

Client ID: Run ID: ICS3K2_110826A SeqNo: 2509926 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.20								
Surr: Selenate (surr)	4.769	0.10	5	0	95.4	85-115	0			

LCS Sample ID: WLCSW2-082611-R115387 Units: mg/L Analysis Date: 8/26/2011 05:05 PM

Client ID: Run ID: ICS3K2_110826A SeqNo: 2509927 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.323	0.20	8	0	104	90-110	0			
Surr: Selenate (surr)	5.021	0.10	5	0	100	85-115	0			

LCSD Sample ID: WLCSW2-082611-R115387 Units: mg/L Analysis Date: 8/26/2011 05:27 PM

Client ID: Run ID: ICS3K2_110826A SeqNo: 2509928 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	8.343	0.20	8	0	104	90-110	8.323	0.24	20	
Surr: Selenate (surr)	5.195	0.10	5	0	104	85-115	5.021	3.41	20	

MS Sample ID: 1108825-01AMS Units: mg/L Analysis Date: 8/26/2011 02:07 PM

Client ID: Run ID: ICS3K2_110826A SeqNo: 2509922 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	9.346	0.20	4	5.513	95.8	80-120	0			
Surr: Selenate (surr)	4.872	0.10	5	0	97.4	85-115	0			

MS Sample ID: 1108855-01CMS Units: mg/L Analysis Date: 8/26/2011 08:48 PM

Client ID: Run ID: ICS3K2_110826A SeqNo: 2509932 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	3.994	0.20	4	0	99.8	80-120	0			
Surr: Selenate (surr)	4.951	0.10	5	0	99	85-115	0			

MSD Sample ID: 1108825-01AMSD Units: mg/L Analysis Date: 8/26/2011 02:29 PM

Client ID: Run ID: ICS3K2_110826A SeqNo: 2509923 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	9.365	0.20	4	5.513	96.3	80-120	9.346	0.203	20	
Surr: Selenate (surr)	4.976	0.10	5	0	99.5	85-115	4.872	2.11	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1108827
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R115387 Instrument ID ICS3K2 Method: E300

MSD Sample ID: 1108855-01CMSD Units: mg/L Analysis Date: 8/26/2011 09:10 PM

Client ID: Run ID: ICS3K2_110826A SeqNo: 2509933 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	4.063	0.20	4	0	102	80-120	3.994	1.71	20	
Surr: Selenate (surr)	5.035	0.10	5	0	101	85-115	4.951	1.68	20	

The following samples were analyzed in this batch:

1108827-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1108827
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R115403** Instrument ID: **WetChem** Method: **E1664**

MBLK Sample ID: **MB-083011-R115403** Units: **mg/L** Analysis Date: **8/30/2011 03:25 PM**

Client ID: Run ID: **WETCHEM_110830I** SeqNo: **2510263** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: **LCS-083011-R115403** Units: **mg/L** Analysis Date: **8/30/2011 03:25 PM**

Client ID: Run ID: **WETCHEM_110830I** SeqNo: **2510264** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	36.84	2.0	40	0	92.1	78-114	0			

MS Sample ID: **1108795-05BMS** Units: **mg/L** Analysis Date: **8/30/2011 03:25 PM**

Client ID: Run ID: **WETCHEM_110830I** SeqNo: **2510275** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	43.29	2.0	40	0.353	107	78-114	0			

The following samples were analyzed in this batch:

1108827-01E

Client: Navajo Refining Company
Work Order: 1108827
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R115422** Instrument ID **WetChem** Method: **SM4500 S2-F**

MBLK Sample ID: **MB-083111-R115422** Units: **mg/L** Analysis Date: **8/31/2011 10:55 AM**

Client ID: Run ID: **WETCHEM_110831B** SeqNo: **2511077** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: **LCS-083111-R115422** Units: **mg/L** Analysis Date: **8/31/2011 10:55 AM**

Client ID: Run ID: **WETCHEM_110831B** SeqNo: **2511078** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.8	1.0	25	0	91.2	80-120	0			

LCSD Sample ID: **LCSD-083111-R115422** Units: **mg/L** Analysis Date: **8/31/2011 10:55 AM**

Client ID: Run ID: **WETCHEM_110831B** SeqNo: **2511081** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	23	1.0	25	0	92	80-120	22.8	0.873	20	

The following samples were analyzed in this batch:

1108827-01C

Client: Navajo Refining Company
 Work Order: 1108827
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R115529 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R115529 Units: mg/L Analysis Date: 8/31/2011 04:00 PM

Client ID: Run ID: BALANCE1_110831E SeqNo: 2513231 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: LCS-R115529 Units: mg/L Analysis Date: 8/31/2011 04:00 PM

Client ID: Run ID: BALANCE1_110831E SeqNo: 2513232 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1008	10	1000	0	101	85-115	0			

DUP Sample ID: 1108827-01DDUP Units: mg/L Analysis Date: 8/31/2011 04:00 PM

Client ID: City Waste H2O Run ID: BALANCE1_110831E SeqNo: 2513214 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	3194	10	0	0	0	0-0	3138	1.77	20	

DUP Sample ID: 1108935-01ADUP Units: mg/L Analysis Date: 8/31/2011 04:00 PM

Client ID: Run ID: BALANCE1_110831E SeqNo: 2513222 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1276	10	0	0	0	0-0	1188	7.14	20	

The following samples were analyzed in this batch:

1108827-01D

Client: Navajo Refining Company
 Work Order: 1108827
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R115578 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-090111-R115578 Units: mg/L Analysis Date: 9/1/2011 01:00 PM

Client ID: Run ID: UV-2450_110901D SeqNo: 2514290 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-090111-R115578 Units: mg/L Analysis Date: 9/1/2011 01:00 PM

Client ID: Run ID: UV-2450_110901D SeqNo: 2514291 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.188	0.025	0.2	0	94	80-120	0			

LCSD Sample ID: WLCSDW-090111-R115578 Units: mg/L Analysis Date: 9/1/2011 01:00 PM

Client ID: Run ID: UV-2450_110901D SeqNo: 2514295 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.189	0.025	0.2	0	94.5	80-120	0.188	0.531	20	

MS Sample ID: 1108915-01BMS Units: mg/L Analysis Date: 9/1/2011 01:00 PM

Client ID: Run ID: UV-2450_110901D SeqNo: 2514294 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.67	0.025	0.2	0.47	100	80-120	0			

The following samples were analyzed in this batch:

1108827-01B

Client: Navajo Refining Company
 Work Order: 1108827
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R115586 Instrument ID: WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW-090111-R115586 Units: mg/L Analysis Date: 9/2/2011

Client ID: Run ID: WETCHEM_110902E SeqNo: 2514402 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLCSW-90111-R115586 Units: mg/L Analysis Date: 9/2/2011

Client ID: Run ID: WETCHEM_110902E SeqNo: 2514403 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	17.88	1.0	20	0	89.4	80-120	0			

LCSD Sample ID: WLCSDW-090111-R115586 Units: mg/L Analysis Date: 9/2/2011

Client ID: Run ID: WETCHEM_110902E SeqNo: 2514404 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	17.46	1.0	20	0	87.3	80-120	17.88	2.38	20	

MS Sample ID: 1108827-01BMS Units: mg/L Analysis Date: 9/2/2011

Client ID: City Waste H2O Run ID: WETCHEM_110902E SeqNo: 2514407 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	24.8	1.0	20	7.22	87.9	75-125	0			

DUP Sample ID: 1108827-01BDUP Units: mg/L Analysis Date: 9/2/2011

Client ID: City Waste H2O Run ID: WETCHEM_110902E SeqNo: 2514406 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	6.52	1.0	0	0	0	0-0	7.22	10.2	20	

The following samples were analyzed in this batch: 1108827-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 02-Sep-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1108827

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

COC ID: 3530

1108827

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly



ALS Project Manager

Customer Information		Project Information	
Purchase Order		Project Name	Lovington Lea Refining-Monthly
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Danell Moore	Invoice Attn	Danell Moore
Address	501 East Main	Address	501 East Main
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(505) 748-3311	Phone	(505) 748-3311
Fax	(505) 748-3421	Fax	(505) 748-3421
e-Mail Address		e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste H ₂ O	8-25-11	9:15AM	W	Y	8	✓		✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Kevin Crockett</i>		Shipment Method		Required Turnaround Time: (Check Box) ☐ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☐ 96 HOURS		Results Due Date:	
Relinquished by: <i>Kevin Crockett</i>		Date: 8-25-11	Time: 9:20AM	Received by: <i>RN ACS</i>		Notes: 10 Day TAT	
Relinquished by:		Date: 8/26/11	Time: 0900	Received by (Laboratory):		Cooler ID	Cooler Temp.
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		QC Package: (Check One Box Below) ☐ Cool 150°C ☐ Cool 150°C ☐ Cool 150°C ☐ Cool 150°C	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035							

- Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2010 by ALS Environmental.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 26-Aug-11 09:00

Work Order: 1108827

Received by: RDN

Checklist completed by Fares M. Ziga
eSignature

26-Aug-11
Date

Reviewed by: Chris Bryson
eSignature

26-Aug-11
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>2.1</u>		<u>002</u>
Cooler(s)/Kit(s):	<u>1893</u>		
Water - VOA vials have zero headspace?	Yes ☐	No ☒	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:	<u></u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

**ALS Environmental**

10450 Standliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 3-23-11 Time: 9:40 AM
Name: Russell C. Smith
Company: ALS Environmental

Seal Broken By: RTDate: 3/23/11

• For pricing, service and other information, visit www.fedex.com

ite FedEx Tracking Number 865910938161

nder's
ime Phone

Company

Address

Dept./Room/Suite/Room

y State ZIP

ur Internal Billing Reference



11-Oct-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1109957

Dear Darrell,

ALS Environmental received 2 samples on 30-Sep-2011 09:10 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 16.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS: 10450 Standish Rd. Suite 210 Houston, Texas 77036-4238 | PHONE: (713) 450-6265 | FAX: (281) 530-8817

CORPORATE / REGIONAL SALES OFFICES: (713) 450-6265 | (713) 450-6265 | (713) 450-6265

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1109957

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1109957-01	City Waste Water	Water		9/29/2011 09:00	9/30/2011	☐
1109957-01	City Waste Water	Water		9/29/2011 09:00	9/30/2011 09:10	☐
1109957-02	Trip Blank	Water		9/30/2011	9/30/2011	☒

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1109957

Case Narrative

No Exceptions.

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Sample ID: City Waste Water

Collection Date: 9/29/2011 09:00 AM

Work Order: 1109957

Lab ID: 1109957-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: JFT
Benzene	ND		0.0010	mg/L	1	10/3/2011 07:01 PM
Toluene	ND		0.0010	mg/L	1	10/3/2011 07:01 PM
Ethylbenzene	ND		0.0010	mg/L	1	10/3/2011 07:01 PM
Xylenes, Total	ND		0.0030	mg/L	1	10/3/2011 07:01 PM
Surr: 4-Bromofluorobenzene	109		77-129	%REC	1	10/3/2011 07:01 PM
Surr: Trifluorotoluene	111		75-130	%REC	1	10/3/2011 07:01 PM
ANIONS - EPA 300.0 (1993)			E300			Analyst: RPM
Nitrogen, Nitrate (As N)	3.58		0.100	mg/L	1	9/30/2011 07:20 PM
Nitrogen, Nitrite (As N)	2.90		0.100	mg/L	1	9/30/2011 07:20 PM
Surr: Selenate (surr)	103		85-115	%REC	1	9/30/2011 07:20 PM
AMMONIA AS N			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	1.18		0.0500	mg/L	2	10/6/2011 03:00 PM
OIL AND GREASE			E1664			Analyst: CMC
Oil and Grease	ND		2.00	mg/L	1	10/5/2011 12:00 PM
SULFIDE			SM4500 S2-F			Analyst: JKP
Sulfide	ND		1.00	mg/L	1	10/3/2011 11:20 AM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	2,550		10.0	mg/L	1	10/5/2011 05:00 PM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: RPM
Nitrogen, Total Kjeldahl	7.10		1.00	mg/L	1	10/6/2011 09:30 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company

Work Order: 1109957

Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R117035 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW1-111003-R117035 Units: µg/L Analysis Date: 10/3/2011 10:57 AM

Client ID: Run ID: BTEX1_111003A SeqNo: 2544908 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	32.66	1.0	30	0	109	77-129	0			
Surr: Trifluorotoluene	29.19	1.0	30	0	97.3	75-130	0			

MBLK Sample ID: BBLKW1-111003-R117035 Units: µg/L Analysis Date: 10/3/2011 11:14 AM

Client ID: Run ID: BTEX1_111003A SeqNo: 2544911 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	32.93	1.0	30	0	110	77-129	0			
Surr: Trifluorotoluene	29.17	1.0	30	0	97.2	75-130	0			

LCS Sample ID: BLCSW1-111003-R117035 Units: µg/L Analysis Date: 10/3/2011 10:20 AM

Client ID: Run ID: BTEX1_111003A SeqNo: 2544905 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.04	1.0	20	0	110	77-126	0			
Toluene	18.97	1.0	20	0	94.9	80-124	0			
Ethylbenzene	19.29	1.0	20	0	96.5	76-125	0			
Xylenes, Total	57.67	3.0	60	0	96.1	79-124	0			
Surr: 4-Bromofluorobenzene	33.6	1.0	30	0	112	77-129	0			
Surr: Trifluorotoluene	29.57	1.0	30	0	98.6	75-130	0			

LCSD Sample ID: BLCSW1-111003-R117035 Units: µg/L Analysis Date: 10/3/2011 10:38 AM

Client ID: Run ID: BTEX1_111003A SeqNo: 2544906 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.06	1.0	20	0	105	77-126	22.04	4.51	20	
Toluene	18.15	1.0	20	0	90.8	80-124	18.97	4.41	20	
Ethylbenzene	18.53	1.0	20	0	92.6	76-125	19.29	4.06	20	
Xylenes, Total	55.42	3.0	60	0	92.4	79-124	57.67	3.97	20	
Surr: 4-Bromofluorobenzene	33.66	1.0	30	0	112	77-129	33.6	0.188	20	
Surr: Trifluorotoluene	29.53	1.0	30	0	98.4	75-130	29.57	0.136	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1109957
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R117035 Instrument ID BTEX1 Method: SW8021B

MS		Sample ID: 1109953-04AMS				Units: µg/L		Analysis Date: 10/3/2011 11:49 AM		
Client ID:		Run ID: BTEX1_111003A				SeqNo: 2544914		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.87	1.0	20	0	109	77-126	0			
Toluene	18.8	1.0	20	0	94	80-124	0			
Ethylbenzene	19.03	1.0	20	0	95.2	76-125	0			
Xylenes, Total	57.07	3.0	60	0	95.1	79-124	0			
Surr: 4-Bromofluorobenzene	34.16	1.0	30	0	114	77-129	0			
Surr: Trifluorotoluene	29.9	1.0	30	0	99.7	75-130	0			

MSD		Sample ID: 1109953-04AMSD				Units: µg/L		Analysis Date: 10/3/2011 12:06 PM		
Client ID:		Run ID: BTEX1_111003A				SeqNo: 2544915		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.85	1.0	20	0	104	77-126	21.87	4.78	20	
Toluene	17.92	1.0	20	0	89.6	80-124	18.8	4.79	20	
Ethylbenzene	18.12	1.0	20	0	90.6	76-125	19.03	4.9	20	
Xylenes, Total	54.31	3.0	60	0	90.5	79-124	57.07	4.95	20	
Surr: 4-Bromofluorobenzene	33.74	1.0	30	0	112	77-129	34.16	1.23	20	
Surr: Trifluorotoluene	29.59	1.0	30	0	98.6	75-130	29.9	1.03	20	

The following samples were analyzed in this batch:

1109957-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1109957
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R117063 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKW1-093011-R117063 Units: mg/L Analysis Date: 9/30/2011 10:15 AM

Client ID: Run ID: ICS3000_110930A SeqNo: 2545718 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Surr: Selenate (surr)	4.856	0.10	5	0	97.1	85-115	0			

LCS Sample ID: WLCSW1-093011-R117063 Units: mg/L Analysis Date: 9/30/2011 10:36 AM

Client ID: Run ID: ICS3000_110930A SeqNo: 2545720 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	4.098	0.10	4	0	102	90-110	0			
Nitrogen, Nitrite (As N)	4.157	0.10	4	0	104	90-110	0			
Surr: Selenate (surr)	4.556	0.10	5	0	91.1	85-115	0			

LCSD Sample ID: WLCSDW1-093011-R117063 Units: mg/L Analysis Date: 9/30/2011 10:57 AM

Client ID: Run ID: ICS3000_110930A SeqNo: 2545721 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	4.101	0.10	4	0	103	90-110	4.098	0.0732	20	
Nitrogen, Nitrite (As N)	4.161	0.10	4	0	104	90-110	4.157	0.0962	20	
Surr: Selenate (surr)	4.565	0.10	5	0	91.3	85-115	4.556	0.197	20	

MS Sample ID: 1109955-01BMS Units: mg/L Analysis Date: 9/30/2011 08:02 PM

Client ID: Run ID: ICS3000_110930A SeqNo: 2545738 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	19.63	0.50	10	8.921	107	80-120	0			
Nitrogen, Nitrite (As N)	10.93	0.50	10	0	109	80-120	0			
Surr: Selenate (surr)	25.55	0.50	25	0	102	85-115	0			

MSD Sample ID: 1109955-01BMSD Units: mg/L Analysis Date: 9/30/2011 08:24 PM

Client ID: Run ID: ICS3000_110930A SeqNo: 2545739 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	19.61	0.50	10	8.921	107	80-120	19.63	0.107	20	
Nitrogen, Nitrite (As N)	10.93	0.50	10	0	109	80-120	10.93	0.0275	20	
Surr: Selenate (surr)	25.59	0.50	25	0	102	85-115	25.55	0.18	20	

The following samples were analyzed in this batch:

1109957-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1109957
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R117070 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: WBLKW1-100311-R117070 Units: mg/L Analysis Date: 10/3/2011 11:20 AM

Client ID: Run ID: WETCHEM_111003M SeqNo: 2545897 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: WLCSW1-100311-R117070 Units: mg/L Analysis Date: 10/3/2011 11:20 AM

Client ID: Run ID: WETCHEM_111003M SeqNo: 2545898 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20.88	1.0	25	0	83.5	80-120	0			

LCSD Sample ID: WLCSDW-100311-R117070 Units: mg/L Analysis Date: 10/3/2011 11:20 AM

Client ID: Run ID: WETCHEM_111003M SeqNo: 2545916 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.28	1.0	25	0	85.1	80-120	20.88	1.9	20	

DUP Sample ID: 1109956-01BDUP Units: mg/L Analysis Date: 10/3/2011 11:20 AM

Client ID: Run ID: WETCHEM_111003M SeqNo: 2545918 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20.88	1.0	0	0	0	0-0	20.68	0.962	20	

The following samples were analyzed in this batch: 1109957-01B

Client: Navajo Refining Company
Work Order: 1109957
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R117182 Instrument ID WetChem Method: E1664

MBLK Sample ID: MBLKW1-100511-R117182 Units: mg/L Analysis Date: 10/5/2011 12:00 PM

Client ID: Run ID: WETCHEM_111005J SeqNo: 2548315 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: WLCSW1-100511-R117182 Units: mg/L Analysis Date: 10/5/2011 12:00 PM

Client ID: Run ID: WETCHEM_111005J SeqNo: 2548316 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	36.43	2.0	40	0	91.1	78-114	0			

MS Sample ID: 1110071-01DMS Units: mg/L Analysis Date: 10/5/2011 12:00 PM

Client ID: Run ID: WETCHEM_111005J SeqNo: 2548337 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	42.69	2.0	40	0.476	106	78-114	0			

The following samples were analyzed in this batch:

1109957-01E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1109957
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: **R117232** Instrument ID: **WetChem** Method: **M4500 NH3 D**

MBLK Sample ID: **WBLKW1-100611-R117232** Units: **mg/L** Analysis Date: **10/6/2011 09:30 AM**

Client ID: Run ID: **WETCHEM_111006C** SeqNo: **2549734** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: **WLCSW1-100611-R117232** Units: **mg/L** Analysis Date: **10/6/2011 09:30 AM**

Client ID: Run ID: **WETCHEM_111006C** SeqNo: **2549735** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.4	1.0	20	0	102	80-120	0			

MS Sample ID: **1109957-01DMS** Units: **mg/L** Analysis Date: **10/6/2011 09:30 AM**

Client ID: **City Waste Water** Run ID: **WETCHEM_111006C** SeqNo: **2549745** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	26.2	1.0	20	7.1	95.5	75-125	0			

DUP Sample ID: **1109957-01DDUP** Units: **mg/L** Analysis Date: **10/6/2011 09:30 AM**

Client ID: **City Waste Water** Run ID: **WETCHEM_111006C** SeqNo: **2549744** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	7.18	1.0	0	0	0	0-0	7.1	1.12	20	

The following samples were analyzed in this batch: 1109957-01D

Client: Navajo Refining Company
 Work Order: 1109957
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R117245 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R117245 Units: mg/L Analysis Date: 10/5/2011 05:00 PM

Client ID: Run ID: BALANCE1_111005G SeqNo: 2550056 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: LCS-R117245 Units: mg/L Analysis Date: 10/5/2011 05:00 PM

Client ID: Run ID: BALANCE1_111005G SeqNo: 2550058 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	910	10	1000	0	91	85-115	0			

DUP Sample ID: 1109969-01BDUP Units: mg/L Analysis Date: 10/5/2011 05:00 PM

Client ID: Run ID: BALANCE1_111005G SeqNo: 2550039 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	432	10	0	0	0	0-0	434	0.462	20	

The following samples were analyzed in this batch:

1109957-01C

Client: Navajo Refining Company
 Work Order: 1109957
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R117281 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK	Sample ID: WBLKW-100611-R117281				Units: mg/L		Analysis Date: 10/6/2011 03:00 PM			
Client ID:	Run ID: UV-2450_111006A				SeqNo: 2550869		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.008	0.025								J

LCS	Sample ID: WLCSW2-100611-R117281					Units: mg/L		Analysis Date: 10/6/2011 03:00 PM		
Client ID:	Run ID: UV-2450_111006A				SeqNo: 2550870		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.224	0.025	0.2	0	112	80-120	0			

MS	Sample ID: 1109817-01CMS				Units: mg/L		Analysis Date: 10/6/2011 03:00 PM			
Client ID:	Run ID: UV-2450_111006A				SeqNo: 2550880		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.458	0.025	0.2	0.241	108	80-120	0			

DUP	Sample ID: 1109817-01CDUP				Units: mg/L		Analysis Date: 10/6/2011 03:00 PM			
Client ID:	Run ID: UV-2450_111006A				SeqNo: 2550879		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.239	0.025	0	0	0	0-0	0.241	0.833	20	

The following samples were analyzed in this batch:

1109957-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1109957

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



Environmental

Chain of Custody Form

Page ____ of ____

COC ID: 47674

☐ Ctr
+1
☐ Evr
+1
☐ For
+1

1109957

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly



ALS Project Manager:

Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	Lovington Lea Refining-Monthly	A	BTEX
Work Order		Project Number		B	Total Metals (6020/7000) Select
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Anions (300) NO3, NO2
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore	D	Ammonia
Address	501 East Main	Address	501 East Main	E	TKM
				F	Oil & Grease
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	TDS
Phone	(505) 748-3311	Phone	(505) 748-3311	H	Sulfide
Fax	(505) 746-5421	Fax	(505) 746-5421	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste Water	9-29-11	9:00AM	W	Y	8	✓		✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
Kevin Crockett				☒ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour			
Relinquished by:	Date:	Time:	Received by:	Notes: 10 Day TAT.			
Kevin Crockett	9-29-11	9:20AM	Received by (Laboratory):	Cooler ID:	Cooler Temp:	QC Package: (Check One Box Below)	
			Checked by (Laboratory):			☒ Level II Std QC ☐ Level III Std QC/Raw Data ☐ Level IV SW846/CLP ☐ Other / EDD	
Logged by (Laboratory):	Date:	Time:				☐ TRRP Checklist ☐ TRRP Level IV	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035							

ote: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 30-Sep-11 09:10

Work Order: 1109957

Received by: RNG

Checklist completed by Raymond N. Gamboa
eSignature

30-Sep-11
Date

Reviewed by: Nicole Brown
eSignature

01-Oct-11
Date

Matrices: Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>2.7c</u>	<u>002</u>	
Cooler(s)/Kit(s):	<u>3875</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:	<u></u>		

Login Notes: Trip blank not on COC--logged in without analysis.

=====

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:

ALS Laboratory Group
 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

Date: 9/29/11
 Name: KATHY TRUETT
 Company: NAVAJO REFINING CO (LEA)

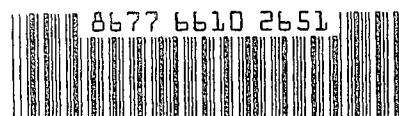
CUSTODY SEAL

Time: 9:30 Am
 Date: 9/29/11
 Seal Broken By: [Signature]
 Date: 9/30/11

141

100

FedEx Express
 US Airbill



FedEx
 Express

MPS Label

8677 6610 2651 8677 6610 2651

SDA21

FedEx Tracking Number for Customer Form ID No. 0260

1 From Please print and press hard
 Date: 9/29/11 Sender's FedEx Account Number: 1129-9018-6
 Sender's Name: KATHY TRUETT Phone: (575) 396-5821
 Company: NAVAJO REFINING CO (LEA)
 Address: 7406 S MAIN ST
 City: LOVINGTON State: NM ZIP: 89260

2 Your Internal Billing Reference
 First 24 characters will appear on invoice.

3 To
 Recipient's Name: ALS
 Company: ALS
 Address: 10450 STANDCLIFF RD STE 210
 City: Houston State: TX ZIP: 77099-4338
 Phone: 281 530-5656



Ship and track packages at fedex.com
 Simplify your shipping. Manage your account. Access all the tools you need.

4a Express Package Service

☒ FedEx Priority Overnight Next business morning. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Standard Overnight Next business afternoon. * Saturday Delivery NOT available.
☐ FedEx First Overnight Earliest next business morning delivery to select locations. * Saturday Delivery NOT available.
☐ FedEx 2Day Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx Express Saver Third business day. * Saturday Delivery NOT available.
 * To most locations.

4b Express Freight Service

☐ FedEx 1Day Freight* Next business day. * Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx 2Day Freight Second business day. * Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
☐ FedEx 3Day Freight Third business day. * Saturday Delivery NOT available.
 * To most locations.

5 Packaging

☐ FedEx Envelope* ☐ FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sundry Pak. ☐ FedEx Box ☐ FedEx Tube ☒ Other
 * Declared value limit \$500

6 Special Handling

☐ SATURDAY Delivery NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
☐ HOLD Weekday at FedEx Location NOT Available for FedEx First Overnight.
☐ HOLD Saturday at FedEx Location Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.
 Does this shipment contain dangerous goods?
☒ No ☐ Yes As per attached Shipper's Declaration ☐ Yes Shipper's Declaration not required ☐ Dry Ice Dry Ice, 9 UN 1845 ☐ Cargo Aircraft Only

7 Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below.
☐ Sender Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check
 FedEx Acct. No. Credit Card No. 2470-7613-1
 Total Packages: 2 Total Weight: 5.00 Total Declared Value: \$ 0.00

*Our liability is limited to \$100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

☐ No Signature Required Packages may be left without obtaining a signature for delivery.
☐ Direct Signature Someone at recipient's address may sign for delivery. *For signature.
☐ Indirect Signature If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *For signature.

PULL AND RETAIN THIS COPY BEFORE AFFIXING TO THE PACKAGE. NO PUNCH NEEDED.

fedex.com 1800.GoFedEx 1800.463.3339

11/11/11 11:49:57



08-Nov-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1111063

Dear Darrell,

ALS Environmental received 2 samples on 02-Nov-2011 10:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 15.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS: 10450 North Fwy Suite 210 Houston, Texas 77036-4219 | PHONE (281) 530-5555 | FAX (281) 530-5287
www.alsglobal.com | 10000 North Fwy Suite 210 Houston, Texas 77036-4219

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

Date: 08-Nov-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1111063

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1111063-01	City Water	Water		10/31/2011 09:15	11/2/2011 10:00	☐
1111063-02	Trip Blank 102011-13	Water		10/31/2011	11/2/2011 10:00	☒

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1111063

Case Narrative

Anions, Sample City Water : Analytical results are flagged with an H qualifier for Nitrogen, Nitrate (As N) and Nitrogen, Nitrite (As N).

Batch R118714, Anions, Sample 1111057-01 : MS/MSD is for an unrelated sample.

ALS Environmental

Date: 08-Nov-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Sample ID: City Water

Collection Date: 10/31/2011 09:15 AM

Work Order: 1111063

Lab ID: 1111063-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: JFT
Benzene	ND		0.0010	mg/L	1	11/4/2011 01:59 PM
Toluene	ND		0.0010	mg/L	1	11/4/2011 01:59 PM
Ethylbenzene	ND		0.0010	mg/L	1	11/4/2011 01:59 PM
Xylenes, Total	ND		0.0030	mg/L	1	11/4/2011 01:59 PM
Surr: 4-Bromofluorobenzene	122		77-129	%REC	1	11/4/2011 01:59 PM
Surr: Trifluorotoluene	108		75-130	%REC	1	11/4/2011 01:59 PM
ANIONS - EPA 300.0 (1993)			E300			Analyst: JKP
Nitrogen, Nitrate (As N)	1.74	H	0.100	mg/L	1	11/2/2011 05:29 PM
Nitrogen, Nitrite (As N)	3.13	H	0.100	mg/L	1	11/2/2011 05:29 PM
Surr: Selenate (surr)	113		85-115	%REC	1	11/2/2011 05:29 PM
AMMONIA AS N			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	1.78		0.0500	mg/L	2	11/8/2011 10:00 AM
OIL AND GREASE			E1664			Analyst: CMC
Oil and Grease	3.45		2.00	mg/L	1	11/3/2011 02:00 PM
SULFIDE			SM4500 S2-F			Analyst: JKP
Sulfide	ND		1.00	mg/L	1	11/6/2011 11:04 AM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	3,990		10.0	mg/L	1	11/3/2011 04:00 PM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: RPM
Nitrogen, Total Kjeldahl	12.6		1.00	mg/L	1	11/4/2011 10:00 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 08-Nov-11

Client: Navajo Refining Company
Work Order: 1111063
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R118768 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW1-110411-R118768 Units: µg/L Analysis Date: 11/4/2011 10:08 AM

Client ID: Run ID: BTEX1_111104A SeqNo: 2585890 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	36.34	1.0	30	0	121	77-129	0			
Surr: Trifluorotoluene	26.99	1.0	30	0	90	75-130	0			

LCS Sample ID: BLCSW1-110411-R118768 Units: µg/L Analysis Date: 11/4/2011 11:18 AM

Client ID: Run ID: BTEX1_111104A SeqNo: 2585892 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.14	1.0	20	0	106	77-126	0			
Toluene	22.53	1.0	20	0	113	80-124	0			
Ethylbenzene	23.11	1.0	20	0	116	76-125	0			
Xylenes, Total	69.08	3.0	60	0	115	79-124	0			
Surr: 4-Bromofluorobenzene	38.06	1.0	30	0	127	77-129	0			
Surr: Trifluorotoluene	28.55	1.0	30	0	95.2	75-130	0			

LCSD Sample ID: BLCSDW1-110411-R118768 Units: µg/L Analysis Date: 11/4/2011 11:35 AM

Client ID: Run ID: BTEX1_111104A SeqNo: 2585893 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.6	1.0	20	0	103	77-126	21.14	2.56	20	
Toluene	21.94	1.0	20	0	110	80-124	22.53	2.64	20	
Ethylbenzene	22.49	1.0	20	0	112	76-125	23.11	2.74	20	
Xylenes, Total	66.73	3.0	60	0	111	79-124	69.08	3.47	20	
Surr: 4-Bromofluorobenzene	38.39	1.0	30	0	128	77-129	38.06	0.879	20	
Surr: Trifluorotoluene	27.97	1.0	30	0	93.2	75-130	28.55	2.05	20	

MS Sample ID: 1111111-02AMS Units: µg/L Analysis Date: 11/4/2011 12:07 PM

Client ID: Run ID: BTEX1_111104A SeqNo: 2585910 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.4	1.0	20	0	102	77-126	0			
Toluene	21.77	1.0	20	0	109	80-124	0			
Ethylbenzene	22.74	1.0	20	0	114	76-125	0			
Xylenes, Total	66.55	3.0	60	0	111	79-124	0			
Surr: 4-Bromofluorobenzene	38.45	1.0	30	0	128	77-129	0			
Surr: Trifluorotoluene	27.86	1.0	30	0	92.9	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1111063
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R118768 Instrument ID BTEX1 Method: SW8021B

MSD Sample ID: 1111111-02AMSD Units: µg/L Analysis Date: 11/4/2011 12:23 PM

Client ID: Run ID: BTEX1_111104A SeqNo: 2585896 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.18	1.0	20	0	101	77-126	20.4	1.08	20	
Toluene	21.36	1.0	20	0	107	80-124	21.77	1.9	20	
Ethylbenzene	22.1	1.0	20	0	111	76-125	22.74	2.82	20	
Xylenes, Total	65.07	3.0	60	0	108	79-124	66.55	2.25	20	
Surr: 4-Bromofluorobenzene	38.25	1.0	30	0	128	77-129	38.45	0.531	20	
Surr: Trifluorotoluene	27.75	1.0	30	0	92.5	75-130	27.86	0.395	20	

The following samples were analyzed in this batch:

1111063-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1111063
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R118714 Instrument ID ICS3K2 Method: E300

MBLK Sample ID: WBLKW3-110211-R118714 Units: mg/L Analysis Date: 11/2/2011 11:42 AM

Client ID: Run ID: ICS3K2_111101B SeqNo: 2584330 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	0.084	0.10								J
Nitrogen, Nitrite (As N)	ND	0.10								
Surr: Selenate (surr)	4.918	0.10	5	0	98.4	85-115	0			

LCS Sample ID: WLCSW3-110211-R118714 Units: mg/L Analysis Date: 11/2/2011 12:04 PM

Client ID: Run ID: ICS3K2_111101B SeqNo: 2584331 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.893	0.10	4	0	97.3	90-110	0			
Nitrogen, Nitrite (As N)	3.881	0.10	4	0	97	90-110	0			
Surr: Selenate (surr)	5.568	0.10	5	0	111	85-115	0			

LCSD Sample ID: WLCSDW3-110211-R118714 Units: mg/L Analysis Date: 11/2/2011 12:25 PM

Client ID: Run ID: ICS3K2_111101B SeqNo: 2584332 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrite (As N)	3.895	0.10	4	0	97.4	90-110	3.881	0.36	20	

MS Sample ID: 1111057-01AMS Units: mg/L Analysis Date: 11/2/2011 01:09 PM

Client ID: Run ID: ICS3K2_111101B SeqNo: 2584336 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	0.321	0.10	2	0.388	-3.35	80-120	0			S
Nitrogen, Nitrite (As N)	1.932	0.10	2	0	96.6	80-120	0			
Surr: Selenate (surr)	4.984	0.10	5	0	99.7	85-115	0			

MSD Sample ID: 1111057-01AMSD Units: mg/L Analysis Date: 11/2/2011 01:30 PM

Client ID: Run ID: ICS3K2_111101B SeqNo: 2584338 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	0.318	0.10	2	0.388	-3.5	80-120	0.321	0.939	20	S
Nitrogen, Nitrite (As N)	1.953	0.10	2	0	97.6	80-120	1.932	1.08	20	
Surr: Selenate (surr)	5.004	0.10	5	0	100	85-115	4.984	0.4	20	

The following samples were analyzed in this batch:

1111063-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1111063
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R118757 Instrument ID WetChem Method: E1664

MBLK Sample ID: WBLKW1-110311-R118757 Units: mg/L Analysis Date: 11/3/2011 02:00 PM

Client ID: Run ID: WETCHEM_111103L SeqNo: 2585689 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: WLCSW1-110311-R118757 Units: mg/L Analysis Date: 11/3/2011 02:00 PM

Client ID: Run ID: WETCHEM_111103L SeqNo: 2585690 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	36.6	2.0	40	0	91.5	78-114	0			

MS Sample ID: 1110991-01DMS Units: mg/L Analysis Date: 11/3/2011 02:00 PM

Client ID: Run ID: WETCHEM_111103L SeqNo: 2585717 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	39	2.0	40	1.364	94.1	78-114	0			

The following samples were analyzed in this batch:

1111063-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1111063
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R118765 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R118765 Units: mg/L Analysis Date: 11/3/2011 04:00 PM

Client ID: Run ID: BALANCE1_111103C SeqNo: 2585855 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	ND	10								

LCS Sample ID: LCS-R118765 Units: mg/L Analysis Date: 11/3/2011 04:00 PM

Client ID: Run ID: BALANCE1_111103C SeqNo: 2585856 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	934	10	1000	0	93.4	85-115	0			

DUP Sample ID: 1110997-01ZDUP Units: mg/L Analysis Date: 11/3/2011 04:00 PM

Client ID: Run ID: BALANCE1_111103C SeqNo: 2585826 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	1756	10	0	0	0	0-0	1542	13	20	

DUP Sample ID: 1111017-03CDUP Units: mg/L Analysis Date: 11/3/2011 04:00 PM

Client ID: Run ID: BALANCE1_111103C SeqNo: 2585830 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	956	10	0	0	0	0-0	930	2.76	20	

The following samples were analyzed in this batch:

1111063-01B

Client: Navajo Refining Company
 Work Order: 1111063
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R118822 Instrument ID WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW1-110411-R118822 Units: mg/L Analysis Date: 11/4/2011 10:00 AM

Client ID: Run ID: WETCHEM_111104G SeqNo: 2586530 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLCSW1-110411-R118822 Units: mg/L Analysis Date: 11/4/2011 10:00 AM

Client ID: Run ID: WETCHEM_111104G SeqNo: 2586531 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.6	1.0	20	0	103	80-120	0			

LCSD Sample ID: WLCSDW1-110411-R118822 Units: mg/L Analysis Date: 11/4/2011 10:00 AM

Client ID: Run ID: WETCHEM_111104G SeqNo: 2586545 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.2	1.0	20	0	101	80-120	20.6	1.96	20	

MS Sample ID: 1110935-01KMS Units: mg/L Analysis Date: 11/4/2011 10:00 AM

Client ID: Run ID: WETCHEM_111104G SeqNo: 2586548 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.4	1.0	20	2.22	90.9	75-125	0			

DUP Sample ID: 1110935-01KDUP Units: mg/L Analysis Date: 11/4/2011 10:00 AM

Client ID: Run ID: WETCHEM_111104G SeqNo: 2586547 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	2.18	1.0	0	0	0	0-0	2.22	1.82	20	

The following samples were analyzed in this batch:

1111063-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1111063
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R118845 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: WBLKW1-110611-R118845 Units: mg/L Analysis Date: 11/6/2011 11:04 AM

Client ID: Run ID: WETCHEM_111106C SeqNo: 2586975 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: WLCSW1-110611-R118845 Units: mg/L Analysis Date: 11/6/2011 11:04 AM

Client ID: Run ID: WETCHEM_111106C SeqNo: 2586976 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.08	1.0	25	0	88.3	80-120	0			

MS Sample ID: 1111065-01EMS Units: mg/L Analysis Date: 11/6/2011 11:04 AM

Client ID: Run ID: WETCHEM_111106C SeqNo: 2586981 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	49.32	1.0	25	23.28	104	80-120	0			

The following samples were analyzed in this batch:

1111063-01E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1111063
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R118938 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-110811-R118938 Units: mg/L Analysis Date: 11/8/2011 10:00 AM

Client ID: Run ID: UV-2450_111108A SeqNo: 2589296 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-110811-R118938 Units: mg/L Analysis Date: 11/8/2011 10:00 AM

Client ID: Run ID: UV-2450_111108A SeqNo: 2589297 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.183	0.025	0.2	0	91.5	80-120	0			

LCSD Sample ID: WLCSDW-110811-R118938 Units: mg/L Analysis Date: 11/8/2011 10:00 AM

Client ID: Run ID: UV-2450_111108A SeqNo: 2589304 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.181	0.025	0.2	0	90.5	80-120	0.183	1.1	20	

MS Sample ID: 1111054-01AMS Units: mg/L Analysis Date: 11/8/2011 10:00 AM

Client ID: Run ID: UV-2450_111108A SeqNo: 2589305 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.221	0.025	0.2	0.045	88	80-120	0			

The following samples were analyzed in this batch:

1111063-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1111063

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



ALS Environmental
10450 Standcliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

COC ID: 29186

1111063

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

ALS Project Manager:



Customer Information		Project Information	
Purchase Order		Project Name	Lovington Lea Refining-Monthly
Work Order		Project Number	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore
Address	501 East Main	Address	501 East Main
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211
Phone	(505) 746-3311	Phone	(505) 746-3311
Fax	(505) 746-5421	Fax	(505) 746-5421
e-Mail Address		e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Water	10-31-11	9:15A	W	Y	8	✓		✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Kevin Crockett</i>		Shipment Method		Required Turnaround Time: (Check Box) ☒ Std 10 Wk Days ☐ 5 Wk Days ☐ Other ☐ 2 Wk Days ☐ 24 Hour				Results Due Date:			
Relinquished by: <i>Kevin Crockett</i>		Date: 10-31-11	Time: 9:15Am	Received by:		Notes: 10 Day TAT.					
Relinquished by:		Date: 11/2/11	Time: 1000	Received by (Laboratory): <i>EW ALS</i>		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)			
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):				☒ Level II Std QC	☐ TRRP Checklist		
								☐ Level III Std QC/Raw Data	☐ TRRP Level IV		
								☐ Level IV SW946/CLP			
								☐ Other / EOD			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035											

- Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 02-Nov-11 10:00

Work Order: 1111063

Received by: JBA

Checklist completed by Raymond N Gamba
eSignature

02-Nov-11
Date

Reviewed by: Chris Bryson
eSignature

02-Nov-11
Date

Matrices: water

Carrier name: ALS.HS

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>2.7 C, 2.1 C</u>		<u>002</u>
Cooler(s)/Kit(s):	<u>4153, 4069</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:	<u>-</u>		

Login Notes: Sample received out of hold for NO3/NO2. Per Client, analyze Sample out of hold. CB 11/2/11

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



01-Dec-2011

Darrell Moore
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 746-5281
Fax: (505) 746-5421

Re: Lovington Lea Refining-Monthly

Work Order: 1111769

Dear Darrell,

ALS Environmental received 2 samples on 22-Nov-2011 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 16.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager



Certificate No: T104704231-09A-TX

ADDRESS: 10450 Standin Rd, Suite 210, Houston, Texas 77036-4236 | PHONE: (281) 630-6536 | FAX: (281) 630-6537
COPYRIGHT © 2011 ALS Environmental, Inc. All rights reserved. No part of this publication may be reproduced without permission.

ALS Environmental

Date: 01-Dec-11

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1111769

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1111769-01	City Waste H2O	Water		11/22/2011 09:30	11/23/2011 08:50	☐
1111769-02	Trip Blank 112011-15	Water		11/22/2011	11/23/2011 08:50	☒

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1111769

Case Narrative

Batch R119795, BTEX, Sample City Waste H2O : MSD recovery was above the control limits for Xylenes, Total. The associated RPD was within the control limits.

ALS Environmental

Date: 01-Dec-11

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Sample ID: City Waste H2O

Collection Date: 11/22/2011 09:30 AM

Work Order: 1111769

Lab ID: 1111769-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: JFT
Benzene	0.0040		0.0010	mg/L	1	11/24/2011 04:29 PM
Toluene	0.0028		0.0010	mg/L	1	11/24/2011 04:29 PM
Ethylbenzene	0.025		0.0010	mg/L	1	11/24/2011 04:29 PM
Xylenes, Total	0.031		0.0030	mg/L	1	11/24/2011 04:29 PM
Surr: 4-Bromofluorobenzene	111		77-129	%REC	1	11/24/2011 04:29 PM
Surr: Trifluorotoluene	92.4		75-130	%REC	1	11/24/2011 04:29 PM
ANIONS - EPA 300.0 (1993)			E300			Analyst: JKP
Nitrate/Nitrite (as N)	11.7		0.200	mg/L	2	11/30/2011 03:26 PM
Surr: Selenate (surr)	95.8		85-115	%REC	2	11/30/2011 03:26 PM
AMMONIA AS N			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	3.43		0.125	mg/L	5	11/30/2011 10:00 AM
OIL AND GREASE			E1664			Analyst: CMC
Oil and Grease	3.24		2.00	mg/L	1	12/1/2011 11:00 AM
SULFIDE			SM4500 S2-F			Analyst: JKP
Sulfide	ND		1.00	mg/L	1	11/28/2011 06:15 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	3,630		10.0	mg/L	1	11/28/2011 04:00 PM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: RPM
Nitrogen, Total Kjeldahl	8.58		1.00	mg/L	1	11/28/2011 10:30 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 01-Dec-11

Client: Navajo Refining Company
Work Order: 1111769
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R119795 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW4-111124-R119795 Units: µg/L Analysis Date: 11/24/2011 04:12 PM

Client ID: Run ID: BTEX1_111123D SeqNo: 2609523 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	31.33	1.0	30	0	104	77-129	0			
Surr: Trifluorotoluene	27.52	1.0	30	0	91.7	75-130	0			

LCS Sample ID: BLCSW4-111124-R119795 Units: µg/L Analysis Date: 11/24/2011 03:20 PM

Client ID: Run ID: BTEX1_111123D SeqNo: 2609520 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	24.05	1.0	20	0	120	77-126	0			
Toluene	24.07	1.0	20	0	120	80-124	0			
Ethylbenzene	24.15	1.0	20	0	121	76-125	0			
Xylenes, Total	72.09	3.0	60	0	120	79-124	0			
Surr: 4-Bromofluorobenzene	32.19	1.0	30	0	107	77-129	0			
Surr: Trifluorotoluene	28.27	1.0	30	0	94.2	75-130	0			

LCSD Sample ID: BLCSDW4-111124-R119795 Units: µg/L Analysis Date: 11/24/2011 03:37 PM

Client ID: Run ID: BTEX1_111123D SeqNo: 2609521 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.81	1.0	20	0	114	77-126	24.05	5.25	20	
Toluene	22.72	1.0	20	0	114	80-124	24.07	5.79	20	
Ethylbenzene	22.5	1.0	20	0	113	76-125	24.15	7.05	20	
Xylenes, Total	66.71	3.0	60	0	111	79-124	72.09	7.76	20	
Surr: 4-Bromofluorobenzene	31.11	1.0	30	0	104	77-129	32.19	3.42	20	
Surr: Trifluorotoluene	28.11	1.0	30	0	93.7	75-130	28.27	0.587	20	

MS Sample ID: 1111769-01AMS Units: µg/L Analysis Date: 11/24/2011 04:46 PM

Client ID: City Waste H2O Run ID: BTEX1_111123D SeqNo: 2609525 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	28.63	1.0	20	4.001	123	77-126	0			
Toluene	27.01	1.0	20	2.791	121	80-124	0			
Ethylbenzene	48.89	1.0	20	25.27	118	76-125	0			
Xylenes, Total	105.4	3.0	60	31.15	124	79-124	0			
Surr: 4-Bromofluorobenzene	33.16	1.0	30	0	111	77-129	0			
Surr: Trifluorotoluene	27.2	1.0	30	0	90.7	75-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
Work Order: 1111769
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R119795 Instrument ID BTEX1 Method: SW8021B

MSD Sample ID: 1111769-01AMSD Units: µg/L Analysis Date: 11/24/2011 05:04 PM

Client ID: City Waste H2O Run ID: BTEX1_111123D SeqNo: 2609526 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	28.83	1.0	20	4.001	124	77-126	28.63	0.697	20	
Toluene	27.31	1.0	20	2.791	123	80-124	27.01	1.1	20	
Ethylbenzene	49.76	1.0	20	25.27	122	76-125	48.89	1.76	20	
Xylenes, Total	107.9	3.0	60	31.15	128	79-124	105.4	2.4	20	S
Surr: 4-Bromofluorobenzene	33.82	1.0	30	0	113	77-129	33.16	1.96	20	
Surr: Trifluorotoluene	27.55	1.0	30	0	91.8	75-130	27.2	1.29	20	

The following samples were analyzed in this batch:

1111769-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1111769
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R119893 Instrument ID WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW1-112811-R119893 Units: mg/L Analysis Date: 11/28/2011 10:30 AM

Client ID: Run ID: WETCHEM_111128J SeqNo: 2612102 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLCSW1-112811-R119893 Units: mg/L Analysis Date: 11/28/2011 10:30 AM

Client ID: Run ID: WETCHEM_111128J SeqNo: 2612103 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.2	1.0	20	0	101	80-120	0			

LCSD Sample ID: WLCSDW1-112811-R119893 Units: mg/L Analysis Date: 11/28/2011 10:30 AM

Client ID: Run ID: WETCHEM_111128J SeqNo: 2612114 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.6	1.0	20	0	103	80-120	20.2	1.96	20	

MS Sample ID: 1111709-01FMS Units: mg/L Analysis Date: 11/28/2011 10:30 AM

Client ID: Run ID: WETCHEM_111128J SeqNo: 2612111 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	21	1.0	20	1.276	98.6	75-125	0			

DUP Sample ID: 1111709-01FDUP Units: mg/L Analysis Date: 11/28/2011 10:30 AM

Client ID: Run ID: WETCHEM_111128J SeqNo: 2612110 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	1.228	1.0	0	0	0	0-0	1.276	3.83	20	

The following samples were analyzed in this batch:

1111769-01C

Client: Navajo Refining Company
 Work Order: 1111769
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R119908 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R119908 Units: mg/L Analysis Date: 11/28/2011 04:00 PM

Client ID: Run ID: BALANCE1_111128A SeqNo: 2612474 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

LCS Sample ID: LCS-R119908 Units: mg/L Analysis Date: 11/28/2011 04:00 PM

Client ID: Run ID: BALANCE1_111128A SeqNo: 2612475 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	966	10	1000		0	96.6	85-115	0		

DUP Sample ID: 1111774-01ADUP Units: mg/L Analysis Date: 11/28/2011 04:00 PM

Client ID: Run ID: BALANCE1_111128A SeqNo: 2612471 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	3120	10	0		0	0	0-0	3002	3.85	20

DUP Sample ID: 1111749-08CDUP Units: mg/L Analysis Date: 11/28/2011 04:00 PM

Client ID: Run ID: BALANCE1_111128A SeqNo: 2612516 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1104	10	0		0	0	0-0	1058	4.26	20

The following samples were analyzed in this batch:

1111769-01B

Client: Navajo Refining Company
Work Order: 1111769
Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R119966 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: WBLKW1-112811-R119966 Units: mg/L Analysis Date: 11/28/2011 06:15 PM

Client ID: Run ID: WETCHEM_111128K SeqNo: 2613599 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: WLCSW1-112811-R119966 Units: mg/L Analysis Date: 11/28/2011 06:15 PM

Client ID: Run ID: WETCHEM_111128K SeqNo: 2613600 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20.8	1.0	25	0	83.2	80-120	0			

MS Sample ID: 1111774-01BMS Units: mg/L Analysis Date: 11/28/2011 06:15 PM

Client ID: Run ID: WETCHEM_111128K SeqNo: 2613604 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	37	1.0	25	14.6	89.6	80-120	0			

The following samples were analyzed in this batch:

1111769-01E

Client: Navajo Refining Company
 Work Order: 1111769
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R119982 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-113011-R119982 Units: mg/L Analysis Date: 11/30/2011 10:00 AM

Client ID: Run ID: UV-2450_111130C SeqNo: 2613834 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-113011-R119982 Units: mg/L Analysis Date: 11/30/2011 10:00 AM

Client ID: Run ID: UV-2450_111130C SeqNo: 2613835 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.219	0.025	0.2	0	110	80-120	0			

LCSD Sample ID: WLCSDW-113011-R119982 Units: mg/L Analysis Date: 11/30/2011 10:00 AM

Client ID: Run ID: UV-2450_111130C SeqNo: 2613842 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.22	0.025	0.2	0	110	80-120	0.219	0.456	20	

MS Sample ID: 1111766-01CMS Units: mg/L Analysis Date: 11/30/2011 10:00 AM

Client ID: Run ID: UV-2450_111130C SeqNo: 2613843 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.391	0.025	0.2	0.193	99	80-120	0			

The following samples were analyzed in this batch:

1111769-01C

Client: Navajo Refining Company
 Work Order: 1111769
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R119992 Instrument ID ICS3K2 Method: E300

MBLK Sample ID: WBLKW2-113011-R119992 Units: mg/L Analysis Date: 11/30/2011 02:21 PM

Client ID: Run ID: ICS3K2_111130B SeqNo: 2613963 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	ND	0.20								
Surr: Selenate (surr)	4.79	0.10	5	0	95.8	85-115	0			

LCS Sample ID: WLCSW2-113011-R119992 Units: mg/L Analysis Date: 11/30/2011 02:43 PM

Client ID: Run ID: ICS3K2_111130B SeqNo: 2613964 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.656	0.20	8	0	95.7	90-110	0			
Surr: Selenate (surr)	4.775	0.10	5	0	95.5	85-115	0			

LCSD Sample ID: WLCSDW2-113011-R119992 Units: mg/L Analysis Date: 11/30/2011 03:05 PM

Client ID: Run ID: ICS3K2_111130B SeqNo: 2613965 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrate/Nitrite (as N)	7.681	0.20	8	0	96	90-110	7.656	0.326	20	
Surr: Selenate (surr)	4.771	0.10	5	0	95.4	85-115	4.775	0.0838	20	

The following samples were analyzed in this batch:

1111769-01F

Client: Navajo Refining Company
 Work Order: 1111769
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R120035 Instrument ID WetChem Method: E1664

MBLK Sample ID: WBLKW1-120111-R120035 Units: mg/L Analysis Date: 12/1/2011 11:00 AM

Client ID: Run ID: WETCHEM_111201D SeqNo: 2615004 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: WLCSW1-120111-R120035 Units: mg/L Analysis Date: 12/1/2011 11:00 AM

Client ID: Run ID: WETCHEM_111201D SeqNo: 2615005 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	37.55	2.0	40	0	93.9	78-114	0			

MS Sample ID: 1111756-01BMS Units: mg/L Analysis Date: 12/1/2011 11:00 AM

Client ID: Run ID: WETCHEM_111201D SeqNo: 2615028 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	40.13	2.0	40	0.473	99.1	78-114	0			

The following samples were analyzed in this batch:

1111769-01D

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1111769

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



Chain of Custody Form

Page ____ of ____

COC ID: 48805

1111769

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

UT
00

03

80

Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	Lovington Lea Refining-Monthly	A	BTEX (8021)
Work Order		Project Number		B	Total Metals (0020-7000) Select
Company Name	Navajo Refining Company	Bill-To Company	Navajo Refining Company	C	Anions (300) NO3, NO2
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore	D	Ammonia
Address	501 East Main	Address	501 East Main	E	TKN
				F	Oil & Grease
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	TDS
Phone	(505) 748-3311	Phone	(505) 748-3311	H	Sulfide
Fax	(505) 746-5421	Fax	(505) 746-5421	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste H2O	11-22-11	11-22-11 9:30 Am	W	Y	8	✓		✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Kevin Crockett</i>		Shipment Method		Required Turnaround Time: (Check Box) ☒ Std. 10 W/K Days ☐ 5 W/K Days ☐ Other _____ ☐ 2 W/K Days ☐ 24 Hour				Results Due Date:			
Relinquished by: <i>Kevin Crockett</i>		Date: 11-22-11	Time: 9:30 Am	Received by:		Notes: 10 Day TAT.					
Relinquished by:		Date:	Time:	Received by (Laboratory): <i>AS</i>		Cooler ID		Cooler Temp.		QC Package: (Check One Box Below)	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):						☒ Level II Std QC ☐ TRRP CheckList ☐ Level III Std & Raw Data ☐ TRRP Level IV ☐ Level IV SW846/CLP ☐ Other / EDD	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035											

- Note:
- Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 - Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 - The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 22-Nov-11 09:30

Work Order: 1111769

Received by: RDH

Checklist completed by Rishel D. Naran
eSignature

23-Nov-11
Date

Reviewed by: Chris Bryson
eSignature

28-Nov-11
Date

Matrices: water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>1.4c</u>		<u>002</u>
Cooler(s)/Kit(s):	<u>4632</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:	<u>PMG</u>		

Login Notes: Decanted 250pH2SO4 container for NO3/NO2 - (11/30/2011 @ 11:12)

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

111 769

THIS PORTION CAN BE REMOVED FOR REQUISITE RECORDS.

ite 11/22/11 FedEx Tracking Number 865910938275

nder's
ime _____ Phone _____

Company _____

Address _____ Dept./Floor/Suite/Room _____

y _____ State _____ ZIP _____

ur Internal Billing Reference _____

 **ALS Environmental**
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL		Seal Broken By:
Date: <u>11-22-11</u>	Time: <u>9:30 AM</u>	 Date: <u>11/22/11</u>
Name: <u>Roger C. Smith</u>		
Company: <u>ALS Environmental</u>		

RIGHT SOLUTIONS MIGHT PAINT THEM

ALS Environmental

Date: 03-Jan-12

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1112678

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1112678-01	City Waste Water	Water		12/21/2011 09:30	12/22/2011	☐
1112678-02	Trip Blank	Water		12/21/2011	12/22/2011	☒

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
Work Order: 1112678

Case Narrative

BTEX surrogate recovery was outside the control limits for Sample City Waste Water. Results confirmed as matrix interference by re-analysis at dilution.

Batch R121029, BTEX, Sample 1112654-03 : MS/MSD RPD is for an unrelated sample.

Batch R121102, BTEX, Sample 1112754-10 : MS/MSD is for an unrelated sample.

ALS Environmental

Date: 03-Jan-12

Client: Navajo Refining Company

Project: Lovington Lea Refining-Monthly

Work Order: 1112678

Sample ID: City Waste Water

Lab ID: 1112678-01

Collection Date: 12/21/2011 09:30 AM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: SMA
Benzene	0.12		0.0010	mg/L	1	12/22/2011 10:09 PM
Toluene	0.18		0.0010	mg/L	1	12/22/2011 10:09 PM
Ethylbenzene	0.23		0.0050	mg/L	5	12/28/2011 05:14 AM
Xylenes, Total	0.33		0.0030	mg/L	1	12/22/2011 10:09 PM
Surr: 4-Bromofluorobenzene	101		77-129	%REC	1	12/22/2011 10:09 PM
Surr: 4-Bromofluorobenzene	74.1	S	77-129	%REC	5	12/28/2011 05:14 AM
Surr: Trifluorotoluene	76.5		75-130	%REC	5	12/28/2011 05:14 AM
Surr: Trifluorotoluene	97.3		75-130	%REC	1	12/22/2011 10:09 PM
METALS			SW6020			Prep Date: 12/27/2011 Analyst: ALR
Chromium	0.0173		0.00500	mg/L	1	12/29/2011 09:34 PM
ANIONS - EPA 300.0 (1993)			E300			Analyst: JKP
Nitrogen, Nitrate (As N)	0.381		0.100	mg/L	1	12/23/2011 02:40 AM
Nitrogen, Nitrite (As N)	1.31		0.100	mg/L	1	12/23/2011 02:40 AM
Surr: Selenate (surr)	113		85-115	%REC	1	12/23/2011 02:40 AM
AMMONIA AS N			SM4500 NH3-B-F			Analyst: IAB
Nitrogen, Ammonia (as N)	1.86		0.0500	mg/L	2	12/30/2011 09:00 AM
OIL AND GREASE			E1664			Analyst: CMC
Oil and Grease	15.8		2.00	mg/L	1	12/30/2011 11:00 AM
SULFIDE			SM4500 S2-F			Analyst: JKP
Sulfide	18.8		1.00	mg/L	1	12/28/2011 09:05 AM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: RPM
Total Dissolved Solids (Residue, Filterable)	3,930		10.0	mg/L	1	12/27/2011 04:00 PM
TOTAL KJELDAHL L NITROGEN			M4500 NH3 D			Analyst: RPM
Nitrogen, Total Kjeldahl	14.8		1.00	mg/L	1	12/30/2011 09:30 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 03-Jan-12

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R121029 Instrument ID: BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW1-111222-R121029 Units: µg/L Analysis Date: 12/22/2011 01:14 PM

Client ID: Run ID: BTEX1_111222A SeqNo: 2638237 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	31.07	1.0	30	0	104	77-129	0			
Surr: Trifluorotoluene	28.72	1.0	30	0	95.7	75-130	0			

LCS Sample ID: BLCSW1-111222-R121029 Units: µg/L Analysis Date: 12/22/2011 12:57 PM

Client ID: Run ID: BTEX1_111222A SeqNo: 2638236 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	24.53	1.0	20	0	123	77-126	0			
Toluene	24.72	1.0	20	0	124	80-124	0			
Xylenes, Total	73.13	3.0	60	0	122	79-124	0			
Surr: 4-Bromofluorobenzene	31.04	1.0	30	0	103	77-129	0			
Surr: Trifluorotoluene	28.46	1.0	30	0	94.9	75-130	0			

MS Sample ID: 1112654-03AMS Units: µg/L Analysis Date: 12/22/2011 09:00 PM

Client ID: Run ID: BTEX1_111222A SeqNo: 2638256 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.8	1.0	20	0	89	77-126	0			
Toluene	17.68	1.0	20	0	88.4	80-124	0			
Xylenes, Total	52.14	3.0	60	0	86.9	79-124	0			
Surr: 4-Bromofluorobenzene	33.22	1.0	30	0	111	77-129	0			
Surr: Trifluorotoluene	29.08	1.0	30	0	96.9	75-130	0			

MSD Sample ID: 1112654-03AMSD Units: µg/L Analysis Date: 12/22/2011 09:52 PM

Client ID: Run ID: BTEX1_111222A SeqNo: 2638278 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	25.09	1.0	20	0	125	77-126	17.8	34	20	R
Toluene	24.1	1.0	20	0	121	80-124	17.68	30.7	20	R
Xylenes, Total	73.29	3.0	60	0	122	79-124	52.14	33.7	20	R
Surr: 4-Bromofluorobenzene	32.43	1.0	30	0	108	77-129	33.22	2.41	20	
Surr: Trifluorotoluene	29.41	1.0	30	0	98	75-130	29.08	1.12	20	

The following samples were analyzed in this batch: 1112678-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC Page: 1 of 9

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R121102 Instrument ID BTEX1 Method: SW8021B

MBLK Sample ID: BBLKW2-111227-R121102 Units: µg/L Analysis Date: 12/28/2011 01:29 AM

Client ID: Run ID: BTEX1_111227B SeqNo: 2640546 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	33.98	1.0	30	0	113	77-129	0			
Surr: Trifluorotoluene	26.01	1.0	30	0	86.7	75-130	0			

LCS Sample ID: BLCSW2-111227-R121102 Units: µg/L Analysis Date: 12/28/2011 12:55 AM

Client ID: Run ID: BTEX1_111227B SeqNo: 2640544 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	23.47	1.0	20	0	117	76-125	0			
Surr: 4-Bromofluorobenzene	35.28	1.0	30	0	118	77-129	0			
Surr: Trifluorotoluene	26.6	1.0	30	0	88.7	75-130	0			

LCSD Sample ID: BLCSW2-111227-R121102 Units: µg/L Analysis Date: 12/28/2011 01:12 AM

Client ID: Run ID: BTEX1_111227B SeqNo: 2640545 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	23.95	1.0	20	0	120	76-125	23.47	2.02	20	
Surr: 4-Bromofluorobenzene	34.87	1.0	30	0	116	77-129	35.28	1.19	20	
Surr: Trifluorotoluene	26.47	1.0	30	0	88.2	75-130	26.6	0.487	20	

MS Sample ID: 1112754-10AMS Units: µg/L Analysis Date: 12/28/2011 09:52 AM

Client ID: Run ID: BTEX1_111227B SeqNo: 2640560 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	30.82	1.0	20	4.867	130	76-125	0			S
Surr: 4-Bromofluorobenzene	31.4	1.0	30	0	105	77-129	0			
Surr: Trifluorotoluene	35.05	1.0	30	0	117	75-130	0			

MSD Sample ID: 1112754-10AMSD Units: µg/L Analysis Date: 12/28/2011 10:09 AM

Client ID: Run ID: BTEX1_111227B SeqNo: 2640561 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	31.74	1.0	20	4.867	134	76-125	30.82	2.93	20	S
Surr: 4-Bromofluorobenzene	30.99	1.0	30	0	103	77-129	31.4	1.32	20	
Surr: Trifluorotoluene	38.52	1.0	30	0	128	75-130	35.05	9.43	20	

The following samples were analyzed in this batch: 1112678-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: 57822 Instrument ID ICPMS03 Method: SW6020

MBLK Sample ID: MBLKW4-122711-57822 Units: mg/L Analysis Date: 12/29/2011 06:20 PM

Client ID: Run ID: ICPMS03_111229A SeqNo: 2642070 Prep Date: 12/27/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	ND	0.0050								

LCS Sample ID: MLCW4-122711-57822 Units: mg/L Analysis Date: 12/29/2011 06:27 PM

Client ID: Run ID: ICPMS03_111229A SeqNo: 2642071 Prep Date: 12/27/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	0.04889	0.0050	0.05	0	97.8	80-120	0			

MS Sample ID: 1112659-10BMS Units: mg/L Analysis Date: 12/29/2011 07:04 PM

Client ID: Run ID: ICPMS03_111229A SeqNo: 2642077 Prep Date: 12/27/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	0.05369	0.0050	0.05	0.005116	97.1	80-120	0			

MSD Sample ID: 1112659-10BMSD Units: mg/L Analysis Date: 12/29/2011 07:10 PM

Client ID: Run ID: ICPMS03_111229A SeqNo: 2642078 Prep Date: 12/27/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	0.05543	0.0050	0.05	0.005116	101	80-120	0.05369	3.19	15	

DUP Sample ID: 1112659-10BDUP Units: mg/L Analysis Date: 12/29/2011 06:52 PM

Client ID: Run ID: ICPMS03_111229A SeqNo: 2642075 Prep Date: 12/27/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	0.004792	0.0050	0	0	0	0-0	0.005116	0	25	J

The following samples were analyzed in this batch:

1112678-01C

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R121026 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKW2-122211-R121026 Units: mg/L Analysis Date: 12/22/2011 11:51 PM

Client ID: Run ID: ICS3000_111222B SeqNo: 2638149 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Surr: Selenate (surr)	4.828	0.10	5	0	96.6	85-115	0			

LCS Sample ID: WLCSW2-122211-R121026 Units: mg/L Analysis Date: 12/23/2011 12:12 AM

Client ID: Run ID: ICS3000_111222B SeqNo: 2638150 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.935	0.10	4	0	98.4	90-110	0			
Nitrogen, Nitrite (As N)	4.202	0.10	4	0	105	90-110	0			
Surr: Selenate (surr)	5.673	0.10	5	0	113	85-115	0			

LCSD Sample ID: WLCSDW2-122211-R121026 Units: mg/L Analysis Date: 12/23/2011 12:33 AM

Client ID: Run ID: ICS3000_111222B SeqNo: 2638151 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.961	0.10	4	0	99	90-110	3.935	0.659	20	
Nitrogen, Nitrite (As N)	4.227	0.10	4	0	106	90-110	4.202	0.593	20	
Surr: Selenate (surr)	5.71	0.10	5	0	114	85-115	5.673	0.65	20	

MS Sample ID: 1112674-06EMS Units: mg/L Analysis Date: 12/23/2011 01:58 AM

Client ID: Run ID: ICS3000_111222B SeqNo: 2638156 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	4.1	0.10	2	2.179	96	80-120	0			
Nitrogen, Nitrite (As N)	2.115	0.10	2	0.0256	104	80-120	0			
Surr: Selenate (surr)	5.631	0.10	5	0	113	85-115	0			

MSD Sample ID: 1112674-06EMSD Units: mg/L Analysis Date: 12/23/2011 02:19 AM

Client ID: Run ID: ICS3000_111222B SeqNo: 2638158 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	4.087	0.10	2	2.179	95.4	80-120	4.1	0.318	20	
Nitrogen, Nitrite (As N)	2.111	0.10	2	0.0256	104	80-120	2.115	0.189	20	
Surr: Selenate (surr)	5.596	0.10	5	0	112	85-115	5.631	0.623	20	

The following samples were analyzed in this batch:

1112678-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R121089 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: WBLKW1-R121089 Units: mg/L Analysis Date: 12/27/2011 04:00 PM

Client ID: Run ID: BALANCE1_111227D SeqNo: 2640015 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
---------	--------	-----	---------	---------------	------	---------------	---------------	------	-----------	------

Total Dissolved Solids (Residue, Fil	ND	10								
--------------------------------------	----	----	--	--	--	--	--	--	--	--

LCS Sample ID: WLCSW1-R121089 Units: mg/L Analysis Date: 12/27/2011 04:00 PM

Client ID: Run ID: BALANCE1_111227D SeqNo: 2640017 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
---------	--------	-----	---------	---------------	------	---------------	---------------	------	-----------	------

Total Dissolved Solids (Residue, Fil	1028	10	1000	0	103	85-115	0			
--------------------------------------	------	----	------	---	-----	--------	---	--	--	--

DUP Sample ID: 1112623-01LDUP Units: mg/L Analysis Date: 12/27/2011 04:00 PM

Client ID: Run ID: BALANCE1_111227D SeqNo: 2639987 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
---------	--------	-----	---------	---------------	------	---------------	---------------	------	-----------	------

Total Dissolved Solids (Residue, Fil	1306	10	0	0	0	0-0	1226	6.32	20	
--------------------------------------	------	----	---	---	---	-----	------	------	----	--

DUP Sample ID: 1112700-01EDUP Units: mg/L Analysis Date: 12/27/2011 04:00 PM

Client ID: Run ID: BALANCE1_111227D SeqNo: 2640013 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
---------	--------	-----	---------	---------------	------	---------------	---------------	------	-----------	------

Total Dissolved Solids (Residue, Fil	15110	10	0	0	0	0-0	15120	0.0265	20	
--------------------------------------	-------	----	---	---	---	-----	-------	--------	----	--

The following samples were analyzed in this batch:

1112678-01D

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R121128 Instrument ID WetChem Method: SM4500 S2-F

MBLK Sample ID: WBLKW1-122811-R121128 Units: mg/L Analysis Date: 12/28/2011 09:05 AM

Client ID: Run ID: WETCHEM_111228G SeqNo: 2641045 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	ND	1.0								

LCS Sample ID: WLCSW1-122811-R121128 Units: mg/L Analysis Date: 12/28/2011 09:05 AM

Client ID: Run ID: WETCHEM_111228G SeqNo: 2641046 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20.8	1.0	25	0	83.2	80-120	0			

LCSD Sample ID: WLCSDW1-122811-R121128 Units: mg/L Analysis Date: 12/28/2011 09:05 AM

Client ID: Run ID: WETCHEM_111228G SeqNo: 2641053 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21	1.0	25	0	84	80-120	20.8	0.957	20	

The following samples were analyzed in this batch:

1112678-01E

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R121217 Instrument ID WetChem Method: M4500 NH3 D

MBLK Sample ID: WBLKW1-123011-R121217 Units: mg/L Analysis Date: 12/30/2011 09:30 AM

Client ID: Run ID: WETCHEM_111230F SeqNo: 2643291 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	ND	1.0								

LCS Sample ID: WLC SW1-123011-R121217 Units: mg/L Analysis Date: 12/30/2011 09:30 AM

Client ID: Run ID: WETCHEM_111230F SeqNo: 2643292 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.6	1.0	20	0	103	80-120	0			

LCSD Sample ID: WLCSDW1-123011-R121217 Units: mg/L Analysis Date: 12/30/2011 09:30 AM

Client ID: Run ID: WETCHEM_111230F SeqNo: 2643340 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	20.8	1.0	20	0	104	80-120	20.6	0.966	20	

MS Sample ID: 1112674-01DMS Units: mg/L Analysis Date: 12/30/2011 09:30 AM

Client ID: Run ID: WETCHEM_111230F SeqNo: 2643314 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	36	1.0	20	15.62	102	75-125	0			

DUP Sample ID: 1112674-01DDUP Units: mg/L Analysis Date: 12/30/2011 09:30 AM

Client ID: Run ID: WETCHEM_111230F SeqNo: 2643313 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Total Kjeldahl	15.82	1.0	0	0	0	0-0	15.62	1.27	20	

The following samples were analyzed in this batch: 1112678-01B

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R121223 Instrument ID UV-2450 Method: SM4500 NH3-B-F

MBLK Sample ID: WBLKW-123011-R121223 Units: mg/L Analysis Date: 12/30/2011 09:00 AM

Client ID: Run ID: UV-2450_111230B SeqNo: 2643389 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.025								

LCS Sample ID: WLCSW-123011-R121223 Units: mg/L Analysis Date: 12/30/2011 09:00 AM

Client ID: Run ID: UV-2450_111230B SeqNo: 2643390 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.221	0.025	0.2	0	110	80-120	0			

LCSD Sample ID: WLCSDW-123011-R121223 Units: mg/L Analysis Date: 12/30/2011 09:00 AM

Client ID: Run ID: UV-2450_111230B SeqNo: 2643400 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.215	0.025	0.2	0	108	80-120	0.221	2.75	20	

MS Sample ID: 1112702-01DMS Units: mg/L Analysis Date: 12/30/2011 09:00 AM

Client ID: Run ID: UV-2450_111230B SeqNo: 2643402 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	0.375	0.025	0.2	0.163	106	80-120	0			

The following samples were analyzed in this batch:

1112678-01B

Client: Navajo Refining Company
 Work Order: 1112678
 Project: Lovington Lea Refining-Monthly

QC BATCH REPORT

Batch ID: R121229 Instrument ID WetChem Method: E1664

MBLK Sample ID: WBLKW1-123011-R121229 Units: mg/L Analysis Date: 12/30/2011 11:00 AM

Client ID: Run ID: WETCHEM_111230K SeqNo: 2643522 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	ND	2.0								

LCS Sample ID: WLCSW1-123011-R121229 Units: mg/L Analysis Date: 12/30/2011 11:00 AM

Client ID: Run ID: WETCHEM_111230K SeqNo: 2643523 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	38.26	2.0	40	0	95.7	78-114	0			

MS Sample ID: 1112678-01FMS Units: mg/L Analysis Date: 12/30/2011 11:00 AM

Client ID: City Waste Water Run ID: WETCHEM_111230K SeqNo: 2643544 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oil and Grease	57.24	2.0	40	15.84	103	78-114	0			

The following samples were analyzed in this batch:

1112678-01F

Client: Navajo Refining Company
Project: Lovington Lea Refining-Monthly
WorkOrder: 1112678

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



Environmental

Chain of Custody For

Page ____ of ____

COC ID: 45474

1112678

NAVAJO REFINING: Navajo Refining Company

Project: Lovington Lea Refining-Monthly



ALS Project Manager:



Customer Information		Project Information			
Purchase Order		Project Name	Lovington Lea Refining-Monthly	A	BTEX (8021)
Work Order		Project Number		B	Total Metals (6020/7000) Select
Company Name	Navap Refining Company	Bill To Company	Navajo Refining Company	C	Anions (300) NO3,NO2
Send Report To	Darrell Moore	Invoice Attn	Darrell Moore	D	Ammonia
Address	501 East Main	Address	501 East Main	E	TKN
				F	Oil & Grease
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	TDS
Phone	(505)748-3311	Phone	(505) 748-3311	H	Sulfide
Fax	(505)746-5421	Fax	(505) 746-5421	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	City Waste Water	12-21-11	9:30Am	✓	Y	9	✓	✓	✓	✓	✓	✓	✓	✓			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Kevin Crockett</i>		Shipment Method		Required Turnaround Time: (Check Box) ☒ Std 10-WK Days ☐ 5 WK Days ☐ Other _____ ☐ 2 WK Days ☐ 24 Hour				Results Due Date:	
Relinquished by: <i>Kevin Crockett</i>	Date: 12-21-11	Time: 9:30Am	Received by:		Notes: 10 Day TAT.				
Relinquished by:	Date:	Time:	Received by (Laboratory): <i>12.22.11 1045</i>		Cooler ID: 45474	Cooler Temp.	QC Package: (Check One Box Below)		
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):				☒ Level II Std QC ☐ TRRP Check List ☐ Level III Std QC Raw Data ☐ TRRP Level IV ☐ Level IV SW846/CLP ☐ Other / EDD _____		
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035									

- note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.

ALS Environmental

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 22-Dec-11 00:00

Work Order: 1112678

Received by: PMG

Checklist completed by Lisabel D. Naran
eSignature

22-Dec-11
Date

Reviewed by: Chris Bryan
eSignature

22-Dec-11
Date

Matrices: water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>2.2c, 2.3c</u>		<u>002</u>
Cooler(s)/Kit(s):	<u>4574,4172</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:	<u></u>		

Login Notes: Per Client, for Metals, only need Chromium. CB 12/27/11

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

ALS Environmental
 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

4574

Date: 12-21-11
 Name: K
 Company: Navajo/Leo Refining

CUSTODY SEAL

Date: 12-21-11 Time: 9:30 Am
 Seal Broken By: [Signature]
 Date: 2-22-11

ALS Environmental
 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

4172

Date: 12-21-11
 Name: K
 Company: Navajo/Leo Refining

CUSTODY SEAL

Date: 12-21-11 Time: 9:30 Am
 Seal Broken By: [Signature]
 Date: 2-22-11

111 2678

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED
 Date: 10/20/00 By: [Signature]
 FedEx Tracking Number: 865910938301
 Sender's Name: [Signature] Phone: [Signature]
 Company: [Signature]
 Address: [Signature] Dept./Floor/Suite/Room:
 City: [Signature] State: [Signature] ZIP: [Signature]
 Our Internal Billing Reference: [Signature]