GW - 28

MONITORING REPORTS

DATE:

2003

3 of 3

GW-28

VOLUME III

2003 ANNUAL GROUNDWATER REPORT

for

NAVAJO REFINING COMPANY
ARTESIA, NEW MEXICO

Prepared for:

NEW MEXICO ENERGY, MINERAL and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, New Mexico

ATTACHMENT E

2003 RO REJECT LABORATORY ANALYTICAL REPORTS

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5887

January 21, 2004

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: RO Reject Annual

Work Order : **0312189**

Dear Jeff Byrd,

e-Lab, Inc. received 2 samples on 12/17/2003 9:22:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 45.

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

Sincerely,

Lora Terrill

Electronically approved by: Patrina A. Dathorne

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *January 21, 2004*

CLIENT: Navajo Refining Company
Project: RO Reject Annual
Work Order: 0312189

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0312189-01	RO Annual - 1	Water		12/16/2003 10:30	12/17/2003 09:22	☐
0312189-02	Trip Blank	Water		12/16/2003	12/17/2003 09:22	☐

e-Lab. Inc.

Date: *January 21, 2004*

CLIENT: Navajo Refining Company
Project: RO Reject Annual
Work Order: 0312189

Case Narrative

The analyses for Radium and Uranium were performed at American Radiation Services in Baton Rouge, LA.

The analyses for BOD, Fecal Coliform, Residual Chlorine, and e-Coli were performed at SPL in Houston, TX.

e-Lab, Inc. **Date:** *January 21, 2004*

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual
Lab ID: 0312189-01

Client Sample ID: RO Annual - 1
Collection Date: 12/16/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
ORGANOCHLORINE PESTICIDES		**SW8081**			Prep Date: **12/18/2003**	Analyst: **JLJ**
4,4'-DDD	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
4,4'-DDE	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
4,4'-DDT	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Aldrin	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
alpha-BHC	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
beta-BHC	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Chlordane	ND	0.50		µg/L	1	12/18/2003 6:14:00 PM
delta-BHC	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Dieldrin	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Endosulfan I	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Endosulfan II	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Endosulfan sulfate	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Endrin	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Endrin aldehyde	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Endrin ketone	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
gamma-BHC	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Heptachlor	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Heptachlor epoxide	ND	0.050		µg/L	1	12/18/2003 6:14:00 PM
Methoxychlor	ND	0.50		µg/L	1	12/18/2003 6:14:00 PM
Toxaphene	ND	0.50		µg/L	1	12/18/2003 6:14:00 PM
Surr: Decachlorobiphenyl	109	30-150		%REC	1	12/18/2003 6:14:00 PM
Surr: Tetrachloro-m-xylene	101	30-150		%REC	1	12/18/2003 6:14:00 PM
PCBS		**SW8082**			Prep Date: **12/18/2003**	Analyst: **JLJ**
Aroclor 1016	ND	0.50		µg/L	1	12/18/2003 5:15:00 PM
Aroclor 1221	ND	0.50		µg/L	1	12/18/2003 5:15:00 PM
Aroclor 1232	ND	0.50		µg/L	1	12/18/2003 5:15:00 PM
Aroclor 1242	ND	0.50		µg/L	1	12/18/2003 5:15:00 PM
Aroclor 1248	ND	0.50		µg/L	1	12/18/2003 5:15:00 PM
Aroclor 1254	ND	0.50		µg/L	1	12/18/2003 5:15:00 PM
Aroclor 1260	ND	0.50		µg/L	1	12/18/2003 5:15:00 PM
Surr: Decachlorobiphenyl	77.1	30-150		%REC	1	12/18/2003 5:15:00 PM
Surr: Tetrachloro-m-xylene	102	30-150		%REC	1	12/18/2003 5:15:00 PM
MERCURY, TOTAL		**SW7470**			Prep Date: **12/18/2003**	Analyst: **JCJ**
Mercury	ND	0.000200		mg/L	1	12/19/2003 12:41:18 PM
ICP METALS, TOTAL		**SW6020**			Prep Date: **12/18/2003**	Analyst: **ALR**
Aluminum	ND	0.0100		mg/L	1	12/19/2003 3:38:00 PM
Arsenic	ND	0.00500		mg/L	1	12/19/2003 3:38:00 PM
Barium	0.0399	0.00500		mg/L	1	12/19/2003 3:38:00 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *January 21, 2004*

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual
Lab ID: 0312189-01

Client Sample ID: RO Annual - 1
Collection Date: 12/16/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Beryllium	ND	0.00200		mg/L	1	12/19/2003 3:38:00 PM
Boron	0.0679	0.0200		mg/L	1	12/19/2003 3:38:00 PM
Cadmium	ND	0.00100		mg/L	1	12/19/2003 3:38:00 PM
Calcium	380	25.0		mg/L	50	12/19/2003 3:21:00 PM
Chromium	ND	0.00200		mg/L	1	12/19/2003 3:38:00 PM
Cobalt	ND	0.00200		mg/L	1	12/19/2003 3:38:00 PM
Copper	0.00386	0.00200		mg/L	1	12/19/2003 3:38:00 PM
Iron	0.489	0.200		mg/L	1	12/19/2003 3:38:00 PM
Lead	ND	0.00500		mg/L	1	12/19/2003 3:38:00 PM
Magnesium	101	2.00		mg/L	10	12/19/2003 3:25:00 PM
Manganese	ND	0.00500		mg/L	1	12/19/2003 3:38:00 PM
Nickel	ND	0.00500		mg/L	1	12/19/2003 3:38:00 PM
Potassium	2.16	0.200		mg/L	1	12/19/2003 3:38:00 PM
Selenium	0.0112	0.00500		mg/L	1	12/19/2003 3:38:00 PM
Silver	ND	0.00500		mg/L	1	12/19/2003 3:38:00 PM
Sodium	30.5	2.00		mg/L	10	12/19/2003 3:25:00 PM
Vanadium	0.00578	0.00500		mg/L	1	12/19/2003 3:38:00 PM
Zinc	0.00866	0.00500		mg/L	1	12/19/2003 3:38:00 PM
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **12/18/2003**	Analyst: **HV**
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/19/2003 7:53:00 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/19/2003 7:53:00 PM
2-Methylnaphthalene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
2-Methylphenol	ND	10		µg/L	1	12/19/2003 7:53:00 PM
2-Nitroaniline	ND	10		µg/L	1	12/19/2003 7:53:00 PM
2-Nitrophenol	ND	10		µg/L	1	12/19/2003 7:53:00 PM
3-Nitroaniline	ND	10		µg/L	1	12/19/2003 7:53:00 PM
4-Methylphenol	ND	10		µg/L	1	12/19/2003 7:53:00 PM
4-Nitroaniline	ND	10		µg/L	1	12/19/2003 7:53:00 PM
4-Nitrophenol	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Acenaphthene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Acenaphthylene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Aniline	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Anthracene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Benz(a)anthracene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Benzidine	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Hexachloroethane	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Isophorone	ND	10		µg/L	1	12/19/2003 7:53:00 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/19/2003 7:53:00 PM

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e-Lab, Inc.

Date: *January 21, 2004*

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual
Lab ID: 0312189-01

Client Sample ID: RO Annual - 1
Collection Date: 12/16/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
N-Nitrosodimethylamine	ND	10		µg/L	1	12/19/2003 7:53:00 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Naphthalene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Nitrobenzene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Pentachlorophenol	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Phenanthrene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Phenol	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Pyrene	ND	10		µg/L	1	12/19/2003 7:53:00 PM
Surr: 2,4,6-Tribromophenol	116	39-153		%REC	1	12/19/2003 7:53:00 PM
Surr: 2-Fluorobiphenyl	97.0	40-147		%REC	1	12/19/2003 7:53:00 PM
Surr: 2-Fluorophenol	55.0	21-100		%REC	1	12/19/2003 7:53:00 PM
Surr: 4-Terphenyl-d14	107	39-141		%REC	1	12/19/2003 7:53:00 PM
Surr: Nitrobenzene-d5	98.2	37-140		%REC	1	12/19/2003 7:53:00 PM
Surr: Phenol-d6	32.6	11-100		%REC	1	12/19/2003 7:53:00 PM
VOLATILES BY GC/MS		**SW8260**				Analyst: **HLBW**
1,1,1-Trichloroethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
1,2-Dichloroethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
2-Butanone	ND	10		µg/L	1	12/26/2003 6:25:00 PM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	12/26/2003 6:25:00 PM
2-Hexanone	ND	10		µg/L	1	12/26/2003 6:25:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	12/26/2003 6:25:00 PM
Acetone	ND	10		µg/L	1	12/26/2003 6:25:00 PM
Benzene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Bromodichloromethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Bromoform	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Bromomethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Carbon disulfide	ND	10		µg/L	1	12/26/2003 6:25:00 PM
Carbon tetrachloride	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Chlorobenzene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Chloroethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Chloroform	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Chloromethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Dibromochloromethane	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Ethylbenzene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
m,p-Xylene	ND	10		µg/L	1	12/26/2003 6:25:00 PM

Qualifiers:

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H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *January 21, 2004*

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual
Lab ID: 0312189-01

Client Sample ID: *RO Annual - 1*
Collection Date: 12/16/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Methylene chloride	ND	10		µg/L	1	12/26/2003 6:25:00 PM
Styrene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Tetrachloroethene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Toluene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Trichloroethene	ND	5.0		µg/L	1	12/26/2003 6:25:00 PM
Vinyl acetate	ND	10		µg/L	1	12/26/2003 6:25:00 PM
Vinyl chloride	ND	2.0		µg/L	1	12/26/2003 6:25:00 PM
Xylenes, Total	ND	15		µg/L	1	12/26/2003 6:25:00 PM
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%REC	1	12/26/2003 6:25:00 PM
Surr: 4-Bromofluorobenzene	96.9	70-130		%REC	1	12/26/2003 6:25:00 PM
Surr: Dibromofluoromethane	95.3	70-130		%REC	1	12/26/2003 6:25:00 PM
Surr: Toluene-d8	92.8	70-130		%REC	1	12/26/2003 6:25:00 PM
CHEMICAL OXYGEN DEMAND		**E410.4**				Analyst: **MAG**
Chemical Oxygen Demand	ND	5.00		mg/L	1	12/19/2003
PHENOLICS		**E420.2**				Analyst: **MAG**
Phenolics, Total Recoverable	ND	0.0500		mg/L	1	12/22/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **MG**
Chloride	37.3	0.500		mg/L	1	12/17/2003 2:42:00 PM
Fluoride	2.30	0.100		mg/L	1	12/17/2003 2:42:00 PM
Nitrogen, Nitrate (As N)	1.43	0.100		mg/L	1	12/17/2003 2:42:00 PM
Sulfate	998	50.0		mg/L	50	12/18/2003 1:59:00 PM
Surr: Dichloroacetic acid (surr)	117	80-120		%REC	50	12/18/2003 1:59:00 PM
Surr: Dichloroacetic acid (surr)	103	80-120		%REC	1	12/17/2003 2:42:00 PM
ALKALINITY		**E310.1**				Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	460	5.00		mg/L	1	12/17/2003
Alkalinity, Carbonate (As CaCO3)	ND	5.00		mg/L	1	12/17/2003
Alkalinity, Hydroxide (As CaCO3)	ND	5.00		mg/L	1	12/17/2003
Alkalinity, Total (As CaCO3)	460	5.00		mg/L	1	12/17/2003
CYANIDE, TOTAL		**E335.3**				Analyst: **LMD**
Cyanide	ND	0.0200		mg/L	1	12/23/2003
AMMONIA AS N		**E350.1**				Analyst: **MAG**
Nitrogen, Ammonia (As N)	ND	0.0625		mg/L	1.25	12/19/2003
PH		**E150.1**				Analyst: **LMD**
pH	7.63	0.100		pH units	1	12/17/2003
TOTAL DISSOLVED SOLIDS		**E160.1**				Analyst: **JBA**

Qualifiers:

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E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *January 21, 2004*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RO Annual - 1
Work Order:	0312189	**Collection Date:**	12/16/2003 10:30:00 AM
Project:	RO Reject Annual		
Lab ID:	0312189-01	**Matrix:**	WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Total Dissolved Solids (Residue, Filterable)	2,060	10.0		mg/L	1	12/18/2003
TOTAL SUSPENDED SOLIDS		**E160.2**				Analyst: **JBA**
Suspended Solids (Residue, Non-Filterable)	4.00	2.00		mg/L	1	12/18/2003

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

Date: *Jan 21 2004*

QC BATCH REPORT

Batch ID: **7532** InstrumentID: **ECD_3**

MBLK Sample ID: **PBLKW1-031218** Test Code: **SW8082** Units: **µg/L** Analysis Date: **12/18/03 12:38**
Client ID: Run ID: **ECD_3_031211G** SeqNo: **408378** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.50								
Aroclor 1221	ND	0.50								
Aroclor 1232	ND	0.50								
Aroclor 1242	ND	0.50								
Aroclor 1248	ND	0.50								
Aroclor 1254	ND	0.50								
Aroclor 1260	ND	0.50								
Surr: Decachlorobiphenyl	0.1413	0	0.2	0	70.6	30-150	0			
Surr: Tetrachloro-m-xylene	0.1582	0	0.2	0	79.1	30-150	0			

LCS Sample ID: **PLCSW1-031218** Test Code: **SW8082** Units: **µg/L** Analysis Date: **12/18/03 13:12**
Client ID: Run ID: **ECD_3_031211G** SeqNo: **408379** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	3.982	0.50	5	0	79.6	55-135	0			
Aroclor 1260	3.51	0.50	5	0	70.2	55-135	0			
Surr: Decachlorobiphenyl	0.1633	0	0.2	0	81.7	30-150	0			
Surr: Tetrachloro-m-xylene	0.1845	0	0.2	0	92.2	30-150	0			

MS Sample ID: **0312178-03BMS** Test Code: **SW8082** Units: **µg/L** Analysis Date: **12/18/03 16:05**
Client ID: Run ID: **ECD_3_031211G** SeqNo: **408384** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	5.265	0.50	5	0	105	50-140	0			
Aroclor 1260	4.215	0.50	5	0	84.3	50-140	0			
Surr: Decachlorobiphenyl	0.1793	0	0.2	0	89.6	30-150	0			
Surr: Tetrachloro-m-xylene	0.201	0	0.2	0	101	30-150	0			

MSD Sample ID: **0312178-03BMSD** Test Code: **SW8082** Units: **µg/L** Analysis Date: **12/18/03 16:40**
Client ID: Run ID: **ECD_3_031211G** SeqNo: **408385** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	4.85	0.50	5	0	97	50-140	5.265	8.21	30	
Aroclor 1260	3.822	0.50	5	0	76.4	50-140	4.215	9.78	30	
Surr: Decachlorobiphenyl	0.1684	0	0.2	0	84.2	30-150	0.1793	6.25	30	
Surr: Tetrachloro-m-xylene	0.1821	0	0.2	0	91.1	30-150	0.201	9.87	30	

The following samples were analyzed in this batch: 0312189-01G

ND - Not Detected at the Reporting Limit
- *Analyte detected below quantitation limits*
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7533** InstrumentID: **ECD_1**

MBLK Sample ID: **PBLKW2-031218** Test Code: **SW8081** Units: **µg/L** Analysis Date: **12/18/03 15:56**

Client ID: Run ID: **ECD_1_031216B** SeqNo: **408299** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4'-DDD	ND	0.050								
4,4'-DDE	ND	0.050								
4,4'-DDT	ND	0.050								
Aldrin	ND	0.050								
alpha-BHC	ND	0.050								
beta-BHC	ND	0.050								
Chlordane	ND	0.50								
delta-BHC	ND	0.050								
Dieldrin	ND	0.050								
Endosulfan I	ND	0.050								
Endosulfan II	ND	0.050								
Endosulfan sulfate	ND	0.050								
Endrin	ND	0.050								
Endrin aldehyde	ND	0.050								
Endrin ketone	ND	0.050								
gamma-BHC	ND	0.050								
Heptachlor	ND	0.050								
Heptachlor epoxide	ND	0.050								
Methoxychlor	ND	0.50								
Toxaphene	ND	0.50								
Surr: Decachlorobiphenyl	0.2196	0.050	0.2	0	110	30-150	0			
Surr: Tetrachloro-m-xylene	0.204	0.050	0.2	0	102	30-150	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7533** InstrumentID: **ECD_1**

LCS Sample ID: **PLCSW2-031218** Test Code: **SW8081** Units: **µg/L** Analysis Date: **12/18/03 16:30**

Client ID: Run ID: **ECD_1_031216B** SeqNo: **408300** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4'-DDD	0.4986	0.050	0.5	0	99.7	52.8-136	0			
4,4'-DDE	0.5288	0.050	0.5	0	106	65-138	0			
4,4'-DDT	0.505	0.050	0.5	0	101	57.5-139	0			
Aldrin	0.258	0.050	0.25	0	103	51.6-126	0			
alpha-BHC	0.2563	0.050	0.25	0	103	53.9-126	0			
beta-BHC	0.269	0.050	0.25	0	108	63.4-140	0			
delta-BHC	0.264	0.050	0.25	0	106	43.6-130	0			
Dieldrin	0.5285	0.050	0.5	0	106	61.1-137	0			
Endosulfan I	0.2649	0.050	0.25	0	106	47-129	0			
Endosulfan II	0.5207	0.050	0.5	0	104	65-136	0			
Endosulfan sulfate	0.6667	0.050	0.5	0	133	59.9-136	0			
Endrin	0.5762	0.050	0.5	0	115	66.5-154	0			
Endrin aldehyde	0.552	0.050	0.5	0	110	67-142	0			
Endrin ketone	0.5591	0.050	0.5	0	112	67.2-147	0			
gamma-BHC	0.2676	0.050	0.25	0	107	58-132	0			
Heptachlor	0.2672	0.050	0.25	0	107	46.3-130	0			
Heptachlor epoxide	0.2532	0.050	0.25	0	101	63.5-132	0			
Methoxychlor	2.397	0.50	2.5	0	95.9	64.2-137	0			
Surr: Decachlorobiphenyl	0.2223	0.050	0.2	0	111	30-150	0			
Surr: Tetrachloro-m-xylene	0.2097	0.050	0.2	0	105	30-150	0			

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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7533** InstrumentID: **ECD_1**

LCSD Sample ID: **PLCSDW2-031218** Test Code: **SW8081** Units: **µg/L** Analysis Date: **12/18/03 17:05**

Client ID: Run ID: **ECD_1_031216B** SeqNo: **408301** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4'-DDD	0.5052	0.050	0.5	0	101	52.8-136	0.4986	1.3	30	
4,4'-DDE	0.524	0.050	0.5	0	105	65-138	0.5288	0.902	30	
4,4'-DDT	0.5095	0.050	0.5	0	102	57.5-139	0.505	0.887	30	
Aldrin	0.2551	0.050	0.25	0	102	51.6-126	0.258	1.13	30	
alpha-BHC	0.2551	0.050	0.25	0	102	53.9-126	0.2563	0.458	30	
beta-BHC	0.266	0.050	0.25	0	106	63.4-140	0.269	1.13	30	
delta-BHC	0.2661	0.050	0.25	0	106	43.6-130	0.264	0.8	30	
Dieldrin	0.5255	0.050	0.5	0	105	61.1-137	0.5285	0.573	30	
Endosulfan I	0.262	0.050	0.25	0	105	47-129	0.2649	1.11	30	
Endosulfan II	0.5192	0.050	0.5	0	104	65-136	0.5207	0.302	30	
Endosulfan sulfate	0.6278	0.050	0.5	0	126	59.9-136	0.6854	8.78	30	
Endrin	0.5782	0.050	0.5	0	116	66.5-154	0.5762	0.34	30	
Endrin aldehyde	0.5596	0.050	0.5	0	112	67-142	0.552	1.38	30	
Endrin ketone	0.5632	0.050	0.5	0	113	67.2-147	0.5591	0.732	30	
gamma-BHC	0.2666	0.050	0.25	0	107	58-132	0.2676	0.393	30	
Heptachlor	0.2666	0.050	0.25	0	107	46.3-130	0.2672	0.221	30	
Heptachlor epoxide	0.2517	0.050	0.25	0	101	63.5-132	0.2532	0.602	30	
Methoxychlor	2.425	0.50	2.5	0	97	64.2-137	2.397	1.17	30	
Surr: Decachlorobiphenyl	0.2255	0.050	0.2	0	113	30-150	0.2223	1.42	30	
Surr: Tetrachloro-m-xylene	0.2104	0.050	0.2	0	105	30-150	0.2097	0.333	30	

The following samples were analyzed in this batch: 0312189-01F

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7528** InstrumentID: **ICP7500**

MBLK Sample ID: **MBLKW2-121803** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:04**
Client ID: Run ID: **ICP7500_031218A** SeqNo: **408273** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	ND	0.0050								

MBLK Sample ID: **MBLKW2-121803** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:25**
Client ID: Run ID: **ICP4500_031218A** SeqNo: **408351** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003126	0.010								J
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Cadmium	ND	0.0010								
Calcium	ND	0.50								
Chromium	ND	0.0020								
Cobalt	ND	0.0020								
Copper	0.0003575	0.0020								J
Iron	ND	0.20								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

MBLK Sample ID: **MBLKW2-121803** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/19/03 14:29**
Client ID: Run ID: **ICP4500_031219A** SeqNo: **408776** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	ND	0.0020								
Boron	ND	0.020								

LCS Sample ID: **MLCSW2-121803** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:10**
Client ID: Run ID: **ICP7500_031218A** SeqNo: **408274** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.0988	0.0050	0.1	0	98.8	80-120	0			

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B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7528** InstrumentID: **ICP7500**

LCS Sample ID: **MLCSW2-121803** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:29**
Client ID: Run ID: **ICP4500_031218A** SeqNo: **408352** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1065	0.010	0.1	0	106	80-120	0			
Arsenic	0.08966	0.0050	0.1	0	89.7	80-120	0			
Barium	0.08925	0.0050	0.1	0	89.2	80-120	0			
Cadmium	0.09277	0.0010	0.1	0	92.8	80-120	0			
Calcium	9.636	0.50	10	0	96.4	80-120	0			
Chromium	0.09317	0.0020	0.1	0	93.2	80-120	0			
Cobalt	0.09398	0.0020	0.1	0	94	80-120	0			
Copper	0.09305	0.0020	0.1	0	93	80-120	0			
Iron	9.563	0.20	10	0	95.6	80-120	0			
Magnesium	9.825	0.20	10	0	98.2	80-120	0			
Manganese	0.09658	0.0050	0.1	0	96.6	80-120	0			
Nickel	0.0946	0.0050	0.1	0	94.6	80-120	0			
Potassium	9.767	0.20	10	0	97.7	80-120	0			
Selenium	0.081	0.0050	0.1	0	81	80-120	0			
Silver	0.09889	0.0050	0.1	0	98.9	80-120	0			
Sodium	9.7	0.20	10	0	97	80-120	0			
Vanadium	0.09296	0.0050	0.1	0	93	80-120	0			
Zinc	0.09225	0.0050	0.1	0	92.2	80-120	0			

LCS Sample ID: **MLCSW2-121803** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/19/03 14:25**
Client ID: Run ID: **ICP4500_031219A** SeqNo: **408775** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09696	0.0020	0.1	0	97	80-120	0			
Boron	0.485	0.020	0.5	0	97	80-120	0			B

MS Sample ID: **0312199-03DMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:25**
Client ID: Run ID: **ICP7500_031218A** SeqNo: **408277** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.1086	0.0050	0.1	0.00007722	109	75-125	0			

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B - Analyte detected in assoc. Method Blank
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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7528** InstrumentID: **ICP7500**

MS Sample ID: **0312199-03DMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:42**
Client ID: Run ID: **ICP4500_031218A** SeqNo: **408356** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1301	0.010	0.1	0.0326	97.5	75-125	0			
Arsenic	0.08825	0.0050	0.1	0.002495	85.8	75-125	0			
Barium	0.1322	0.0050	0.1	0.03815	94	75-125	0			
Beryllium	0.09602	0.0020	0.1	0.00001913	96	75-125	0			
Boron	0.6832	0.020	0.5	0.1599	105	75-125	0			
Cadmium	0.09	0.0010	0.1	0.00003043	90	75-125	0			
Calcium	118.9	0.50	10	102.9	160	75-125	0			SEO
Chromium	0.09097	0.0020	0.1	0.002067	88.9	75-125	0			
Cobalt	0.08745	0.0020	0.1	0.0003552	87.1	75-125	0			
Copper	0.08443	0.0020	0.1	0.001899	82.5	75-125	0			
Iron	9.051	0.20	10	0.1277	89.2	75-125	0			
Magnesium	13.23	0.20	10	3.809	94.2	75-125	0			
Manganese	0.095	0.0050	0.1	0.003783	91.2	75-125	0			
Nickel	0.09035	0.0050	0.1	0.00375	86.6	75-125	0			
Potassium	11.04	0.20	10	1.87	91.7	75-125	0			
Selenium	0.08174	0.0050	0.1	-0.00338	85.1	75-125	0			
Silver	0.09468	0.0050	0.1	0.00006131	94.6	75-125	0			
Sodium	44.53	0.20	10	31.47	131	75-125	0			S
Vanadium	0.09224	0.0050	0.1	0.0003969	91.8	75-125	0			
Zinc	0.08216	0.0050	0.1	0.0006006	81.6	75-125	0			

MSD Sample ID: **0312199-03DMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:30**
Client ID: Run ID: **ICP7500_031218A** SeqNo: **408278** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.1157	0.0050	0.1	0.00007722	116	75-125	0.1086	6.33	25	

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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7528** InstrumentID: **ICP7500**

MSD Sample ID: **0312199-03DMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:47**

Client ID: Run ID: **ICP4500_031218A** SeqNo: **408392** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1389	0.010	0.1	0.0326	106	75-125	0.1301	6.54	25	
Arsenic	0.09244	0.0050	0.1	0.002495	89.9	75-125	0.08825	4.64	25	
Barium	0.1335	0.0050	0.1	0.03815	95.4	75-125	0.1322	0.979	25	
Beryllium	0.1002	0.0020	0.1	0.00001913	100	75-125	0.09602	4.26	25	
Boron	0.6877	0.020	0.5	0.1599	106	75-125	0.6832	0.657	25	
Cadmium	0.09108	0.0010	0.1	0.00003043	91	75-125	0.09	1.19	25	
Calcium	119.6	0.50	10	102.9	167	75-125	118.9	0.587	25	SEO
Chromium	0.09289	0.0020	0.1	0.002067	90.8	75-125	0.09097	2.09	25	
Cobalt	0.08963	0.0020	0.1	0.0003552	89.3	75-125	0.08745	2.46	25	
Copper	0.08512	0.0020	0.1	0.001899	83.2	75-125	0.08443	0.814	25	
Iron	9.237	0.20	10	0.1277	91.1	75-125	9.051	2.03	25	
Magnesium	13.74	0.20	10	3.809	99.3	75-125	13.23	3.78	25	
Manganese	0.0971	0.0050	0.1	0.003783	93.3	75-125	0.095	2.19	25	
Nickel	0.09225	0.0050	0.1	0.00375	88.5	75-125	0.09035	2.08	25	
Potassium	11.62	0.20	10	1.87	97.5	75-125	11.04	5.12	25	
Selenium	0.07758	0.0050	0.1	-0.00338	81	75-125	0.08174	5.22	25	
Silver	0.0948	0.0050	0.1	0.00006131	94.7	75-125	0.09468	0.127	25	
Sodium	43.83	0.20	10	31.47	124	75-125	44.53	1.58	25	
Vanadium	0.0937	0.0050	0.1	0.0003969	93.3	75-125	0.09224	1.57	25	
Zinc	0.0844	0.0050	0.1	0.0006006	83.8	75-125	0.08216	2.69	25	

DUP Sample ID: **0312199-03DDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:20**

Client ID: Run ID: **ICP7500_031218A** SeqNo: **408276** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	ND	0.0050	0	0	0	0-0	0.00007722	0	25	

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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7528** InstrumentID: **ICP7500**

DUP Sample ID: **0312199-03DDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/18/03 18:38**
Client ID: Run ID: **ICP4500_031218A** SeqNo: **408355** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0372	0.010	0	0	0	0-0	0.0326	13.2	25	
Arsenic	ND	0.0050	0	0	0	0-0	0.002495	0	25	
Barium	0.04064	0.0050	0	0	0	0-0	0.03815	6.32	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.00001913	0	25	
Boron	0.1824	0.020	0	0	0	0-0	0.1599	13.1	25	
Cadmium	ND	0.0010	0	0	0	0-0	0.00003043	0	25	
Chromium	0.002126	0.0020	0	0	0	0-0	0.002067	2.81	25	
Cobalt	0.0003829	0.0020	0	0	0	0-0	0.0003552	0	25	J
Copper	0.001762	0.0020	0	0	0	0-0	0.001899	0	25	J
Iron	0.1226	0.20	0	0	0	0-0	0.1277	0	25	J
Magnesium	4.018	0.20	0	0	0	0-0	3.809	5.34	25	
Manganese	0.004226	0.0050	0	0	0	0-0	0.003783	0	25	J
Nickel	0.003923	0.0050	0	0	0	0-0	0.00375	0	25	J
Potassium	2.039	0.20	0	0	0	0-0	1.87	8.65	25	
Selenium	ND	0.0050	0	0	0	0-0	-0.00338	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.00006131	0	25	
Sodium	33.19	0.20	0	0	0	0-0	31.47	5.32	25	
'anadium	ND	0.0050	0	0	0	0-0	0.0003969	0	25	
Zinc	ND	0.0050	0	0	0	0-0	0.0006006	0	25	

DUP Sample ID: **0312199-03DDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **12/19/03 15:17**
Client ID: Run ID: **ICP4500_031219A** SeqNo: **408787** Prep Date: **12/18/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	104	5.0	0	0	0	0-0	109.6	5.24	25	

The following samples were analyzed in this batch: 0312189-01B

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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7538** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW1-121803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/19/03 12:15**
Client ID: Run ID: **MERCURY_031219A** SeqNo: **408595** Prep Date: **12/18/2003** 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: **GLCSW1-121803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/19/03 12:16**
Client ID: Run ID: **MERCURY_031219A** SeqNo: **408596** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00474	0.00020	0.005	0	94.8	83-115	0			

LCSD Sample ID: **GLCSDW1-121803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/19/03 12:18**
Client ID: Run ID: **MERCURY_031219A** SeqNo: **408597** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00506	0.00020	0.005	0	101	83-115	0.00474	6.53	20	

MS Sample ID: **0312180-02AMS** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/19/03 12:28**
Client ID: Run ID: **MERCURY_031219A** SeqNo: **408600** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00486	0.00020	0.005	0.000029	96.6	70-124	0			

MSD Sample ID: **0312180-02AMSD** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/19/03 12:29**
Client ID: Run ID: **MERCURY_031219A** SeqNo: **408601** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00489	0.00020	0.005	0.000029	97.2	70-124	0.00486	0.615	20	

DUP Sample ID: **0312180-02ADUP** Test Code: **SW7470** Units: **mg/L** Analysis Date: **12/19/03 12:26**
Client ID: Run ID: **MERCURY_031219A** SeqNo: **408599** Prep Date: **12/18/2003** 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	0.000029	0	20	

The following samples were analyzed in this batch: 0312189-01B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7534** InstrumentID: **SV-2**

MBLK Sample ID: **SBLKW1-031218** Test Code: **SW8270** Units: **µg/L** Analysis Date: **12/19/03 13:33**

Client ID: Run ID: **SV-2_031219A** SeqNo: **409341** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
3-Nitroaniline	ND	10								
4-Methylphenol	ND	10								
4-Nitroaniline	ND	10								
4-Nitrophenol	ND	10								
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Benz(a)anthracene	ND	10								
Benzidine	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
Nitrobenzene	ND	10								
Pentachlorophenol	ND	10								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr: 2,4,6-Tribromophenol	113.4	0	100	0	113	39-153	0			
Surr: 2-Fluorobiphenyl	92.71	0	100	0	92.7	40-147	0			
Surr: 2-Fluorophenol	65.4	0	100	0	65.4	21-100	0			
Surr: 4-Terphenyl-d14	107.3	0	100	0	107	39-141	0			
Surr: Nitrobenzene-d5	91.94	0	100	0	91.9	37-140	0			
Surr: Phenol-d6	43.01	0	100	0	43	11-100	0			

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R - RPD outside accepted recovery limits
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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7534** InstrumentID: **SV-2**

LCS Sample ID: **SLCSW1-031218** Test Code: **SW8270** Units: **µg/L** Analysis Date: **12/19/03 13:58**

Client ID: Run ID: **SV-2_031219A** SeqNo: **409342** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	53.29	10	50	0	107	50-115	0			
2,4,5-Trichlorophenol	111.4	10	100	0	111	72-118	0			
2,4,6-Trichlorophenol	109.4	10	100	0	109	72-117	0			
2-Methylnaphthalene	66.74	10	50	0	133	47-122	0			S
2-Methylphenol	87.92	10	100	0	87.9	51-115	0			
2-Nitroaniline	51.72	10	50	0	103	73-119	0			
2-Nitrophenol	108.6	10	100	0	109	60-119	0			
3-Nitroaniline	40.52	10	50	0	81	61-118	0			
4-Methylphenol	127.1	10	150	0	84.7	44-115	0			
4-Nitroaniline	47.37	10	50	0	94.7	61-123	0			
4-Nitrophenol	60.25	10	100	0	60.3	17-100	0			
Acenaphthene	48.65	10	50	0	97.3	68-115	0			
Acenaphthylene	48.29	10	50	0	96.6	67-116	0			
Anthracene	57.91	10	50	0	116	72-124	0			
Benz(a)anthracene	50.47	10	50	0	101	55-131	0			
Benzidine	27.26	10	50	0	54.5	10-115	0			
Hexachloroethane	51.92	10	50	0	104	46-115	0			
ndeno(1,2,3-cd)pyrene	58.26	10	50	0	117	42-123	0			
Isophorone	54.34	10	50	0	109	63-117	0			
N-Nitrosodi-n-propylamine	49.2	10	50	0	98.4	67-115	0			
N-Nitrosodimethylamine	35.27	10	50	0	70.5	28-115	0			
N-Nitrosodiphenylamine	58.1	10	50	0	116	72-144	0			
Naphthalene	49.92	10	50	0	99.8	52-115	0			
Nitrobenzene	55.53	10	50	0	111	65-115	0			
Pentachlorophenol	125.2	10	100	0	125	65-123	0			S
Phenanthrene	52.94	10	50	0	106	69-119	0			
Phenol	49.83	10	100	0	49.8	16-115	0			
Pyrene	47.4	10	50	0	94.8	51-130	0			
Surr: 2,4,6-Tribromophenol	116.8	0	100	0	117	39-153	0			
Surr: 2-Fluorobiphenyl	95.95	0	100	0	96	40-147	0			
Surr: 2-Fluorophenol	69.52	0	100	0	69.5	21-100	0			
Surr: 4-Terphenyl-d14	102.8	0	100	0	103	39-141	0			
Surr: Nitrobenzene-d5	100.8	0	100	0	101	37-140	0			
Surr: Phenol-d6	45.99	0	100	0	46	11-100	0			

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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **7534** InstrumentID: **SV-2**

LCSD Sample ID: **SLCSDW1-031218** Test Code: **SW8270** Units: **µg/L** Analysis Date: **12/19/03 14:24**

Client ID: Run ID: **SV-2_031219A** SeqNo: **409343** Prep Date: **12/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	51.98	10	50	0	104	50-115	53.29	2.48	30	
2,4,5-Trichlorophenol	114.3	10	100	0	114	72-118	111.4	2.56	30	
2,4,6-Trichlorophenol	110.7	10	100	0	111	72-117	109.4	1.26	30	
2-Methylnaphthalene	57.44	10	50	0	115	47-122	66.74	15	30	
2-Methylphenol	89.53	10	100	0	89.5	51-115	87.92	1.81	30	
2-Nitroaniline	53.07	10	50	0	106	73-119	51.72	2.57	30	
2-Nitrophenol	103.4	10	100	0	103	60-119	108.6	4.94	30	
3-Nitroaniline	39.9	10	50	0	79.8	61-118	40.52	1.54	30	
4-Methylphenol	124.2	10	150	0	82.8	44-115	127.1	2.31	30	
4-Nitroaniline	47.22	10	50	0	94.4	61-123	47.37	0.317	30	
4-Nitrophenol	60.28	10	100	0	60.3	17-100	60.25	0.0451	30	
Acenaphthene	49.12	10	50	0	98.2	68-115	48.65	0.959	30	
Acenaphthylene	48.29	10	50	0	96.6	67-116	48.29	0.0118	30	
Anthracene	55.89	10	50	0	112	72-124	57.91	3.55	30	
Benz(a)anthracene	49.16	10	50	0	98.3	55-131	50.47	2.64	30	
Benzidine	26.05	10	50	0	52.1	10-115	27.26	4.55	30	
Hexachloroethane	51.1	10	50	0	102	46-115	51.92	1.58	30	
ndeno(1,2,3-cd)pyrene	55.39	10	50	0	111	42-123	58.26	5.05	30	
Isophorone	51.78	10	50	0	104	63-117	54.34	4.82	30	
N-Nitrosodi-n-propylamine	52.17	10	50	0	104	67-115	49.2	5.84	30	
N-Nitrosodimethylamine	34.75	10	50	0	69.5	28-115	35.27	1.5	30	
N-Nitrosodiphenylamine	56.78	10	50	0	114	72-144	58.1	2.29	30	
Naphthalene	47.18	10	50	0	94.4	52-115	49.92	5.66	30	
Nitrobenzene	50.26	10	50	0	101	65-115	55.53	9.97	30	
Pentachlorophenol	123.9	10	100	0	124	65-123	125.2	1.09	30	S
Phenanthrene	51.68	10	50	0	103	69-119	52.94	2.41	30	
Phenol	46.72	10	100	0	46.7	16-115	49.83	6.43	30	
Pyrene	46.46	10	50	0	92.9	51-130	47.4	2.01	30	
Surr: 2,4,6-Tribromophenol	115	0	100	0	115	39-153	116.8	1.59	30	
Surr: 2-Fluorobiphenyl	100.3	0	100	0	100	40-147	95.95	4.46	30	
Surr: 2-Fluorophenol	66.39	0	100	0	66.4	21-100	69.52	4.6	30	
Surr: 4-Terphenyl-d14	97.99	0	100	0	98	39-141	102.8	4.83	30	
Surr: Nitrobenzene-d5	98.56	0	100	0	98.6	37-140	100.8	2.29	30	
Surr: Phenol-d6	44.64	0	100	0	44.6	11-100	45.99	3	30	

The following samples were analyzed in this batch: 0312189-01E

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17964** InstrumentID: **VOA_I**

MBLK Sample ID: **VBLKW-1226** Test Code: **SW8260** Units: **µg/L** Analysis Date: **12/26/03 10:28**
Client ID: Run ID: **VOA_I_031226A** SeqNo: **410826** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
2-Butanone	ND	10								
2-Chloroethyl vinyl ether	ND	10								
2-Hexanone	ND	10								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methylene chloride	ND	10								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,3-Dichloropropene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl acetate	ND	10								
Vinyl chloride	ND	2.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	49.13	5.0	50	0	98.3	70-130		0		
Surr: 4-Bromofluorobenzene	47.94	5.0	50	0	95.9	70-130		0		
Surr: Dibromofluoromethane	48.4	5.0	50	0	96.8	70-130		0		
Surr: Toluene-d8	47.96	5.0	50	0	95.9	70-130		0		

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R - RPD outside accepted recovery limits
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17964** InstrumentID: **VOA_I**

LCS Sample ID: **VLCSW-1226** Test Code: **SW8260** Units: **µg/L** Analysis Date: **12/26/03 10:01**

Client ID: Run ID: **VOA_I_031226A** SeqNo: **410825** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.45	5.0	50	0	98.9	75-118	0			
1,1,2,2-Tetrachloroethane	46.75	5.0	50	0	93.5	79-120	0			
1,1,2-Trichloroethane	47.82	5.0	50	0	95.6	81-119	0			
1,1-Dichloroethane	45.73	5.0	50	0	91.5	80-120	0			
1,1-Dichloroethene	47.32	5.0	50	0	94.6	80-120	0			
1,2-Dichloroethane	50.51	5.0	50	0	101	80-120	0			
2-Butanone	98.99	10	100	0	99	70-130	0			
2-Chloroethyl vinyl ether	94.65	10	100	0	94.7	72-120	0			
2-Hexanone	105	10	100	0	105	70-130	0			
4-Methyl-2-pentanone	100.1	10	100	0	100	78-120	0			
Acetone	109.5	10	100	0	110	60-135	0			
Benzene	47.12	5.0	50	0	94.2	82-119	0			
Bromodichloromethane	48.73	5.0	50	0	97.5	81-119	0			
Bromoform	50.69	5.0	50	0	101	80-120	0			
Bromomethane	41.59	5.0	50	0	83.2	75-130	0			
Carbon disulfide	88.13	10	100	0	88.1	78-120	0			
Carbon tetrachloride	51.1	5.0	50	0	102	77-120	0			
Chlorobenzene	47.49	5.0	50	0	95	82-118	0			
Chloroethane	44.25	5.0	50	0	88.5	78-122	0			
Chloroform	47.28	5.0	50	0	94.6	78-120	0			
Chloromethane	37.93	5.0	50	0	75.9	75-125	0			
cis-1,3-Dichloropropene	47.53	5.0	50	0	95.1	81-120	0			
Dibromochloromethane	49.35	5.0	50	0	98.7	81-118	0			
Ethylbenzene	47.68	5.0	50	0	95.4	82-120	0			
m,p-Xylene	95.09	10	100	0	95.1	82-122	0			
Methylene chloride	45	10	50	0	90	80-122	0			
Styrene	48.39	5.0	50	0	96.8	82-121	0			
Tetrachloroethene	49.4	5.0	50	0	98.8	79-118	0			
Toluene	46.38	5.0	50	0	92.8	81-119	0			
trans-1,3-Dichloropropene	48.41	5.0	50	0	96.8	82-121	0			
Trichloroethene	49.38	5.0	50	0	98.8	78-118	0			
Vinyl acetate	97.43	10	100	0	97.4	75-120	0			
Vinyl chloride	41.69	2.0	50	0	83.4	73-127	0			
Xylenes, Total	143	15	150	0	95.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	46.2	5.0	50	0	92.4	70-130	0			
Surr: 4-Bromofluorobenzene	47.93	5.0	50	0	95.9	70-130	0			
Surr: Dibromofluoromethane	46.9	5.0	50	0	93.8	70-130	0			
Surr: Toluene-d8	46.39	5.0	50	0	92.8	70-130	0			

ND - Not Detected at the Reporting Limit
- *Analyte detected below quantitation limits*
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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17964** InstrumentID: **VOA_I**

MS Sample ID: **0312260-02AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date: **12/26/03 11:49**

Client ID: Run ID: **VOA_I_031226A** SeqNo: **410875** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.88	5.0	50	0	106	75-125		0		
1,1,2,2-Tetrachloroethane	50.24	5.0	50	0	100	75-125		0		
1,1,2-Trichloroethane	50.41	5.0	50	0	101	75-125		0		
1,1-Dichloroethane	47.84	5.0	50	0	95.7	75-125		0		
1,1-Dichloroethene	48.41	5.0	50	0	96.8	65-130		0		
1,2-Dichloroethane	53.24	5.0	50	0	106	70-130		0		
2-Butanone	104.4	10	100	0	104	64-128		0		
2-Chloroethyl vinyl ether	96.93	10	100	0	96.9	75-125		0		
2-Hexanone	111	10	100	0	111	72-124		0		
4-Methyl-2-pentanone	102	10	100	0	102	75-125		0		
Acetone	119.2	10	100	0	119	60-130		0		
Benzene	48.82	5.0	50	0	97.6	76-127		0		
Bromodichloromethane	51.83	5.0	50	0	104	75-125		0		
Bromoform	54.01	5.0	50	0	108	75-125		0		
Bromomethane	44.31	5.0	50	0	88.6	75-125		0		
Carbon disulfide	91.81	10	100	0	91.8	75-125		0		
Carbon tetrachloride	54.67	5.0	50	0	109	70-130		0		
Chlorobenzene	50.08	5.0	50	0	100	75-126		0		
Chloroethane	45.62	5.0	50	0	91.2	70-130		0		
Chloroform	51.2	5.0	50	0.9194	101	75-125		0		
Chloromethane	40.82	5.0	50	0	81.6	75-125		0		
cis-1,3-Dichloropropene	49.56	5.0	50	0	99.1	75-125		0		
Dibromochloromethane	52.73	5.0	50	0	105	75-125		0		
Ethylbenzene	50.72	5.0	50	0	101	75-125		0		
m,p-Xylene	99.99	10	100	0	100	75-125		0		
Methylene chloride	47.3	10	50	0	94.6	75-125		0		
Styrene	50.52	5.0	50	0	101	75-125		0		
Tetrachloroethene	52.43	5.0	50	0	105	75-125		0		
Toluene	48.89	5.0	50	0	97.8	76-125		0		
trans-1,3-Dichloropropene	50.79	5.0	50	0	102	70-130		0		
Trichloroethene	52.49	5.0	50	0	105	71-120		0		
Vinyl acetate	101.7	10	100	0	102	75-125		0		
Vinyl chloride	42.87	2.0	50	0	85.7	60-135		0		
Xylenes, Total	149.9	15	150	0	99.9	75-125		0		
Surr: 1,2-Dichloroethane-d4	48.53	5.0	50	0	97.1	70-130		0		
Surr: 4-Bromofluorobenzene	49.54	5.0	50	0	99.1	70-130		0		
Surr: Dibromofluoromethane	48.4	5.0	50	0	96.8	70-130		0		
Surr: Toluene-d8	48.22	5.0	50	0	96.4	70-130		0		

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17964** InstrumentID: **VOA_I**

MSD Sample ID: **0312260-02AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date: **12/26/03 12:16**

Client ID: Run ID: **VOA_I_031226A** SeqNo: **410890** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	57.35	5.0	50	0	115	75-125	52.88	8.11	20	
1,1,2,2-Tetrachloroethane	51.73	5.0	50	0	103	75-125	50.24	2.92	20	
1,1,2-Trichloroethane	51.88	5.0	50	0	104	75-125	50.41	2.89	20	
1,1-Dichloroethane	51.18	5.0	50	0	102	75-125	47.84	6.74	20	
1,1-Dichloroethene	54.31	5.0	50	0	109	65-130	48.41	11.5	20	
1,2-Dichloroethane	55.08	5.0	50	0	110	70-130	53.24	3.4	20	
2-Butanone	108.9	10	100	0	109	64-128	104.4	4.24	20	
2-Chloroethyl vinyl ether	98.1	10	100	0	98.1	75-125	96.93	1.19	20	
2-Hexanone	105	10	100	0	105	72-124	111	5.52	20	
4-Methyl-2-pentanone	103.6	10	100	0	104	75-125	102	1.51	20	
Acetone	120.7	10	100	0	121	60-130	119.2	1.22	20	
Benzene	51.9	5.0	50	0	104	76-127	48.82	6.13	20	
Bromodichloromethane	53.88	5.0	50	0	108	75-125	51.83	3.88	20	
Bromoform	55.12	5.0	50	0	110	75-125	54.01	2.04	20	
Bromomethane	49.12	5.0	50	0	98.2	75-125	44.31	10.3	20	
Carbon disulfide	101.3	10	100	0	101	75-125	91.81	9.81	20	
Carbon tetrachloride	59.12	5.0	50	0	118	70-130	54.67	7.82	20	
Chlorobenzene	53.69	5.0	50	0	107	75-126	50.08	6.95	20	
Chloroethane	51.35	5.0	50	0	103	70-130	45.62	11.8	20	
Chloroform	54.17	5.0	50	0.9194	106	75-125	51.2	5.63	20	
Chloromethane	45.93	5.0	50	0	91.9	75-125	40.82	11.8	20	
cis-1,3-Dichloropropene	56.76	5.0	50	0	114	75-125	49.56	13.5	20	
Dibromochloromethane	55.23	5.0	50	0	110	75-125	52.73	4.63	20	
Ethylbenzene	53.66	5.0	50	0	107	75-125	50.72	5.62	20	
m,p-Xylene	105.9	10	100	0	106	75-125	99.99	5.75	20	
Methylene chloride	50.3	10	50	0	101	75-125	47.3	6.16	20	
Styrene	53.84	5.0	50	0	108	75-125	50.52	6.35	20	
Tetrachloroethene	57.39	5.0	50	0	115	75-125	52.43	9.03	20	
Toluene	51.94	5.0	50	0	104	76-125	48.89	6.06	20	
trans-1,3-Dichloropropene	52.63	5.0	50	0	105	70-130	50.79	3.57	20	
Trichloroethene	55.83	5.0	50	0	112	71-120	52.49	6.18	20	
Vinyl acetate	105.7	10	100	0	106	75-125	101.7	3.86	20	
Vinyl chloride	48.72	2.0	50	0	97.4	60-135	42.87	12.8	20	
Xylenes, Total	159	15	150	0	106	75-125	149.9	5.87	20	
Surr: 1,2-Dichloroethane-d4	48	5.0	50	0	96	70-130	48.53	1.09	20	
Surr: 4-Bromofluorobenzene	49.29	5.0	50	0	98.6	70-130	49.54	0.512	20	
Surr: Dibromofluoromethane	48.27	5.0	50	0	96.5	70-130	48.4	0.267	20	
Surr: Toluene-d8	47.92	5.0	50	0	95.8	70-130	48.22	0.639	20	

The following samples were analyzed in this batch: 0312189-01A

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - *Referenced analyte* value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17818** InstrumentID: **Wet Chemistry**

LCS Sample ID: **WLCSW1-121703** Test Code: **E150.1** Units: **pH units** Analysis Date: **12/17/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **407466** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.02	0.10	6	0	100	85-115	0			

DUP Sample ID: **0312189-01D DUP** Test Code: **E150.1** Units: **pH units** Analysis Date: **12/17/03 0:00**
Client ID: **RO Annual - 1** Run ID: **WET CHEMISTRY_0312** SeqNo: **407468** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.64	0.10	0	0	0	0-0	7.63	0.131	20	

The following samples were analyzed in this batch: 0312189-01D

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17832** InstrumentID: **Wet Chemistry**

MBLK Sample ID: **WMBW1-121703** Test Code: **E310.1** Units: **mg/L** Analysis Date: **12/17/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **407746** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-121703** Test Code: **E310.1** Units: **mg/L** Analysis Date: **12/17/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **407747** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1000	5.0	1000	0	100	80-120		0		

DUP Sample ID: **0312189-01D DUP** Test Code: **E310.1** Units: **mg/L** Analysis Date: **12/17/03 0:00**
Client ID: **RO Annual - 1** Run ID: **WET CHEMISTRY_0312** SeqNo: **407754** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	460.1	5.0	0	0	0	0-0	460.1	0	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	460.1	5.0	0	0	0	0-0	460.1	0	20	

The following samples were analyzed in this batch: 0312189-01D

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17836** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-121703** Test Code: **E300** Units: **mg/L** Analysis Date: **12/17/03 12:32**
Client ID: Run ID: **IC201_031217A** SeqNo: **407924** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	1.0								
Surr: Dichloroacetic acid (surr)	5.29	0.10	5	0	106	80-120	0			

LCS Sample ID: **WLCSW1-121703** Test Code: **E300** Units: **mg/L** Analysis Date: **12/17/03 13:04**
Client ID: Run ID: **IC201_031217A** SeqNo: **407925** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.58	0.50	10	0	95.8	80-120	0			
Fluoride	1.99	0.10	2	0	99.5	80-120	0			
Nitrogen, Nitrate (As N)	1.99	0.10	2	0	99.5	80-120	0			
Sulfate	10.12	1.0	10	0	101	80-120	0			
Surr: Dichloroacetic acid (surr)	4.96	0.10	5	0	99.2	80-120	0			

LCSD Sample ID: **WLCSDW1-12170** Test Code: **E300** Units: **mg/L** Analysis Date: **12/17/03 13:37**
Client ID: Run ID: **IC201_031217A** SeqNo: **407926** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.56	0.50	10	0	95.6	80-120	9.58	0.209	20	
Fluoride	1.93	0.10	2	0	96.5	80-120	1.99	3.06	20	
Nitrogen, Nitrate (As N)	2	0.10	2	0	100	80-120	1.99	0.501	20	
Sulfate	9.79	1.0	10	0	97.9	80-120	10.12	3.31	20	
Surr: Dichloroacetic acid (surr)	5.61	0.10	5	0	112	80-120	4.96	12.3	20	

MS Sample ID: **0312191-01EMS** Test Code: **E300** Units: **mg/L** Analysis Date: **12/17/03 17:24**
Client ID: Run ID: **IC201_031217A** SeqNo: **407933** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2948	0.50	10	2984	-354	75-125	0			SEO
Fluoride	2.41	0.10	2	0.75	83	75-125	0			
Nitrogen, Nitrate (As N)	3.09	0.10	2	1.2	94.5	75-125	0			
Sulfate	22.82	1.0	10	12.55	103	75-125	0			
Surr: Dichloroacetic acid (surr)	5.01	0.10	5	0	100	80-120	0			

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R - RPD outside accepted recovery limits
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B - Analyte detected in assoc. Method Blank
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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17836** InstrumentID: **IC201**

MSD Sample ID: **0312191-01EMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **12/17/03 17:57**
Client ID: Run ID: **IC201_031217A** SeqNo: **407934** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2953	0.50	10	2984	-314	75-125	2948	0.137	20	SEO
Fluoride	2.41	0.10	2	0.75	83	75-125	2.41	0	20	
Nitrogen, Nitrate (As N)	3.08	0.10	2	1.2	94	75-125	3.09	0.324	20	
Sulfate	22.76	1.0	10	12.55	102	75-125	22.82	0.263	20	
Surr: Dichloroacetic acid (surr)	5.2	0.10	5	0	104	80-120	5.01	3.72	20	

DUP Sample ID: **0312191-01EDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **12/17/03 15:47**
Client ID: Run ID: **IC201_031217A** SeqNo: **407930** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2981	0.50	0	0	0	0-0	2984	0.112	20	E
Fluoride	0.74	0.10	0	0	0	0-0	0.75	1.34	20	
Nitrogen, Nitrate (As N)	1.21	0.10	0	0	0	0-0	1.2	0.83	20	
Sulfate	12.46	1.0	0	0	0	0-0	12.55	0.72	20	
Surr: Dichloroacetic acid (surr)	5.28	0.10	5	0	106	80-120	5.21	1.33	20	

The following samples were analyzed in this batch: 0312189-01D

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17859** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-121803** Test Code: **E300** Units: **mg/L** Analysis Date: **12/18/03 11:49**
Client ID: Run ID: **IC201_031218A** SeqNo: **408329** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	1.0								
Surr: Dichloroacetic acid (surr)	5.33	0.10	5	0	107	80-120	0			

LCS Sample ID: **WLCSW1-121803** Test Code: **E300** Units: **mg/L** Analysis Date: **12/18/03 12:22**
Client ID: Run ID: **IC201_031218A** SeqNo: **408330** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.58	0.50	10	0	95.8	80-120	0			
Fluoride	1.93	0.10	2	0	96.5	80-120	0			
Nitrogen, Nitrate (As N)	2.01	0.10	2	0	100	80-120	0			
Sulfate	10.17	1.0	10	0	102	80-120	0			
Surr: Dichloroacetic acid (surr)	5.22	0.10	5	0	104	80-120	0			

LCSD Sample ID: **WLCSDW1-12180** Test Code: **E300** Units: **mg/L** Analysis Date: **12/18/03 12:54**
Client ID: Run ID: **IC201_031218A** SeqNo: **408331** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.58	0.50	10	0	95.8	80-120	9.58	0	20	
Fluoride	1.97	0.10	2	0	98.5	80-120	1.93	2.05	20	
Nitrogen, Nitrate (As N)	1.89	0.10	2	0	94.5	80-120	2.01	6.15	20	
Sulfate	10.11	1.0	10	0	101	80-120	10.17	0.592	20	
Surr: Dichloroacetic acid (surr)	5.55	0.10	5	0	111	80-120	5.22	6.13	20	

MS Sample ID: **0312195-10AMS** Test Code: **E300** Units: **mg/L** Analysis Date: **12/18/03 17:14**
Client ID: Run ID: **IC201_031218A** SeqNo: **408340** Prep Date: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	32.66	1.0	20	14.46	91	75-125	0			
Fluoride	19.12	0.20	4	15.42	92.5	75-125	0			
Nitrogen, Nitrate (As N)	3.94	0.20	4	0.34	90	75-125	0			
Sulfate	87.32	2.0	20	67.56	98.8	75-125	0			
Surr: Dichloroacetic acid (surr)	10.54	0.20	10	0	105	80-120	0			

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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17859** InstrumentID: **IC201**

MSD Sample ID: **0312195-10AMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **12/18/03 17:47**
Client ID: Run ID: **IC201_031218A** SeqNo: **408341** Prep Date: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	31.98	1.0	20	14.46	87.6	75-125	32.66	2.1	20	
Fluoride	19.22	0.20	4	15.42	95	75-125	19.12	0.522	20	
Nitrogen, Nitrate (As N)	3.88	0.20	4	0.34	88.5	75-125	3.94	1.53	20	
Sulfate	86.82	2.0	20	67.56	96.3	75-125	87.32	0.574	20	
Surr: Dichloroacetic acid (surr)	10.58	0.20	10	0	106	80-120	10.54	0.379	20	

DUP Sample ID: **0312195-10ADUP** Test Code: **E300** Units: **mg/L** Analysis Date: **12/18/03 16:42**
Client ID: Run ID: **IC201_031218A** SeqNo: **408338** Prep Date: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	14.24	1.0	0	0	0	0-0	14.46	1.53	20	
Fluoride	15.42	0.20	0	0	0	0-0	15.42	0	20	
Nitrogen, Nitrate (As N)	0.34	0.20	0	0	0	0-0	0.34	0	20	
Sulfate	66.44	2.0	0	0	0	0-0	67.56	1.67	20	
Surr: Dichloroacetic acid (surr)	11.78	0.20	10	0	118	80-120	11.64	1.2	20	

DUP Sample ID: **0312218-01DDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **12/18/03 21:34**
Client ID: Run ID: **IC201_031218A** SeqNo: **408346** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	338.1	5.0	0	0	0	0-0	339	0.266	20	
Fluoride	6.8	1.0	0	0	0	0-0	6.9	1.46	20	
Nitrogen, Nitrate (As N)	ND	1.0	0	0	0	0-0	0	0	20	
Surr: Dichloroacetic acid (surr)	52.8	1.0	50	0	106	80-120	48.9	7.67	20	

The following samples were analyzed in this batch: 0312189-01D

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
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CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17864** InstrumentID: **Wet Chemistry**

MBLK Sample ID: **WBLKW1-121803** Test Code: **E160.2** Units: **mg/L** Analysis Date: **12/18/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **408499** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Fi	ND	2.0								

LCS Sample ID: **WLCSW1-121803** Test Code: **E160.2** Units: **mg/L** Analysis Date: **12/18/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **408500** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Fi	99	2.0	100	0	99	71-114	0			

DUP Sample ID: **0312204-01BDUP** Test Code: **E160.2** Units: **mg/L** Analysis Date: **12/18/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **408504** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Fi	6	2.0	0	0	0	0-0	6	0	20	

The following samples were analyzed in this batch: 0312189-01D

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17865** InstrumentID: **Wet Chemistry**

MBLK Sample ID: **MBLKW1-121803** Test Code: **E160.1** Units: **mg/L** Analysis Date: **12/18/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **408528** 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: **MLCSW1-121803** Test Code: **E160.1** Units: **mg/L** Analysis Date: **12/18/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **408529** 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	1027	10	1000	0	103	80-120	0			

DUP Sample ID: **0312204-01BDUP** Test Code: **E160.1** Units: **mg/L** Analysis Date: **12/18/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0312** SeqNo: **408536** 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	2075	10	0	0	0	0-0	2053	1.07	20	

The following samples were analyzed in this batch: 0312189-01D

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0312189
Project: RO Reject Annual

QC BATCH REPORT

Batch ID: **R17929** InstrumentID: **UV-2101PC**

MBLK Sample ID: **WMBW1-122303** Test Code: **E335.3** Units: **mg/L** Analysis Date: **12/23/03 0:00**
Client ID: Run ID: **UV-2101PC_031223C** SeqNo: **409979** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								

LCS Sample ID: **WLCSW1-122303** Test Code: **E335.3** Units: **mg/L** Analysis Date: **12/23/03 0:00**
Client ID: Run ID: **UV-2101PC_031223C** SeqNo: **409980** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2037	0.020	0.2	0	102	80-120	0			

MS Sample ID: **0312218-01H MS** Test Code: **E335.3** Units: **mg/L** Analysis Date: **12/23/03 0:00**
Client ID: Run ID: **UV-2101PC_031223C** SeqNo: **409994** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2031	0.020	0.2	0.00968	96.7	75-125	0			

MSD Sample ID: **0312218-01H MSD** Test Code: **E335.3** Units: **mg/L** Analysis Date: **12/23/03 0:00**
Client ID: Run ID: **UV-2101PC_031223C** SeqNo: **409995** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2055	0.020	0.2	0.00968	97.9	75-125	0.2031	1.17	25	

DUP Sample ID: **0312218-01H DUP** Test Code: **E335.3** Units: **mg/L** Analysis Date: **12/23/03 0:00**
Client ID: Run ID: **UV-2101PC_031223C** SeqNo: **409993** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.009	0.020	0	0	0	0-0	0.00968	0	20	J

The following samples were analyzed in this batch: 0312189-01C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

e-Lab
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Chain of Custody Form

Page 1 of 1

☐ e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager: | e-Lab Work Order #: 03289

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name		A	VOC Select list 8260B
Work Order		Project Number	RO Reject Annual	B	Phenol
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Ammonia
Send Report To	Jeff Byrd / Charlie Hyman	Invoice Attn	~~Jeff Byrd~~ / Charlie Hyman	D	COD
Address	P.O. Box 159	Address	P.O. Box 159	E	Semivolatiles Select list (8270C)
				F	Pesticides (8081)
City/State/Zip	Artesia, New Mexico 88211	City/State/Zip	Artesia, New Mexico 88211	G	PCB (8082)
Phone	(505) 748-3311	Phone	(505) 748-3311	H	TOX
Fax	(505) 746-5421	Fax	(505) 746-5421	I	Metals(6020)
e-Mail Address		e-Mail Address		J	Hg (7470)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	RO ANNUAL	12/16/03	1030			19	X	X	X	X	X	X	X	X	X	X	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Charlie Hyman

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☒ STD 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: Charlie Hyman	Date: 12/16/03	Time: 1615	Received by:	Notes:	
Relinquished by:	Date:	Time:	Received by (Laboratory): RICHARD SANCHEZ 12-17-03 0900	e-Lab Cooler ID	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

QC Package: (Check One Box Below)
☒ Level II Std QC ☐ Level II Std QC/Raw Data ☐ Level IV SW846/CLP ☐ Other ☐ TRRP Checklist ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.
2. Unless otherwise agreed in a formal contract, services provided by e-Lab, Inc. are expressly limited to the terms and conditions stated on the reverse.

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Chain of Custody Form

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☐ e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager: | e-Lab Work Order #: 83289

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name		A	Radium (226+228)
Work Order		Project Number	RO Reject Annual	B	Cyanide
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	BOD
Send Report To	Jeff Byrd	Invoice Attn	Jeff Byrd	D	TSS
Address	P.O. Box 159	Address	P.O. Box 159	E	Ph
				F	TDS
City/State/Zip	Artesia, New Mexico 88211	City/State/Zip	Artesia, New Mexico 88211	G	C12
Phone	(505) 748-3311	Phone	(505) 748-3311	H	Anions: Cl,SO4,NO3,F
Fax	(505) 746-5421	Fax	(505) 746-5421	I	Alkalinity
e-Mail Address		e-Mail Address		J	Fecal coliform and EC

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	See Chain #1						X	X	X	X	X	X	X	X	X	X	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: [signature]

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☒ STD 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by: [signature]	Date: 12/12/03	Time: 1615	Received by:	Notes:		
Relinquished by:	Date:	Time:	Received by (Laboratory): [signature] 12-13-03 0730	e-lab Cooler ID	Cooler Temp.	QC Package: (Check One Box Below) ☒ Level II Std QC ☐ Level III Std QC/Raw Data ☐ Level IV SW846/CLP ☐ Other ____ ☐ TRRP Checklist ☐ TRRP Level IV
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.
2. Unless otherwise agreed in a formal contract, services provided by e-Lab, Inc. are expressly limited to the terms and conditions stated on the reverse.

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☐ e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager: | e-Lab Work Order #: 03289

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name		A	Uranium
Work Order		Project Number	RO Reject Annual	B	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	
Send Report To	Jeff Byrd	Invoice Attn	Jeff Byrd	D	
Address	P.O. Box 159	Address	P.O. Box 159	E	
				F	
City/State/Zip	Artesia, New Mexico 88211	City/State/Zip	Artesia, New Mexico 88211	G	
Phone	(505) 748-3311	Phone	(505) 748-3311	H	
Fax	(505) 746-5411	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	See Chain #1						X										
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Charles Byrd

Shipment Method: Fed Ex

Required Turnaround Time: (Check Box) ☐ Other ____ ☑ STD 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date: 12/16/03	Time: 1615	Received by:	Notes:		
Relinquished by:	Date:	Time:	Received by (Laboratory): RICHARD SAYRE 12/17/03 0830	e-lab Cooler ID	Cooler Temp.	QC Package: (Check One Box Below) ☑ Level II Std QC ☐ Level II Std QC/Raw Data ☐ Level IV SW846/CLP ☐ Other ____ ☐ TRRP Checklist ☐ TRRP Level IV
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.

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Sample Receipt Checklist

Client Name NAVAJO REFINING | Date/Time Received: 12/17/2003 9:22:00 AM

Work Order Number 0312189 | Received by: RSZ

Checklist completed by RICHARD SANCHEZ 12.17.03 (Signature / Date) | Reviewed by LT 12/18/03 (Initials / Date)

Matrix: W | 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):	2.6c, 3.2c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes: Trip blank not on COC; logged in without analysis.

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

e-Lab, Inc

Date: *December 29, 2003*

CLIENT: e-Lab, Inc
Project: 0312189
Work Order: 0312273

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0312273-01	0312189-01K	Water		12/16/2003 10:30	12/18/2003 14:50	☐
0312273-02	0312189-01L	Water		12/16/2003 10:30	12/18/2003 14:50	☐

e-Lab, Inc

CLIENT: e-Lab, Inc
Work Order: 0312273
Project: 0312189

Date: *Dec 29 2003*

QC BATCH REPORT

Batch ID: **R18346** InstrumentID: **WETCHEM**

MBLK Sample ID: **WBLKW1-121903** Test Code: **EPA 410.4** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: Run ID: **WETCHEM_031219G** SeqNo: **266222** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	ND	5.0								

LCS Sample ID: **WLCSW1-121903** Test Code: **EPA 410.4** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: Run ID: **WETCHEM_031219G** SeqNo: **266223** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	56	5.0	60	0	93.3	75-125	0			

LCSD Sample ID: **WLCSDW1-12190** Test Code: **EPA 410.4** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: Run ID: **WETCHEM_031219G** SeqNo: **266228** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	57	5.0	60	0	95	75-125	56	1.77	20	

MS Sample ID: **0312273-01A MS** Test Code: **EPA 410.4** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: **0312189-01K** Run ID: **WETCHEM_031219G** SeqNo: **266225** Prep Date: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	44	10	60	-1	75	70-130	0			

MSD Sample ID: **0312273-01A MSD** Test Code: **EPA 410.4** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: **0312189-01K** Run ID: **WETCHEM_031219G** SeqNo: **266226** Prep Date: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	56	10	60	-1	95	70-130	44	24	20	R

The following samples were analyzed in this batch: 0312273-01A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: e-Lab, Inc
Work Order: 0312273
Project: 0312189

QC BATCH REPORT

Batch ID: **R18348** InstrumentID: **WETCHEM**

MBLK Sample ID: **WBLKW1-121903** Test Code: **EPA 350.1** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: Run ID: **WETCHEM_031219I** SeqNo: **266241** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia	ND	0.050								

LCS Sample ID: **WLCSW1-121903** Test Code: **EPA 350.1** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: Run ID: **WETCHEM_031219I** SeqNo: **266242** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia	0.3161	0.050	0.3	0	105	80-120		0		

LCSD Sample ID: **WLCSDW1-12190** Test Code: **EPA 350.1** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: Run ID: **WETCHEM_031219I** SeqNo: **266255** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia	0.3342	0.050	0.3	0	111	80-120	0.3161	5.57	20	

MS Sample ID: **0312240-03B MS** Test Code: **EPA 350.1** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: Run ID: **WETCHEM_031219I** SeqNo: **266248** Prep Date: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia	11.82	1.2	10	0.4147	114	75-125		0		

MSD Sample ID: **0312240-03B MSD** Test Code: **EPA 350.1** Units: **mg/L** Analysis Date **12/19/03 0:00**
Client ID: Run ID: **WETCHEM_031219I** SeqNo: **266249** Prep Date: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia	12.08	1.2	10	0.4147	117	75-125	11.82	2.2	20	

The following samples were analyzed in this batch: 0312273-01A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: e-Lab, Inc
Work Order: 0312273
Project: 0312189

QC BATCH REPORT

Batch ID: **R18366** InstrumentID: **WETCHEM**

MBLK Sample ID: **WBLKW1-121703** Test Code: **EPA 420.1** Units: **mg/L** Analysis Date **12/22/03 0:00**
Client ID: Run ID: **WETCHEM_031222A** SeqNo: **266622** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total	0.015	0.050								J

LCS Sample ID: **WLCSW1-121603** Test Code: **EPA 420.1** Units: **mg/L** Analysis Date **12/22/03 0:00**
Client ID: Run ID: **WETCHEM_031222A** SeqNo: **266623** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total	0.2039	0.050	0.2	0	102	80-120	0			

LCSD Sample ID: **WLCSDW1-12160** Test Code: **EPA 420.1** Units: **mg/L** Analysis Date **12/22/03 0:00**
Client ID: Run ID: **WETCHEM_031222A** SeqNo: **266628** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total	0.2195	0.050	0.2	0	110	80-120	0.2039	7.37	20	

MS Sample ID: **0312194-01D MS** Test Code: **EPA 420.1** Units: **mg/L** Analysis Date **12/22/03 0:00**
Client ID: Run ID: **WETCHEM_031222A** SeqNo: **266625** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total	0.188	0.050	0.2	0.03148	78.3	75-125	0			

MSD Sample ID: **0312194-01D MSD** Test Code: **EPA 420.1** Units: **mg/L** Analysis Date **12/22/03 0:00**
Client ID: Run ID: **WETCHEM_031222A** SeqNo: **266626** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total	0.2117	0.050	0.2	0.03148	90.1	75-125	0.188	11.9	20	

The following samples were analyzed in this batch: 0312273-02A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

e-Lab, Inc.
[illegible]
Houston, Texas 77099-4158
(281) 530-5656

Subcontractor:
e-Lab Inc.
3352 128th Ave

Holland, MI 494240233

TEL: (616) 399-6070
FAX: (616) 399-6185

Attn to:

Dec 17, 2003

	Sample ID	Matrix	Collection Date	Requested Tests: E350.1	E410.4	E420.2
1	0312149-01K (RD Annual - 12	Water	12/16/2003 10:30	1	1	1
2	0312149-01L (RD Annual - 12	Water	12/16/2003 10:30			

Comments: Please analyze for COD, Ammonia, and Phenolics. Send results to Lara Tse ill due by 12-29-03.

	Date/Time		Date/Time
Relinquished by:	12-17-03 1425	Received by:	
Relinquished by:		Received by:	12/17/03 1425

e-Lab, Inc

Sample Receipt Checklist

Client Name: ELABLHOU — Date/Time Received: 12/18/2003 9:00:00 AM

Work Order Number: 0312278 — Received by: KBW

Checklist completed by: _____ 12/18/03 (Signature / Date) — Reviewed by: _____ 12/19/03 (Initials / Date)

Matrix: — 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):	0.0 C		
Water - VOA vials have zero headspace?	Yes	No	No VOA vials submitted ✓
Water - pH acceptable upon receipt?	Yes ✓	No	N/A

Adjusted? — Checked by:

Login Notes: Samples were shipped overnight on ice.

Any No and/or N/A (not applicable) response must be detailed in the comments section below.

Client contacted: — Date contacted: — Person contacted:

Contacted by: — Regarding:

Comments:

Corrective Action:

From: Aviel Kastor (281)599-6070
E-LAB, INC
10450 STANCLIFF RD. #210

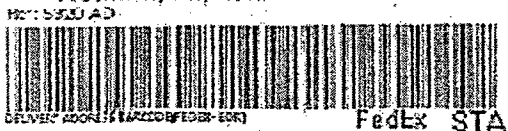
HOUSTON, TX, 77099

FedEx.

To: e-Lab Sample Receiving (616)399-6070
e-Lab Michigan
3352 128th Ave.

Holland, MI, 49424

SHIP DATE: 17DEC08
WEIGHT: 47 LB



FedEx STANDARD OVERNIGHT

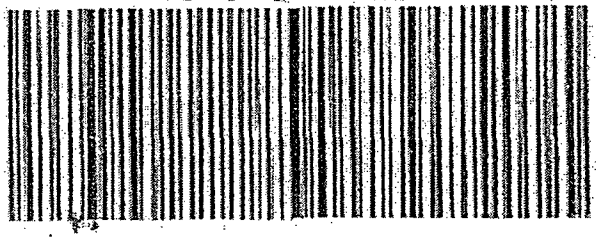
THU
AA
Deliver by:
18DEC08

TRK # 7917 3709 5136

GRR

49424-MI-US

NH HLMA



Align bottom of Airbill Pouch here.
Part # 150454 Rev. 4/09

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

e-Labs, Inc

Certificate of Analysis Number:

03120686

Report To:		Project Name:	e-Labs/0312189
e-Labs, Inc		Site:	Houston, TX
Lora DunlapTerrill		Site Address:	
10450 Stancliff Road			
Suite 210		PO Number:	2105390
Houston		State:	Texas
TX		State Cert. No.:	
77099-		Date Reported:	
ph (281) 530-5656	fax:		

This Report Contains A Total Of 11 Pages

Excluding This Page

12/29/2003

Date

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

e-Labs, Inc

Certificate of Analysis Number:

03120686

Report To:		Project Name:	e-Labs/0312189
e-Labs, Inc		Site:	Houston, TX
Lora DunlapTerrill		Site Address:	
10450 Stancliff Road			
Suite 210		PO Number:	2105390
Houston		State:	Texas
TX		State Cert. No.:	
77099-		Date Reported:	
ph (281) 530-5656	fax:		

Your sample "0312189-01(RO Annual-1)" (SPL ID: 03120686-01) was received outside the method holding time for coliform and total residual chlorine analysis. Per our conversation via e-mail on December 18, 2003, SPL continued with the analysis requested.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Dean A. Joiner

12/29/2003

Dean Joiner
Senior Project Manager

Date

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

e-Labs, Inc

Certificate of Analysis Number:

03120686

Report To: e-Labs, Inc
Lora DunlapTerrill
10450 Stancliff Road
Suite 210
Houston
TX
77099-
ph (281) 530-5656 fax: (281) 530-5887

Fax To:

Project Name: e-Labs/0312189
Site: Houston, TX
Site Address:
PO Number: 2105390
State: Texas
State Cert. No.:
Date Reported:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
0312189-01(RO Annual-1)	03120686-01	Water	12/16/2003 10:30:00 AM	12/17/2003 2:25:00 PM		☐

Dean A. Joiner

12/29/2003

Dean Joiner
Senior Project Manager

Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: 0312189-01(RO Annual-1) **Collected:** 12/16/2003 10:30 **SPL Sample ID:** 03120686-01

Site: Houston, TX

Analyses/Method	Result	Rep.Limit		Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
BIOCHEMICAL OXYGEN DEMAND			**MCL**	**E405.1**		**Units: mg/L**		
Biochemical Oxygen Demand	ND	2		1		12/17/03 16:30	J_M	2010498
ENTERCOCCI BACTERIA			**MCL**	**M9230-C**		**Units: colonies/100mL**		
Entercocci Bacteria	2	0		1	B	12/17/03 18:00	DP	2019019
FECAL COLIFORMS			**MCL**	**M9222 D**		**Units: colonies/100mL**		
Coliform,Fecal	1	1		1		12/17/03 17:15	DP	2016168
RESIDUAL CHLORINE			**MCL**	**E330.5**		**Units: mg/L**		
Residual Chlorine,Total	ND	0.1		1		12/17/03 19:00	DP	2004691

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

12/29/2003 3:39:25 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

e-Labs, Inc

e-Labs/0312189

Analysis: Residual Chlorine
Method: E330.5
WorkOrder: 03120686
Lab Batch ID: R100559

Method Blank

RunID: WET_031217S-2004684 Units: mg/L
Analysis Date: 12/17/2003 19:00 Analyst: DP

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
03120686-01D	0312189-01(RO Annual-1)

Analyte	Result	Rep Limit
Residual Chlorine,Total	ND	0.10

Sample Duplicate

Original Sample: 03120658-01
RunID: WET_031217S-2004687 Units: mg/L
Analysis Date: 12/17/2003 19:00 Analyst: DP

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Residual Chlorine,Total	ND	ND	0	20

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

e-Labs, Inc

e-Labs/0312189

Analysis: Biochemical Oxygen Demand
Method: E405.1
WorkOrder: 03120686
Lab Batch ID: R100806

Method Blank

RunID: WET_031217W-2010485 Units: mg/L
Analysis Date: 12/17/2003 12:00 Analyst: J_M

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
03120686-01C	0312189-01(RO Annual-1)

Analyte	Result	Rep Limit
Biochemical Oxygen Demand	ND	2.0

Laboratory Control Sample (LCS)

RunID: WET_031217W-2010487 Units: mg/L
Analysis Date: 12/17/2003 12:00 Analyst: J_M

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Biochemical Oxygen Demand	198	201.6	102	83.7	114

Sample Duplicate

Original Sample: 03120660-03
RunID: WET_031217W-2010488 Units: mg/L
Analysis Date: 12/17/2003 12:00 Analyst: J_M

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Biochemical Oxygen Demand	157	157.8	1	20

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

e-Labs, Inc

e-Labs/0312189

Analysis: Fecal Coliforms
Method: M9222 D
WorkOrder: 03120686
Lab Batch ID: R101078

Method Blank

RunID: WET_031217X-2016165 Units: colonies/100mL
Analysis Date: 12/17/2003 17:15 Analyst: DP

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
03120686-01A	0312189-01(RO Annual-1)

Analyte	Result	Rep Limit
Coliform,Fecal	ND	1.0

Sample Duplicate

Original Sample: 03120693-01
RunID: WET_031217X-2016166 Units: colonies/100mL
Analysis Date: 12/17/2003 17:15 Analyst: DP

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Coliform,Fecal	280	270	4	48

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

e-Labs, Inc
e-Labs/0312189

Analysis: Entercocci Bacteria
Method: M9230-C
WorkOrder: 03120686
Lab Batch ID: R101183

Method Blank

RunID: WET_031217Z-2019018 Units: colonies/100mL
Analysis Date: 12/17/2003 18:00 Analyst: DP

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
03120686-01B	0312189-01(RO Annual-1)

Analyte	Result	Rep Limit
Entercocci Bacteria	0	0

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

Sample Receipt Checklist

And

Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	03120686	Received By:	NB
Date and Time Received:	12/17/2003 2:25:00 PM	Carrier name:	SPL
Temperature:	4.1°C	Chilled by:	Water Ice

		Ye	No	Not Present	Not Applicable
1.	Shipping container/cooler in good condition?	☑	☐	☐	
2.	Custody seals intact on shippping container/cooler?	☐	☐	☑	
3.	Custody seals intact on sample bottles?	☐	☐	☑	
4.	Chain of custody present?	☑	☐		
5.	Chain of custody signed when relinquished and receiv	☑	☐		
6.	Chain of custody agrees with sample labels?	☑	☐		
7.	Samples in proper container/bottle?	☑	☐		
8.	Sample containers intact?	☑	☐		
9.	Sufficient sample volume for indicated test?	☑	☐		
10.	All samples received within holding time?	☐	☑		
	1. Samples for Fecal Coliform + E Coli. Were received out of hold time.				
11.	Container/Temp Blank temperature in compliance?	☑	☐		
12.	Water - VOA vials have zero headspace	☑	☐		☐
13.	Water - pH acceptable upon receipt?	☑	☐		☐

SPL Representative: Brown, Electa **Contact Date & Time:** 12/17/2003 3:45:00 PM

Client Name Contacted: Contact

Non Conformance Issues:

Client Instructions: Per Hector run the samples and run E Coli, narrate the issues.

0312086

CHAIN-OF-CUSTODY RECORD

e-Lab, Inc.
10450 Stancliff Rd, Suite 210
Houston, Texas 77099-4338
(281) 530-5656

Subcontractor:

Southern Petroleum Laboratories
8880 Interchange
Houston, TX 77054

TEL: (713) 660-0901
FAX: (713) 660-8975
Acct #:

Dec 17, 2003

Sample ID	Matrix	Collection Date	Requested Tests						
			E330.4	E405.1	SM9222D				
0312189-01H (RO Annual - 1)	Water	12/16/2003 10:30			1				
0312189-01I (RO Annual - 1)	Water	12/16/2003 10:30		1					
0312189-01J (RO Annual - 1)	Water	12/16/2003 10:30	1						

Comments: Please analyze for Fecal Coliform + E Coli, BOD, Residual Chlorine, ~~and BOD~~ 12-17-03

4°C

		Date/Time			Date/Time
Relinquished by:		12/17/03 1425	Received by:		12/17/03 1425
Relinquished by:			Received by:		

AMERICAN RADIATION SERVICES, INC.
2609 N. River Rd. Port Allen, Louisiana 70767
1(800) 401 - 4277 Fax: (225) 381-2996

ARS Tracking Number:	ARS03234	**P.O. Number:**	2105391
Client I.D.:	0312189-01M(RO Annual-1)	**ARS Sample I.D.:**	ARS032234-8717
Date Sampled:	12/16/03	**Date Received:**	12/19/03
Time Sample:	1030	**Time Received:**	1200
Type of Sample:	Liquid	**Date of Report:**	1/20/04
NELAP Certification #:	E87558	**L. A. Agency Interest #:**	30658

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Unit	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	0.29	0.87	2.26	pCi/L	EPA 903	1/19/04 1929	KP
Ra-228	11.51	0.88	1.88	pCi/L	EPA 904	1/16/04 1854	KP
Total Uranium	0.009	0.000	0.0003	mg/L	ASTM D 5174-97	1/14/04 1434	SM

Quality Assurance Review

Notes. American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.
2609 N. River Rd. Port Allen, Louisiana 70767
1(800) 401 - 4277 Fax: (225) 381-2996

ARS Tracking Number:	ARS03234	**P.O. Number:**	2105391
Client I.D.:	0312189-01N(RO Annual-1)	**ARS Sample I.D.:**	ARS032234-8718
Date Sampled:	12/16/03	**Date Received:**	12/19/03
Time Sample:	1030	**Time Received:**	1200
Type of Sample:	Liquid	**Date of Report:**	1/20/04
NELAP Certification #:	E87558	**L. A. Agency Interest #:**	30658

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Unit	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	0.26	0.89	2.35	pCi/L	EPA-903	1/19/04 1929	KP
Ra-228	8.33	0.82	1.88	pCi/L	EPA 904	1/16/04 1854	KP
Total Uranium	0.007	0.000	0.0003	mg/L	ASTM D 5174-97	1/14/04 1451	SM

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS AMERICAN RADIATION SERVICES, INC.

2609 North River Road Port Allen, Louisiana 70767
1 (800) 401-4277 FAX (225) 381-2998

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B.
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only).
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only).
8.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurements of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for Examination of Water and Waste Water, 18th, 1992.
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995).
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory.
10.0)	NR	Not Referenced
11.0)	N/A	Not Applicable

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5887

January 26, 2004

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Inj Wells

Work Order : **0401037**

Dear Jeff Byrd,

e-Lab, Inc. received 1 sample on 1/7/2004 9:25:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 36.

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

Sincerely,

Lora Terrill

Electronically approved by: Patrina A. Dathorne

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *January 26, 2004*

CLIENT: Navajo Refining Company
Project: Inj Wells
Work Order: **0401037**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0401037-01	Inj. Wells	Water		1/6/2004 11:00	1/7/2004 09:25	☐

e-Lab, Inc. **Date:** *January 26, 2004*

CLIENT: Navajo Refining Company
Project: Inj Wells
Work Order: 0401037

Case Narrative

The analysis for Uranium was performed at American Radiation Services in Baton Rouge, LA.

e-Lab, Inc.

Date: *January 26, 2004*

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells
Lab ID: 0401037-01

Client Sample ID: Inj. Wells
Collection Date: 1/6/2004 11:00:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **1/13/2004**	Analyst: **JCJ**
Mercury	ND	0.000200		mg/L	1	1/14/2004 4:38:03 PM
ICP METALS, TOTAL		**SW6020**			Prep Date: **1/8/2004**	Analyst: **ALR**
Aluminum	0.0929	0.0200		mg/L	2	1/9/2004 3:23:00 PM
Arsenic	0.130	0.0250		mg/L	5	1/9/2004 3:14:00 PM
Barium	0.0405	0.0100		mg/L	2	1/9/2004 3:23:00 PM
Beryllium	ND	0.00400		mg/L	2	1/9/2004 3:23:00 PM
Boron	0.579	0.0400		mg/L	2	1/9/2004 3:23:00 PM
Cadmium	ND	0.00200		mg/L	2	1/9/2004 3:23:00 PM
Calcium	78.5	2.50		mg/L	5	1/9/2004 3:14:00 PM
Chromium	ND	0.00400		mg/L	2	1/9/2004 3:23:00 PM
Cobalt	ND	0.00400		mg/L	2	1/9/2004 3:23:00 PM
Copper	ND	0.00400		mg/L	2	1/9/2004 3:23:00 PM
Iron	0.424	0.400		mg/L	2	1/9/2004 3:23:00 PM
Lead	ND	0.0100		mg/L	2	1/9/2004 3:23:00 PM
Magnesium	21.2	1.00		mg/L	5	1/9/2004 3:14:00 PM
Manganese	0.0279	0.0100		mg/L	2	1/9/2004 3:23:00 PM
Nickel	ND	0.0100		mg/L	2	1/9/2004 3:23:00 PM
Potassium	84.1	1.00		mg/L	5	1/9/2004 3:14:00 PM
Selenium	0.169	0.0100		mg/L	2	1/9/2004 3:23:00 PM
Silver	ND	0.0100		mg/L	2	1/9/2004 3:23:00 PM
Sodium	2,280	40.0		mg/L	200	1/14/2004 1:00:00 PM
Vanadium	ND	0.0100		mg/L	2	1/9/2004 3:23:00 PM
Zinc	0.0357	0.0100		mg/L	2	1/9/2004 3:23:00 PM
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **1/8/2004**	Analyst: **HV**
1,2,4-Trichlorobenzene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
2,4,5-Trichlorophenol	ND	10		µg/L	1	1/10/2004 1:04:00 AM
2,4,6-Trichlorophenol	ND	10		µg/L	1	1/10/2004 1:04:00 AM
2-Methylnaphthalene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
2-Methylphenol	ND	10		µg/L	1	1/10/2004 1:04:00 AM
2-Nitroaniline	ND	10		µg/L	1	1/10/2004 1:04:00 AM
2-Nitrophenol	ND	10		µg/L	1	1/10/2004 1:04:00 AM
3-Nitroaniline	ND	10		µg/L	1	1/10/2004 1:04:00 AM
4-Methylphenol	ND	10		µg/L	1	1/10/2004 1:04:00 AM
4-Nitroaniline	ND	10		µg/L	1	1/10/2004 1:04:00 AM
4-Nitrophenol	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Acenaphthene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Acenaphthylene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Aniline	ND	10		µg/L	1	1/10/2004 1:04:00 AM

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *January 26, 2004*

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells
Lab ID: 0401037-01

Client Sample ID: Inj. Wells
Collection Date: 1/6/2004 11:00:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Benz(a)anthracene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Benzidine	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Hexachloroethane	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Isophorone	ND	10		µg/L	1	1/10/2004 1:04:00 AM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	1/10/2004 1:04:00 AM
N-Nitrosodimethylamine	ND	10		µg/L	1	1/10/2004 1:04:00 AM
N-Nitrosodiphenylamine	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Naphthalene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Nitrobenzene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Pentachlorophenol	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Phenanthrene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Phenol	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Pyrene	ND	10		µg/L	1	1/10/2004 1:04:00 AM
Surr: 2,4,6-Tribromophenol	84.1	39-153		%REC	1	1/10/2004 1:04:00 AM
Surr: 2-Fluorobiphenyl	69.6	40-147		%REC	1	1/10/2004 1:04:00 AM
Surr: 2-Fluorophenol	29.1	21-100		%REC	1	1/10/2004 1:04:00 AM
Surr: 4-Terphenyl-d14	65.8	39-141		%REC	1	1/10/2004 1:04:00 AM
Surr: Nitrobenzene-d5	76.6	37-140		%REC	1	1/10/2004 1:04:00 AM
Surr: Phenol-d6	17.0	11-100		%REC	1	1/10/2004 1:04:00 AM
VOLATILES BY GC/MS		**SW8260**				Analyst: **PC**
1,1,1-Trichloroethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
1,2-Dichloroethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
2-Butanone	ND	10		µg/L	1	1/13/2004 7:54:00 PM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	1/13/2004 7:54:00 PM
2-Hexanone	ND	10		µg/L	1	1/13/2004 7:54:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	1/13/2004 7:54:00 PM
Acetone	17	10		µg/L	1	1/13/2004 7:54:00 PM
Benzene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Bromodichloromethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Bromoform	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Bromomethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Carbon disulfide	ND	10		µg/L	1	1/13/2004 7:54:00 PM
Carbon tetrachloride	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Chlorobenzene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM

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H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *January 26, 2004*

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells
Lab ID: 0401037-01

Client Sample ID: Inj. Wells
Collection Date: 1/6/2004 11:00:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Chloroform	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Chloromethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Dibromochloromethane	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Ethylbenzene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
m,p-Xylene	ND	10		µg/L	1	1/13/2004 7:54:00 PM
Methylene chloride	ND	10		µg/L	1	1/13/2004 7:54:00 PM
Styrene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Tetrachloroethene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Toluene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Trichloroethene	ND	5.0		µg/L	1	1/13/2004 7:54:00 PM
Vinyl acetate	ND	10		µg/L	1	1/13/2004 7:54:00 PM
Vinyl chloride	ND	2.0		µg/L	1	1/13/2004 7:54:00 PM
Xylenes, Total	ND	15		µg/L	1	1/13/2004 7:54:00 PM
Surr: 1,2-Dichloroethane-d4	93.7	70-130		%REC	1	1/13/2004 7:54:00 PM
Surr: 4-Bromofluorobenzene	92.8	70-130		%REC	1	1/13/2004 7:54:00 PM
Surr: Dibromofluoromethane	93.4	70-130		%REC	1	1/13/2004 7:54:00 PM
Surr: Toluene-d8	89.3	70-130		%REC	1	1/13/2004 7:54:00 PM
FLASHPOINT		**SW1010**				Analyst: **MAG**
Ignitability	>200	50		°F	1	1/8/2004
CYANIDE, REACTIVE		**SW-846**				Analyst: **MAG**
Reactive Cyanide	ND	0.0300		mg/L	1	1/13/2004
SULFIDE, REACTIVE		**SW-846**				Analyst: **MAG**
Reactive Sulfide	ND	40.0		mg/L	1	1/12/2004
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **MG**
Chloride	2,440	50.0		mg/L	100	1/13/2004 12:02:00 PM
Sulfate	1,710	100		mg/L	100	1/13/2004 12:02:00 PM
Surr: Dichloroacetic acid (surr)	115	80-120		%REC	100	1/13/2004 12:02:00 PM
ALKALINITY		**E310.1**				Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	290	5.00		mg/L	1	1/7/2004
Alkalinity, Carbonate (As CaCO3)	ND	5.00		mg/L	1	1/7/2004
Alkalinity, Hydroxide (As CaCO3)	ND	5.00		mg/L	1	1/7/2004
Alkalinity, Total (As CaCO3)	290	5.00		mg/L	1	1/7/2004
CONDUCTIVITY		**E120.1**				Analyst: **LMD**
Specific Conductance	9,120	1.00		µmhos/cm	1	1/13/2004

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e-Lab, Inc.

Date: *January 26, 2004*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	Inj. Wells
Work Order:	0401037	**Collection Date:**	1/6/2004 11:00:00 AM
Project:	Inj Wells		
Lab ID:	0401037-01	**Matrix:**	WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
PH		**E150.1**				Analyst: **LMD**
pH	8.43	0.100		pH units	1	1/7/2004
TOTAL DISSOLVED SOLIDS		**E160.1**				Analyst: **JBA**
Total Dissolved Solids (Residue, Filterable)	6,070	10.0		mg/L	1	1/9/2004

Qualifiers:

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P - Dual Column results percent difference > 40%

E - Value above quantitation range

H - Analyzed outside of Hold Time

e-Lab, Inc.

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

Date: *Jan 26 2004*

QC BATCH REPORT

Batch ID: **7670** InstrumentID: **ICP4500**

MBLK Sample ID: **MBLKW2-010804** Test Code: **SW6020** Units: **mg/L** Analysis Date: **01/09/04 13:47**

Client ID: Run ID: **ICP4500_040109A** SeqNo: **415496** Prep Date: **1/8/2004** 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	0.020								
Cadmium	ND	0.0010								
Calcium	ND	0.50								
Chromium	ND	0.0020								
Cobalt	ND	0.0020								
Copper	ND	0.0020								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								
Vanadium	ND	0.0050								
Zinc	0.001716	0.0050								J

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- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **7670** InstrumentID: **ICP4500**

LCS Sample ID: **MLCSW2-010804** Test Code: **SW6020** Units: **mg/L** Analysis Date: **01/09/04 13:51**

Client ID: Run ID: **ICP4500_040109A** SeqNo: **415497** Prep Date: **1/8/2004** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05256	0.010	0.05	0	105	80-120	0			
Arsenic	0.05054	0.0050	0.05	0	101	80-120	0			
Barium	0.04876	0.0050	0.05	0	97.5	80-120	0			
Beryllium	0.0475	0.0020	0.05	0	95	80-120	0			
Boron	0.4771	0.020	0.5	0	95.4	80-120	0			
Cadmium	0.0518	0.0010	0.05	0	104	80-120	0			
Calcium	4.894	0.50	5	0	97.9	80-120	0			
Chromium	0.05086	0.0020	0.05	0	102	80-120	0			
Cobalt	0.05016	0.0020	0.05	0	100	80-120	0			
Copper	0.04837	0.0020	0.05	0	96.7	80-120	0			
Iron	4.695	0.20	5	0	93.9	80-120	0			
Lead	0.04803	0.0050	0.05	0	96.1	80-120	0			
Magnesium	5.03	0.20	5	0	101	80-120	0			
Manganese	0.05203	0.0050	0.05	0	104	80-120	0			
Nickel	0.05031	0.0050	0.05	0	101	80-120	0			
Potassium	5.001	0.20	5	0	100	80-120	0			
Selenium	0.04876	0.0050	0.05	0	97.5	80-120	0			
Silver	0.04905	0.0050	0.05	0	98.1	80-120	0			
Sodium	4.934	0.20	5	0	98.7	80-120	0			
Vanadium	0.05047	0.0050	0.05	0	101	80-120	0			
Zinc	0.04962	0.0050	0.05	0	99.2	80-120	0			

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CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **7670** InstrumentID: **ICP4500**

MS Sample ID: **0401037-01CMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **01/09/04 15:41**

Client ID: **Inj. Wells** Run ID: **ICP4500_040109A** SeqNo: **415583** Prep Date: **1/8/2004** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1386	0.020	0.05	0.09293	91.3	75-125	0			
Arsenic	0.1628	0.010	0.05	0.1222	81.2	75-125	0			
Barium	0.0922	0.010	0.05	0.04055	103	75-125	0			
Beryllium	0.054	0.0040	0.05	0	108	75-125	0			
Boron	1.149	0.040	0.5	0.5787	114	75-125	0			
Cadmium	0.04433	0.0020	0.05	0	88.7	75-125	0			
Calcium	76.14	1.0	5	73.6	50.8	75-125	0			SO
Chromium	0.05061	0.0040	0.05	0.002633	96	75-125	0			
Cobalt	0.04941	0.0040	0.05	0.002671	93.5	75-125	0			
Copper	0.0442	0.0040	0.05	0.003364	81.7	75-125	0			
Iron	4.765	0.40	5	0.4238	86.8	75-125	0			
Lead	0.05518	0.010	0.05	0	110	75-125	0			
Magnesium	23.02	0.40	5	19.15	77.4	75-125	0			
Manganese	0.07355	0.010	0.05	0.02789	91.3	75-125	0			
Nickel	0.05067	0.010	0.05	0.008268	84.8	75-125	0			
Potassium	85.96	0.40	5	82.03	78.6	75-125	0			O
Selenium	0.1903	0.010	0.05	0.1686	43.4	75-125	0			S
Silver	0.04085	0.010	0.05	0.0006825	80.3	75-125	0			
Sodium	400	0.40	5	400	0	75-125	0			SEO
Vanadium	0.05781	0.010	0.05	0.007067	101	75-125	0			
Zinc	0.07138	0.010	0.05	0.03574	71.3	75-125	0			S

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CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **7670** InstrumentID: **ICP4500**

MSD Sample ID: **0401037-01CMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **01/09/04 15:46**

Client ID: **Inj. Wells** Run ID: **ICP4500_040109A** SeqNo: **415584** Prep Date: **1/8/2004** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1337	0.020	0.05	0.09293	81.5	75-125	0.1386	3.6	25	
Arsenic	0.1586	0.010	0.05	0.1222	72.8	75-125	0.1628	2.61	25	S
Barium	0.08998	0.010	0.05	0.04055	98.9	75-125	0.0922	2.44	25	
Beryllium	0.0523	0.0040	0.05	0	105	75-125	0.054	3.2	25	
Boron	1.11	0.040	0.5	0.5787	106	75-125	1.149	3.45	25	
Cadmium	0.0431	0.0020	0.05	0	86.2	75-125	0.04433	2.81	25	
Calcium	74.74	1.0	5	73.6	22.8	75-125	76.14	1.86	25	SO
Chromium	0.05029	0.0040	0.05	0.002633	95.3	75-125	0.05061	0.634	25	
Cobalt	0.04901	0.0040	0.05	0.002671	92.7	75-125	0.04941	0.813	25	
Copper	0.04405	0.0040	0.05	0.003364	81.4	75-125	0.0442	0.34	25	
Iron	4.732	0.40	5	0.4238	86.2	75-125	4.765	0.695	25	
Lead	0.05415	0.010	0.05	0	108	75-125	0.05518	1.88	25	
Magnesium	22.37	0.40	5	19.15	64.4	75-125	23.02	2.86	25	S
Manganese	0.07227	0.010	0.05	0.02789	88.8	75-125	0.07355	1.76	25	
Nickel	0.05102	0.010	0.05	0.008268	85.5	75-125	0.05067	0.688	25	
Potassium	81.97	0.40	5	82.03	-1.2	75-125	85.96	4.75	25	SO
Selenium	0.179	0.010	0.05	0.1686	20.8	75-125	0.1903	6.12	25	S
Silver	0.03939	0.010	0.05	0.0006825	77.4	75-125	0.04085	3.64	25	
Sodium	400	0.40	5	400	0	75-125	400	0	25	SEO
Vanadium	0.0578	0.010	0.05	0.007067	101	75-125	0.05781	0.0173	25	
Zinc	0.07034	0.010	0.05	0.03574	69.2	75-125	0.07138	1.47	25	S

DUP Sample ID: **0401037-01CDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **01/09/04 15:18**

Client ID: **Inj. Wells** Run ID: **ICP4500_040109A** SeqNo: **415578** Prep Date: **1/8/2004** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1275	0.025	0	0	0	0-0	0.13	1.94	25	
Calcium	73.74	2.5	0	0	0	0-0	78.49	6.24	25	
Magnesium	19.87	1.0	0	0	0	0-0	21.18	6.38	25	
Potassium	80.79	1.0	0	0	0	0-0	84.06	3.97	25	

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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **7670** InstrumentID: **ICP4500**

DUP Sample ID: **0401037-01CDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **01/09/04 15:37**
Client ID: **Inj. Wells** Run ID: **ICP4500_040109A** SeqNo: **415582** Prep Date: **1/8/2004** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09187	0.020	0	0	0	0-0	0.09293	1.15	25	
Barium	0.03947	0.010	0	0	0	0-0	0.04055	2.7	25	
Beryllium	ND	0.0040	0	0	0	0-0	0	0	25	
Boron	0.5767	0.040	0	0	0	0-0	0.5787	0.346	25	
Cadmium	ND	0.0020	0	0	0	0-0	0	0	25	
Chromium	0.002171	0.0040	0	0	0	0-0	0.002633	0	25	J
Cobalt	0.002721	0.0040	0	0	0	0-0	0.002671	0	25	J
Copper	0.003462	0.0040	0	0	0	0-0	0.003364	0	25	J
Iron	0.4287	0.40	0	0	0	0-0	0.4238	1.15	25	
Lead	ND	0.010	0	0	0	0-0	0	0	25	
Manganese	0.02741	0.010	0	0	0	0-0	0.02789	1.74	25	
Nickel	0.008235	0.010	0	0	0	0-0	0.008268	0	25	J
Selenium	0.1445	0.010	0	0	0	0-0	0.1686	15.4	25	
Silver	0.0005242	0.010	0	0	0	0-0	0.0006825	0	25	J
Vanadium	0.006497	0.010	0	0	0	0-0	0.007067	0	25	J
Zinc	0.0343	0.010	0	0	0	0-0	0.03574	4.11	25	

DUP Sample ID: **0401037-01CDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **01/14/04 13:04**
Client ID: **Inj. Wells** Run ID: **ICP4500_040114A** SeqNo: **416724** Prep Date: **1/8/2004** DF: **200**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	2229	40	0	0	0	0-0	2285	2.48	25	

The following samples were analyzed in this batch: 0401037-01C

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **7710** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW5-011304** Test Code: **SW7470** Units: **mg/L** Analysis Date: **01/14/04 16:33**
Client ID: Run ID: **MERCURY_040114D** SeqNo: **416950** Prep Date: **1/13/2004** 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: **GLCSW5-011304** Test Code: **SW7470** Units: **mg/L** Analysis Date: **01/14/04 16:34**
Client ID: Run ID: **MERCURY_040114D** SeqNo: **416951** Prep Date: **1/13/2004** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00487	0.00020	0.005	0	97.4	83-115		0		

LCSD Sample ID: **GLCSDW5-011304** Test Code: **SW7470** Units: **mg/L** Analysis Date: **01/14/04 16:36**
Client ID: Run ID: **MERCURY_040114D** SeqNo: **416952** Prep Date: **1/13/2004** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00496	0.00020	0.005	0	99.2	83-115	0.00487	1.83	20	

MS Sample ID: **0401037-01CMS** Test Code: **SW7470** Units: **mg/L** Analysis Date: **01/14/04 16:41**
Client ID: **Inj. Wells** Run ID: **MERCURY_040114D** SeqNo: **416955** Prep Date: **1/13/2004** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00507	0.00020	0.005	0.000045	100	70-124		0		

MSD Sample ID: **0401037-01CMSD** Test Code: **SW7470** Units: **mg/L** Analysis Date: **01/14/04 16:42**
Client ID: **Inj. Wells** Run ID: **MERCURY_040114D** SeqNo: **416956** Prep Date: **1/13/2004** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00495	0.00020	0.005	0.000045	98.1	70-124	0.00507	2.4	20	

DUP Sample ID: **0401037-01CDUP** Test Code: **SW7470** Units: **mg/L** Analysis Date: **01/14/04 16:39**
Client ID: **Inj. Wells** Run ID: **MERCURY_040114D** SeqNo: **416954** Prep Date: **1/13/2004** 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	0.000045	0	20	

The following samples were analyzed in this batch: 0401037-01C

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **7683** InstrumentID: **SV-3**

MBLK Sample ID: **SBLKW1-040108** Test Code: **SW8270** Units: **µg/L** Analysis Date: **01/09/04 16:47**

Client ID: Run ID: **SV-3_040108A** SeqNo: **416012** Prep Date: **1/8/2004** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
3-Nitroaniline	ND	10								
4-Methylphenol	ND	10								
4-Nitroaniline	ND	10								
4-Nitrophenol	ND	10								
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Benz(a)anthracene	ND	10								
Benzidine	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
Nitrobenzene	ND	10								
Pentachlorophenol	ND	10								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr: 2,4,6-Tribromophenol	85.07	0	100	0	85.1	39-153	0			
Surr: 2-Fluorobiphenyl	76.23	0	100	0	76.2	40-147	0			
Surr: 2-Fluorophenol	45.21	0	100	0	45.2	21-100	0			
Surr: 4-Terphenyl-d14	75.82	0	100	0	75.8	39-141	0			
Surr: Nitrobenzene-d5	86.87	0	100	0	86.9	37-140	0			
Surr: Phenol-d6	28.99	0	100	0	29	11-100	0			

ND - Not Detected at the Reporting Limit

- Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **7683** InstrumentID: **SV-3**

LCS Sample ID: **SLCSW1-040108** Test Code: **SW8270** Units: **µg/L** Analysis Date: **01/09/04 17:13**

Client ID: Run ID: **SV-3_040108A** SeqNo: **416013** Prep Date: **1/8/2004** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	41.87	10	50	0	83.7	50-115	0			
2,4,5-Trichlorophenol	82.2	10	100	0	82.2	72-118	0			
2,4,6-Trichlorophenol	83.51	10	100	0	83.5	72-117	0			
2-Methylnaphthalene	42.34	10	50	0	84.7	47-122	0			
2-Methylphenol	71.03	10	100	0	71	51-115	0			
2-Nitroaniline	44.61	10	50	0	89.2	73-119	0			
2-Nitrophenol	87.53	10	100	0	87.5	60-119	0			
3-Nitroaniline	41.16	10	50	0	82.3	61-118	0			
4-Methylphenol	96.92	10	150	0	64.6	44-115	0			
4-Nitroaniline	41.84	10	50	0	83.7	61-123	0			
4-Nitrophenol	38.84	10	100	0	38.8	17-100	0			
Acenaphthene	41.32	10	50	0	82.6	68-115	0			
Acenaphthylene	41.87	10	50	0	83.7	67-116	0			
Anthracene	44.55	10	50	0	89.1	72-124	0			
Benz(a)anthracene	40.18	10	50	0	80.4	55-131	0			
Benzidine	13.03	10	50	0	26.1	10-115	0			
Hexachloroethane	38.29	10	50	0	76.6	46-115	0			
'ndeno(1,2,3-cd)pyrene	41.53	10	50	0	83.1	42-123	0			
ısophorone	45.89	10	50	0	91.8	63-117	0			
N-Nitrosodi-n-propylamine	43.72	10	50	0	87.4	67-115	0			
N-Nitrosodimethylamine	25.46	10	50	0	50.9	28-115	0			
N-Nitrosodiphenylamine	50.02	10	50	0	100	72-144	0			
Naphthalene	42.08	10	50	0	84.2	52-115	0			
Nitrobenzene	45.06	10	50	0	90.1	65-115	0			
Pentachlorophenol	84.64	10	100	0	84.6	65-123	0			
Phenanthrene	43.23	10	50	0	86.5	69-119	0			
Phenol	33.5	10	100	0	33.5	16-115	0			
Pyrene	38.95	10	50	0	77.9	51-130	0			
Surr: 2,4,6-Tribromophenol	91.94	0	100	0	91.9	39-153	0			
Surr: 2-Fluorobiphenyl	80.16	0	100	0	80.2	40-147	0			
Surr: 2-Fluorophenol	50.59	0	100	0	50.6	21-100	0			
Surr: 4-Terphenyl-d14	81.09	0	100	0	81.1	39-141	0			
Surr: Nitrobenzene-d5	90.59	0	100	0	90.6	37-140	0			
Surr: Phenol-d6	33.67	0	100	0	33.7	11-100	0			

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **7683** InstrumentID: **SV-3**

LCSD Sample ID: **SLCSDW1-040108** Test Code: **SW8270** Units: **µg/L** Analysis Date: **01/09/04 17:39**

Client ID: Run ID: **SV-3_040108A** SeqNo: **416014** Prep Date: **1/8/2004** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	42.41	10	50	0	84.8	50-115	41.87	1.29	30	
2,4,5-Trichlorophenol	86.29	10	100	0	86.3	72-118	82.2	4.86	30	
2,4,6-Trichlorophenol	83.53	10	100	0	83.5	72-117	83.51	0.0281	30	
2-Methylnaphthalene	42.19	10	50	0	84.4	47-122	42.34	0.363	30	
2-Methylphenol	67.08	10	100	0	67.1	51-115	71.03	5.73	30	
2-Nitroaniline	46.08	10	50	0	92.2	73-119	44.61	3.24	30	
2-Nitrophenol	87.97	10	100	0	88	60-119	87.53	0.504	30	
3-Nitroaniline	41.24	10	50	0	82.5	61-118	41.16	0.186	30	
4-Methylphenol	90.96	10	150	0	60.6	44-115	96.92	6.35	30	
4-Nitroaniline	43.08	10	50	0	86.2	61-123	41.84	2.91	30	
4-Nitrophenol	34.89	10	100	0	34.9	17-100	38.84	10.7	30	
Acenaphthene	41.74	10	50	0	83.5	68-115	41.32	1.02	30	
Acenaphthylene	42.98	10	50	0	86	67-116	41.87	2.62	30	
Anthracene	45.95	10	50	0	91.9	72-124	44.55	3.09	30	
Benz(a)anthracene	40.72	10	50	0	81.4	55-131	40.18	1.34	30	
Benzidine	19.19	10	50	0	38.4	10-115	13.03	38.2	30	R
Hexachloroethane	38.69	10	50	0	77.4	46-115	38.29	1.04	30	
ndeno(1,2,3-cd)pyrene	42.3	10	50	0	84.6	42-123	41.53	1.84	30	
Isophorone	46.42	10	50	0	92.8	63-117	45.89	1.15	30	
N-Nitrosodi-n-propylamine	43.74	10	50	0	87.5	67-115	43.72	0.0428	30	
N-Nitrosodimethylamine	25.93	10	50	0	51.9	28-115	25.46	1.83	30	
N-Nitrosodiphenylamine	47.58	10	50	0	95.2	72-144	50.02	5.01	30	
Naphthalene	41.54	10	50	0	83.1	52-115	42.08	1.29	30	
Nitrobenzene	45.04	10	50	0	90.1	65-115	45.06	0.0543	30	
Pentachlorophenol	82.68	10	100	0	82.7	65-123	84.64	2.34	30	
Phenanthrene	44.72	10	50	0	89.4	69-119	43.23	3.38	30	
Phenol	33.12	10	100	0	33.1	16-115	33.5	1.13	30	
Pyrene	39.61	10	50	0	79.2	51-130	38.95	1.68	30	
Surr: 2,4,6-Tribromophenol	95.4	0	100	0	95.4	39-153	91.94	3.69	30	
Surr: 2-Fluorobiphenyl	81.18	0	100	0	81.2	40-147	80.16	1.26	30	
Surr: 2-Fluorophenol	48.13	0	100	0	48.1	21-100	50.59	4.98	30	
Surr: 4-Terphenyl-d14	80.48	0	100	0	80.5	39-141	81.09	0.752	30	
Surr: Nitrobenzene-d5	91.03	0	100	0	91	37-140	90.59	0.48	30	
Surr: Phenol-d6	30.39	0	100	0	30.4	11-100	33.67	10.3	30	

The following samples were analyzed in this batch: 0401037-01B

ND - Not Detected at the Reporting Limit
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O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18228** InstrumentID: **VOA_I**

MBLK Sample ID: **VBLKW-0113** Test Code: **SW8260** Units: **µg/L** Analysis Date: **01/13/04 11:22**

Client ID: Run ID: **VOA_I_040113A** SeqNo: **416622** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
2-Butanone	ND	10								
2-Chloroethyl vinyl ether	ND	10								
2-Hexanone	ND	10								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methylene chloride	ND	10								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,3-Dichloropropene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl acetate	ND	10								
Vinyl chloride	ND	2.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	46	5.0	50	0	92	70-130		0		
Surr: 4-Bromofluorobenzene	48.08	5.0	50	0	96.2	70-130		0		
Surr: Dibromofluoromethane	47.06	5.0	50	0	94.1	70-130		0		
Surr: Toluene-d8	46.05	5.0	50	0	92.1	70-130		0		

ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18228** InstrumentID: **VOA_I**

LCS Sample ID: **VLCSW-0113** Test Code: **SW8260** Units: **µg/L** Analysis Date: **01/13/04 10:28**

Client ID: Run ID: **VOA_I_040113A** SeqNo: **416621** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.27	5.0	50	0	96.5	75-118	0			
1,1,2,2-Tetrachloroethane	47.46	5.0	50	0	94.9	79-120	0			
1,1,2-Trichloroethane	48.13	5.0	50	0	96.3	81-119	0			
1,1-Dichloroethane	46.83	5.0	50	0	93.7	80-120	0			
1,1-Dichloroethene	46.32	5.0	50	0	92.6	80-120	0			
1,2-Dichloroethane	53.01	5.0	50	0	106	80-120	0			
2-Butanone	98.39	10	100	0	98.4	70-130	0			
2-Chloroethyl vinyl ether	90.24	10	100	0	90.2	72-120	0			
4-Methyl-2-pentanone	93.51	10	100	0	93.5	78-120	0			
Acetone	113.7	10	100	0	114	60-135	0			
Benzene	46.07	5.0	50	0	92.1	82-119	0			
Bromodichloromethane	51.5	5.0	50	0	103	81-119	0			
Bromoform	50.25	5.0	50	0	100	80-120	0			
Bromomethane	44.31	5.0	50	0	88.6	75-130	0			
Carbon disulfide	89.23	10	100	0	89.2	78-120	0			
Carbon tetrachloride	49.21	5.0	50	0	98.4	77-120	0			
Chlorobenzene	47.05	5.0	50	0	94.1	82-118	0			
Chloroethane	46.72	5.0	50	0	93.4	78-122	0			
Chloroform	49.02	5.0	50	0	98	78-120	0			
Chloromethane	58.33	5.0	50	0	117	75-125	0			
cis-1,3-Dichloropropene	50.41	5.0	50	0	101	81-120	0			
Dibromochloromethane	52.1	5.0	50	0	104	81-118	0			
Ethylbenzene	46.77	5.0	50	0	93.5	82-120	0			
m,p-Xylene	90.81	10	100	0	90.8	82-122	0			
Methylene chloride	47.03	10	50	0	94.1	80-122	0			
Styrene	47.64	5.0	50	0	95.3	82-121	0			
Tetrachloroethene	47.51	5.0	50	0	95	79-118	0			
Toluene	45.44	5.0	50	0	90.9	81-119	0			
trans-1,3-Dichloropropene	50.2	5.0	50	0	100	82-121	0			
Trichloroethene	49.17	5.0	50	0	98.3	78-118	0			
Vinyl acetate	98.67	10	100	0	98.7	75-120	0			
Vinyl chloride	45.63	2.0	50	0	91.3	73-127	0			
Xylenes, Total	138.2	15	150	0	92.1	80-120	0			
Surr: 1,2-Dichloroethane-d4	45.82	5.0	50	0	91.6	70-130	0			
Surr: 4-Bromofluorobenzene	48.79	5.0	50	0	97.6	70-130	0			
Surr: Dibromofluoromethane	46.9	5.0	50	0	93.8	70-130	0			
Surr: Toluene-d8	45.11	5.0	50	0	90.2	70-130	0			

ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18228** InstrumentID: **VOA_I**

MS Sample ID: **0401069-08AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date: **01/13/04 13:36**

Client ID: Run ID: **VOA_I_040113A** SeqNo: **416623** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.27	5.0	50	0	88.5	75-125	0			
1,1,2,2-Tetrachloroethane	43.73	5.0	50	0	87.5	75-125	0			
1,1,2-Trichloroethane	45.29	5.0	50	0	90.6	75-125	0			
1,1-Dichloroethane	71.66	5.0	50	31.2	80.9	75-125	0			
1,1-Dichloroethene	104.2	5.0	50	72.85	62.8	65-130	0			S
1,2-Dichloroethane	49.86	5.0	50	0	99.7	70-130	0			
2-Butanone	91.73	10	100	0	91.7	64-128	0			
2-Chloroethyl vinyl ether	ND	10	100	0	0	75-125	0			S
4-Methyl-2-pentanone	95.27	10	100	0	95.3	75-125	0			
Acetone	100.1	10	100	0	100	60-130	0			
Benzene	44.02	5.0	50	0	88	76-127	0			
Bromodichloromethane	48.53	5.0	50	0	97.1	75-125	0			
Bromoform	47.61	5.0	50	0	95.2	75-125	0			
Bromomethane	40.26	5.0	50	0	80.5	75-125	0			
Carbon disulfide	81.69	10	100	0	81.7	75-125	0			
Carbon tetrachloride	44.78	5.0	50	0	89.6	70-130	0			
Chlorobenzene	44.91	5.0	50	0	89.8	75-126	0			
Chloroethane	41.03	5.0	50	0	82.1	70-130	0			
Chloroform	47.25	5.0	50	0	94.5	75-125	0			
Chloromethane	53.47	5.0	50	0	107	75-125	0			
cis-1,3-Dichloropropene	47.2	5.0	50	0	94.4	75-125	0			
Dibromochloromethane	49.07	5.0	50	0	98.1	75-125	0			
Ethylbenzene	43.36	5.0	50	0	86.7	75-125	0			
m,p-Xylene	85.04	10	100	0	85	75-125	0			
Methylene chloride	45.19	10	50	0	90.4	75-125	0			
Styrene	40.66	5.0	50	0	81.3	75-125	0			
Tetrachloroethene	43.81	5.0	50	0	87.6	75-125	0			
Toluene	42.83	5.0	50	0	85.7	76-125	0			
trans-1,3-Dichloropropene	48.07	5.0	50	0	96.1	70-130	0			
Trichloroethene	47.03	5.0	50	0	94.1	71-120	0			
Vinyl acetate	88.29	10	100	0	88.3	75-125	0			
Vinyl chloride	39.74	2.0	50	0	79.5	60-135	0			
Xylenes, Total	129	15	150	0	86	75-125	0			
Surr: 1,2-Dichloroethane-d4	46.19	5.0	50	0	92.4	70-130	0			
Surr: 4-Bromofluorobenzene	49.78	5.0	50	0	99.6	70-130	0			
Surr: Dibromofluoromethane	47.52	5.0	50	0	95	70-130	0			
Surr: Toluene-d8	45.36	5.0	50	0	90.7	70-130	0			

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18228** InstrumentID: **VOA_I**

MSD Sample ID: **0401069-08AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date: **01/13/04 14:03**

Client ID: Run ID: **VOA_I_040113A** SeqNo: **416624** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	51.32	5.0	50	0	103	75-125	44.27	14.8	20	
1,1,2,2-Tetrachloroethane	47.81	5.0	50	0	95.6	75-125	43.73	8.9	20	
1,1,2-Trichloroethane	49.39	5.0	50	0	98.8	75-125	45.29	8.66	20	
1,1-Dichloroethane	77.65	5.0	50	31.2	92.9	75-125	71.66	8.03	20	
1,1-Dichloroethene	115.3	5.0	50	72.85	84.9	65-130	104.2	10.1	20	
1,2-Dichloroethane	53.62	5.0	50	0	107	70-130	49.86	7.27	20	
2-Butanone	103.2	10	100	0	103	64-128	91.73	11.8	20	
2-Chloroethyl vinyl ether	ND	10	100	0	0	75-125	0	0	20	S
4-Methyl-2-pentanone	100.9	10	100	0	101	75-125	95.27	5.77	20	
Acetone	107.4	10	100	0	107	60-130	100.1	7.09	20	
Benzene	49.06	5.0	50	0	98.1	76-127	44.02	10.8	20	
Bromodichloromethane	53.21	5.0	50	0	106	75-125	48.53	9.21	20	
Bromoform	51.56	5.0	50	0	103	75-125	47.61	7.95	20	
Bromomethane	49.35	5.0	50	0	98.7	75-125	40.26	20.3	20	R
Carbon disulfide	96.66	10	100	0	96.7	75-125	81.69	16.8	20	
Carbon tetrachloride	52.5	5.0	50	0	105	70-130	44.78	15.9	20	
Chlorobenzene	49.89	5.0	50	0	99.8	75-126	44.91	10.5	20	
Chloroethane	49.74	5.0	50	0	99.5	70-130	41.03	19.2	20	
Chloroform	51.66	5.0	50	0	103	75-125	47.25	8.93	20	
Chloromethane	59.73	5.0	50	0	119	75-125	53.47	11.1	20	
cis-1,3-Dichloropropene	52.48	5.0	50	0	105	75-125	47.2	10.6	20	
Dibromochloromethane	52.99	5.0	50	0	106	75-125	49.07	7.7	20	
Ethylbenzene	49.24	5.0	50	0	98.5	75-125	43.36	12.7	20	
m,p-Xylene	97.66	10	100	0	97.7	75-125	85.04	13.8	20	
Methylene chloride	49.52	10	50	0	99	75-125	45.19	9.15	20	
Styrene	44.29	5.0	50	0	88.6	75-125	40.66	8.54	20	
Tetrachloroethene	51.19	5.0	50	0	102	75-125	43.81	15.5	20	
Toluene	47.76	5.0	50	0	95.5	76-125	42.83	10.9	20	
trans-1,3-Dichloropropene	52.51	5.0	50	0	105	70-130	48.07	8.81	20	
Trichloroethene	52.68	5.0	50	0	105	71-120	47.03	11.3	20	
Vinyl acetate	92.99	10	100	0	93	75-125	88.29	5.19	20	
Vinyl chloride	47.65	2.0	50	0	95.3	60-135	39.74	18.1	20	
Xylenes, Total	146.6	15	150	0	97.8	75-125	129	12.8	20	
Surr: 1,2-Dichloroethane-d4	46.39	5.0	50	0	92.8	70-130	46.19	0.429	20	
Surr: 4-Bromofluorobenzene	49.42	5.0	50	0	98.8	70-130	49.78	0.719	20	
Surr: Dibromofluoromethane	47.17	5.0	50	0	94.3	70-130	47.52	0.757	20	
Surr: Toluene-d8	45.25	5.0	50	0	90.5	70-130	45.36	0.243	20	

The following samples were analyzed in this batch: 0401037-01A

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18133** InstrumentID: **Wet Chemistry**

LCS Sample ID: **WLCSW1-010704** Test Code: **E150.1** Units: **pH units** Analysis Date: **01/07/04 0:00**
Client ID: Run ID: **WET CHEMISTRY_0401** SeqNo: **414646** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.03	0.10	6	0	100	85-115	0			

DUP Sample ID: **0401037-01D DUP** Test Code: **E150.1** Units: **pH units** Analysis Date: **01/07/04 0:00**
Client ID: **Inj. Wells** Run ID: **WET CHEMISTRY_0401** SeqNo: **414648** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.45	0.10	0	0	0	0-0	8.43	0.237	20	

The following samples were analyzed in this batch: 0401037-01D

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
[redacted] Order: 0401037
Project: Inj Well #s

QC BATCH REPORT

Batch ID: R18137 InstrumentID: Wet Chemistry

MBLK Sample ID: W MBW1-010704 Test Code: E310.1 Units: mg/L Analysis Date: 01/07/04 0:00
Client ID: Run ID: WET CHEMISTRY_0401 SeqNo: 414715 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: W LCSW1-010704 Test Code: E310.1 Units: mg/L Analysis Date: 01/07/04 0:00
Client ID: Run ID: WET CHEMISTRY_0401 SeqNo: 414716 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1000	5.0	1000	0	100	80-120	0			

DUP Sample ID: 03[redacted]297-03D DUP Test Code: E310.1 Units: mg/L Analysis Date: 01/07/04 0:00
Client ID: Run ID: WET CHEMISTRY_0401 SeqNo: 414723 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
[redacted]ity, Bicarbonate (As CaCO3)	675.2	5.0	0	0	0	0-0	680.2	0.738	20	
Alkalinity, Carbonate (As CaCO3)	40.01	5.0	0	0	0	0-0	40.01	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	715.2	5.0	0	0	0	0-0	720.2	0.698	20	

DUP Sample ID: 04[redacted]024-03D DUP Test Code: E310.1 Units: mg/L Analysis Date: 01/07/04 0:00
Client ID: Run ID: WET CHEMISTRY_0401 SeqNo: 414727 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	600.2	5.0	0	0	0	0-0	605.2	0.83	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	600.2	5.0	0	0	0	0-0	605.2	0.83	20	

The following samples were analyzed in this batch: 0401037-01D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18194** InstrumentID: **Wet Chemistry**

MBLK Sample ID: **WBLKW1-010904** Test Code: **E160.1** Units: **mg/L** Analysis Date: **01/09/04 0:00**
Client ID: Run ID: **WET CHEMISTRY_0401** SeqNo: **415951** 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: **WLCSW1-010904** Test Code: **E160.1** Units: **mg/L** Analysis Date: **01/09/04 0:00**
Client ID: Run ID: **WET CHEMISTRY_0401** SeqNo: **415952** 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	1010	10	1000	0	101	80-120	0			

DUP Sample ID: **0401020-01EDUP** Test Code: **E160.1** Units: **mg/L** Analysis Date: **01/09/04 0:00**
Client ID: Run ID: **WET CHEMISTRY_0401** SeqNo: **415961** 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	849	10	0	0	0	0-0	841	0.947	20	

The following samples were analyzed in this batch: 0401037-01D

ND - Not Detected at the Reporting Limit
- Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18217** InstrumentID: **Wet Chemistry**

MBLK Sample ID: **WMBW1-011304** Test Code: **E120.1** Units: **µmhos/cm** Analysis Date: **01/13/04 0:00**
Client ID: Run ID: **WET CHEMISTRY_0401** SeqNo: **416394** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-011304** Test Code: **E120.1** Units: **µmhos/cm** Analysis Date: **01/13/04 0:00**
Client ID: Run ID: **WET CHEMISTRY_0401** SeqNo: **416395** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductance	1410	1.0	1409	0	100	80-120	0			

DUP Sample ID: **0401087-03B DUP** Test Code: **E120.1** Units: **µmhos/cm** Analysis Date: **01/13/04 0:00**
Client ID: Run ID: **WET CHEMISTRY_0401** SeqNo: **416400** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductance	978	1.0	0	0	0	0-0	975	0.307	20	

The following samples were analyzed in this batch: 0401037-01D

ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18226** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-011204** Test Code: **E300** Units: **mg/L** Analysis Date: **01/12/04 15:27**
Client ID: Run ID: **IC201_040112A** SeqNo: **416579** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Sulfate	ND	1.0								
Surr: Dichloroacetic acid (surr)	5.31	0.10	5	0	106	80-120	0			

LCS Sample ID: **WLCSW1-011204** Test Code: **E300** Units: **mg/L** Analysis Date: **01/12/04 15:59**
Client ID: Run ID: **IC201_040112A** SeqNo: **416580** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.86	0.50	10	0	98.6	80-120	0			
Sulfate	9.43	1.0	10	0	94.3	80-120	0			
Surr: Dichloroacetic acid (surr)	5.43	0.10	5	0	109	80-120	0			

LCSD Sample ID: **WLCSDW1-01120** Test Code: **E300** Units: **mg/L** Analysis Date: **01/12/04 16:32**
Client ID: Run ID: **IC201_040112A** SeqNo: **416581** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10	0.50	10	0	100	80-120	9.86	1.41	20	
Sulfate	9.46	1.0	10	0	94.6	80-120	9.43	0.318	20	
Surr: Dichloroacetic acid (surr)	5.45	0.10	5	0	109	80-120	5.43	0.368	20	

MS Sample ID: **0401071-02EMS** Test Code: **E300** Units: **mg/L** Analysis Date: **01/12/04 19:47**
Client ID: Run ID: **IC201_040112A** SeqNo: **416587** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	50.26	0.50	10	39.6	107	75-125	0			E
Sulfate	43.9	1.0	10	33.82	101	75-125	0			
Surr: Dichloroacetic acid (surr)	5.29	0.10	5	0	106	80-120	0			

MSD Sample ID: **0401071-02EMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **01/12/04 20:19**
Client ID: Run ID: **IC201_040112A** SeqNo: **416588** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	50.1	0.50	10	39.6	105	75-125	50.26	0.319	20	E
Sulfate	43.91	1.0	10	33.82	101	75-125	43.9	0.0228	20	
Surr: Dichloroacetic acid (surr)	5.28	0.10	5	0	106	80-120	5.29	0.189	20	

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CLIENT: Navajo Refining Company
Work Order: 0401037
Project: Inj Wells

QC BATCH REPORT

Batch ID: **R18226** InstrumentID: **IC201**

DUP Sample ID: **0401071-02EDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **01/12/04 19:14**
Client ID: Run ID: **IC201_040112A** SeqNo: **416586** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	39.6	0.50	0	0	0	0-0	39.6	0	20	
Sulfate	33.89	1.0	0	0	0	0-0	33.82	0.207	20	
Surr: Dichloroacetic acid (surr)	5.31	0.10	5	0	106	80-120	5.34	0.563	20	

DUP Sample ID: **0401071-03EDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **01/12/04 23:34**
Client ID: Run ID: **IC201_040112A** SeqNo: **416593** Prep Date: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	57.2	1.0	0	0	0	0-0	57.1	0.175	20	
Sulfate	12.82	2.0	0	0	0	0-0	12.9	0.622	20	
Surr: Dichloroacetic acid (surr)	10.68	0.20	10	0	107	80-120	10.56	1.13	20	

DUP Sample ID: **0401037-01D DUP** Test Code: **E300** Units: **mg/L** Analysis Date: **01/13/04 12:35**
Client ID: **Inj. Wells** Run ID: **IC201_040112A** SeqNo: **416601** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2451	50	0	0	0	0-0	2442	0.368	20	
Sulfate	1719	100	0	0	0	0-0	1708	0.642	20	
Surr: Dichloroacetic acid (surr)	567	10	500	0	113	80-120	573	1.05	20	

The following samples were analyzed in this batch: 0401037-01D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

e-Lab
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Houston, Texas 77099
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Chain of Custody Form

Page _____ of _____

☐ e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager: | e-Lab Work Order #: 040037

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	INJ WELLS	A	Volatiles Select (8260)
Work Order		Project Number		B	Semivolatiles select (8270)
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Tot. Metals WQCC+ Cations(6020/7000)
Send Report To	Jeff Byrd /Charlie Plymale	Invoice Attn	Jeff Byrd	D	RCI Profile
Address	P.O. Box 159	Address	P.O. Box 159	E	Anions: Cl, SO4
				F	Alkalinity
City/State/Zip	Artesia, New Mexico 88211	City/State/Zip	Artesia, New Mexico 88211	G	pH
Phone	(505) 748-3311	Phone	(505) 748-3311	H	Solids: TDS
Fax	(505) 746-5421	Fax	(505) 746-5421	I	Conductivity
e-Mail Address		e-Mail Address		J	Uranium

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Inj. wells	1/6/04	1100			10	X	X	X	X	X	X	X	X	X	X	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Charlie Plymale

Shipment Method: Fed Ex

Required Turnaround Time: (Check Box) ☐ STD 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: | Date: 1/6/04 | Time: 1615 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): RICHARD SHUCK 1-7-04 0925

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes:

e-lab Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level II Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.

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e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING

Date/Time Received: 1/7/2004 9:25:00 AM

Work Order Number 0401037

Received by: RSZ

Checklist completed by _____ 1/7/04
Signature Date

Reviewed by _____ 1/8/04
Initials Date

Matrix: W

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):	2.9 C	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑

Adjusted? _____ Checked by _____

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

e-Lab, Inc

Date: *January 13, 2004*

CLIENT: e-Lab, Inc
Project: 0401037
Work Order: **0401065**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0401065-01	0401037-01F	Water		1/8/2004	1/8/2004	☐

e-Lab, Inc

CLIENT: e-Lab, Inc
Work Order: 0401065
Project: 0401037

Date: *Jan 13 2004*

QC BATCH REPORT

Batch ID: **R18598** InstrumentID: **WETCHEM**

LCS Sample ID: **WLCSW1-123003** Test Code: **ASTM D93** Units: **°F** Analysis Date **01/08/04 0:00**

Client ID: Run ID: **WETCHEM_040108E** SeqNo: **270178** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Flashpoint, P-M Closed-cup	80.6	0	81	0	99.5	97.8-102.7	0			

The following samples were analyzed in this batch: 0401065-01A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: e-Lab, Inc
Work Order: 0401065
Project: 0401037

QC BATCH REPORT

Batch ID: **R18653** InstrumentID: **WETCHEM**

MBLK Sample ID: **WBLKW1-011204** Test Code: **EPA 7.3.4.2** Units: **mg/Kg** Analysis Date **01/12/04 0:00**

Client ID: Run ID: **WETCHEM_040112C** SeqNo: **270845** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide, Reactive	ND	40								

The following samples were analyzed in this batch: 0401065-01A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: e-Lab, Inc
Work Order: 0401065
Project: 0401037

QC BATCH REPORT

Batch ID: **R18667** InstrumentID: **WETCHEM**

MBLK Sample ID: **WBLKR1-011204** Test Code: **EPA 7.3.3.2** Units: **mg/Kg** Analysis Date **01/13/04 0:00**

Client ID: Run ID: **WETCHEM_040113F** SeqNo: **271121** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	ND	0.030								

LCS Sample ID: **WLCSR1-011204** Test Code: **EPA 7.3.3.2** Units: **mg/Kg** Analysis Date **01/13/04 0:00**

Client ID: Run ID: **WETCHEM_040113F** SeqNo: **271122** Prep Date: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	4.22	0.75	16.95	0	24.9	5-100	0			

The following samples were analyzed in this batch: 0401065-01A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

Kleinfelder, Inc.

[illegible]

[illegible]

[illegible]

Subcontractor:

[illegible]

[illegible]

TEL: (916) 920-0340

FAX: (916) 381-6740

Holland, MI 49423-9303 Attn:

Jan 31, 2001

Sample ID	Matrix	Collection Date	SW 846	SW1010	Requested Tests
040127-01F (Bail Wells)	Water	1/27/2001 11:03	3	3	

Comments: Please analyze for Resp. Per Cycle and Reactive cyanide and hydrolidity. Report results by 2/5/01.

		Date/Time			Date/Time
Relinquished by:	[signature]	[illegible]	Received by:	[signature]	[illegible]
Relinquished by:			Received by:		

e-Lab, Inc

Sample Receipt Checklist

Client Name: [redacted] Date/Time Received: 10/27/04

Work Order Number: 0410265 Received by: DW

Checklist completed by: [signature] 10/28/04 Reviewed by: [signature] 10/28/04

Matrix: 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	
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):	3.2 C		
Water - VOA vials have zero headspace?	Yes	No	No VOA vials submitted ✓
Water - pH acceptable upon receipt?	Yes ✓	No	N/A

Adjusted? Checked by:

Login Notes:

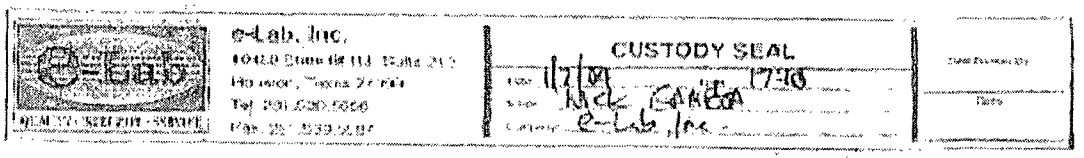
Any No and/or NA (not applicable) response must be detailed in the comments section below.

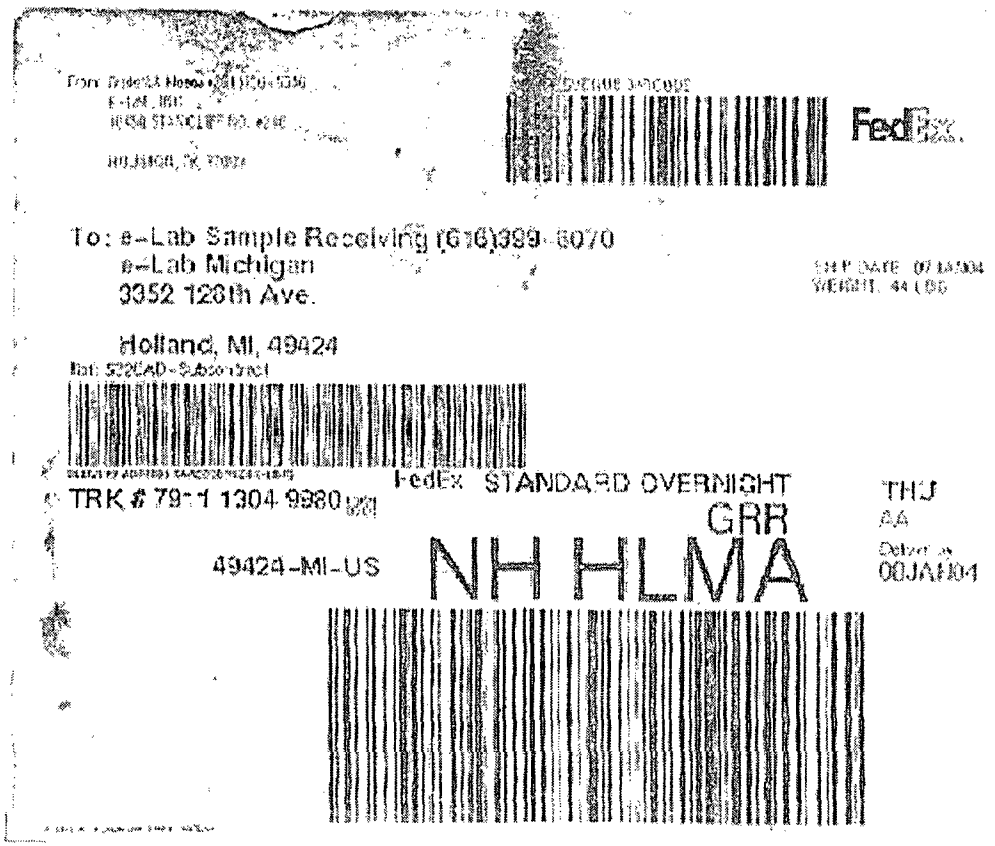
Client contacted: Date contacted: Person contacted:

Contacted by: Regarding:

Comments:

Corrective Action:


e-Lab, Inc.
CUSTODY SEAL
11/7/08
1730
e-Lab, Inc.



From: [illegible]

FedEx

To: e-Lab Sample Receiving (616)399-6070
e-Lab Michigan
3352 128th Ave.

Holland, MI, 49424

SHIP DATE: 07JA04
WEIGHT: 44 LBS

Ref: 522CAD-Subcontract

TRK # 7911 1304 9980

FedEx STANDARD OVERNIGHT

THJ
AA

GRR

49424-MI-US

NH HLMA

DEPT #
00JAFA04

AMERICAN RADIATION SERVICES, INC.

2609 N. River Rd. Port Allen, Louisiana 70767

1(800) 401 - 4277 Fax: (225) 381-2996

ARS Tracking Number:	ARS040096	**P.O. Number:**	NA
Client I.D.:	0401037-01E (Inj. Wells)	**ARS Sample I.D.:**	ARS040096-218
Date Sampled:	1/6/04	**Date Received:**	1/08/04
Time Sample:	11:00	**Time Received:**	1200
Type of Sample:	Liquid	**Date of Report:**	1/23/04
NELAP Certification #:	E87558	**L. A. Agency Interest #:**	30658

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Unit	Analysis Test Method	Analysis Date & Time	Analysis Technician
Total Uranium	0.000	0.000	0.0003	mg/L	ASTM D 5174-97	1/23/04 1535	SM

Quality Assurance Review

Notice: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client

ARS
AMERICAN RADIATION SERVICES, INC.

2609 North River Road Port Allen, Louisiana 70767
1 (800) 401-4277 FAX (225) 381-2996

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specfied.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B.
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-226 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only).
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only).
8.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurements of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for Examination of Water and Waste Water, 18th, 1992.
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995).
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced
11.0)	N/A	Not Applicable

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of the client.

Summary Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: March 17, 2003

Order ID Number: A03030607

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia,NM 88210

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
223042	RO Reject	Water	3/5/03	10:10	3/6/03

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

Sample: 223042 - RO Reject

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		612	mg/L as CaCo3
Total Alkalinity		612	mg/L as CaCo3
Total Mercury		<0.0002	mg/L
Chloride		139	mg/L
Fluoride		3.74	mg/L
Nitrate-N		2.63	mg/L
Sulfate		1500	mg/L
Dissolved Calcium		554	mg/L
Dissolved Magnesium		161	mg/L
Dissolved Potassium		2.92	mg/L
Dissolved Sodium		87.5	mg/L
Total Aluminum		0.111	mg/L
Total Arsenic		<0.010	mg/L
Total Barium		<0.100	mg/L
Total Beryllium		<0.0025	mg/L
Total Boron		0.0856	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		<0.010	mg/L
Total Cobalt		<0.020	mg/L
Total Copper		<0.0125	mg/L
Total Iron		<0.050	mg/L
Total Lead		<0.010	mg/L
Total Manganese		<0.025	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.050	mg/L
Total Silver		<0.0125	mg/L

Continued on next page ...

Sample 223042 continued ...

Param	Flag	Result	Units
Total Vanadium		<0.025	mg/L
Total Zinc		<0.025	mg/L

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: March 17, 2003

Order ID Number: A03030607

Project Number: N/A
Project Name: RO Reject
Project Location: Artesia,NM 88210

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
223042	RO Reject	Water	3/5/03	10:10	3/6/03

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Note: Samples will be disposed of 30 days from the report date unless the lab is contacted before the 30 days has past.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 223042 - RO Reject

Analysis: Alkalinity | Analytical Method: E 310.1 | QC Batch: QC27634 | Date Analyzed: 3/6/03
Analyst: RS | Preparation Method: | Prep Batch: PB25345 | Date Prepared: 3/6/03

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		612	mg/L as CaCo3	1	1
Total Alkalinity		612	mg/L as CaCo3	1	1

Sample: 223042 - RO Reject

Analysis: Hg, Total | Analytical Method: S 7470A | QC Batch: QC27782 | Date Analyzed: 3/15/03
Analyst: BC | Preparation Method: N/A | Prep Batch: PB25456 | Date Prepared: 3/13/03

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 223042 - RO Reject

Analysis: Ion Chromatography (IC) | Analytical Method: E 300.0 | QC Batch: QC27637 | Date Analyzed: 3/6/03
Analyst: JSW | Preparation Method: N/A | Prep Batch: PB25352 | Date Prepared: 3/6/03

Param	Flag	Result	Units	Dilution	RDL
Chloride		139	mg/L	5	1
Fluoride		3.74	mg/L	5	0.20
Nitrate-N		2.63	mg/L	5	0.20
Sulfate		1500	mg/L	50	1

Sample: 223042 - RO Reject

Analysis: Salts | Analytical Method: E 200.7 | QC Batch: QC27785 | Date Analyzed: 3/12/03
Analyst: BC | Preparation Method: | Prep Batch: PB25349 | Date Prepared: 3/6/03

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		554	mg/L	1	0.50
Dissolved Magnesium		161	mg/L	1	0.50
Dissolved Potassium		2.92	mg/L	1	0.50
Dissolved Sodium		87.5	mg/L	1	0.50

Sample: 223042 - RO Reject

Analysis: Total Metals | Analytical Method: S 6010B | QC Batch: QC27729 | Date Analyzed: 3/11/03
Analyst: RR | Preparation Method: S 3010A | Prep Batch: PB25365 | Date Prepared: 3/7/03

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		0.111	mg/L	1	0.05

Continued ...

... *Continued* Sample: 223042 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Arsenic		<0.010	mg/L	1	0.01
Total Barium		<0.100	mg/L	1	0.01
Total Beryllium		<0.0025	mg/L	1	0.0025
Total Boron		0.0856	mg/L	1	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		<0.010	mg/L	1	0.01
Total Cobalt		<0.020	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		<0.050	mg/L	1	0.05
Total Lead		<0.010	mg/L	1	0.01
Total Manganese		<0.025	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Vanadium		<0.025	mg/L	1	0.01
Total Zinc		<0.025	mg/L	1	0.02

Quality Control Report
Method Blank

Method Blank

QCBatch: QC27634

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	1
Total Alkalinity		<4.0	mg/L as CaCo3	1

Method Blank

QCBatch: QC27637

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<1.0	mg/L	1

Method Blank

QCBatch: QC27729

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.100	mg/L	0.05
Total Arsenic		<0.010	mg/L	0.01
Total Barium		<0.100	mg/L	0.01
Total Beryllium		<0.0025	mg/L	0.0025
Total Boron		<0.005	mg/L	0.005
Total Cadmium		<0.005	mg/L	0.005
Total Chromium		<0.010	mg/L	0.01
Total Cobalt		<0.020	mg/L	0.02
Total Copper		<0.0125	mg/L	0.01
Total Iron		<0.050	mg/L	0.05
Total Lead		<0.010	mg/L	0.01
Total Manganese		<0.025	mg/L	0.02
Total Molybdenum		<0.050	mg/L	0.05
Total Nickel		<0.025	mg/L	0.02
Total Selenium		<0.050	mg/L	0.05
Total Silver		<0.0125	mg/L	0.01
Total Vanadium		<0.025	mg/L	0.01
Total Zinc		<0.025	mg/L	0.02

Method Blank

QCBatch: QC27782

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Method Blank

QCBatch: QC27785

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		<0.5	mg/L	0.50
Dissolved Magnesium		<0.5	mg/L	0.50
Dissolved Potassium		<0.5	mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Quality Control Report
Duplicate Samples

Duplicate

QCBatch: QC27634

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2
Bicarbonate Alkalinity		50	50	mg/L as CaCo3	1	0	9.2
Total Alkalinity		50	50	mg/L as CaCo3	1	0	9.2

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC27637

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	[1] 12.84	[2] 12.88	mg/L	1	12.50	<1.0	102	0	90 - 110	20
Fluoride	[3] 2.63	[4] 2.68	mg/L	1	2.50	<0.2	105	1	90 - 110	20
Nitrate-N	[5] 2.49	[6] 2.49	mg/L	1	2.50	<0.2	99	0	90 - 110	20
Sulfate	[7] 12.90	[8] 12.99	mg/L	1	12.50	<1.0	103	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC27729

[1]The sample spiked was not reported. MS%EA = 96 and RPD = 1.
[2]The sample spiked was not reported. MS%EA = 96 and RPD = 1.
[3]The sample spiked was not reported. MS%EA = 116 and RPD = 5.
[4]The sample spiked was not reported. MS%EA = 116 and RPD = 5.
[5]The sample spiked was not reported. MS%EA = 104 and RPD = 1.
[6]The sample spiked was not reported. MS%EA = 104 and RPD = 1.
[7]The sample spiked was not reported. MS%EA = 102 and RPD = 1.
[8]The sample spiked was not reported. MS%EA = 102 and RPD = 1.

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	1.04	1.02	mg/L	1	1	<0.100	104	2	75 - 125	20
Total Arsenic	0.492	0.484	mg/L	1	0.50	<0.010	98	2	75 - 125	20
Total Barium	1.04	1.03	mg/L	1	1	<0.100	104	1	75 - 125	20
Total Beryllium	0.0252	0.0248	mg/L	1	0.02	<0.0025	101	2	75 - 125	20
Total Boron	0.0507	0.0501	mg/L	1	0.05	<0.005	101	0	75 - 125	20
Total Cadmium	0.266	0.264	mg/L	1	0.25	<0.005	106	1	75 - 125	20
Total Chromium	0.107	0.104	mg/L	1	0.10	<0.010	107	3	75 - 125	20
Total Cobalt	0.269	0.266	mg/L	1	0.25	<0.020	108	1	75 - 125	20
Total Copper	0.136	0.132	mg/L	1	0.12	<0.0125	109	3	75 - 125	20
Total Iron	0.555	0.519	mg/L	1	0.50	<0.050	111	7	75 - 125	20
Total Lead	0.528	0.521	mg/L	1	0.50	<0.010	106	1	75 - 125	20
Total Manganese	0.258	0.256	mg/L	1	0.25	<0.025	103	1	75 - 125	20
Total Molybdenum	0.503	0.504	mg/L	1	0.50	<0.050	101	0	75 - 125	20
Total Nickel	0.263	0.260	mg/L	1	0.25	<0.025	105	1	75 - 125	20
Total Selenium	0.436	0.439	mg/L	1	0.50	<0.050	87	1	75 - 125	20
Total Silver	0.129	0.127	mg/L	1	0.12	<0.0125	103	2	75 - 125	20
Total Vanadium	0.270	0.267	mg/L	1	0.25	<0.025	108	1	75 - 125	20
Total Zinc	0.265	0.260	mg/L	1	0.25	<0.025	106	2	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch: QC27785

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	93.9	96.8	mg/L	1	100	<0.5	93	3	75 - 125	20
Dissolved Magnesium	94.6	95.2	mg/L	1	100	<0.5	94	0	75 - 125	20
Dissolved Potassium	92.9	96.9	mg/L	1	100	<0.5	92	4	75 - 125	20
Dissolved Sodium	99.1	103	mg/L	1	100	<0.5	99	3	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC27729

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	1.26	1.31	mg/L	1	1	0.111	114	4	75 - 125	20
Total Arsenic	0.460	0.474	mg/L	1	0.50	<0.010	92	2	75 - 125	20
Total Barium	1.09	1.14	mg/L	1	1	<0.100	109	4	75 - 125	20
Total Beryllium	0.0227	0.0232	mg/L	1	0.02	<0.0025	90	2	75 - 125	20
Total Boron	0.128	0.131	mg/L	1	0.05	0.0856	84	6	75 - 125	20
Total Cadmium	0.234	0.244	mg/L	1	0.25	<0.005	93	4	75 - 125	20
Total Chromium	0.0936	0.0965	mg/L	1	0.10	<0.010	93	3	75 - 125	20
Total Cobalt	0.228	0.240	mg/L	1	0.25	<0.020	91	5	75 - 125	20
Total Copper	0.141	0.147	mg/L	1	0.12	<0.0125	112	4	75 - 125	20
Total Iron	0.530	0.521	mg/L	1	0.50	<0.050	106	1	75 - 125	20

Continued ...

... *Continued*

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Lead	0.462	0.487	mg/L	1	0.50	<0.010	92	5	75 - 125	20
Total Manganese	0.226	0.234	mg/L	1	0.25	<0.025	90	3	75 - 125	20
Total Molybdenum	0.468	0.482	mg/L	1	0.50	<0.050	93	2	75 - 125	20
Total Nickel	0.221	0.232	mg/L	1	0.25	<0.025	88	4	75 - 125	20
Total Selenium	0.432	0.437	mg/L	1	0.50	<0.050	86	1	75 - 125	20
Total Silver	0.132	0.137	mg/L	1	0.12	<0.0125	105	3	75 - 125	20
Total Vanadium	0.252	0.262	mg/L	1	0.25	<0.025	100	3	75 - 125	20
Total Zinc	0.248	0.260	mg/L	1	0.25	<0.025	99	4	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch: QC27785

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	132	127	mg/L	1	100	43.2	88	5	75 - 125	20
Dissolved Magnesium	[9] 34.0	[10] 40.2	mg/L	1	100	6.33	27	20	75 - 125	20
Dissolved Potassium	87.9	86.6	mg/L	1	100	1.84	86	1	75 - 125	20
Dissolved Sodium	122	122	mg/L	1	100	21.8	100	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC27634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	-	3/6/03
Carbonate Alkalinity		mg/L as CaCo3	0	232	0	-	3/6/03
Bicarbonate Alkalinity		mg/L as CaCo3	0	10	0	-	3/6/03
Total Alkalinity		mg/L as CaCo3	250	242	96	90 - 110	3/6/03

ICV (1)

QCBatch: QC27634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	-	3/6/03
Carbonate Alkalinity		mg/L as CaCo3	0	236	0	-	3/6/03

Continued ...

[9]ms recovery invalid due to matrix effect
[10]ms recovery invalid due to matrix effect

... *Continued*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bicarbonate Alkalinity		mg/L as CaCo3	0	6	0	-	3/6/03
Total Alkalinity		mg/L as CaCo3	250	242	96	90 - 110	3/6/03

CCV (1)

QCBatch: QC27637

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	12.90	103	90 - 110	3/6/03
Fluoride		mg/L	2.50	2.69	107	90 - 110	3/6/03
Nitrate-N		mg/L	2.50	2.48	99	90 - 110	3/6/03
Sulfate		mg/L	12.50	12.98	103	90 - 110	3/6/03

ICV (1)

QCBatch: QC27637

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	12.57	100	90 - 110	3/6/03
Fluoride		mg/L	2.50	2.65	106	90 - 110	3/6/03
Nitrate-N		mg/L	2.50	2.48	99	90 - 110	3/6/03
Sulfate		mg/L	12.50	12.93	103	90 - 110	3/6/03

CCV (1)

QCBatch: QC27729

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	2	1.87	94	90 - 110	3/11/03
Total Arsenic		mg/L	1	0.955	96	90 - 110	3/11/03
Total Barium		mg/L	2	1.87	94	90 - 110	3/11/03
Total Beryllium		mg/L	0.05	0.0485	97	90 - 110	3/11/03
Total Boron		mg/L	0.10	0.100	100	90 - 110	3/11/03
Total Cadmium		mg/L	0.50	0.478	96	90 - 110	3/11/03
Total Chromium		mg/L	0.20	0.199	100	90 - 110	3/11/03
Total Cobalt		mg/L	0.50	0.499	100	90 - 110	3/11/03
Total Copper		mg/L	0.25	0.237	95	90 - 110	3/11/03
Total Iron		mg/L	1	0.956	96	90 - 110	3/11/03
Total Lead		mg/L	1	0.960	96	90 - 110	3/11/03
Total Manganese		mg/L	0.50	0.493	99	90 - 110	3/11/03
Total Molybdenum		mg/L	1	0.954	95	90 - 110	3/11/03
Total Nickel		mg/L	0.50	0.494	99	90 - 110	3/11/03
Total Selenium		mg/L	1	0.959	96	90 - 110	3/11/03
Total Silver		mg/L	0.25	0.241	96	90 - 110	3/11/03

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Vanadium		mg/L	0.50	0.477	95	90 - 110	3/11/03
Total Zinc		mg/L	0.50	0.476	95	90 - 110	3/11/03

ICV (1)

QCBatch: QC27729

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	2	1.95	98	90 - 110	3/11/03
Total Arsenic		mg/L	1	1.01	101	90 - 110	3/11/03
Total Barium		mg/L	2	2.02	101	90 - 110	3/11/03
Total Beryllium		mg/L	0.05	0.0508	102	90 - 110	3/11/03
Total Boron		mg/L	0.10	0.105	105	90 - 110	3/11/03
Total Cadmium		mg/L	0.50	0.506	101	90 - 110	3/11/03
Total Chromium		mg/L	0.20	0.209	104	90 - 110	3/11/03
Total Cobalt		mg/L	0.50	0.534	107	90 - 110	3/11/03
Total Copper		mg/L	0.25	0.254	102	90 - 110	3/11/03
Total Iron		mg/L	1	1.01	101	90 - 110	3/11/03
Total Lead		mg/L	1	1.03	103	95 - 105	3/11/03
Total Manganese		mg/L	0.50	0.511	102	90 - 110	3/11/03
Total Molybdenum		mg/L	1	1.01	101	90 - 110	3/11/03
Total Nickel		mg/L	0.50	0.524	105	90 - 110	3/11/03
Total Selenium		mg/L	1	0.993	99	90 - 110	3/11/03
Total Silver		mg/L	0.25	0.256	102	90 - 110	3/11/03
Total Vanadium		mg/L	0.50	0.494	99	90 - 110	3/11/03
Total Zinc		mg/L	0.50	0.493	99	90 - 110	3/11/03

CCV (1)

QCBatch: QC27782

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.0011	110	80 - 120	3/15/03

ICV (1)

QCBatch: QC27782

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00106	106	80 - 120	3/15/03

CCV (1)

QCBatch: QC27785

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	23.9	95	90 - 110	3/12/03
Dissolved Magnesium		mg/L	25	23.5	94	90 - 110	3/12/03
Dissolved Potassium		mg/L	25	26.3	105	90 - 110	3/12/03
Dissolved Sodium		mg/L	25	24.5	98	90 - 110	3/12/03

ICV (1)

QCBatch: QC27785

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.3	101	90 - 110	3/12/03
Dissolved Magnesium		mg/L	25	26.5	106	90 - 110	3/12/03
Dissolved Potassium		mg/L	25	23.9	95	90 - 110	3/12/03
Dissolved Sodium		mg/L	25	24.3	97	90 - 110	3/12/03

223042

Page ___ of ___

6701 Aberdeen Ave. Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0303060 07

Company Name: Navajo
Phone #: 5057483311
Address: (Street, City, Zip) 501 E. Main
Fax #: 5057465421
Contact Person: Darrell Moore
Invoice to: (If different from above)
Project #:
Project Name: Ro Reject
Project Location: Artesia
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
223042	RO Reject	1	500ml	X					X			X		3/5/03	1010
	" "	1	1L	X								X	X	3/5/03	1010

MTBE 8021B/602 | BTEX 8021B/602 | TPH 418.1/TX1005 | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | TCLP Pesticides | RCI | GC/MS Vol. 8260B/624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082/608 | Pesticides 8081A/608 | BOD, TSS, pH | Turn Around Time if different from standard | Hold

Sent 1st

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	3/5/03	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Dennis	3-6-03	10:00

LAB USE ONLY
Intact Y N
Headspace Y / N
Temp 1 °
Log-in Review MS

REMARKS:
3/7 FAX
☐ Check If Special Reporting Limits Are Needed

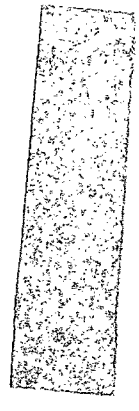
Carrier # Fed Ex 7907 1487 5323

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

ATTACHMENT F

IRRIGATION WELL MONTHLY LABORATORY ANALYTICAL REPORTS



e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5

October 21, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Monthly

Work Order : **0309293**

Dear Jeff Byrd,

e-Lab, Inc. received 3 samples on 9/30/2003 8:45:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 38.

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

Sincerely,

Lora Terrill

Electronically approved by: Lora Terrill

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: **0309293**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0309293-01	RA 315(	Wate1		9/29/2003 08:45	9/30/2003 08:45	☐
0309293-02	Larue	Wate1		9/29/2003 09:0(	9/30/2003 08:45	☐
0309293-03	RA3353	Wate1		9/29/2003 09:15	9/30/2003 08:45	☐

e-Lab, Inc.

Date: *October 21, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: 0309293

Case Narrative

The results for Sodium in the MS/MSD @DF1 are above the ability of the instrument to detect (it maximized the instrument reading). Therefore, the result is shown as zero. The calculation for MS/MSD % recovery is also not possible.

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-01

Client Sample ID: RA 3156
Collection Date: 9/29/2003 8:45:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **10/8/2003**	Analyst: **JCJ**
Mercury	ND	0.000200		mg/L	1	10/8/2003 6:08:13 PM
ICP METALS, TOTAL		**SW6020**			Prep Date: **10/3/2003**	Analyst: **ALR**
Aluminum	0.0150	0.0100		mg/L	1	10/16/2003 11:57:00 PM
Arsenic	ND	0.00500		mg/L	1	10/16/2003 11:57:00 PM
Barium	0.00776	0.00500		mg/L	1	10/16/2003 11:57:00 PM
Beryllium	ND	0.00200		mg/L	1	10/16/2003 11:57:00 PM
Boron	0.190	0.0200		mg/L	1	10/17/2003 3:11:00 PM
Cadmium	ND	0.00100		mg/L	1	10/16/2003 11:57:00 PM
Calcium	456	10.0		mg/L	20	10/17/2003 1:52:00 PM
Chromium	ND	0.00200		mg/L	1	10/16/2003 11:57:00 PM
Cobalt	ND	0.00200		mg/L	1	10/16/2003 11:57:00 PM
Copper	0.00519	0.00200		mg/L	1	10/16/2003 11:57:00 PM
Iron	6.09	0.200		mg/L	1	10/16/2003 11:57:00 PM
Lead	ND	0.00500		mg/L	1	10/16/2003 11:57:00 PM
Magnesium	145	4.00		mg/L	20	10/17/2003 1:52:00 PM
Manganese	0.180	0.00500		mg/L	1	10/16/2003 11:57:00 PM
Nickel	0.00635	0.00500		mg/L	1	10/16/2003 11:57:00 PM
Potassium	2.97	0.200		mg/L	1	10/16/2003 11:57:00 PM
Selenium	ND	0.00500		mg/L	1	10/16/2003 11:57:00 PM
Silver	ND	0.00500		mg/L	1	10/16/2003 11:57:00 PM
Sodium	163	4.00		mg/L	20	10/17/2003 1:52:00 PM
Vanadium	0.00715	0.00500		mg/L	1	10/16/2003 11:57:00 PM
Zinc	0.179	0.00500		mg/L	1	10/16/2003 11:57:00 PM
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **10/2/2003**	Analyst: **HV**
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/3/2003 4:57:00 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	10/3/2003 4:57:00 PM
2-Methylnaphthalene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
2-Methylphenol	ND	10		µg/L	1	10/3/2003 4:57:00 PM
2-Nitroaniline	ND	10		µg/L	1	10/3/2003 4:57:00 PM
2-Nitrophenol	ND	10		µg/L	1	10/3/2003 4:57:00 PM
3-Nitroaniline	ND	10		µg/L	1	10/3/2003 4:57:00 PM
4-Methylphenol	ND	10		µg/L	1	10/3/2003 4:57:00 PM
4-Nitroaniline	ND	10		µg/L	1	10/3/2003 4:57:00 PM
4-Nitrophenol	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Acenaphthene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Acenaphthylene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Aniline	ND	10		µg/L	1	10/3/2003 4:57:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-01

Client Sample ID: RA 3156
Collection Date: 9/29/2003 8:45:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Benz(a)anthracene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Benzidine	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Hexachloroethane	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Isophorone	ND	10		µg/L	1	10/3/2003 4:57:00 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/3/2003 4:57:00 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	10/3/2003 4:57:00 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Naphthalene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Nitrobenzene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Pentachlorophenol	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Phenanthrene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Phenol	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Pyrene	ND	10		µg/L	1	10/3/2003 4:57:00 PM
Surr: 2,4,6-Tribromophenol	103	39-153		%REC	1	10/3/2003 4:57:00 PM
Surr: 2-Fluorobiphenyl	92.6	40-147		%REC	1	10/3/2003 4:57:00 PM
Surr: 2-Fluorophenol	44.7	21-100		%REC	1	10/3/2003 4:57:00 PM
Surr: 4-Terphenyl-d14	109	39-141		%REC	1	10/3/2003 4:57:00 PM
Surr: Nitrobenzene-d5	92.0	37-140		%REC	1	10/3/2003 4:57:00 PM
Surr: Phenol-d6	26.4	11-100		%REC	1	10/3/2003 4:57:00 PM
VOLATILES BY GC/MS		**SW8260**				Analyst: **PC**
1,1,1-Trichloroethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
1,1,2-Trichloroethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
1,1-Dichloroethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
1,1-Dichloroethene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
1,2-Dichloroethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
2-Butanone	ND	10		µg/L	1	10/8/2003 8:37:00 AM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	10/8/2003 8:37:00 AM
2-Hexanone	ND	10		µg/L	1	10/8/2003 8:37:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/8/2003 8:37:00 AM
Acetone	ND	10		µg/L	1	10/8/2003 8:37:00 AM
Benzene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Bromodichloromethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Bromoform	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Bromomethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Carbon disulfide	ND	10		µg/L	1	10/8/2003 8:37:00 AM
Carbon tetrachloride	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Chlorobenzene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-01

Client Sample ID: RA 3156
Collection Date: 9/29/2003 8:45:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Chloroform	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Chloromethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
cis-1,3-Dichloropropene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Dibromochloromethane	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Ethylbenzene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
m,p-Xylene	ND	10		µg/L	1	10/8/2003 8:37:00 AM
Methyl tert-butyl ether	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Methylene chloride	ND	10		µg/L	1	10/8/2003 8:37:00 AM
Styrene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Tetrachloroethene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Toluene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
trans-1,3-Dichloropropene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Trichloroethene	ND	5.0		µg/L	1	10/8/2003 8:37:00 AM
Vinyl acetate	ND	10		µg/L	1	10/8/2003 8:37:00 AM
Vinyl chloride	ND	2.0		µg/L	1	10/8/2003 8:37:00 AM
Xylenes, Total	ND	15		µg/L	1	10/8/2003 8:37:00 AM
Surr: 1,2-Dichloroethane-d4	94.9	70-130		%REC	1	10/8/2003 8:37:00 AM
Surr: 4-Bromofluorobenzene	93.2	70-130		%REC	1	10/8/2003 8:37:00 AM
Surr: Dibromofluoromethane	96.5	70-130		%REC	1	10/8/2003 8:37:00 AM
Surr: Toluene-d8	98.2	70-130		%REC	1	10/8/2003 8:37:00 AM
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **MG**
Chloride	236	5.00		mg/L	10	10/7/2003 10:47:00 PM
Fluoride	0.780	0.100		mg/L	1	10/4/2003 12:42:00 AM
Sulfate	1,650	100		mg/L	100	10/7/2003 11:20:00 PM
Surr: Dichloroacetic acid (surr)	102	80-120		%REC	100	10/7/2003 11:20:00 PM
Surr: Dichloroacetic acid (surr)	97.6	80-120		%REC	10	10/7/2003 10:47:00 PM
Surr: Dichloroacetic acid (surr)	114	80-120		%REC	1	10/4/2003 12:42:00 AM
ALKALINITY		**E310.1**				Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	240	5.00		mg/L	1	10/7/2003
Alkalinity, Carbonate (As CaCO3)	ND	5.00		mg/L	1	10/7/2003
Alkalinity, Hydroxide (As CaCO3)	ND	5.00		mg/L	1	10/7/2003
Alkalinity, Total (As CaCO3)	240	5.00		mg/L	1	10/7/2003
CYANIDE, TOTAL		**E335.3**				Analyst: **LMD**
Cyanide	ND	0.0200		mg/L	1	10/6/2003

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-02

Client Sample ID: Larue
Collection Date: 9/29/2003 9:00:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **10/8/2003**	Analyst: **JCJ**
Mercury	ND	0.000200		mg/L	1	10/8/2003 6:09:45 PM
ICP METALS, TOTAL		**SW6020**			Prep Date: **10/3/2003**	Analyst: **ALR**
Aluminum	0.0104	0.0100		mg/L	1	10/17/2003 12:02:00 AM
Arsenic	ND	0.00500		mg/L	1	10/17/2003 12:02:00 AM
Barium	0.00812	0.00500		mg/L	1	10/17/2003 12:02:00 AM
Beryllium	ND	0.00200		mg/L	1	10/17/2003 12:02:00 AM
Boron	0.210	0.0200		mg/L	1	10/17/2003 3:15:00 PM
Cadmium	ND	0.00100		mg/L	1	10/17/2003 12:02:00 AM
Calcium	385	10.0		mg/L	20	10/17/2003 1:56:00 PM
Chromium	ND	0.00200		mg/L	1	10/17/2003 12:02:00 AM
Cobalt	ND	0.00200		mg/L	1	10/17/2003 12:02:00 AM
Copper	0.00879	0.00200		mg/L	1	10/17/2003 12:02:00 AM
Iron	2.32	0.200		mg/L	1	10/17/2003 12:02:00 AM
Lead	ND	0.00500		mg/L	1	10/17/2003 12:02:00 AM
Magnesium	150	4.00		mg/L	20	10/17/2003 1:56:00 PM
Manganese	0.0108	0.00500		mg/L	1	10/17/2003 12:02:00 AM
Nickel	0.00554	0.00500		mg/L	1	10/17/2003 12:02:00 AM
Potassium	1.84	0.200		mg/L	1	10/17/2003 12:02:00 AM
Selenium	0.00927	0.00500		mg/L	1	10/17/2003 12:02:00 AM
Silver	ND	0.00500		mg/L	1	10/17/2003 12:02:00 AM
Sodium	105	4.00		mg/L	20	10/17/2003 1:56:00 PM
Vanadium	0.00897	0.00500		mg/L	1	10/17/2003 12:02:00 AM
Zinc	0.0469	0.00500		mg/L	1	10/17/2003 12:02:00 AM
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **10/2/2003**	Analyst: **HV**
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/3/2003 5:24:00 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	10/3/2003 5:24:00 PM
2-Methylnaphthalene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
2-Methylphenol	ND	10		µg/L	1	10/3/2003 5:24:00 PM
2-Nitroaniline	ND	10		µg/L	1	10/3/2003 5:24:00 PM
2-Nitrophenol	ND	10		µg/L	1	10/3/2003 5:24:00 PM
3-Nitroaniline	ND	10		µg/L	1	10/3/2003 5:24:00 PM
4-Methylphenol	ND	10		µg/L	1	10/3/2003 5:24:00 PM
4-Nitroaniline	ND	10		µg/L	1	10/3/2003 5:24:00 PM
4-Nitrophenol	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Acenaphthene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Acenaphthylene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Aniline	ND	10		µg/L	1	10/3/2003 5:24:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-02

Client Sample ID: Larue
Collection Date: 9/29/2003 9:00:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Benz(a)anthracene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Benzidine	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Hexachloroethane	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Isophorone	ND	10		µg/L	1	10/3/2003 5:24:00 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/3/2003 5:24:00 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	10/3/2003 5:24:00 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Naphthalene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Nitrobenzene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Pentachlorophenol	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Phenanthrene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Phenol	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Pyrene	ND	10		µg/L	1	10/3/2003 5:24:00 PM
Surr: 2,4,6-Tribromophenol	93.2	39-153		%REC	1	10/3/2003 5:24:00 PM
Surr: 2-Fluorobiphenyl	80.7	40-147		%REC	1	10/3/2003 5:24:00 PM
Surr: 2-Fluorophenol	38.0	21-100		%REC	1	10/3/2003 5:24:00 PM
Surr: 4-Terphenyl-d14	101	39-141		%REC	1	10/3/2003 5:24:00 PM
Surr: Nitrobenzene-d5	81.7	37-140		%REC	1	10/3/2003 5:24:00 PM
Surr: Phenol-d6	22.6	11-100		%REC	1	10/3/2003 5:24:00 PM
VOLATILES BY GC/MS		**SW8260**				Analyst: **PC**
1,1,1-Trichloroethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
1,2-Dichloroethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
2-Butanone	ND	10		µg/L	1	10/8/2003 5:31:00 PM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	10/8/2003 5:31:00 PM
2-Hexanone	ND	10		µg/L	1	10/8/2003 5:31:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/8/2003 5:31:00 PM
Acetone	ND	10		µg/L	1	10/8/2003 5:31:00 PM
Benzene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Bromodichloromethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Bromoform	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Bromomethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Carbon disulfide	ND	10		µg/L	1	10/8/2003 5:31:00 PM
Carbon tetrachloride	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Chlorobenzene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-02

Client Sample ID: Larue
Collection Date: 9/29/2003 9:00:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Chloroform	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Chloromethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Dibromochloromethane	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Ethylbenzene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
m,p-Xylene	ND	10		µg/L	1	10/8/2003 5:31:00 PM
Methyl tert-butyl ether	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Methylene chloride	ND	10		µg/L	1	10/8/2003 5:31:00 PM
Styrene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Tetrachloroethene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Toluene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Trichloroethene	ND	5.0		µg/L	1	10/8/2003 5:31:00 PM
Vinyl acetate	ND	10		µg/L	1	10/8/2003 5:31:00 PM
Vinyl chloride	ND	2.0		µg/L	1	10/8/2003 5:31:00 PM
Xylenes, Total	ND	15		µg/L	1	10/8/2003 5:31:00 PM
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%REC	1	10/8/2003 5:31:00 PM
Surr: 4-Bromofluorobenzene	93.8	70-130		%REC	1	10/8/2003 5:31:00 PM
Surr: Dibromofluoromethane	96.4	70-130		%REC	1	10/8/2003 5:31:00 PM
Surr: Toluene-d8	98.1	70-130		%REC	1	10/8/2003 5:31:00 PM
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **MG**
Chloride	120	2.50		mg/L	5	10/7/2003 11:52:00 PM
Fluoride	0.580	0.100		mg/L	1	10/4/2003 1:14:00 AM
Sulfate	1,460	100		mg/L	100	10/8/2003 12:25:00 AM
Surr: Dichloroacetic acid (surr)	101	80-120		%REC	100	10/8/2003 12:25:00 AM
Surr: Dichloroacetic acid (surr)	98.4	80-120		%REC	5	10/7/2003 11:52:00 PM
Surr: Dichloroacetic acid (surr)	114	80-120		%REC	1	10/4/2003 1:14:00 AM
ALKALINITY		**E310.1**				Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	270	5.00		mg/L	1	10/7/2003
Alkalinity, Carbonate (As CaCO3)	ND	5.00		mg/L	1	10/7/2003
Alkalinity, Hydroxide (As CaCO3)	ND	5.00		mg/L	1	10/7/2003
Alkalinity, Total (As CaCO3)	270	5.00		mg/L	1	10/7/2003
CYANIDE, TOTAL		**E335.3**				Analyst: **LMD**
Cyanide	ND	0.0200		mg/L	1	10/6/2003

Qualifiers:

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J - Analyte detected below quantitation limits
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-03

Client Sample ID: RA3353
Collection Date: 9/29/2003 9:15:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **10/8/2003**	Analyst: **JCJ**
Mercury	ND	0.000200		mg/L	1	10/8/2003 6:11:18 PM
ICP METALS, TOTAL		**SW6020**			Prep Date: **10/3/2003**	Analyst: **ALR**
Aluminum	ND	0.0100		mg/L	1	10/6/2003 3:48:00 PM
Arsenic	ND	0.00500		mg/L	1	10/6/2003 3:48:00 PM
Barium	0.00991	0.00500		mg/L	1	10/6/2003 3:48:00 PM
Beryllium	ND	0.00200		mg/L	1	10/6/2003 3:48:00 PM
Boron	0.107	0.0200		mg/L	1	10/17/2003 3:20:00 PM
Cadmium	ND	0.00100		mg/L	1	10/6/2003 3:48:00 PM
Calcium	402	10.0		mg/L	20	10/17/2003 2:00:00 PM
Chromium	ND	0.00200		mg/L	1	10/6/2003 3:48:00 PM
Cobalt	ND	0.00200		mg/L	1	10/6/2003 3:48:00 PM
Copper	0.00320	0.00200		mg/L	1	10/6/2003 3:48:00 PM
Iron	1.89	0.200		mg/L	1	10/6/2003 3:48:00 PM
Lead	ND	0.00500		mg/L	1	10/6/2003 3:48:00 PM
Magnesium	123	4.00		mg/L	20	10/17/2003 2:00:00 PM
Manganese	0.00838	0.00500		mg/L	1	10/6/2003 3:48:00 PM
Nickel	0.00650	0.00500		mg/L	1	10/6/2003 3:48:00 PM
Potassium	1.89	0.200		mg/L	1	10/6/2003 3:48:00 PM
Selenium	0.0108	0.00500		mg/L	1	10/6/2003 3:48:00 PM
Silver	ND	0.00500		mg/L	1	10/6/2003 3:48:00 PM
Sodium	94.2	4.00		mg/L	20	10/17/2003 2:00:00 PM
Vanadium	ND	0.00500		mg/L	1	10/6/2003 3:48:00 PM
Zinc	0.530	0.0500		mg/L	10	10/17/2003 2:09:00 PM
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **10/2/2003**	Analyst: **HV**
1,2,4-Trichlorobenzene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	10/3/2003 5:51:00 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	10/3/2003 5:51:00 PM
2-Methylnaphthalene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
2-Methylphenol	ND	10		µg/L	1	10/3/2003 5:51:00 PM
2-Nitroaniline	ND	10		µg/L	1	10/3/2003 5:51:00 PM
2-Nitrophenol	ND	10		µg/L	1	10/3/2003 5:51:00 PM
3-Nitroaniline	ND	10		µg/L	1	10/3/2003 5:51:00 PM
4-Methylphenol	ND	10		µg/L	1	10/3/2003 5:51:00 PM
4-Nitroaniline	ND	10		µg/L	1	10/3/2003 5:51:00 PM
4-Nitrophenol	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Acenaphthene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Acenaphthylene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Aniline	ND	10		µg/L	1	10/3/2003 5:51:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-03

Client Sample ID: RA3353
Collection Date: 9/29/2003 9:15:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Benz(a)anthracene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Benzidine	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Hexachloroethane	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Isophorone	ND	10		µg/L	1	10/3/2003 5:51:00 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	10/3/2003 5:51:00 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	10/3/2003 5:51:00 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Naphthalene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Nitrobenzene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Pentachlorophenol	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Phenanthrene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Phenol	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Pyrene	ND	10		µg/L	1	10/3/2003 5:51:00 PM
Surr: 2,4,6-Tribromophenol	104	39-153		%REC	1	10/3/2003 5:51:00 PM
Surr: 2-Fluorobiphenyl	94.2	40-147		%REC	1	10/3/2003 5:51:00 PM
Surr: 2-Fluorophenol	41.7	21-100		%REC	1	10/3/2003 5:51:00 PM
Surr: 4-Terphenyl-d14	113	39-141		%REC	1	10/3/2003 5:51:00 PM
Surr: Nitrobenzene-d5	92.8	37-140		%REC	1	10/3/2003 5:51:00 PM
Surr: Phenol-d6	25.6	11-100		%REC	1	10/3/2003 5:51:00 PM
VOLATILES BY GC/MS		**SW8260**				Analyst: **PC**
1,1,1-Trichloroethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
1,2-Dichloroethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
2-Butanone	ND	10		µg/L	1	10/8/2003 5:58:00 PM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	10/8/2003 5:58:00 PM
2-Hexanone	ND	10		µg/L	1	10/8/2003 5:58:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	10/8/2003 5:58:00 PM
Acetone	ND	10		µg/L	1	10/8/2003 5:58:00 PM
Benzene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Bromodichloromethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Bromoform	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Bromomethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Carbon disulfide	ND	10		µg/L	1	10/8/2003 5:58:00 PM
Carbon tetrachloride	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Chlorobenzene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM

Qualifiers:

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* - Value exceeds Maximum Contaminant Level
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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 20, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly
Lab ID: 0309293-03

Client Sample ID: RA3353
Collection Date: 9/29/2003 9:15:00 AM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Chloroform	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Chloromethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Dibromochloromethane	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Ethylbenzene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
m,p-Xylene	ND	10		µg/L	1	10/8/2003 5:58:00 PM
Methyl tert-butyl ether	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Methylene chloride	ND	10		µg/L	1	10/8/2003 5:58:00 PM
Styrene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Tetrachloroethene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Toluene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Trichloroethene	ND	5.0		µg/L	1	10/8/2003 5:58:00 PM
Vinyl acetate	ND	10		µg/L	1	10/8/2003 5:58:00 PM
Vinyl chloride	ND	2.0		µg/L	1	10/8/2003 5:58:00 PM
Xylenes, Total	ND	15		µg/L	1	10/8/2003 5:58:00 PM
Surr: 1,2-Dichloroethane-d4	96.1	70-130		%REC	1	10/8/2003 5:58:00 PM
Surr: 4-Bromofluorobenzene	91.9	70-130		%REC	1	10/8/2003 5:58:00 PM
Surr: Dibromofluoromethane	97.2	70-130		%REC	1	10/8/2003 5:58:00 PM
Surr: Toluene-d8	97.6	70-130		%REC	1	10/8/2003 5:58:00 PM
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **MG**
Chloride	173	5.00		mg/L	10	10/8/2003 12:57:00 AM
Fluoride	1.02	0.100		mg/L	1	10/4/2003 1:47:00 AM
Sulfate	1,210	50.0		mg/L	50	10/8/2003 1:30:00 AM
Surr: Dichloroacetic acid (surr)	107	80-120		%REC	50	10/8/2003 1:30:00 AM
Surr: Dichloroacetic acid (surr)	102	80-120		%REC	10	10/8/2003 12:57:00 AM
Surr: Dichloroacetic acid (surr)	86.4	80-120		%REC	1	10/4/2003 1:47:00 AM
ALKALINITY		**E310.1**				Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	180	5.00		mg/L	1	10/7/2003
Alkalinity, Carbonate (As CaCO3)	ND	5.00		mg/L	1	10/7/2003
Alkalinity, Hydroxide (As CaCO3)	ND	5.00		mg/L	1	10/7/2003
Alkalinity, Total (As CaCO3)	180	5.00		mg/L	1	10/7/2003
CYANIDE, TOTAL		**E335.3**				Analyst: **LMD**
Cyanide	ND	0.0200		mg/L	1	10/6/2003

Qualifiers:

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E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *Oct 20 2003*

CLIENT: Navajo Refining Company

QC BATCH REPORT

Work Order: 0309293

Project: Monthly

Batch ID: **6823** InstrumentID: **ICP4500**

MBLK Sample ID: **MBLKW2-100303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/06/03 15:35**

Client ID: Run ID: **ICP4500_031006A** SeqNo: **376093** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003049	0.010								J
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Cadmium	ND	0.0010								
Calcium	ND	0.50								
Chromium	ND	0.0020								
Cobalt	0.0001557	0.0020								J
Copper	0.0006768	0.0020								J
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	0.0005001	0.0050								J
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

MBLK Sample ID: **MBLKW2-100303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 12:41**

Client ID: Run ID: **ICP4500_031017A** SeqNo: **381166** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	ND	0.20								

MBLK Sample ID: **MBLKW2-100303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 14:57**

Client ID: Run ID: **ICP4500_031017A** SeqNo: **381236** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	ND	0.020								

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **6823** InstrumentID: **ICP4500**

LCS Sample ID: **MLCSW2-100303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/06/03 15:39**
Client ID: Run ID: **ICP4500_031006A** SeqNo: **376094** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09935	0.010	0.1	0	99.4	80-120	0			
Arsenic	0.1003	0.0050	0.1	0	100	80-120	0			
Barium	0.09866	0.0050	0.1	0	98.7	80-120	0			
Beryllium	0.1073	0.0020	0.1	0	107	80-120	0			
Cadmium	0.1009	0.0010	0.1	0	101	80-120	0			
Calcium	9.392	0.50	10	0	93.9	80-120	0			
Chromium	0.09727	0.0020	0.1	0	97.3	80-120	0			
Cobalt	0.09852	0.0020	0.1	0	98.5	80-120	0			
Copper	0.09667	0.0020	0.1	0	96.7	80-120	0			
Iron	9.664	0.20	10	0	96.6	80-120	0			
Lead	0.09997	0.0050	0.1	0	100	80-120	0			
Magnesium	9.571	0.20	10	0	95.7	80-120	0			
Manganese	0.09946	0.0050	0.1	0	99.5	80-120	0			
Nickel	0.09793	0.0050	0.1	0	97.9	80-120	0			
Potassium	9.38	0.20	10	0	93.8	80-120	0			
Selenium	0.101	0.0050	0.1	0	101	80-120	0			
Silver	0.09838	0.0050	0.1	0	98.4	80-120	0			
Vanadium	0.09803	0.0050	0.1	0	98	80-120	0			
Zinc	0.1014	0.0050	0.1	0	101	80-120	0			

LCS Sample ID: **MLCSW2-100303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 12:45**
Client ID: Run ID: **ICP4500_031017A** SeqNo: **381167** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	8.539	0.20	10	0	85.4	80-120	0			

LCS Sample ID: **MLCSW2-100303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 15:02**
Client ID: Run ID: **ICP4500_031017A** SeqNo: **381237** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4819	0.020	0.5	0	96.4	80-120	0			

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **6823** InstrumentID: **ICP4500**

MS Sample ID: **0309293-03BMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/06/03 15:57**
Client ID: **RA3353** Run ID: **ICP4500_031006A** SeqNo: **376098** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1004	0.010	0.1	0.009971	90.4	75-125	0			
Arsenic	0.09743	0.0050	0.1	-0.002367	99.8	75-125	0			
Barium	0.1107	0.0050	0.1	0.009906	101	75-125	0			
Beryllium	0.1032	0.0020	0.1	0.00002777	103	75-125	0			
Cadmium	0.09068	0.0010	0.1	0.0001024	90.6	75-125	0			
Calcium	362.7	0.50	10	355.6	71	75-125	0			SEO
Chromium	0.09268	0.0020	0.1	-0.0001404	92.8	75-125	0			
Cobalt	0.09126	0.0020	0.1	0.0005618	90.7	75-125	0			
Copper	0.08587	0.0020	0.1	0.003196	82.7	75-125	0			
Iron	11.03	0.20	10	1.886	91.4	75-125	0			
Lead	0.1039	0.0050	0.1	0.0006829	103	75-125	0			
Magnesium	109.8	0.20	10	101	88	75-125	0			EO
Manganese	0.1015	0.0050	0.1	0.008384	93.1	75-125	0			
Nickel	0.09145	0.0050	0.1	0.006495	85	75-125	0			
Potassium	10.93	0.20	10	1.89	90.4	75-125	0			
Selenium	0.1046	0.0050	0.1	0.01079	93.8	75-125	0			
Silver	0.08594	0.0050	0.1	0.0003342	85.6	75-125	0			
Vanadium	0.1028	0.0050	0.1	0.00415	98.6	75-125	0			
Zinc	0.5278	0.0050	0.1	0.4535	74.3	75-125	0			SEO

MS Sample ID: **0309293-03BMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 0:16**
Client ID: **RA3353** Run ID: **ICP4500_031016A** SeqNo: **380982** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	0	0.20	10	0	0	75-125	0			S

MS Sample ID: **0309293-03BMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 15:29**
Client ID: **RA3353** Run ID: **ICP4500_031017A** SeqNo: **381243** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5648	0.020	0.5	0.1074	91.5	75-125	0			

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B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **6823** InstrumentID: **ICP4500**

MSD Sample ID: **0309293-03BMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/06/03 16:02**
Client ID: **RA3353** Run ID: **ICP4500_031006A** SeqNo: **376099** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1041	0.010	0.1	0.009971	94.1	75-125	0.1004	3.62	25	
Arsenic	0.09772	0.0050	0.1	-0.002367	100	75-125	0.09743	0.297	25	
Barium	0.1134	0.0050	0.1	0.009906	103	75-125	0.1107	2.41	25	
Beryllium	0.104	0.0020	0.1	0.00002777	104	75-125	0.1032	0.772	25	
Cadmium	0.09318	0.0010	0.1	0.0001024	93.1	75-125	0.09068	2.72	25	
Calcium	372	0.50	10	355.6	164	75-125	362.7	2.53	25	SEO
Chromium	0.09485	0.0020	0.1	-0.0001404	95	75-125	0.09268	2.31	25	
Cobalt	0.09361	0.0020	0.1	0.0005618	93	75-125	0.09126	2.54	25	
Copper	0.08823	0.0020	0.1	0.003196	85	75-125	0.08587	2.71	25	
Iron	11.39	0.20	10	1.886	95	75-125	11.03	3.21	25	
Lead	0.1051	0.0050	0.1	0.0006829	104	75-125	0.1039	1.15	25	
Magnesium	111.2	0.20	10	101	102	75-125	109.8	1.27	25	EO
Manganese	0.1038	0.0050	0.1	0.008384	95.4	75-125	0.1015	2.24	25	
Nickel	0.09446	0.0050	0.1	0.006495	88	75-125	0.09145	3.24	25	
Potassium	11.2	0.20	10	1.89	93.1	75-125	10.93	2.44	25	
Selenium	0.1082	0.0050	0.1	0.01079	97.4	75-125	0.1046	3.38	25	
Silver	0.08938	0.0050	0.1	0.0003342	89	75-125	0.08594	3.92	25	
Vanadium	0.1058	0.0050	0.1	0.00415	102	75-125	0.1028	2.88	25	
Zinc	0.5361	0.0050	0.1	0.4535	82.6	75-125	0.5278	1.56	25	EO

MSD Sample ID: **0309293-03BMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 0:21**
Client ID: **RA3353** Run ID: **ICP4500_031016A** SeqNo: **380983** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	0	0.20	10	0	0	75-125	0	0	25	S

MSD Sample ID: **0309293-03BMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 15:43**
Client ID: **RA3353** Run ID: **ICP4500_031017A** SeqNo: **381246** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5956	0.020	0.5	0.1074	97.6	75-125	0.5648	5.31	25	

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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **6823** InstrumentID: **ICP4500**

DUP Sample ID: **0309293-03BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/06/03 15:53**
Client ID: **RA3353** Run ID: **ICP4500_031006A** SeqNo: **376097** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.009883	0.010	0	0	0	0-0	0.009971	0	25	J
Arsenic	ND	0.0050	0	0	0	0-0	-0.002367	0	25	
Barium	0.009881	0.0050	0	0	0	0-0	0.009906	0.253	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.00002777	0	25	
Cadmium	ND	0.0010	0	0	0	0-0	0.0001024	0	25	
Chromium	ND	0.0020	0	0	0	0-0	-0.0001404	0	25	
Cobalt	0.0005294	0.0020	0	0	0	0-0	0.0005618	0	25	J
Copper	0.002953	0.0020	0	0	0	0-0	0.003196	7.9	25	
Iron	1.81	0.20	0	0	0	0-0	1.886	4.11	25	
Lead	0.0005939	0.0050	0	0	0	0-0	0.0006829	0	25	J
Manganese	0.008036	0.0050	0	0	0	0-0	0.008384	4.24	25	
Nickel	0.006111	0.0050	0	0	0	0-0	0.006495	6.09	25	
Potassium	1.867	0.20	0	0	0	0-0	1.89	1.22	25	
Selenium	0.01296	0.0050	0	0	0	0-0	0.01079	18.3	25	
Silver	0.0003211	0.0050	0	0	0	0-0	0.0003342	0	25	J
Vanadium	0.004432	0.0050	0	0	0	0-0	0.00415	0	25	J

DUP Sample ID: **0309293-03BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 14:05**
Client ID: **RA3353** Run ID: **ICP4500_031017A** SeqNo: **381176** Prep Date: **10/3/2003** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	360.8	10	0	0	0	0-0	401.7	10.7	25	
Magnesium	110	4.0	0	0	0	0-0	123.1	11.2	25	
Sodium	84.38	4.0	0	0	0	0-0	94.22	11	25	

DUP Sample ID: **0309293-03BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 14:13**
Client ID: **RA3353** Run ID: **ICP4500_031017A** SeqNo: **381191** Prep Date: **10/3/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Zinc	0.5346	0.050	0	0	0	0-0	0.5297	0.921	25	

DUP Sample ID: **0309293-03BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **10/17/03 15:25**
Client ID: **RA3353** Run ID: **ICP4500_031017A** SeqNo: **381242** Prep Date: **10/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.1055	0.020	0	0	0	0-0	0.1074	1.78	25	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-01B 0309293-02B 0309293-03B

ND - Not Detected at the Reporting Limit
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O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **6859** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW1-100803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **10/08/03 16:38**
Client ID: Run ID: **MERCURY_031008C** SeqNo: **377205** Prep Date: **10/8/2003** 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: **GLCSW1-100803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **10/08/03 16:45**
Client ID: Run ID: **MERCURY_031008C** SeqNo: **377206** Prep Date: **10/8/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00518	0.00020	0.005	0	104	83-115	0			

LCSD Sample ID: **GLCSDW1-100803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **10/08/03 16:55**
Client ID: Run ID: **MERCURY_031008C** SeqNo: **377207** Prep Date: **10/8/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00494	0.00020	0.005	0	98.8	83-115	0.00518	4.74	20	

MS Sample ID: **0310040-02AMS** Test Code: **SW7470** Units: **mg/L** Analysis Date: **10/08/03 17:10**
Client ID: Run ID: **MERCURY_031008C** SeqNo: **377214** Prep Date: **10/8/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.00020	0.005	-0.000057	101	70-124	0			

MSD Sample ID: **0310040-02AMSD** Test Code: **SW7470** Units: **mg/L** Analysis Date: **10/08/03 17:15**
Client ID: Run ID: **MERCURY_031008C** SeqNo: **377215** Prep Date: **10/8/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00515	0.00020	0.005	-0.000057	104	70-124	0.00498	3.36	20	

DUP Sample ID: **0310040-02ADUP** Test Code: **SW7470** Units: **mg/L** Analysis Date: **10/08/03 17:03**
Client ID: Run ID: **MERCURY_031008C** SeqNo: **377211** Prep Date: **10/8/2003** 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	-0.000057	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-01B 0309293-02B 0309293-03B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **6814** InstrumentID: **SV-3**

MBLK Sample ID: **SBLKW1-031002** Test Code: **SW8270** Units: **µg/L** Analysis Date: **10/02/03 17:09**
Client ID: Run ID: **SV-3_031002B** SeqNo: **376174** Prep Date: **10/2/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
3-Nitroaniline	ND	10								
4-Methylphenol	ND	10								
4-Nitroaniline	ND	10								
4-Nitrophenol	ND	10								
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Benz(a)anthracene	ND	10								
Benzidine	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
Nitrobenzene	ND	10								
Pentachlorophenol	ND	10								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr: 2,4,6-Tribromophenol	111.5	0	100	0	111	39-153	0			
Surr: 2-Fluorobiphenyl	93.17	0	100	0	93.2	40-147	0			
Surr: 2-Fluorophenol	67.18	0	100	0	67.2	21-100	0			
Surr:4-Terphenyl-d14	119.5	0	100	0	119	39-141	0			
Surr: Nitrobenzene-d5	91.17	0	100	0	91.2	37-140	0			
Surr: Phenol-d6	48.9	0	100	0	48.9	11-100	0			

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J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **6814** InstrumentID: **SV-3**

LCS Sample ID: **SLCSW1-031002** Test Code: **SW8270** Units: **µg/L** Analysis Date: **10/06/03 17:53**

Client ID: Run ID: **SV-3_031002B** SeqNo: **378002** Prep Date: **10/2/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	51.49	10	50	0	103	50-115	0			
2,4,5-Trichlorophenol	111.9	10	100	0	112	72-118	0			
2,4,6-Trichlorophenol	106.1	10	100	0	106	72-117	0			
2-Methylnaphthalene	52.1	10	50	0	104	47-122	0			
2-Methylphenol	98.74	10	100	0	98.7	51-115	0			
2-Nitroaniline	52.2	10	50	0	104	73-119	0			
2-Nitrophenol	105.1	10	100	0	105	60-119	0			
3-Nitroaniline	50.1	10	50	0	100	61-118	0			
4-Methylphenol	137.4	10	150	0	91.6	44-115	0			
4-Nitroaniline	55.21	10	50	0	110	61-123	0			
4-Nitrophenol	57.32	10	100	0	57.3	17-100	0			
Acenaphthene	54.11	10	50	0	108	68-115	0			
Acenaphthylene	51.65	10	50	0	103	67-116	0			
Anthracene	56.67	10	50	0	113	72-124	0			
Benz(a)anthracene	57.6	10	50	0	115	55-131	0			
Benzidine	12.68	10	50	0	25.4	10-115	0			
Hexachloroethane	48.96	10	50	0	97.9	46-115	0			
Indeno(1,2,3-cd)pyrene	49.16	10	50	0	98.3	42-123	0			
Isophorone	53.92	10	50	0	108	63-117	0			
N-Nitrosodi-n-propylamine	51.56	10	50	0	103	67-115	0			
N-Nitrosodimethylamine	34.44	10	50	0	68.9	28-115	0			
N-Nitrosodiphenylamine	61.23	10	50	0	122	72-144	0			
Naphthalene	51.62	10	50	0	103	52-115	0			
Nitrobenzene	51.46	10	50	0	103	65-115	0			
Pentachlorophenol	104.7	10	100	0	105	65-123	0			
Phenanthrene	54.89	10	50	0	110	69-119	0			
Phenol	55.71	10	100	0	55.7	16-115	0			
Pyrene	57.33	10	50	0	115	51-130	0			
Surr: 2,4,6-Tribromophenol	115.3	0	100	0	115	39-153	0			
Surr: 2-Fluorobiphenyl	102.3	0	100	0	102	40-147	0			
Surr: 2-Fluorophenol	76.61	0	100	0	76.6	21-100	0			
Surr:4-Terphenyl-d14	119.9	0	100	0	120	39-141	0			
Surr: Nitrobenzene-d5	100.5	0	100	0	100	37-140	0			
Surr: Phenol-d6	55.62	0	100	0	55.6	11-100	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
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R - RPD outside accepted recovery limits
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B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **6814** InstrumentID: **SV-3**

LCSD Sample ID: **SLCSDW1-031002** Test Code: **SW8270** Units: **µg/L** Analysis Date: **10/02/03 18:03**

Client ID: Run ID: **SV-3_031002B** SeqNo: **376175** Prep Date: **10/2/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	51.86	10	50	0	104	50-115	51.49	0.72	30	
2,4,5-Trichlorophenol	110.7	10	100	0	111	72-118	111.9	1.15	30	
2,4,6-Trichlorophenol	109	10	100	0	109	72-117	106.1	2.68	30	
2-Methylnaphthalene	52.04	10	50	0	104	47-122	52.1	0.125	30	
2-Methylphenol	102.5	10	100	0	103	51-115	98.74	3.79	30	
2-Nitroaniline	53.41	10	50	0	107	73-119	52.2	2.3	30	
2-Nitrophenol	106.3	10	100	0	106	60-119	105.1	1.11	30	
3-Nitroaniline	52.99	10	50	0	106	61-118	50.1	5.6	30	
4-Methylphenol	143.4	10	150	0	95.6	44-115	137.4	4.26	30	
4-Nitroaniline	54.23	10	50	0	108	61-123	55.21	1.78	30	
4-Nitrophenol	61.03	10	100	0	61	17-100	57.32	6.26	30	
Acenaphthene	53.38	10	50	0	107	68-115	54.11	1.36	30	
Acenaphthylene	52.05	10	50	0	104	67-116	51.65	0.782	30	
Anthracene	56.5	10	50	0	113	72-124	56.67	0.302	30	
Benz(a)anthracene	57.35	10	50	0	115	55-131	57.6	0.449	30	
Benzidine	19.67	10	50	0	39.3	10-115	12.68	43.2	30	R
Hexachloroethane	51.25	10	50	0	103	46-115	48.96	4.57	30	
Indeno(1,2,3-cd)pyrene	52.48	10	50	0	105	42-123	49.16	6.53	30	
Isophorone	55	10	50	0	110	63-117	53.92	1.99	30	
N-Nitrosodi-n-propylamine	55.81	10	50	0	112	67-115	51.56	7.92	30	
N-Nitrosodimethylamine	34.07	10	50	0	68.1	28-115	34.44	1.09	30	
N-Nitrosodiphenylamine	58.48	10	50	0	117	72-144	61.23	4.6	30	
Naphthalene	51.59	10	50	0	103	52-115	51.62	0.0555	30	
Nitrobenzene	51.79	10	50	0	104	65-115	51.46	0.638	30	
Pentachlorophenol	109.9	10	100	0	110	65-123	104.7	4.89	30	
Phenanthrene	53.71	10	50	0	107	69-119	54.89	2.18	30	
Phenol	58.15	10	100	0	58.2	16-115	55.71	4.28	30	
Pyrene	57.64	10	50	0	115	51-130	57.33	0.531	30	
Surr: 2,4,6-Tribromophenol	116.5	0	100	0	117	39-153	115.3	1.01	30	
Surr: 2-Fluorobiphenyl	100.7	0	100	0	101	40-147	102.3	1.66	30	
Surr: 2-Fluorophenol	79.37	0	100	0	79.4	21-100	76.61	3.54	30	
Surr:4-Terphenyl-d14	119.6	0	100	0	120	39-141	119.9	0.284	30	
Surr: Nitrobenzene-d5	100.4	0	100	0	100	37-140	100.5	0.0781	30	
Surr: Phenol-d6	57.79	0	100	0	57.8	11-100	55.62	3.84	30	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-01E 0309293-02E 0309293-03E

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
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B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16546** InstrumentID: **VOA_I**

MBLK Sample ID: **VBLKW-1007** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 1:23**

Client ID: Run ID: **VOA_I_031007B** SeqNo: **377018** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
2-Butanone	ND	10								
2-Chloroethyl vinyl ether	ND	10								
2-Hexanone	ND	10								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,3-Dichloropropene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl acetate	ND	10								
Vinyl chloride	ND	2.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	46.11	5.0	50	0	92.2	70-130		0		
Surr: 4-Bromofluorobenzene	46.17	5.0	50	0	92.3	70-130		0		
Surr: Dibromofluoromethane	47.87	5.0	50	0	95.7	70-130		0		
Surr: Toluene-d8	49.54	5.0	50	0	99.1	70-130		0		

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16546** InstrumentID: **VOA_I**

LCS Sample ID: **VLCSW-1007** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 0:01**

Client ID: Run ID: **VOA_I_031007B** SeqNo: **377017** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.74	5.0	50	0	99.5	75-118	0			
1,1,2,2-Tetrachloroethane	46.5	5.0	50	0	93	79-120	0			
1,1,2-Trichloroethane	50.69	5.0	50	0	101	81-119	0			
1,1-Dichloroethane	52.23	5.0	50	0	104	80-120	0			
1,1-Dichloroethene	51.21	5.0	50	0	102	80-120	0			
1,2-Dichloroethane	48.69	5.0	50	0	97.4	80-120	0			
2-Butanone	103.9	10	100	0	104	70-130	0			
2-Chloroethyl vinyl ether	104.6	10	100	0	105	72-120	0			
2-Hexanone	82.39	10	100	0	82.4	70-130	0			
4-Methyl-2-pentanone	93.46	10	100	0	93.5	78-120	0			
Acetone	103.1	10	100	0	103	60-135	0			
Benzene	50.01	5.0	50	0	100	82-119	0			
Bromodichloromethane	49.51	5.0	50	0	99	81-119	0			
Bromoform	49.09	5.0	50	0	98.2	80-120	0			
Bromomethane	44.89	5.0	50	0	89.8	75-130	0			
Carbon disulfide	104.3	10	100	0	104	78-120	0			
Carbon tetrachloride	48.04	5.0	50	0	96.1	77-120	0			
Chlorobenzene	49.75	5.0	50	0	99.5	82-118	0			
Chloroethane	52.87	5.0	50	0	106	78-122	0			
Chloroform	50.29	5.0	50	0	101	78-120	0			
Chloromethane	57.08	5.0	50	0	114	75-125	0			
cis-1,3-Dichloropropene	51.22	5.0	50	0	102	81-120	0			
Dibromochloromethane	49.28	5.0	50	0	98.6	81-118	0			
Ethylbenzene	51.07	5.0	50	0	102	82-120	0			
m,p-Xylene	100.1	10	100	0	100	82-122	0			
Methyl tert-butyl ether	50.07	5.0	50	0	100	79-120	0			
Methylene chloride	51.01	10	50	0	102	80-122	0			
Styrene	52.07	5.0	50	0	104	82-121	0			
Tetrachloroethene	48.66	5.0	50	0	97.3	79-118	0			
Toluene	51.36	5.0	50	0	103	81-119	0			
trans-1,3-Dichloropropene	51.92	5.0	50	0	104	82-121	0			
Trichloroethene	51.79	5.0	50	0	104	78-118	0			
Vinyl acetate	81.29	10	100	0	81.3	75-120	0			
Vinyl chloride	53.12	2.0	50	0	106	73-127	0			
Xylenes, Total	151.3	15	150	0	101	80-120	0			
Surr:1,2-Dichloroethane-d4	45.2	5.0	50	0	90.4	70-130	0			
Surr:4-Bromofluorobenzene	48.74	5.0	50	0	97.5	70-130	0			
Surr:Dibromofluoromethane	46.63	5.0	50	0	93.3	70-130	0			
Surr:Toluene-d8	48.83	5.0	50	0	97.7	70-130	0			

ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16546** InstrumentID: **VOA_I**

MS Sample ID: **0310039-21AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 2:18**

Client ID: Run ID: **VOA_I_031007B** SeqNo: **377019** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	53.59	5.0	50	0	107	75-125	0			
1,1,2,2-Tetrachloroethane	58.4	5.0	50	0	117	75-125	0			
1,1,2-Trichloroethane	61.05	5.0	50	0	122	75-125	0			
1,1-Dichloroethane	59.09	5.0	50	0	118	75-125	0			
1,1-Dichloroethene	52.11	5.0	50	0	104	65-130	0			
1,2-Dichloroethane	60.21	5.0	50	0	120	70-130	0			
2-Butanone	118.1	10	100	0	118	64-128	0			
2-Chloroethyl vinyl ether	ND	10	100	0	0	75-125	0			S
2-Hexanone	79.15	10	100	0	79.2	72-124	0			
4-Methyl-2-pentanone	107.4	10	100	0	107	75-125	0			
Acetone	104.7	10	100	0	105	60-130	0			
Benzene	58	5.0	50	0	116	76-127	0			
Bromodichloromethane	60.69	5.0	50	0	121	75-125	0			
Bromoform	60.2	5.0	50	0	120	75-125	0			
Bromomethane	49.56	5.0	50	0	99.1	75-125	0			
Carbon disulfide	108.2	10	100	0	108	75-125	0			
Carbon tetrachloride	52.01	5.0	50	0	104	70-130	0			
Chlorobenzene	58.5	5.0	50	0	117	75-126	0			
Chloroethane	55.62	5.0	50	0	111	70-130	0			
Chloroform	59.16	5.0	50	0	118	75-125	0			
Chloromethane	58.88	5.0	50	0	118	75-125	0			
cis-1,3-Dichloropropene	60.34	5.0	50	0	121	75-125	0			
Dibromochloromethane	59.76	5.0	50	0	120	75-125	0			
Ethylbenzene	57.62	5.0	50	0	115	75-125	0			
m,p-Xylene	113.7	10	100	0	114	75-125	0			
Methyl tert-butyl ether	59.54	5.0	50	0	119	75-125	0			
Methylene chloride	60.33	10	50	0	121	75-125	0			
Styrene	61.58	5.0	50	0	123	75-125	0			
Tetrachloroethene	53.48	5.0	50	0	107	75-125	0			
Toluene	58.57	5.0	50	0	117	76-125	0			
trans-1,3-Dichloropropene	62.57	5.0	50	0	125	70-130	0			
Trichloroethene	55.65	5.0	50	0	111	71-120	0			
Vinyl acetate	105.7	10	100	0	106	75-125	0			
Vinyl chloride	52.28	2.0	50	0	105	60-135	0			
Xylenes, Total	172.5	15	150	0	115	75-125	0			
Surr: 1,2-Dichloroethane-d4	45.38	5.0	50	0	90.8	70-130	0			
Surr: 4-Bromofluorobenzene	49.15	5.0	50	0	98.3	70-130	0			
Surr: Dibromofluoromethane	46.83	5.0	50	0	93.7	70-130	0			
Surr: Toluene-d8	48.96	5.0	50	0	97.9	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16546** InstrumentID: **VOA_I**

MSD Sample ID: **0310039-21AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 2:45**

Client ID: Run ID: **VOA_I_031007B** SeqNo: **377020** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	53.52	5.0	50	0	107	75-125	53.59	0.126	20	
1,1,2,2-Tetrachloroethane	56.82	5.0	50	0	114	75-125	58.4	2.74	20	
1,1,2-Trichloroethane	62.72	5.0	50	0	125	75-125	61.05	2.69	20	S
1,1-Dichloroethane	58.42	5.0	50	0	117	75-125	59.09	1.14	20	
1,1-Dichloroethene	55.03	5.0	50	0	110	65-130	52.11	5.45	20	
1,2-Dichloroethane	58.5	5.0	50	0	117	70-130	60.21	2.89	20	
2-Butanone	119	10	100	0	119	64-128	118.1	0.784	20	
2-Chloroethyl vinyl ether	ND	10	100	0	0	75-125	0	0	20	S
2-Hexanone	82.44	10	100	0	82.4	72-124	79.15	4.06	20	
4-Methyl-2-pentanone	108	10	100	0	108	75-125	107.4	0.595	20	
Acetone	103.5	10	100	0	104	60-130	104.7	1.11	20	
Benzene	57.45	5.0	50	0	115	76-127	58	0.948	20	
Bromodichloromethane	59.17	5.0	50	0	118	75-125	60.69	2.53	20	
Bromoform	59.05	5.0	50	0	118	75-125	60.2	1.92	20	
Bromomethane	50.54	5.0	50	0	101	75-125	49.56	1.96	20	
Carbon disulfide	110.8	10	100	0	111	75-125	108.2	2.37	20	
Carbontetrachloride	51.63	5.0	50	0	103	70-130	52.01	0.734	20	
Chlorobenzene	57.61	5.0	50	0	115	75-126	58.5	1.54	20	
Chloroethane	57.81	5.0	50	0	116	70-130	55.62	3.86	20	
Chloroform	57.95	5.0	50	0	116	75-125	59.16	2.07	20	
Chloromethane	61.03	5.0	50	0	122	75-125	58.88	3.59	20	
cis-1,3-Dichloropropene	58.33	5.0	50	0	117	75-125	60.34	3.39	20	
Dibromochloromethane	58.59	5.0	50	0	117	75-125	59.76	1.98	20	
Ethylbenzene	57.65	5.0	50	0	115	75-125	57.62	0.0521	20	
m,p-Xylene	112.4	10	100	0	112	75-125	113.7	1.15	20	
Methyl tert-butyl ether	59	5.0	50	0	118	75-125	59.54	0.912	20	
Methylene chloride	60.54	10	50	0	121	75-125	60.33	0.335	20	
Styrene	59.74	5.0	50	0	119	75-125	61.58	3.04	20	
Tetrachloroethene	52.9	5.0	50	0	106	75-125	53.48	1.09	20	
Toluene	58.25	5.0	50	0	116	76-125	58.57	0.55	20	
trans-1,3-Dichloropropene	61.01	5.0	50	0	122	70-130	62.57	2.52	20	
Trichloroethene	55.69	5.0	50	0	111	71-120	55.65	0.0722	20	
Vinylacetate	105.2	10	100	0	105	75-125	105.7	0.439	20	
Vinyl chloride	54.27	2.0	50	0	109	60-135	52.28	3.73	20	
Xylenes, Total	171.3	15	150	0	114	75-125	172.5	0.716	20	
Surr:1,2-Dichloroethane-d4	45.28	5.0	50	0	90.6	70-130	45.38	0.23	20	
Surr:4-Bromofluorobenzene	48.16	5.0	50	0	96.3	70-130	49.15	2.02	20	
Surr:Dibromofluoromethane	47.36	5.0	50	0	94.7	70-130	46.83	1.14	20	
Surr: Toluene-d8	49.02	5.0	50	0	98	70-130	48.96	0.122	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-01A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16564** InstrumentID: **VOA_I**

MBLK Sample ID: **VBLKW-1008** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 12:59**

Client ID: Run ID: **VOA_I_031008A** SeqNo: **377268** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
2-Butanone	ND	10								
2-Chloroethyl vinyl ether	ND	10								
2-Hexanone	ND	10								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,3-Dichloropropene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl acetate	ND	10								
Vinyl chloride	ND	2.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	46.24	5.0	50	0	92.5	70-130	0			
Surr: 4-Bromofluorobenzene	46.45	5.0	50	0	92.9	70-130	0			
Surr: Dibromofluoromethane	47.97	5.0	50	0	95.9	70-130	0			
Surr: Toluene-d8	48.99	5.0	50	0	98	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16564** InstrumentID: **VOA_I**

LCS Sample ID: **VLCSW-1008** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 12:04**

Client ID: Run ID: **VOA_I_031008A** SeqNo: **377266** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.53	5.0	50	0	101	75-118	0			
1,1,2,2-Tetrachloroethane	48.81	5.0	50	0	97.6	79-120	0			
1,1,2-Trichloroethane	51.57	5.0	50	0	103	81-119	0			
1,1-Dichloroethane	50.05	5.0	50	0	100	80-120	0			
1,1-Dichloroethene	50	5.0	50	0	100	80-120	0			
1,2-Dichloroethane	50.47	5.0	50	0	101	80-120	0			
2-Butanone	109.5	10	100	0	110	70-130	0			
2-Chloroethyl vinyl ether	99.2	10	100	0	99.2	72-120	0			
2-Hexanone	81.33	10	100	0	81.3	70-130	0			
4-Methyl-2-pentanone	94.15	10	100	0	94.2	78-120	0			
Acetone	113.5	10	100	0	114	60-135	0			
Benzene	49.61	5.0	50	0	99.2	82-119	0			
Bromodichloromethane	51.17	5.0	50	0	102	81-119	0			
Bromoform	52.12	5.0	50	0	104	80-120	0			
Bromomethane	44.33	5.0	50	0	88.7	75-130	0			
Carbon disulfide	101.6	10	100	0	102	78-120	0			
Carbon tetrachloride	50.25	5.0	50	0	101	77-120	0			
Chlorobenzene	49.6	5.0	50	0	99.2	82-118	0			
Chloroethane	51.18	5.0	50	0	102	78-122	0			
Chloroform	50.41	5.0	50	0	101	78-120	0			
Chloromethane	51.69	5.0	50	0	103	75-125	0			
cis-1,3-Dichloropropene	51.53	5.0	50	0	103	81-120	0			
Dibromochloromethane	50.6	5.0	50	0	101	81-118	0			
Ethylbenzene	50.26	5.0	50	0	101	82-120	0			
m,p-Xylene	99.75	10	100	0	99.8	82-122	0			
Methyl tert-butyl ether	50.65	5.0	50	0	101	79-120	0			
Methylene chloride	48.56	10	50	0	97.1	80-122	0			
Styrene	52.74	5.0	50	0	105	82-121	0			
Tetrachloroethene	49.66	5.0	50	0	99.3	79-118	0			
Toluene	50.41	5.0	50	0	101	81-119	0			
trans-1,3-Dichloropropene	53.19	5.0	50	0	106	82-121	0			
Trichloroethene	50.85	5.0	50	0	102	78-118	0			
Vinyl acetate	105.8	10	100	0	106	75-120	0			
Vinyl chloride	51.19	2.0	50	0	102	73-127	0			
Xylenes, Total	150.3	15	150	0	100	80-120	0			
Surr: 1,2-Dichloroethane-d4	47.15	5.0	50	0	94.3	70-130	0			
Surr: 4-Bromofluorobenzene	49.05	5.0	50	0	98.1	70-130	0			
Surr: Dibromofluoromethane	47.61	5.0	50	0	95.2	70-130	0			
Surr: Toluene-d8	48.83	5.0	50	0	97.7	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16564** InstrumentID: **VOA_I**

LCSD Sample ID: **VLCSWD-1008** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 12:31**

Client ID: Run ID: **VOA_I_031008A** SeqNo: **377267** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	51.87	5.0	50	0	104	75-118	50.53	2.63	20	
1,1,2,2-Tetrachloroethane	51.16	5.0	50	0	102	79-120	48.81	4.69	20	
1,1,2-Trichloroethane	52.3	5.0	50	0	105	81-119	51.57	1.4	20	
1,1-Dichloroethane	51.76	5.0	50	0	104	80-120	50.05	3.36	20	
1,1-Dichloroethene	51.73	5.0	50	0	103	80-120	50	3.4	20	
1,2-Dichloroethane	51.07	5.0	50	0	102	80-120	50.47	1.18	20	
2-Butanone	106.2	10	100	0	106	70-130	109.5	3.1	20	
2-Chloroethyl vinyl ether	102.9	10	100	0	103	72-120	99.2	3.7	20	
2-Hexanone	78.1	10	100	0	78.1	70-130	81.33	4.05	20	
4-Methyl-2-pentanone	97.56	10	100	0	97.6	78-120	94.15	3.56	20	
Acetone	113.8	10	100	0	114	60-135	113.5	0.213	20	
Benzene	51.09	5.0	50	0	102	82-119	49.61	2.94	20	
Bromodichloromethane	51.35	5.0	50	0	103	81-119	51.17	0.349	20	
Bromoform	53.78	5.0	50	0	108	80-120	52.12	3.13	20	
Bromomethane	44.91	5.0	50	0	89.8	75-130	44.33	1.29	20	
Carbon disulfide	104.7	10	100	0	105	78-120	101.6	3.01	20	
Carbontetrachloride	51.48	5.0	50	0	103	77-120	50.25	2.42	20	
Chlorobenzene	51.53	5.0	50	0	103	82-118	49.6	3.82	20	
Chloroethane	52.9	5.0	50	0	106	78-122	51.18	3.31	20	
Chloroform	51.26	5.0	50	0	103	78-120	50.41	1.66	20	
Chloromethane	53.56	5.0	50	0	107	75-125	51.69	3.55	20	
cis-1,3-Dichloropropene	52.58	5.0	50	0	105	81-120	51.53	2.02	20	
Dibromochloromethane	51.68	5.0	50	0	103	81-118	50.6	2.11	20	
Ethylbenzene	52.4	5.0	50	0	105	82-120	50.26	4.16	20	
m,p-Xylene	103.1	10	100	0	103	82-122	99.75	3.26	20	
Methyl tert-butyl ether	51.05	5.0	50	0	102	79-120	50.65	0.801	20	
Methylene chloride	49.54	10	50	0	99.1	80-122	48.56	2	20	
Styrene	53.62	5.0	50	0	107	82-121	52.74	1.66	20	
Tetrachloroethene	52.96	5.0	50	0	106	79-118	49.66	6.42	20	
Toluene	52.16	5.0	50	0	104	81-119	50.41	3.41	20	
trans-1,3-Dichloropropene	53.22	5.0	50	0	106	82-121	53.19	0.0504	20	
Trichloroethene	51.76	5.0	50	0	104	78-118	50.85	1.78	20	
Vinyl acetate	105.7	10	100	0	106	75-120	105.8	0.109	20	
Vinyl chloride	53.25	2.0	50	0	106	73-127	51.19	3.93	20	
Xylenes, Total	155.2	15	150	0	103	80-120	150.3	3.22	20	
Surr:1,2-Dichloroethane-d4	46.04	5.0	50	0	92.1	70-130	47.15	2.39	20	
Surr:4-Bromofluorobenzene	49.58	5.0	50	0	99.2	70-130	49.05	1.06	20	
Surr:Dibromofluoromethane	46.75	5.0	50	0	93.5	70-130	47.61	1.81	20	
Surr: Toluene-d8	49.23	5.0	50	0	98.5	70-130	48.83	0.812	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16564** InstrumentID: **VOA_I**

MS Sample ID: **0310083-03AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 14:21**

Client ID: Run ID: **VOA_I_031008A** SeqNo: **377271** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.17	5.0	50	0	96.3	75-125	0			
1,1,2,2-Tetrachloroethane	47.97	5.0	50	0	95.9	75-125	0			
1,1,2-Trichloroethane	50.31	5.0	50	0	101	75-125	0			
1,1-Dichloroethane	47.55	5.0	50	0	95.1	75-125	0			
1,1-Dichloroethene	45.93	5.0	50	0	91.9	65-130	0			
1,2-Dichloroethane	49.44	5.0	50	0	98.9	70-130	0			
2-Butanone	101.7	10	100	0	102	64-128	0			
2-Chloroethyl vinyl ether	13.31	10	100	0	13.3	75-125	0			S
2-Hexanone	73.29	10	100	0	73.3	72-124	0			
4-Methyl-2-pentanone	93.37	10	100	0	93.4	75-125	0			
Acetone	93.79	10	100	0	93.8	60-130	0			
Benzene	46.87	5.0	50	0	93.7	76-127	0			
Bromodichloromethane	49.16	5.0	50	0	98.3	75-125	0			
Bromoform	51.95	5.0	50	0	104	75-125	0			
Bromomethane	41.65	5.0	50	0	83.3	75-125	0			
Carbon disulfide	94.11	10	100	0	94.1	75-125	0			
Carbon tetrachloride	47.51	5.0	50	0	95	70-130	0			
Chlorobenzene	48.48	5.0	50	0	97	75-126	0			
Chloroethane	46.15	5.0	50	0	92.3	70-130	0			
Chloroform	48.55	5.0	50	0	97.1	75-125	0			
Chloromethane	47.34	5.0	50	2.35	90	75-125	0			
cis-1,3-Dichloropropene	48.25	5.0	50	0	96.5	75-125	0			
Dibromochloromethane	50.44	5.0	50	0	101	75-125	0			
Ethylbenzene	48.82	5.0	50	0	97.6	75-125	0			
m,p-Xylene	96.5	10	100	0	96.5	75-125	0			
Methyl tert-butyl ether	49.08	5.0	50	0	98.2	75-125	0			
Methylene chloride	45.88	10	50	0	91.8	75-125	0			
Styrene	50.91	5.0	50	0	102	75-125	0			
Tetrachloroethene	48.09	5.0	50	0	96.2	75-125	0			
Toluene	48.03	5.0	50	0	96.1	76-125	0			
trans-1,3-Dichloropropene	51.06	5.0	50	0	102	70-130	0			
Trichloroethene	48.18	5.0	50	0	96.4	71-120	0			
Vinyl acetate	102	10	100	0	102	75-125	0			
Vinyl chloride	44.42	2.0	50	0	88.8	60-135	0			
Xylenes, Total	145.7	15	150	0	97.1	75-125	0			
Surr: 1,2-Dichloroethane-d4	46.66	5.0	50	0	93.3	70-130	0			
Surr: 4-Bromofluorobenzene	49.18	5.0	50	0	98.4	70-130	0			
Surr: Dibromofluoromethane	47.24	5.0	50	0	94.5	70-130	0			
Surr: Toluene-d8	47.55	5.0	50	0	95.1	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16564** InstrumentID: **VOA_I**

MSD Sample ID: **0310083-03AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date: **10/08/03 14:48**

Client ID: Run ID: **VOA_I_031008A** SeqNo: **377272** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.98	5.0	50	0	100	75-125	48.17	3.7	20	
1,1,2,2-Tetrachloroethane	50.02	5.0	50	0	100	75-125	47.97	4.18	20	
1,1,2-Trichloroethane	51.84	5.0	50	0	104	75-125	50.31	3.01	20	
1,1-Dichloroethane	49.59	5.0	50	0	99.2	75-125	47.55	4.2	20	
1,1-Dichloroethene	49.7	5.0	50	0	99.4	65-130	45.93	7.89	20	
1,2-Dichloroethane	50.79	5.0	50	0	102	70-130	49.44	2.7	20	
2-Butanone	102.2	10	100	0	102	64-128	101.7	0.48	20	
2-Chloroethyl vinyl ether	14.11	10	100	0	14.1	75-125	13.31	5.89	20	S
2-Hexanone	73.4	10	100	0	73.4	72-124	73.29	0.153	20	
4-Methyl-2-pentanone	96.05	10	100	0	96.1	75-125	93.37	2.83	20	
Acetone	95.33	10	100	0	95.3	60-130	93.79	1.64	20	
Benzene	49.85	5.0	50	0	99.7	76-127	46.87	6.15	20	
Bromodichloromethane	50.9	5.0	50	0	102	75-125	49.16	3.48	20	
Bromoform	54.79	5.0	50	0	110	75-125	51.95	5.32	20	
Bromomethane	43.92	5.0	50	0	87.8	75-125	41.65	5.32	20	
Carbon disulfide	99.92	10	100	0	99.9	75-125	94.11	6	20	
Carbon tetrachloride	51.1	5.0	50	0	102	70-130	47.51	7.27	20	
Chlorobenzene	50.25	5.0	50	0	100	75-126	48.48	3.58	20	
Chloroethane	50.5	5.0	50	0	101	70-130	46.15	9	20	
Chloroform	50.03	5.0	50	0	100	75-125	48.55	2.99	20	
Chloromethane	53.29	5.0	50	2.35	102	75-125	47.34	11.8	20	
cis-1,3-Dichloropropene	50.49	5.0	50	0	101	75-125	48.25	4.54	20	
Dibromochloromethane	52.32	5.0	50	0	105	75-125	50.44	3.65	20	
Ethylbenzene	51.42	5.0	50	0	103	75-125	48.82	5.18	20	
m,p-Xylene	102	10	100	0	102	75-125	96.5	5.53	20	
Methyl tert-butyl ether	50.69	5.0	50	0	101	75-125	49.08	3.23	20	
Methylene chloride	47.76	10	50	0	95.5	75-125	45.88	4.03	20	
Styrene	52.59	5.0	50	0	105	75-125	50.91	3.25	20	
Tetrachloroethene	51	5.0	50	0	102	75-125	48.09	5.88	20	
Toluene	50.74	5.0	50	0	101	76-125	48.03	5.5	20	
trans-1,3-Dichloropropene	53.28	5.0	50	0	107	70-130	51.06	4.26	20	
Trichloroethene	51.25	5.0	50	0	103	71-120	48.18	6.19	20	
Vinyl acetate	107.6	10	100	0	108	75-125	102	5.27	20	
Vinyl chloride	49.83	2.0	50	0	99.7	60-135	44.42	11.5	20	
Xylenes, Total	153.4	15	150	0	102	75-125	145.7	5.18	20	
Surr:1,2-Dichloroethane-d4	45.87	5.0	50	0	91.7	70-130	46.66	1.72	20	
Surr: 4-Bromofluorobenzene	49.21	5.0	50	0	98.4	70-130	49.18	0.0572	20	
Surr: Dibromofluoromethane	46.88	5.0	50	0	93.8	70-130	47.24	0.777	20	
Surr: Toluene-d8	48.9	5.0	50	0	97.8	70-130	47.55	2.8	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-02A 0309293-03A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16507** InstrumentID: **UV-2101PC**

MBLK Sample ID: **WMBW1-100603** Test Code: **E335.3** Units: **mg/L** Analysis Date: **10/06/03 0:00**
Client ID: Run ID: **UV-2101PC_031006A** SeqNo: **376045** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								

LCS Sample ID: **WLCSW1-100603** Test Code: **E335.3** Units: **mg/L** Analysis Date: **10/06/03 0:00**
Client ID: Run ID: **UV-2101PC_031006A** SeqNo: **376046** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2013	0.020	0.2	0	101	80-120	0			

MS Sample ID: **0309293-01CMS** Test Code: **E335.3** Units: **mg/L** Analysis Date: **10/06/03 0:00**
Client ID: **RA 3156** Run ID: **UV-2101PC_031006A** SeqNo: **376061** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.202	0.020	0.2	0.002	100	75-125	0			

MSD Sample ID: **0309293-01C MSD** Test Code: **E335.3** Units: **mg/L** Analysis Date: **10/06/03 0:00**
Client ID: **RA 3156** Run ID: **UV-2101PC_031006A** SeqNo: **376062** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2069	0.020	0.2	0.002	102	75-125	0.202	2.4	25	

DUP Sample ID: **0309293-01C DUP** Test Code: **E335.3** Units: **mg/L** Analysis Date: **10/06/03 0:00**
Client ID: **RA 3156** Run ID: **UV-2101PC_031006A** SeqNo: **376060** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020	0	0	0	0-0	0.002	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-01C 0309293-02C 0309293-03C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16517** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-100302** Test Code: **E300** Units: **mg/L** Analysis Date: **10/03/03 17:39**
Client ID: Run ID: **IC201_031003A** SeqNo: **376367** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	1.0								
Surr: Dichloroacetic acid (surr)	ND	0.10								

LCS Sample ID: **WLCSW1-100302** Test Code: **E300** Units: **mg/L** Analysis Date: **10/03/03 18:12**
Client ID: Run ID: **IC201_031003A** SeqNo: **376368** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.89	0.50	10	0	98.9	80-120	0			
Fluoride	2	0.10	2	0	100	80-120	0			
Sulfate	10.52	1.0	10	0	105	80-120	0			
Surr: Dichloroacetic acid (surr)	2.15	0.10	2	0	108	80-120	0			

LCSD Sample ID: **WLCSDW1-10030** Test Code: **E300** Units: **mg/L** Analysis Date: **10/03/03 18:44**
Client ID: Run ID: **IC201_031003A** SeqNo: **376369** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.94	0.50	10	0	99.4	80-120	9.89	0.504	20	
Fluoride	1.99	0.10	2	0	99.5	80-120	2	0.501	20	
Sulfate	10.56	1.0	10	0	106	80-120	10.52	0.38	20	
Surr: Dichloroacetic acid (surr)	2.11	0.10	2	0	106	80-120	2.15	1.88	20	

MS Sample ID: **0309267-01CMS** Test Code: **E300** Units: **mg/L** Analysis Date: **10/03/03 20:22**
Client ID: Run ID: **IC201_031003A** SeqNo: **376372** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	57.38	0.50	10	47.03	103	75-125	0			EO
Fluoride	2.47	0.10	2	0.54	96.5	75-125	0			
Sulfate	182	1.0	10	171.3	107	75-125	0			EO
Surr: Dichloroacetic acid (surr)	4.88	0.10	5	0	97.6	80-120	0			

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R - RPD outside accepted recovery limits
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B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16517** InstrumentID: **IC201**

MSD Sample ID: **0309267-01CMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **10/03/03 20:54**
Client ID: Run ID: **IC201_031003A** SeqNo: **376373** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	58.04	0.50	10	47.03	110	75-125	57.38	1.14	20	EO
Fluoride	2.47	0.10	2	0.54	96.5	75-125	2.47	0	20	
Sulfate	180.2	1.0	10	171.3	89.5	75-125	182	0.955	20	EO
Surr: Dichloroacetic acid (surr)	5.14	0.10	5	0	103	80-120	4.88	5.19	20	

DUP Sample ID: **0309267-01CDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **10/03/03 19:49**
Client ID: Run ID: **IC201_031003A** SeqNo: **376371** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	46.25	0.50	0	0	0	0-0	47.03	1.67	20	
Fluoride	0.65	0.10	0	0	0	0-0	0.54	18.5	20	
Sulfate	171.6	1.0	0	0	0	0-0	171.3	0.198	20	E
Surr: Dichloroacetic acid (surr)	5.63	0.10	5	0	113	80-120	5.62	0.178	20	

DUP Sample ID: **0310016-07CDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **10/04/03 6:07**
Client ID: Run ID: **IC201_031003A** SeqNo: **376394** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	88.6	5.0	0	0	0	0-0	88.7	0.113	20	
Fluoride	2.4	1.0	0	0	0	0-0	0	200	20	R
Sulfate	257.9	10	0	0	0	0-0	257.9	0	20	
Surr: Dichloroacetic acid (surr)	50	1.0	50	0	100	80-120	53	5.83	20	

DUP Sample ID: **0310018-03ADUP** Test Code: **E300** Units: **mg/L** Analysis Date: **10/04/03 9:55**
Client ID: Run ID: **IC201_031003A** SeqNo: **376399** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	302.6	2.5	0	0	0	0-0	299.4	1.06	20	E
Fluoride	ND	0.50	0	0	0	0-0	0	0	20	
Sulfate	134.8	5.0	0	0	0	0-0	132.9	1.46	20	
Surr: Dichloroacetic acid (surr)	26.85	0.50	25	0	107	80-120	27	0.557	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-01D 0309293-02D 0309293-03D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16533** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-100703** Test Code: **E310.1** Units: **mg/L** Analysis Date: **10/07/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0310** SeqNo: **376751** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-100703** Test Code: **E310.1** Units: **mg/L** Analysis Date: **10/07/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0310** SeqNo: **376752** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1000	5.0	1000	0	100	80-120	0			

DUP Sample ID: **0309293-03D DUP** Test Code: **E310.1** Units: **mg/L** Analysis Date: **10/07/03 0:00**
Client ID: **RA3353** Run ID: **WET CHEMISTRY_0310** SeqNo: **376766** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	175	5.0	0	0	0	0-0	180	2.82	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	175	5.0	0	0	0	0-0	180	2.82	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-01D 0309293-02D 0309293-03D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16550** InstrumentID: **IC201**

LCS Sample ID: **WLCSW-100703** Test Code: **E300** Units: **mg/L** Analysis Date: **10/08/03 9:05**
Client ID: Run ID: **IC201_031007A** SeqNo: **377111** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.88	0.50	10	0	98.8	80-120	0			
Fluoride	2.01	0.10	2	0	100	80-120	0			
Sulfate	10.63	1.0	10	0	106	80-120	0			
Surr: Dichloroacetic acid (surr)	2.14	0.10	2	0	107	80-120	0			

LCSD Sample ID: **WLCSDW1-10070** Test Code: **E300** Units: **mg/L** Analysis Date: **10/08/03 9:38**
Client ID: Run ID: **IC201_031007A** SeqNo: **377112** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10	0.50	10	0	100	80-120	9.88	1.21	20	
Fluoride	1.96	0.10	2	0	98	80-120	2.01	2.52	20	
Sulfate	10.67	1.0	10	0	107	80-120	10.63	0.376	20	
Surr: Dichloroacetic acid (surr)	2.17	0.10	2	0	108	80-120	2.14	1.39	20	

MS Sample ID: **0310040-02BMS** Test Code: **E300** Units: **mg/L** Analysis Date: **10/07/03 18:27**
Client ID: Run ID: **IC201_031007A** SeqNo: **377085** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.46	0.50	10	0	94.6	75-125	0			
Fluoride	1.94	0.10	2	0	97	75-125	0			
Sulfate	10.31	1.0	10	0	103	75-125	0			
Surr: Dichloroacetic acid (surr)	4.4	0.10	5	0	88	80-120	0			

MSD Sample ID: **0310040-02BMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **10/07/03 19:00**
Client ID: Run ID: **IC201_031007A** SeqNo: **377086** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.72	0.50	10	0	97.2	75-125	9.46	2.71	20	
Fluoride	1.95	0.10	2	0	97.5	75-125	1.94	0.514	20	
Sulfate	10.49	1.0	10	0	105	75-125	10.31	1.73	20	
Surr: Dichloroacetic acid (surr)	4.97	0.10	5	0	99.4	80-120	4.4	12.2	20	

ND - Not Detected at the Reporting Limit
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CLIENT: Navajo Refining Company
Work Order: 0309293
Project: Monthly

QC BATCH REPORT

Batch ID: **R16550** InstrumentID: **IC201**

DUP Sample ID: **0310040-02BDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **10/07/03 17:55**
Client ID: Run ID: **IC201_031007A** SeqNo: **377084** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50	0	0	0	0-0	0	0	20	
Fluoride	ND	0.10	0	0	0	0-0	0	0	20	
Sulfate	ND	1.0	0	0	0	0-0	0	0	20	
Surr: Dichloroacetic acid (surr)	5.3	0.10	5	0	106	80-120	5.45	2.79	20	

DUP Sample ID: **0310072-01DDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **10/08/03 4:12**
Client ID: Run ID: **IC201_031007A** SeqNo: **377107** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	729.8	0.50	0	0	0	0-0	737.1	0.998	20	E
Fluoride	0.63	0.10	0	0	0	0-0	0.62	1.6	20	
Sulfate	440.4	1.0	0	0	0	0-0	440.4	0.00908	20	E
Surr: Dichloroacetic acid (surr)	5.47	0.10	5	0	109	80-120	5.15	6.03	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309293-01D 0309293-02D 0309293-03D

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W.O. # 0309293

Page 1 of 1

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Lubbock, Texas 79424
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TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #:

Company Name: Navajo
Address: (Street, City, Zip)
Phone #:
Fax #:
Contact Person: Jeff Byrd
Invoice to: (If different from above)
Project #:
Project Name: Monthly
Project Location: Artesia
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
	RA 3156	8		X				X	X		X	X		9/29	845
	Larue	1		1				1	1		1	1		1	900
	RA3353	1		1				1	1		1	1		1	915

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Monthly					Turn Around Time if different from standard	Hold
														X							
														X							
														X							

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	9/29	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: (RICHARD SANCHEZ)	Date: 9-30-18	Time: 0845

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp °
Log-in Review

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier #

e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING

Date/Time Received: 9/30/2003 8:45:00 AM

Work Order Number 0309293

Received by: RSZ

Checklist completed by [signature] Signature 9/30/03 Date

Reviewed by LT Initials 10/2/03 Date

Matrix: W

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):	2.7c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

INVOICE

DATE: *September 18, 2003*

QUALITY - INTEGRITY - SERVICE

Original

Remit To: e-Lab, Inc.
PO Box 3014
Houston, Texas 77253
Attn: Accounts Receivable
TEL: (281) 530-5656
FAX: (281) 530-5887

Invoice To: Navajo Refining Company
P.O. Box 159

Artesia, New Mexico 88211

Attn:
Phone: (505) 748-3311

Work Order 0308208
PO Number N/A
Delivery Order:
Project Name: Monthly
Date Received: 8/20/2003

Invoice No: 0308208
Invoice Date: Sep 18 2003
Payment Due: Oct 18 2003
Payment Terms: Net 30 days

Item	Remarks	Matrix	Qty	Unit Price	Mult	Quoted	Test Total
Alkalinity		Aqueous	4	$20.00	1	$20.00	$80.00
Anions by Ion Chromatography	F,Cl,SO4	Aqueous	4	$45.00	1	$45.00	$180.00
Cyanide, Total	WQCC Cyanid	Aqueous	4	$30.00	1	$30.00	$120.00
ICP Metals, Total	WQCC + catio	Aqueous	4	$200.00	1	$200.00	$800.00
Semivolatile Organics by GC/MS	client select list	Aqueous	4	$210.00	1	$210.00	$840.00
Volatiles by GC/MS	Select+BTEX/	Aqueous	4	$110.00	1	$110.00	$440.00

Discount: 0.00%
Surcharge: 0.00%
Misc Charges $0.00

Misc Comments

INVOICE TOTAL: $2,460.00

Invoice is due and payable within the above referenced terms from date of receipt. A finance charge of 1.5% will be added to past due accounts ov
15 days.

Thank you for choosing e-Lab, Inc.

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5

September 18, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Monthly

Work Order : **0308208**

Dear Jeff Byrd,

e-Lab, Inc. received 4 samples on 8/20/2003 8:40:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 40.

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

Sincerely,

Lora Terrill

Electronically approved by: Lora Terrill

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: **0308208**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0308208-01	RA 314	Wate		8/18/2003 09:15	8/20/2003 08:4C	☐
0308208-02	RA 419	Wate		8/18/2003 09:45	8/20/2003 08:4C	☐
0308208-02	RA 419	Wate		8/18/2003 09:45	8/21/2003 08:4C	☐
0308208-03	RA 479	Wate		8/18/2003 10:1C	8/20/2003 08:4C	☐
0308208-04	RA 3353	Wate		8/18/2003 10:3C	8/20/2003 08:4C	☐

e-Lab. Inc.

Date: *September 18, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: 0308208

Case Narrative

Sample containers for RA4196, Volatiles, Metals, Anions, and Alkalinity were received at 21.8C. Jeff Byrd requested we proceed with analysis.

Analytical comment for QC sample "VLCSW/VLCSWD-0828" for the SW 8260 analysis: Tert-Butylbenzene failed high in the LCS/LCSD, the samples were ND in this batch, the data was accepted.

Analytical comment for QC sample "0308299-01AMS/MSD" for the SW 8260 analysis: 2-Chloroethyl vinyl ether does not recover in acid matrix for MS/MSD, the LCS/LCSD met criteria.

For Method 300, batch R15901 for chloride, fluoride and sulfate, an MS/MSD was performed due to a comumication error by the analyst. The project samples required 1x, 10 x and 50x dilutions to report data from the batch. After the error was discovered in data review, the analyst was instructed to reanalyzed the samples at 10x and perform the MS/MSD on a 10x dilution of one of the samples. The re-run batch is R16057.

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-01

Client Sample ID: RA 314
Collection Date: 8/18/2003 9:15:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **8/27/2003**		Analyst: **MG**
Mercury	0.0000530	0.000042	0.000200	J	mg/L	1	8/27/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **8/21/2003**		Analyst: **ALR**
Aluminum	0.00330	0.0016	0.0100	J	mg/L	1	8/29/2003
Arsenic	0.00188	0.0018	0.00500	J	mg/L	1	8/29/2003
Barium	0.0204	0.00060	0.00500		mg/L	1	8/29/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/29/2003
Boron	0.0486	0.011	0.0200		mg/L	1	9/1/2003
Cadmium	U	0.00015	0.00100		mg/L	1	8/29/2003
Calcium	215	1.6	10.0		mg/L	20	8/30/2003
Chromium	0.00115	0.00050	0.00200	J	mg/L	1	8/29/2003
Cobalt	0.000295	0.00010	0.00200	J	mg/L	1	8/29/2003
Copper	0.00663	0.00030	0.00200		mg/L	1	8/29/2003
Iron	1.12	0.025	0.200		mg/L	1	8/29/2003
Lead	0.00188	0.00020	0.00500	J	mg/L	1	8/29/2003
Magnesium	65.1	0.50	4.00		mg/L	20	8/30/2003
Manganese	0.00120	0.0010	0.00500	J	mg/L	1	8/29/2003
Nickel	0.00594	0.00030	0.00500		mg/L	1	8/29/2003
Potassium	1.24	0.020	0.200		mg/L	1	8/29/2003
Selenium	0.00599	0.0017	0.00500		mg/L	1	8/29/2003
Silver	U	0.00020	0.00500		mg/L	1	8/29/2003
Sodium	50.5	0.64	4.00		mg/L	20	8/30/2003
Vanadium	0.00257	0.00040	0.00500	J	mg/L	1	8/29/2003
Zinc	0.0320	0.0015	0.00500		mg/L	1	8/29/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **8/21/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	8/22/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	8/22/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	8/22/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	8/22/2003
2-Methylphenol	U	2.8	10		µg/L	1	8/22/2003
2-Nitroaniline	U	1.1	10		µg/L	1	8/22/2003
2-Nitrophenol	U	2.6	10		µg/L	1	8/22/2003
3-Nitroaniline	U	1.2	10		µg/L	1	8/22/2003
4-Methylphenol	U	4.6	10		µg/L	1	8/22/2003
4-Nitroaniline	U	0.95	10		µg/L	1	8/22/2003
4-Nitrophenol	U	2.7	10		µg/L	1	8/22/2003
Acenaphthene	U	1.1	10		µg/L	1	8/22/2003
Acenaphthylene	U	1.0	10		µg/L	1	8/22/2003
Aniline	U	10	10		µg/L	1	8/22/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-01

Client Sample ID: RA 314
Collection Date: 8/18/2003 9:15:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	8/22/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	8/22/2003
Benzidine	U	0.34	10		µg/L	1	8/22/2003
Hexachloroethane	U	0.64	10		µg/L	1	8/22/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	8/22/2003
Isophorone	U	1.2	10		µg/L	1	8/22/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	8/22/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	8/22/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	8/22/2003
Naphthalene	U	1.0	10		µg/L	1	8/22/2003
Nitrobenzene	U	1.7	10		µg/L	1	8/22/2003
Pentachlorophenol	U	1.5	10		µg/L	1	8/22/2003
Phenanthrene	U	1.2	10		µg/L	1	8/22/2003
Phenol	U	3.5	10		µg/L	1	8/22/2003
Pyrene	U	0.92	10		µg/L	1	8/22/2003
Surr: 2,4,6-Tribromophenol	90.4	0	10-123		%REC	1	8/22/2003
Surr: 2-Fluorobiphenyl	87.5	0	43-116		%REC	1	8/22/2003
Surr: 2-Fluorophenol	55.7	0	21-100		%REC	1	8/22/2003
Surr: 4-Terphenyl-d14	113	0	33-141		%REC	1	8/22/2003
Surr: Nitrobenzene-d5	85.5	0	35-114		%REC	1	8/22/2003
Surr: Phenol-d6	32.7	0	10-94		%REC	1	8/22/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **HLBW**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	8/28/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	8/28/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	8/28/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	8/28/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	8/28/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	8/28/2003
2-Butanone	1.6	0.70	10	J	µg/L	1	8/28/2003
2-Chloroethyl vinyl ether	U	0.63	10		µg/L	1	8/28/2003
2-Hexanone	U	1.1	10		µg/L	1	8/28/2003
4-Methyl-2-pentanone	U	0.64	10		µg/L	1	8/28/2003
Acetone	10	1.2	10		µg/L	1	8/28/2003
Benzene	U	0.66	5.0		µg/L	1	8/28/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	8/28/2003
Bromoform	U	0.40	5.0		µg/L	1	8/28/2003
Bromomethane	U	0.70	5.0		µg/L	1	8/28/2003
Carbon disulfide	U	0.76	10		µg/L	1	8/28/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	8/28/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	8/28/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-01

Client Sample ID: RA 314
Collection Date: 8/18/2003 9:15:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	8/28/2003
Chloroform	U	0.52	5.0		µg/L	1	8/28/2003
Chloromethane	U	1.1	5.0		µg/L	1	8/28/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	8/28/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	8/28/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	8/28/2003
m,p-Xylene	U	1.3	10		µg/L	1	8/28/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	8/28/2003
Methylene chloride	U	0.60	10		µg/L	1	8/28/2003
Styrene	U	0.56	5.0		µg/L	1	8/28/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	8/28/2003
Toluene	U	0.69	5.0		µg/L	1	8/28/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	8/28/2003
Trichloroethene	U	0.70	5.0		µg/L	1	8/28/2003
Vinyl acetate	U	0.92	10		µg/L	1	8/28/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	8/28/2003
Xylenes, Total	U	1.8	15		µg/L	1	8/28/2003
Surr: 1,2-Dichloroethane-d4	85.4	0	70-130		%REC	1	8/28/2003
Surr: 4-Bromofluorobenzene	94.5	0	70-130		%REC	1	8/28/2003
Surr: Dibromofluoromethane	93.6	0	70-130		%REC	1	8/28/2003
Surr: Toluene-d8	95.3	0	70-130		%REC	1	8/28/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	79.2	2.00	5.00		mg/L	10	8/26/2003
Fluoride	0.930	0.0500	0.100		mg/L	1	8/26/2003
Sulfate	578	25.0	50.0		mg/L	50	8/26/2003
Surr: Dichloroacetic acid (surr)	108	0	80-120		%REC	50	8/26/2003
Surr: Dichloroacetic acid (surr)	108	0	80-120		%REC	10	8/26/2003
Surr: Dichloroacetic acid (surr)	102	0	80-120		%REC	1	8/26/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	195	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Total (As CaCO3)	195	2.0	5.00		mg/L	1	8/27/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	0.00550	0.0030	0.0200	J	mg/L	1	8/25/2003

Qualifiers

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-02

Client Sample ID: RA 4196
Collection Date: 8/18/2003 9:45:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL			**SW7470**		Prep Date: **8/27/2003**		Analyst: **MG**
Mercury	0.0000580	0.000042	0.000200	J	mg/L	1	8/27/2003
ICP METALS, TOTAL			**SW6020**		Prep Date: **8/21/2003**		Analyst: **ALR**
Aluminum	U	0.0016	0.0100		mg/L	1	8/29/2003
Arsenic	0.00308	0.0018	0.00500	J	mg/L	1	8/29/2003
Barium	0.0174	0.00060	0.00500		mg/L	1	8/29/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/29/2003
Boron	0.140	0.011	0.0200		mg/L	1	9/1/2003
Cadmium	U	0.00015	0.00100		mg/L	1	8/29/2003
Calcium	475	1.6	10.0		mg/L	20	8/30/2003
Chromium	0.00165	0.00050	0.00200	J	mg/L	1	8/29/2003
Cobalt	0.000613	0.00010	0.00200	J	mg/L	1	8/29/2003
Copper	0.00572	0.00030	0.00200		mg/L	1	8/29/2003
Iron	11.3	0.025	0.200		mg/L	1	8/29/2003
Lead	0.000431	0.00020	0.00500	J	mg/L	1	8/29/2003
Magnesium	157	0.50	4.00		mg/L	20	8/30/2003
Manganese	0.282	0.0010	0.00500		mg/L	1	8/29/2003
Nickel	0.0113	0.00030	0.00500		mg/L	1	8/29/2003
Potassium	2.03	0.020	0.200		mg/L	1	8/29/2003
Selenium	0.00655	0.0017	0.00500		mg/L	1	8/29/2003
Silver	U	0.00020	0.00500		mg/L	1	8/29/2003
Sodium	96.3	0.64	4.00		mg/L	20	8/30/2003
Vanadium	U	0.00040	0.00500		mg/L	1	8/29/2003
Zinc	0.0557	0.0015	0.00500		mg/L	1	8/29/2003
SEMIVOLATILE ORGANICS BY GC/MS			**SW8270**		Prep Date: **8/21/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	8/22/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	8/22/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	8/22/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	8/22/2003
2-Methylphenol	U	2.8	10		µg/L	1	8/22/2003
2-Nitroaniline	U	1.1	10		µg/L	1	8/22/2003
2-Nitrophenol	U	2.6	10		µg/L	1	8/22/2003
3-Nitroaniline	U	1.2	10		µg/L	1	8/22/2003
4-Methylphenol	U	4.6	10		µg/L	1	8/22/2003
4-Nitroaniline	U	0.95	10		µg/L	1	8/22/2003
4-Nitrophenol	U	2.7	10		µg/L	1	8/22/2003
Acenaphthene	U	1.1	10		µg/L	1	8/22/2003
Acenaphthylene	U	1.0	10		µg/L	1	8/22/2003
Aniline	U	10	10		µg/L	1	8/22/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-02

Client Sample ID: RA 4196
Collection Date: 8/18/2003 9:45:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	8/22/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	8/22/2003
Benzidine	U	0.34	10		µg/L	1	8/22/2003
Hexachloroethane	U	0.64	10		µg/L	1	8/22/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	8/22/2003
Isophorone	U	1.2	10		µg/L	1	8/22/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	8/22/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	8/22/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	8/22/2003
Naphthalene	U	1.0	10		µg/L	1	8/22/2003
Nitrobenzene	U	1.7	10		µg/L	1	8/22/2003
Pentachlorophenol	U	1.5	10		µg/L	1	8/22/2003
Phenanthrene	U	1.2	10		µg/L	1	8/22/2003
Phenol	U	3.5	10		µg/L	1	8/22/2003
Pyrene	U	0.92	10		µg/L	1	8/22/2003
Surr: 2,4,6-Tribromophenol	98.9	0	10-123		%REC	1	8/22/2003
Surr: 2-Fluorobiphenyl	84.2	0	43-116		%REC	1	8/22/2003
Surr: 2-Fluorophenol	56.5	0	21-100		%REC	1	8/22/2003
Surr: 4-Terphenyl-d14	104	0	33-141		%REC	1	8/22/2003
Surr: Nitrobenzene-d5	84.6	0	35-114		%REC	1	8/22/2003
Surr: Phenol-d6	36.2	0	10-94		%REC	1	8/22/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **HLBW**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	8/28/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	8/28/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	8/28/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	8/28/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	8/28/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	8/28/2003
2-Butanone	U	0.70	10		µg/L	1	8/28/2003
2-Chloroethyl vinyl ether	U	0.63	10		µg/L	1	8/28/2003
2-Hexanone	U	1.1	10		µg/L	1	8/28/2003
4-Methyl-2-pentanone	U	0.64	10		µg/L	1	8/28/2003
Acetone	U	1.2	10		µg/L	1	8/28/2003
Benzene	U	0.66	5.0		µg/L	1	8/28/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	8/28/2003
Bromoform	U	0.40	5.0		µg/L	1	8/28/2003
Bromomethane	U	0.70	5.0		µg/L	1	8/28/2003
Carbon disulfide	U	0.76	10		µg/L	1	8/28/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	8/28/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	8/28/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-02

Client Sample ID: RA 4196
Collection Date: 8/18/2003 9:45:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	8/28/2003
Chloroform	U	0.52	5.0		µg/L	1	8/28/2003
Chloromethane	U	1.1	5.0		µg/L	1	8/28/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	8/28/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	8/28/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	8/28/2003
m,p-Xylene	U	1.3	10		µg/L	1	8/28/2003
Methyl tert-butyl ether	2.8	0.30	5.0	J	µg/L	1	8/28/2003
Methylene chloride	U	0.60	10		µg/L	1	8/28/2003
Styrene	U	0.56	5.0		µg/L	1	8/28/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	8/28/2003
Toluene	U	0.69	5.0		µg/L	1	8/28/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	8/28/2003
Trichloroethene	U	0.70	5.0		µg/L	1	8/28/2003
Vinyl acetate	U	0.92	10		µg/L	1	8/28/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	8/28/2003
Xylenes, Total	U	1.8	15		µg/L	1	8/28/2003
Surr: 1,2-Dichloroethane-d4	86.3	0	70-130		%REC	1	8/28/2003
Surr: 4-Bromofluorobenzene	95.5	0	70-130		%REC	1	8/28/2003
Surr: Dibromofluoromethane	94.7	0	70-130		%REC	1	8/28/2003
Surr: Toluene-d8	96.3	0	70-130		%REC	1	8/28/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	217	2.00	5.00		mg/L	10	8/26/2003
Fluoride	0.530	0.0500	0.100		mg/L	1	8/26/2003
Sulfate	1,390	25.0	50.0		mg/L	50	8/26/2003
Surr: Dichloroacetic acid (surr)	108	0	80-120		%REC	50	8/26/2003
Surr: Dichloroacetic acid (surr)	102	0	80-120		%REC	10	8/26/2003
Surr: Dichloroacetic acid (surr)	90.4	0	80-120		%REC	1	8/26/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	200	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Total (As CaCO3)	200	2.0	5.00		mg/L	1	8/27/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	0.00450	0.0030	0.0200	J	mg/L	1	8/25/2003

Qualifiers

U - Analyzed for but Not Detected
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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-03

Client Sample ID: RA 4798
Collection Date: 8/18/2003 10:10:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **8/27/2003**		Analyst: **MG**
Mercury	0.000181	0.000042	0.000200	J	mg/L	1	8/27/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **8/21/2003**		Analyst: **ALR**
Aluminum	U	0.0016	0.0100		mg/L	1	8/29/2003
Arsenic	U	0.0018	0.00500		mg/L	1	8/29/2003
Barium	0.00829	0.00060	0.00500		mg/L	1	8/29/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/29/2003
Boron	0.209	0.011	0.0200		mg/L	1	9/1/2003
Cadmium	U	0.00015	0.00100		mg/L	1	8/29/2003
Calcium	494	4.0	25.0		mg/L	50	8/30/2003
Chromium	0.00563	0.00050	0.00200		mg/L	1	8/29/2003
Cobalt	0.000770	0.00010	0.00200	J	mg/L	1	8/29/2003
Copper	0.00760	0.00030	0.00200		mg/L	1	8/29/2003
Iron	3.21	0.025	0.200		mg/L	1	8/29/2003
Lead	0.00377	0.00020	0.00500	J	mg/L	1	8/29/2003
Magnesium	167	1.2	10.0		mg/L	50	8/30/2003
Manganese	0.00660	0.0010	0.00500		mg/L	1	8/29/2003
Nickel	0.0124	0.00030	0.00500		mg/L	1	8/29/2003
Potassium	2.22	0.020	0.200		mg/L	1	8/29/2003
Selenium	0.0197	0.0017	0.00500		mg/L	1	8/29/2003
Silver	U	0.00020	0.00500		mg/L	1	8/29/2003
Sodium	126	1.6	10.0		mg/L	50	8/30/2003
Vanadium	0.00711	0.00040	0.00500		mg/L	1	8/29/2003
Zinc	3.73	0.075	0.250		mg/L	50	8/30/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **8/21/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	8/22/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	8/22/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	8/22/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	8/22/2003
2-Methylphenol	U	2.8	10		µg/L	1	8/22/2003
2-Nitroaniline	U	1.1	10		µg/L	1	8/22/2003
2-Nitrophenol	U	2.6	10		µg/L	1	8/22/2003
3-Nitroaniline	U	1.2	10		µg/L	1	8/22/2003
4-Methylphenol	U	4.6	10		µg/L	1	8/22/2003
4-Nitroaniline	U	0.95	10		µg/L	1	8/22/2003
4-Nitrophenol	U	2.7	10		µg/L	1	8/22/2003
Acenaphthene	U	1.1	10		µg/L	1	8/22/2003
Acenaphthylene	U	1.0	10		µg/L	1	8/22/2003
Aniline	U	10	10		µg/L	1	8/22/2003

Qualifiers

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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-03

Client Sample ID: RA 4798
Collection Date: 8/18/2003 10:10:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	8/22/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	8/22/2003
Benzidine	U	0.34	10		µg/L	1	8/22/2003
Hexachloroethane	U	0.64	10		µg/L	1	8/22/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	8/22/2003
Isophorone	U	1.2	10		µg/L	1	8/22/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	8/22/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	8/22/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	8/22/2003
Naphthalene	U	1.0	10		µg/L	1	8/22/2003
Nitrobenzene	U	1.7	10		µg/L	1	8/22/2003
Pentachlorophenol	U	1.5	10		µg/L	1	8/22/2003
Phenanthrene	U	1.2	10		µg/L	1	8/22/2003
Phenol	U	3.5	10		µg/L	1	8/22/2003
Pyrene	U	0.92	10		µg/L	1	8/22/2003
Surr: 2,4,6-Tribromophenol	80.1	0	10-123		%REC	1	8/22/2003
Surr: 2-Fluorobiphenyl	76.8	0	43-116		%REC	1	8/22/2003
Surr: 2-Fluorophenol	38.1	0	21-100		%REC	1	8/22/2003
Surr: 4-Terphenyl-d14	102	0	33-141		%REC	1	8/22/2003
Surr: Nitrobenzene-d5	74.0	0	35-114		%REC	1	8/22/2003
Surr: Phenol-d6	20.5	0	10-94		%REC	1	8/22/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **HLBW**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	8/28/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	8/28/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	8/28/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	8/28/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	8/28/2003
1,2-Dichloroethane	1.6	0.38	5.0	J	µg/L	1	8/28/2003
2-Butanone	U	0.70	10		µg/L	1	8/28/2003
2-Chloroethyl vinyl ether	U	0.63	10		µg/L	1	8/28/2003
2-Hexanone	U	1.1	10		µg/L	1	8/28/2003
4-Methyl-2-pentanone	U	0.64	10		µg/L	1	8/28/2003
Acetone	U	1.2	10		µg/L	1	8/28/2003
Benzene	U	0.66	5.0		µg/L	1	8/28/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	8/28/2003
Bromoform	U	0.40	5.0		µg/L	1	8/28/2003
Bromomethane	U	0.70	5.0		µg/L	1	8/28/2003
Carbon disulfide	U	0.76	10		µg/L	1	8/28/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	8/28/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	8/28/2003

Qualifiers

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
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E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA 4798
Work Order:	0308208	**Collection Date:**	8/18/2003 10:10:00 AM
Project:	Monthly		
Lab ID:	0308208-03	**Matrix:**	WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	8/28/2003
Chloroform	U	0.52	5.0		µg/L	1	8/28/2003
Chloromethane	U	1.1	5.0		µg/L	1	8/28/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	8/28/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	8/28/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	8/28/2003
m,p-Xylene	U	1.3	10		µg/L	1	8/28/2003
Methyl tert-butyl ether	7.1	0.30	5.0		µg/L	1	8/28/2003
Methylene chloride	U	0.60	10		µg/L	1	8/28/2003
Styrene	U	0.56	5.0		µg/L	1	8/28/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	8/28/2003
Toluene	U	0.69	5.0		µg/L	1	8/28/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	8/28/2003
Trichloroethene	U	0.70	5.0		µg/L	1	8/28/2003
Vinyl acetate	U	0.92	10		µg/L	1	8/28/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	8/28/2003
Xylenes, Total	U	1.8	15		µg/L	1	8/28/2003
Surr: 1,2-Dichloroethane-d4	86.8	0	70-130		%REC	1	8/28/2003
Surr: 4-Bromofluorobenzene	92.5	0	70-130		%REC	1	8/28/2003
Surr: Dibromofluoromethane	94.3	0	70-130		%REC	1	8/28/2003
Surr: Toluene-d8	97.5	0	70-130		%REC	1	8/28/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	138	2.00	5.00		mg/L	10	8/26/2003
Fluoride	0.660	0.0500	0.100		mg/L	1	8/26/2003
Sulfate	1,560	25.0	50.0		mg/L	50	8/26/2003
Surr: Dichloroacetic acid (surr)	109	0	80-120		%REC	50	8/26/2003
Surr: Dichloroacetic acid (surr)	110	0	80-120		%REC	10	8/26/2003
Surr: Dichloroacetic acid (surr)	85.8	0	80-120		%REC	1	8/26/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	260	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Total (As CaCO3)	260	2.0	5.00		mg/L	1	8/27/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	8/25/2003

Qualifiers

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly
Lab ID: 0308208-04

Client Sample ID: RA 3353
Collection Date: 8/18/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **8/27/2003**		Analyst: **MG**
Mercury	0.0000540	0.000042	0.000200	J	mg/L	1	8/27/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **8/21/2003**		Analyst: **ALR**
Aluminum	0.00230	0.0016	0.0100	J	mg/L	1	8/29/2003
Arsenic	0.00207	0.0018	0.00500	J	mg/L	1	8/28/2003
Barium	0.00988	0.00060	0.00500		mg/L	1	8/29/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/28/2003
Boron	0.134	0.011	0.0200		mg/L	1	8/28/2003
Cadmium	U	0.00015	0.00100		mg/L	1	8/29/2003
Calcium	380	0.80	5.00		mg/L	10	8/30/2003
Chromium	0.000640	0.00050	0.00200	J	mg/L	1	8/28/2003
Cobalt	0.000718	0.00010	0.00200	J	mg/L	1	8/28/2003
Copper	0.00652	0.00030	0.00200		mg/L	1	8/28/2003
Iron	2.37	0.025	0.200		mg/L	1	8/28/2003
Lead	0.000530	0.00020	0.00500	J	mg/L	1	8/28/2003
Magnesium	118	0.25	2.00		mg/L	10	8/30/2003
Manganese	0.0121	0.0010	0.00500		mg/L	1	8/28/2003
Nickel	0.0117	0.00030	0.00500		mg/L	1	8/28/2003
Potassium	2.12	0.020	0.200		mg/L	1	8/28/2003
Selenium	0.0138	0.0017	0.00500		mg/L	1	8/28/2003
Silver	U	0.00020	0.00500		mg/L	1	8/29/2003
Sodium	94.1	0.32	2.00		mg/L	10	8/30/2003
Vanadium	0.00629	0.00040	0.00500		mg/L	1	8/28/2003
Zinc	0.359	0.015	0.0500		mg/L	10	8/30/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **8/21/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	8/22/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	8/22/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	8/22/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	8/22/2003
2-Methylphenol	U	2.8	10		µg/L	1	8/22/2003
2-Nitroaniline	U	1.1	10		µg/L	1	8/22/2003
2-Nitrophenol	U	2.6	10		µg/L	1	8/22/2003
3-Nitroaniline	U	1.2	10		µg/L	1	8/22/2003
4-Methylphenol	U	4.6	10		µg/L	1	8/22/2003
4-Nitroaniline	U	0.95	10		µg/L	1	8/22/2003
4-Nitrophenol	U	2.7	10		µg/L	1	8/22/2003
Acenaphthene	U	1.1	10		µg/L	1	8/22/2003
Acenaphthylene	U	1.0	10		µg/L	1	8/22/2003
Aniline	U	10	10		µg/L	1	8/22/2003

Qualifiers

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *September 02, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA 3353
Work Order:	0308208	**Collection Date:**	8/18/2003 10:30:00 AM
Project:	Monthly		
Lab ID:	0308208-04	**Matrix:**	WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	8/22/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	8/22/2003
Benzidine	U	0.34	10		µg/L	1	8/22/2003
Hexachloroethane	U	0.64	10		µg/L	1	8/22/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	8/22/2003
Isophorone	U	1.2	10		µg/L	1	8/22/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	8/22/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	8/22/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	8/22/2003
Naphthalene	U	1.0	10		µg/L	1	8/22/2003
Nitrobenzene	U	1.7	10		µg/L	1	8/22/2003
Pentachlorophenol	U	1.5	10		µg/L	1	8/22/2003
Phenanthrene	U	1.2	10		µg/L	1	8/22/2003
Phenol	U	3.5	10		µg/L	1	8/22/2003
Pyrene	U	0.92	10		µg/L	1	8/22/2003
Surr: 2,4,6-Tribromophenol	87.7	0	10-123		%REC	1	8/22/2003
Surr: 2-Fluorobiphenyl	82.6	0	43-116		%REC	1	8/22/2003
Surr: 2-Fluorophenol	57.4	0	21-100		%REC	1	8/22/2003
Surr: 4-Terphenyl-d14	105	0	33-141		%REC	1	8/22/2003
Surr: Nitrobenzene-d5	83.6	0	35-114		%REC	1	8/22/2003
Surr: Phenol-d6	34.6	0	10-94		%REC	1	8/22/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **HLBW**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	8/28/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	8/28/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	8/28/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	8/28/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	8/28/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	8/28/2003
2-Butanone	U	0.70	10		µg/L	1	8/28/2003
2-Chloroethyl vinyl ether	U	0.63	10		µg/L	1	8/28/2003
2-Hexanone	U	1.1	10		µg/L	1	8/28/2003
4-Methyl-2-pentanone	U	0.64	10		µg/L	1	8/28/2003
Acetone	U	1.2	10		µg/L	1	8/28/2003
Benzene	U	0.66	5.0		µg/L	1	8/28/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	8/28/2003
Bromoform	U	0.40	5.0		µg/L	1	8/28/2003
Bromomethane	U	0.70	5.0		µg/L	1	8/28/2003
Carbon disulfide	U	0.76	10		µg/L	1	8/28/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	8/28/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	8/28/2003

Qualifiers

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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 02, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA 3353
Work Order:	0308208	**Collection Date:**	8/18/2003 10:30:00 AM
Project:	Monthly		
Lab ID:	0308208-04	**Matrix:**	WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	8/28/2003
Chloroform	U	0.52	5.0		µg/L	1	8/28/2003
Chloromethane	1.3	1.1	5.0	J	µg/L	1	8/28/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	8/28/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	8/28/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	8/28/2003
m,p-Xylene	U	1.3	10		µg/L	1	8/28/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	8/28/2003
Methylene chloride	U	0.60	10		µg/L	1	8/28/2003
Styrene	U	0.56	5.0		µg/L	1	8/28/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	8/28/2003
Toluene	U	0.69	5.0		µg/L	1	8/28/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	8/28/2003
Trichloroethene	U	0.70	5.0		µg/L	1	8/28/2003
Vinyl acetate	U	0.92	10		µg/L	1	8/28/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	8/28/2003
Xylenes, Total	U	1.8	15		µg/L	1	8/28/2003
Surr: 1,2-Dichloroethane-d4	84.9	0	70-130		%REC	1	8/28/2003
Surr: 4-Bromofluorobenzene	92.5	0	70-130		%REC	1	8/28/2003
Surr: Dibromofluoromethane	92.2	0	70-130		%REC	1	8/28/2003
Surr: Toluene-d8	97.4	0	70-130		%REC	1	8/28/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	169	2.00	5.00		mg/L	10	8/26/2003
Fluoride	0.510	0.0500	0.100		mg/L	1	8/26/2003
Sulfate	1,080	25.0	50.0		mg/L	50	8/26/2003
Surr: Dichloroacetic acid (surr)	111	0	80-120		%REC	50	8/26/2003
Surr: Dichloroacetic acid (surr)	108	0	80-120		%REC	10	8/26/2003
Surr: Dichloroacetic acid (surr)	85.6	0	80-120		%REC	1	8/26/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	180	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	8/27/2003
Alkalinity, Total (As CaCO3)	180	2.0	5.00		mg/L	1	8/27/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	8/25/2003

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e-Lab, Inc.

Date: *Sep 18 2003*

CLIENT: Navajo Refining Company

QC BATCH REPORT

Work Order: 0308208

Project: Monthly

Batch ID: **6463** InstrumentID: **6020**

MBLK Sample ID: **MBLKW2-082103** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/23/03 19:16**

Client ID: Run ID: **6020_030823A** SeqNo: **359810** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.02816	0.010								
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Boron	U	0.020								
Cadmium	U	0.0010								
Calcium	U	0.50								
Chromium	U	0.0020								
Cobalt	U	0.0020								
Copper	U	0.0020								
Iron	U	0.20								
Lead	0.0002068	0.0050								J
Magnesium	U	0.20								
Manganese	U	0.0050								
Nickel	U	0.0050								
Potassium	U	0.20								
Selenium	0.002033	0.0050								J
Silver	U	0.0050								
Sodium	U	0.20								
Vanadium	U	0.0050								
Zinc	0.001677	0.0050								J

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R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **6463** InstrumentID: **6020**

LCS Sample ID: **MLCSW2-082103** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/23/03 19:21**
Client ID: Run ID: **6020_030823A** SeqNo: **359811** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1326	0.010	0.1	0	133	80-120	0			BS
Arsenic	0.1062	0.0050	0.1	0	106	80-120	0			
Barium	0.1054	0.0050	0.1	0	105	80-120	0			
Beryllium	0.09987	0.0020	0.1	0	99.9	80-120	0			
Boron	0.5036	0.020	0.5	0	101	80-120	0			
Cadmium	0.1029	0.0010	0.1	0	103	80-120	0			
Calcium	10.59	0.50	10	0	106	80-120	0			
Chromium	0.1047	0.0020	0.1	0	105	80-120	0			
Cobalt	0.1045	0.0020	0.1	0	104	80-120	0			
Copper	0.104	0.0020	0.1	0	104	80-120	0			
Iron	10.58	0.20	10	0	106	80-120	0			
Lead	0.1047	0.0050	0.1	0	105	80-120	0			
Magnesium	10.74	0.20	10	0	107	80-120	0			
Manganese	0.1047	0.0050	0.1	0	105	80-120	0			
Nickel	0.1073	0.0050	0.1	0	107	80-120	0			
Potassium	10.76	0.20	10	0	108	80-120	0			
Selenium	0.1021	0.0050	0.1	0	102	80-120	0			
Silver	0.1081	0.0050	0.1	0	108	80-120	0			
Sodium	10.64	0.20	10	0	106	80-120	0			
Vanadium	0.1021	0.0050	0.1	0	102	80-120	0			
Zinc	0.1036	0.0050	0.1	0	104	80-120	0			

MS Sample ID: **0308208-04BMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 3:32**
Client ID: **RA 3353** Run ID: **6020_030827A** SeqNo: **361841** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09869	0.0050	0.1	0.00207	96.6	75-125	0			
Beryllium	0.09734	0.0020	0.1	0.00005226	97.3	75-125	0			
Boron	0.6889	0.020	0.5	0.1344	111	75-125	0			
Calcium	405.6	0.50	10	385.5	201	75-125	0			SEO
Chromium	0.1045	0.0020	0.1	0.0006403	104	75-125	0			
Cobalt	0.09943	0.0020	0.1	0.0007183	98.7	75-125	0			
Copper	0.0964	0.0020	0.1	0.006518	89.9	75-125	0			
Iron	12.95	0.20	10	2.372	106	75-125	0			
Lead	0.1122	0.0050	0.1	0.0005298	112	75-125	0			
Manganese	0.1026	0.0050	0.1	0.01211	90.5	75-125	0			
Nickel	0.1096	0.0050	0.1	0.01173	97.9	75-125	0			
Potassium	13.29	0.20	10	2.119	112	75-125	0			
Selenium	0.1068	0.0050	0.1	0.01377	93	75-125	0			
Vanadium	0.1165	0.0050	0.1	0.006292	110	75-125	0			
Zinc	0.3599	0.0050	0.1	0.2958	64.1	75-125	0			S

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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **6463** InstrumentID: **6020**

MS Sample ID: **0308208-04BMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/29/03 2:07**
Client ID: **RA 3353** Run ID: **6020_030828A** SeqNo: **362302** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1006	0.010	0.1	0.002304	98.3	75-125	0			B
Magnesium	110.9	0.20	10	101.8	91	75-125	0			EO
Sodium	91.25	0.20	10	83.55	77	75-125	0			EO

MS Sample ID: **0308208-04BMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/29/03 22:29**
Client ID: **RA 3353** Run ID: **6020_030829A** SeqNo: **362666** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.1161	0.0050	0.1	0.009882	106	75-125	0			
Cadmium	0.0878	0.0010	0.1	0.000003334	87.8	75-125	0			
Silver	0.09147	0.0050	0.1	-0.00004323	91.5	75-125	0			

MSD Sample ID: **0308208-04BMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 3:37**
Client ID: **RA 3353** Run ID: **6020_030827A** SeqNo: **361842** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09551	0.0050	0.1	0.00207	93.4	75-125	0.09869	3.27	25	
Beryllium	0.09597	0.0020	0.1	0.00005226	95.9	75-125	0.09734	1.42	25	
Boron	0.679	0.020	0.5	0.1344	109	75-125	0.6889	1.45	25	
Calcium	398.4	0.50	10	385.5	129	75-125	405.6	1.79	25	SEO
Chromium	0.1066	0.0020	0.1	0.0006403	106	75-125	0.1045	1.99	25	
Cobalt	0.09655	0.0020	0.1	0.0007183	95.8	75-125	0.09943	2.94	25	
Copper	0.09453	0.0020	0.1	0.006518	88	75-125	0.0964	1.96	25	
Iron	12.48	0.20	10	2.372	101	75-125	12.95	3.7	25	
Lead	0.106	0.0050	0.1	0.0005298	105	75-125	0.1122	5.68	25	
Manganese	0.09942	0.0050	0.1	0.01211	87.3	75-125	0.1026	3.15	25	
Nickel	0.1075	0.0050	0.1	0.01173	95.8	75-125	0.1096	1.93	25	
Potassium	12.78	0.20	10	2.119	107	75-125	13.29	3.91	25	
Selenium	0.1063	0.0050	0.1	0.01377	92.5	75-125	0.1068	0.469	25	
Vanadium	0.1135	0.0050	0.1	0.006292	107	75-125	0.1165	2.61	25	
Zinc	0.3588	0.0050	0.1	0.2958	63	75-125	0.3599	0.306	25	S

MSD Sample ID: **0308208-04BMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/29/03 2:12**
Client ID: **RA 3353** Run ID: **6020_030828A** SeqNo: **362303** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.105	0.010	0.1	0.002304	103	75-125	0.1006	4.28	25	B
Magnesium	116.7	0.20	10	101.8	149	75-125	110.9	5.1	25	SEO
Sodium	96.53	0.20	10	83.55	130	75-125	91.25	5.62	25	SEO

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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **6463** InstrumentID: **6020**

MSD Sample ID: **0308208-04BMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/29/03 22:34**
Client ID: **RA 3353** Run ID: **6020_030829A** SeqNo: **362667** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.1145	0.0050	0.1	0.009882	105	75-125	0.1161	1.39	25	
Cadmium	0.08795	0.0010	0.1	0.000003334	87.9	75-125	0.0878	0.171	25	
Silver	0.08974	0.0050	0.1	-0.00004323	89.8	75-125	0.09147	1.91	25	

DUP Sample ID: **0308208-04BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 3:28**
Client ID: **RA 3353** Run ID: **6020_030827A** SeqNo: **361840** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050	0	0	0	0-0	0.00207	0	25	
Beryllium	U	0.0020	0	0	0	0-0	0.00005226	0	25	
Boron	0.1308	0.020	0	0	0	0-0	0.1344	2.71	25	
Chromium	0.0007328	0.0020	0	0	0	0-0	0.0006403	0	25	J
Cobalt	0.0007385	0.0020	0	0	0	0-0	0.0007183	0	25	J
Copper	0.005444	0.0020	0	0	0	0-0	0.006518	18	25	
Iron	2.41	0.20	0	0	0	0-0	2.372	1.59	25	
Lead	0.002635	0.0050	0	0	0	0-0	0.0005298	0	25	J
Manganese	0.005407	0.0050	0	0	0	0-0	0.01211	76.5	25	R
Nickel	0.01254	0.0050	0	0	0	0-0	0.01173	6.67	25	
Potassium	2.116	0.20	0	0	0	0-0	2.119	0.142	25	
Selenium	0.0148	0.0050	0	0	0	0-0	0.01377	7.21	25	
Vanadium	0.006119	0.0050	0	0	0	0-0	0.006292	2.79	25	

DUP Sample ID: **0308208-04BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/29/03 2:02**
Client ID: **RA 3353** Run ID: **6020_030828A** SeqNo: **362301** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.00377	0.010	0	0	0	0-0	0.002304	0	25	J

DUP Sample ID: **0308208-04BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/29/03 21:08**
Client ID: **RA 3353** Run ID: **6020_030829A** SeqNo: **362661** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.00977	0.0050	0	0	0	0-0	0.009882	1.14	25	
Cadmium	U	0.0010	0	0	0	0-0	0.000003334	0	25	
Silver	U	0.0050	0	0	0	0-0	-0.00004323	0	25	

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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **6463** InstrumentID: **6020**

DUP Sample ID: **0308208-04BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/30/03 21:12**

Client ID: **RA 3353** Run ID: **6020_030830A** SeqNo: **362762** Prep Date: **8/21/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	370.6	5.0	0	0	0	0-0	379.6	2.4	25	
Magnesium	114.1	2.0	0	0	0	0-0	117.7	3.11	25	
Sodium	90.27	2.0	0	0	0	0-0	94.12	4.18	25	
Zinc	0.347	0.050	0	0	0	0-0	0.3594	3.51	25	

Thefollowingsampleswereanalyzedinthisbatch: 0308208-01B 0308208-02B 0308208-03B 0308208-04B

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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **6516** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW1-082703** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/27/03 22:16**
Client ID: Run ID: **MERCURY_030827F** SeqNo: **361602** Prep Date: **8/27/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000054	0.00020								J

LCS Sample ID: **GLCSW1-082703** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/27/03 22:20**
Client ID: Run ID: **MERCURY_030827F** SeqNo: **361603** Prep Date: **8/27/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00539	0.00020	0.005	0	108	80-120	0			

LCSD Sample ID: **GLCSDW1-082703** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/27/03 22:22**
Client ID: Run ID: **MERCURY_030827F** SeqNo: **361604** Prep Date: **8/27/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00526	0.00020	0.005	0	105	80-120	0.00539	2.44	20	

MS Sample ID: **0308268-01CMS** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/27/03 22:33**
Client ID: Run ID: **MERCURY_030827F** SeqNo: **361607** Prep Date: **8/27/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00537	0.00020	0.005	0.000063	106	80-120	0			

MSD Sample ID: **0308268-01CMSD** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/27/03 22:35**
Client ID: Run ID: **MERCURY_030827F** SeqNo: **361608** Prep Date: **8/27/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00532	0.00020	0.005	0.000063	105	80-120	0.00537	0.935	20	

DUP Sample ID: **0308268-01CDUP** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/27/03 22:29**
Client ID: Run ID: **MERCURY_030827F** SeqNo: **361606** Prep Date: **8/27/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000052	0.00020	0	0	0	0-0	0.000063	0	20	J

Thefollowingsampleswereanalyzedinthisbatch: 0308208-01B 0308208-02B 0308208-03B 0308208-04B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **6468** InstrumentID: **SV-3**

MBLK Sample ID: **SBLKW1-030821** Test Code: **SW8270** Units: **µg/L** Analysis Date: **08/22/03 12:31**

Client ID: Run ID: **SV-3_030822A** SeqNo: **359414** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	U	10								
2,4,5-Trichlorophenol	U	10								
2,4,6-Trichlorophenol	U	10								
2-Methylnaphthalene	U	10								
2-Methylphenol	U	10								
2-Nitroaniline	U	10								
2-Nitrophenol	U	10								
3-Nitroaniline	U	10								
4-Methylphenol	U	10								
4-Nitroaniline	U	10								
4-Nitrophenol	U	10								
Acenaphthene	U	10								
Acenaphthylene	U	10								
Aniline	U	10								
Anthracene	U	10								
Benz(a)anthracene	U	10								
Benzidine	U	10								
Hexachloroethane	U	10								
Indeno(1,2,3-cd)pyrene	U	10								
Isophorone	U	10								
N-Nitrosodi-n-propylamine	U	10								
N-Nitrosodimethylamine	U	10								
N-Nitrosodiphenylamine	U	10								
Naphthalene	U	10								
Nitrobenzene	U	10								
Pentachlorophenol	U	10								
Phenanthrene	U	10								
Phenol	U	10								
Pyrene	U	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr: 2,4,6-Tribromophenol	104.7	0	100	0	105	10-123	0			
Surr: 2-Fluorobiphenyl	85.77	0	100	0	85.8	43-116	0			
Surr: 2-Fluorophenol	55.98	0	100	0	56	21-100	0			
Surr:4-Terphenyl-d14	101	0	100	0	101	33-141	0			
Surr: Nitrobenzene-d5	82.01	0	100	0	82	35-114	0			
Surr: Phenol-d6	40.56	0	100	0	40.6	10-94	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **6468** InstrumentID: **SV-3**

LCS Sample ID: **SLCSW1-030821** Test Code: **SW8270** Units: **µg/L** Analysis Date: **08/22/03 12:56**
Client ID: Run ID: **SV-3_030822A** SeqNo: **359415** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	35.44	10	50	0	70.9	51-110	0			
2,4,5-Trichlorophenol	101.1	10	100	0	101	55-130	0			
2,4,6-Trichlorophenol	100.2	10	100	0	100	55-130	0			
2-Methylnaphthalene	40.89	10	50	0	81.8	50-125	0			
2-Methylphenol	90.01	10	100	0	90	45-120	0			
2-Nitroaniline	55.2	10	50	0	110	55-130	0			
2-Nitrophenol	99.83	10	100	0	99.8	55-125	0			
3-Nitroaniline	50.08	10	50	0	100	55-120	0			
4-Methylphenol	126.3	10	150	0	84.2	40-120	0			
4-Nitroaniline	53.07	10	50	0	106	60-130	0			
4-Nitrophenol	67.67	10	100	0	67.7	25-100	0			
Acenaphthene	46.41	10	50	0	92.8	50-120	0			
Acenaphthylene	46.19	10	50	0	92.4	55-130	0			
Anthracene	52.01	10	50	0	104	60-130	0			
Benz(a)anthracene	50.8	10	50	0	102	60-130	0			
Benzidine	14.74	10	50	0	29.5	10-85	0			
Hexachloroethane	30.87	10	50	0	61.7	40-120	0			
deno(1,2,3-cd)pyrene	54.33	10	50	0	109	60-130	0			
Isophorone	51.96	10	50	0	104	60-130	0			
N-Nitrosodi-n-propylamine	50.85	10	50	0	102	55-120	0			
N-Nitrosodimethylamine	29.83	10	50	0	59.7	35-110	0			
N-Nitrosodiphenylamine	59.9	10	50	0	120	60-130	0			
Naphthalene	41.1	10	50	0	82.2	55-130	0			
Nitrobenzene	46.98	10	50	0	94	60-130	0			
Pentachlorophenol	108.7	10	100	0	109	45-125	0			
Phenanthrene	49.18	10	50	0	98.4	60-130	0			
Phenol	49.84	10	100	0	49.8	20-100	0			
Pyrene	47.49	10	50	0	95	45-120	0			
Surr: 2,4,6-Tribromophenol	109.2	0	100	0	109	10-123	0			
Surr: 2-Fluorobiphenyl	87.8	0	100	0	87.8	43-116	0			
Surr: 2-Fluorophenol	68.7	0	100	0	68.7	21-100	0			
Surr:4-Terphenyl-d14	98.27	0	100	0	98.3	33-141	0			
Surr:Nitrobenzene-d5	92.4	0	100	0	92.4	35-114	0			
Surr: Phenol-d6	49.23	0	100	0	49.2	10-94	0			

ND - Not Detected at the Reporting Limit
Analyte detected below quantitation limits
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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **6468** InstrumentID: **SV-3**

LCSD Sample ID: **SLCSDW1-030821** Test Code: **SW8270** Units: **µg/L** Analysis Date: **08/22/03 13:22**

Client ID: Run ID: **SV-3_030822A** SeqNo: **359416** Prep Date: **8/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	36.52	10	50	0	73	51-110	35.44	3.01	30	
2,4,5-Trichlorophenol	100.2	10	100	0	100	55-130	101.1	0.898	30	
2,4,6-Trichlorophenol	99.05	10	100	0	99	55-130	100.2	1.11	30	
2-Methylnaphthalene	41.16	10	50	0	82.3	50-125	40.89	0.654	30	
2-Methylphenol	88.11	10	100	0	88.1	45-120	90.01	2.13	30	
2-Nitroaniline	55.11	10	50	0	110	55-130	55.2	0.156	30	
2-Nitrophenol	100.8	10	100	0	101	55-125	99.83	1.01	30	
3-Nitroaniline	51.04	10	50	0	102	55-120	50.08	1.89	30	
4-Methylphenol	124.2	10	150	0	82.8	40-120	126.3	1.64	30	
4-Nitroaniline	53.87	10	50	0	108	60-130	53.07	1.51	30	
4-Nitrophenol	50.87	10	100	0	50.9	25-100	67.67	28.3	30	
Acenaphthene	46.32	10	50	0	92.6	50-120	46.41	0.198	30	
Acenaphthylene	46.26	10	50	0	92.5	55-130	46.19	0.163	30	
Anthracene	53.16	10	50	0	106	60-130	52.01	2.19	30	
Benz(a)anthracene	51.56	10	50	0	103	60-130	50.8	1.48	30	
Benzidine	15.65	10	50	0	31.3	10-85	14.74	5.96	30	
Hexachloroethane	32.88	10	50	0	65.8	40-120	30.87	6.29	30	
Indeno(1,2,3-cd)pyrene	55.44	10	50	0	111	60-130	54.33	2.02	30	
Isophorone	51.62	10	50	0	103	60-130	51.96	0.645	30	
N-Nitrosodi-n-propylamine	50.35	10	50	0	101	55-120	50.85	0.997	30	
N-Nitrosodimethylamine	31.43	10	50	0	62.9	35-110	29.83	5.25	30	
N-Nitrosodiphenylamine	60.53	10	50	0	121	60-130	59.9	1.05	30	
Naphthalene	41.78	10	50	0	83.6	55-130	41.1	1.63	30	
Nitrobenzene	47.39	10	50	0	94.8	60-130	46.98	0.871	30	
Pentachlorophenol	109.8	10	100	0	110	45-125	108.7	0.999	30	
Phenanthrene	49.69	10	50	0	99.4	60-130	49.18	1.04	30	
Phenol	48.48	10	100	0	48.5	20-100	49.84	2.76	30	
Pyrene	48.55	10	50	0	97.1	45-120	47.49	2.21	30	
Surr: 2,4,6-Tribromophenol	108.8	0	100	0	109	10-123	109.2	0.352	30	
Surr: 2-Fluorobiphenyl	86.18	0	100	0	86.2	43-116	87.8	1.86	30	
Surr: 2-Fluorophenol	67.23	0	100	0	67.2	21-100	68.7	2.17	30	
Surr:4-Terphenyl-d14	99.59	0	100	0	99.6	33-141	98.27	1.34	30	
Surr: Nitrobenzene-d5	91.4	0	100	0	91.4	35-114	92.4	1.08	30	
Surr: Phenol-d6	46.95	0	100	0	46.9	10-94	49.23	4.74	30	

Thefollowingsampleswereanalyzedinthisbatch: 0308208-01E 0308208-02E 0308208-03E 0308208-04E

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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R15905** InstrumentID: **VOA3**

MBLK Sample ID: **VBLKW-0828** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/28/03 12:22**

Client ID: Run ID: **VOA3_030828A** SeqNo: **361815** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
2-Butanone	U	10								
2-Chloroethyl vinyl ether	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	10								
Methyl tert-butyl ether	U	5.0								
Methylene chloride	U	10								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl acetate	U	10								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	45.11	5.0	50	0	90.2	70-130	0			
Surr: 4-Bromofluorobenzene	48.04	5.0	50	0	96.1	70-130	0			
Surr: Dibromofluoromethane	48.36	5.0	50	0	96.7	70-130	0			
Surr: Toluene-d8	48.28	5.0	50	0	96.6	70-130	0			

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R15905** InstrumentID: **VOA3**

LCS Sample ID: **VLCSW-0828** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/28/03 11:22**
Client ID: Run ID: **VOA3_030828A** SeqNo: **361813** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.84	5.0	50	0	97.7	75-118	0			
1,1,2,2-Tetrachloroethane	51.17	5.0	50	0	102	79-120	0			
1,1,2-Trichloroethane	49.34	5.0	50	0	98.7	81-119	0			
1,1-Dichloroethane	49	5.0	50	0	98	80-120	0			
1,1-Dichloroethene	48.88	5.0	50	0	97.8	80-120	0			
1,2-Dichloroethane	50.01	5.0	50	0	100	80-120	0			
2-Butanone	100.4	10	100	0	100	70-130	0			
2-Chloroethyl vinyl ether	100.6	10	100	0	101	72-120	0			
2-Hexanone	105.1	10	100	0	105	70-130	0			
4-Methyl-2-pentanone	102.3	10	100	0	102	78-120	0			
Acetone	103.1	10	100	0	103	60-135	0			
Benzene	49.11	5.0	50	0	98.2	82-119	0			
Bromodichloromethane	50.98	5.0	50	0	102	81-119	0			
Bromoform	53.12	5.0	50	0	106	80-120	0			
Bromomethane	44.77	5.0	50	0	89.5	75-130	0			
Carbon disulfide	101.9	10	100	0	102	78-120	0			
Carbon tetrachloride	49.8	5.0	50	0	99.6	77-120	0			
Chlorobenzene	49.68	5.0	50	0	99.4	82-118	0			
Chloroethane	46.39	5.0	50	0	92.8	78-122	0			
Chloroform	49.54	5.0	50	0	99.1	78-120	0			
Chloromethane	47.18	5.0	50	0	94.4	75-125	0			
cis-1,3-Dichloropropene	50.8	5.0	50	0	102	81-120	0			
Dibromochloromethane	52.03	5.0	50	0	104	81-118	0			
Ethylbenzene	50.35	5.0	50	0	101	82-120	0			
m,p-Xylene	100.8	10	100	0	101	82-122	0			
Methyl tert-butyl ether	49.28	5.0	50	0	98.6	79-120	0			
Methylene chloride	47.75	10	50	0	95.5	80-122	0			
Styrene	50.17	5.0	50	0	100	82-121	0			
Tetrachloroethene	41.05	5.0	50	0	82.1	79-118	0			
Toluene	48.47	5.0	50	0	96.9	81-119	0			
trans-1,3-Dichloropropene	50.55	5.0	50	0	101	82-121	0			
Trichloroethene	50.06	5.0	50	0	100	78-118	0			
Vinyl acetate	109.5	10	100	0	110	75-120	0			
Vinyl chloride	47.44	2.0	50	0	94.9	73-127	0			
Xylenes, Total	150.5	15	150	0	100	80-120	0			
Surr:1,2-Dichloroethane-d4	46.01	5.0	50	0	92	70-130	0			
Surr:4-Bromofluorobenzene	48.89	5.0	50	0	97.8	70-130	0			
Surr: Dibromofluoromethane	48.15	5.0	50	0	96.3	70-130	0			
Surr: Toluene-d8	47.92	5.0	50	0	95.8	70-130	0			

ND - Not Detected at the Reporting Limit
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P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R15905** InstrumentID: **VOA3**

LCSD Sample ID: **VLCSWD-0828** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/28/03 11:52**

Client ID: Run ID: **VOA3_030828A** SeqNo: **361814** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.2	5.0	50	0	98.4	75-118	48.84	0.728	20	
1,1,2,2-Tetrachloroethane	52.24	5.0	50	0	104	79-120	51.17	2.07	20	
1,1,2-Trichloroethane	49.79	5.0	50	0	99.6	81-119	49.34	0.917	20	
1,1-Dichloroethane	49.36	5.0	50	0	98.7	80-120	49	0.73	20	
1,1-Dichloroethene	51.42	5.0	50	0	103	80-120	48.88	5.06	20	
1,2-Dichloroethane	50.96	5.0	50	0	102	80-120	50.01	1.87	20	
2-Butanone	105.3	10	100	0	105	70-130	100.4	4.76	20	
2-Chloroethyl vinyl ether	102	10	100	0	102	72-120	100.6	1.38	20	
2-Hexanone	107.2	10	100	0	107	70-130	105.1	2	20	
4-Methyl-2-pentanone	102	10	100	0	102	78-120	102.3	0.311	20	
Acetone	100.9	10	100	0	101	60-135	103.1	2.13	20	
Benzene	50.22	5.0	50	0	100	82-119	49.11	2.23	20	
Bromodichloromethane	51.5	5.0	50	0	103	81-119	50.98	1.02	20	
Bromoform	53.46	5.0	50	0	107	80-120	53.12	0.626	20	
Bromomethane	45.74	5.0	50	0	91.5	75-130	44.77	2.15	20	
Carbon disulfide	104.8	10	100	0	105	78-120	101.9	2.86	20	
Carbon tetrachloride	51.87	5.0	50	0	104	77-120	49.8	4.08	20	
Chlorobenzene	50.22	5.0	50	0	100	82-118	49.68	1.07	20	
Chloroethane	47.49	5.0	50	0	95	78-122	46.39	2.35	20	
Chloroform	49.87	5.0	50	0	99.7	78-120	49.54	0.654	20	
Chloromethane	46.95	5.0	50	0	93.9	75-125	47.18	0.503	20	
cis-1,3-Dichloropropene	50.76	5.0	50	0	102	81-120	50.8	0.0622	20	
Dibromochloromethane	52.23	5.0	50	0	104	81-118	52.03	0.369	20	
Ethylbenzene	50.85	5.0	50	0	102	82-120	50.35	0.991	20	
m,p-Xylene	102	10	100	0	102	82-122	100.8	1.18	20	
Methyl tert-butyl ether	49.35	5.0	50	0	98.7	79-120	49.28	0.142	20	
Methylene chloride	47.76	10	50	0	95.5	80-122	47.75	0.0146	20	
Styrene	51.66	5.0	50	0	103	82-121	50.17	2.93	20	
Tetrachloroethene	42.39	5.0	50	0	84.8	79-118	41.05	3.2	20	
Toluene	49.45	5.0	50	0	98.9	81-119	48.47	1.99	20	
trans-1,3-Dichloropropene	51.74	5.0	50	0	103	82-121	50.55	2.32	20	
Trichloroethene	51.31	5.0	50	0	103	78-118	50.06	2.46	20	
Vinyl acetate	109.4	10	100	0	109	75-120	109.5	0.129	20	
Vinyl chloride	47.62	2.0	50	0	95.2	73-127	47.44	0.379	20	
Xylenes, Total	153	15	150	0	102	80-120	150.5	1.68	20	
Surr: 1,2-Dichloroethane-d4	46.02	5.0	50	0	92	70-130	46.01	0.0186	20	
Surr: 4-Bromofluorobenzene	49	5.0	50	0	98	70-130	48.89	0.224	20	
Surr: Dibromofluoromethane	46.97	5.0	50	0	93.9	70-130	48.15	2.48	20	
Surr: Toluene-d8	48.99	5.0	50	0	98	70-130	47.92	2.2	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R15905** InstrumentID: **VOA3**

MS Sample ID: **0308299-01AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/28/03 15:52**

Client ID: Run ID: **VOA3_030828A** SeqNo: **362347** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.32	5.0	50	0	94.6	75-125	0			
1,1,2,2-Tetrachloroethane	53.24	5.0	50	0	106	75-125	0			
1,1,2-Trichloroethane	50.56	5.0	50	0	101	75-125	0			
1,1-Dichloroethane	49.53	5.0	50	0	99.1	75-125	0			
1,1-Dichloroethene	50.04	5.0	50	0	100	65-130	0			
1,2-Dichloroethane	46.35	5.0	50	0	92.7	70-130	0			
2-Butanone	92.24	10	100	0	92.2	64-128	0			
2-Chloroethyl vinyl ether	U	10	100	0	0	75-125	0			S
2-Hexanone	101.8	10	100	0	102	72-124	0			
4-Methyl-2-pentanone	105.7	10	100	0	106	75-125	0			
Acetone	76.11	10	100	7.27	68.8	60-130	0			
Benzene	51.24	5.0	50	0	102	76-127	0			
Bromodichloromethane	48.23	5.0	50	0	96.5	75-125	0			
Bromoform	51.84	5.0	50	0	104	75-125	0			
Bromomethane	46.84	5.0	50	0	93.7	75-125	0			
Carbon disulfide	105.2	10	100	0	105	75-125	0			
Carbontetrachloride	48.29	5.0	50	0	96.6	70-130	0			
Chlorobenzene	49.18	5.0	50	0	98.4	75-126	0			
Chloroethane	50.31	5.0	50	0	101	70-130	0			
Chloroform	47.88	5.0	50	0	95.8	75-125	0			
Chloromethane	50.58	5.0	50	0	101	75-125	0			
cis-1,3-Dichloropropene	50.06	5.0	50	0	100	75-125	0			
Dibromochloromethane	49.05	5.0	50	0	98.1	75-125	0			
Ethylbenzene	50.2	5.0	50	0	100	75-125	0			
m,p-Xylene	100.4	10	100	0	100	75-125	0			
Methyl tert-butyl ether	49.39	5.0	50	0	98.8	75-125	0			
Methylene chloride	49.37	10	50	3.878	91	75-125	0			
Styrene	50.41	5.0	50	0	101	75-125	0			
Tetrachloroethene	37.07	5.0	50	0	74.1	75-125	0			S
Toluene	50.69	5.0	50	0	101	76-125	0			
trans-1,3-Dichloropropene	48.93	5.0	50	0	97.9	70-130	0			
Trichloroethene	49.24	5.0	50	0	98.5	71-120	0			
Vinyl acetate	112.3	10	100	0	112	75-125	0			
Vinyl chloride	50.26	2.0	50	0	101	60-135	0			
Xylenes, Total	150.3	15	150	0	100	75-125	0			
Surr:1,2-Dichloroethane-d4	43.53	5.0	50	0	87.1	70-130	0			
Surr:4-Bromofluorobenzene	48.28	5.0	50	0	96.6	70-130	0			
Surr:Dibromofluoromethane	47.34	5.0	50	0	94.7	70-130	0			
Surr: Toluene-d8	49.5	5.0	50	0	99	70-130	0			

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R15905** InstrumentID: **VOA3**

MSD Sample ID: **0308299-01AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/28/03 16:22**

Client ID: Run ID: **VOA3_030828A** SeqNo: **362348** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.18	5.0	50	0	98.4	75-125	47.32	3.86	20	
1,1,2,2-Tetrachloroethane	54.4	5.0	50	0	109	75-125	53.24	2.16	20	
1,1,2-Trichloroethane	52.71	5.0	50	0	105	75-125	50.56	4.17	20	
1,1-Dichloroethane	50.69	5.0	50	0	101	75-125	49.53	2.31	20	
1,1-Dichloroethene	52.17	5.0	50	0	104	65-130	50.04	4.17	20	
1,2-Dichloroethane	47.44	5.0	50	0	94.9	70-130	46.35	2.34	20	
2-Butanone	99.92	10	100	0	99.9	64-128	92.24	7.99	20	
2-Chloroethyl vinyl ether	U	10	100	0	0	75-125	0	0	20	S
2-Hexanone	106.1	10	100	0	106	72-124	101.8	4.11	20	
4-Methyl-2-pentanone	108.2	10	100	0	108	75-125	105.7	2.34	20	
Acetone	78.32	10	100	7.27	71.1	60-130	76.11	2.87	20	
Benzene	53.79	5.0	50	0	108	76-127	51.24	4.85	20	
Bromodichloromethane	50	5.0	50	0	100	75-125	48.23	3.6	20	
Bromoform	54.8	5.0	50	0	110	75-125	51.84	5.55	20	
Bromomethane	47.25	5.0	50	0	94.5	75-125	46.84	0.866	20	
Carbon disulfide	109.5	10	100	0	109	75-125	105.2	3.97	20	
Carbon tetrachloride	50.91	5.0	50	0	102	70-130	48.29	5.29	20	
Chlorobenzene	51.66	5.0	50	0	103	75-126	49.18	4.92	20	
Chloroethane	50.63	5.0	50	0	101	70-130	50.31	0.618	20	
Chloroform	49.64	5.0	50	0	99.3	75-125	47.88	3.61	20	
Chloromethane	51.21	5.0	50	0	102	75-125	50.58	1.25	20	
cis-1,3-Dichloropropene	51.15	5.0	50	0	102	75-125	50.06	2.15	20	
Dibromochloromethane	51.54	5.0	50	0	103	75-125	49.05	4.96	20	
Ethylbenzene	53.07	5.0	50	0	106	75-125	50.2	5.56	20	
m,p-Xylene	105.5	10	100	0	105	75-125	100.4	4.9	20	
Methyl tert-butyl ether	50.73	5.0	50	0	101	75-125	49.39	2.68	20	
Methylene chloride	54.02	10	50	3.878	100	75-125	49.37	8.99	20	
Styrene	52.12	5.0	50	0	104	75-125	50.41	3.34	20	
Tetrachloroethene	39.46	5.0	50	0	78.9	75-125	37.07	6.23	20	
Toluene	52.74	5.0	50	0	105	76-125	50.69	3.96	20	
trans-1,3-Dichloropropene	51.06	5.0	50	0	102	70-130	48.93	4.27	20	
Trichloroethene	51.06	5.0	50	0	102	71-120	49.24	3.63	20	
Vinyl acetate	115.7	10	100	0	116	75-125	112.3	2.97	20	
Vinyl chloride	51.75	2.0	50	0	103	60-135	50.26	2.92	20	
Xylenes, Total	157.5	15	150	0	105	75-125	150.3	4.71	20	
Surr:1,2-Dichloroethane-d4	44	5.0	50	0	88	70-130	43.53	1.08	20	
Surr:4-Bromofluorobenzene	48.44	5.0	50	0	96.9	70-130	48.28	0.342	20	
Surr: Dibromofluoromethane	46.77	5.0	50	0	93.5	70-130	47.34	1.2	20	
Surr: Toluene-d8	49.31	5.0	50	0	98.6	70-130	49.5	0.394	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308208-01A 0308208-02A 0308208-03A 0308208-04A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R15836** InstrumentID: **UV-2101PC**

MBLK Sample ID: **WMBW1-082503** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/25/03 0:00**
Client ID: Run ID: **UV-2101PC_030825A** SeqNo: **360228** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020								

LCS Sample ID: **WLCSW1-082503** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/25/03 0:00**
Client ID: Run ID: **UV-2101PC_030825A** SeqNo: **360229** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2043	0.020	0.2	0	102	80-120	0			

MS Sample ID: **0308207-02CMS** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/25/03 0:00**
Client ID: Run ID: **UV-2101PC_030825A** SeqNo: **360241** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2074	0.020	0.2	0.002	103	75-125	0			

MSD Sample ID: **0308207-02C MSD** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/25/03 0:00**
Client ID: Run ID: **UV-2101PC_030825A** SeqNo: **360242** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2001	0.020	0.2	0.002	99	75-125	0.2074	3.58	25	

DUP Sample ID: **0308207-02C DUP** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/25/03 0:00**
Client ID: Run ID: **UV-2101PC_030825A** SeqNo: **360240** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020	0	0	0	0-0	0.002	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308208-01D 0308208-02D 0308208-03D 0308208-04D

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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R15895** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-082703** Test Code: **E310.1** Units: **mg/L** Analysis Date: **08/27/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0308** SeqNo: **361550** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.0								
Alkalinity, Carbonate (As CaCO3)	U	5.0								
Alkalinity, Hydroxide (As CaCO3)	U	5.0								
Alkalinity, Total (As CaCO3)	U	5.0								

LCS Sample ID: **WLCSW1-082703** Test Code: **E310.1** Units: **mg/L** Analysis Date: **08/27/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0308** SeqNo: **361551** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1000	5.0	1000	0	100	80-120	0			

DUP Sample ID: **0308208-03C DUP** Test Code: **E310.1** Units: **mg/L** Analysis Date: **08/27/03 0:00**
Client ID: **RA 4798** Run ID: **WET CHEMISTRY_0308** SeqNo: **361559** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	260.1	5.0	0	0	0	0-0	260.1	0	20	
Alkalinity, Carbonate (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	260.1	5.0	0	0	0	0-0	260.1	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308208-01C 0308208-02C 0308208-03C 0308208-04C

ND - Not Detected at the Reporting Limit
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P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R15901** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-082503** Test Code: **E300** Units: **mg/L** Analysis Date: **08/26/03 5:46**
Client ID: Run ID: **IC201_030825B** SeqNo: **361723** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-082503** Test Code: **E300** Units: **mg/L** Analysis Date: **08/26/03 6:19**
Client ID: Run ID: **IC201_030825B** SeqNo: **361724** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10	0.50	10	0	100	80-120	0			
Fluoride	1.92	0.10	2	0	96	80-120	0			
Sulfate	10.27	1.0	10	0	103	80-120	0			
Surr: Dichloroacetic acid (surr)	1.95	0.10	2	0	97.5	80-120	0			

LCSD Sample ID: **WLCSDW1-08250** Test Code: **E300** Units: **mg/L** Analysis Date: **08/26/03 6:51**
Client ID: Run ID: **IC201_030825B** SeqNo: **361725** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.88	0.50	10	0	98.8	80-120	10	1.21	20	
Fluoride	1.93	0.10	2	0	96.5	80-120	1.92	0.519	20	
Sulfate	10.33	1.0	10	0	103	80-120	10.27	0.583	20	
Surr: Dichloroacetic acid (surr)	1.8	0.10	2	0	90	80-120	1.95	8	20	

DUP Sample ID: **0308170-06DDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **08/26/03 11:44**
Client ID: Run ID: **IC201_030825B** SeqNo: **361705** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	127	25	0	0	0	0-0	127	0	20	
Sulfate	784.5	50	0	0	0	0-0	791	0.825	20	
Surr: Dichloroacetic acid (surr)	272.5	5.0	250	0	109	80-120	266.5	2.23	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308208-01C 0308208-02C 0308208-03C 0308208-04C

ND - Not Detected at the Reporting Limit
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O - Referenced analyte value is > 4 times amount spiked
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R16057** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-090503** Test Code: **E300** Units: **mg/L** Analysis Date: **09/05/03 22:56**
Client ID: Run ID: **IC201_030905A** SeqNo: **365892** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-090503** Test Code: **E300** Units: **mg/L** Analysis Date: **09/05/03 23:29**
Client ID: Run ID: **IC201_030905A** SeqNo: **365893** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.67	0.50	10	0	96.7	80-120	0			
Fluoride	1.86	0.10	2	0	93	80-120	0			
Sulfate	10.13	1.0	10	0	101	80-120	0			
Surr: Dichloroacetic acid (surr)	1.85	0.10	2	0	92.5	80-120	0			

LCSD Sample ID: **WLCSDW1-09050** Test Code: **E300** Units: **mg/L** Analysis Date: **09/06/03 0:01**
Client ID: Run ID: **IC201_030905A** SeqNo: **365894** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.68	0.50	10	0	96.8	80-120	9.67	0.103	20	
Fluoride	1.9	0.10	2	0	95	80-120	1.86	2.13	20	
Sulfate	10.18	1.0	10	0	102	80-120	10.13	0.492	20	
Surr: Dichloroacetic acid (surr)	1.93	0.10	2	0	96.5	80-120	1.85	4.23	20	

MS Sample ID: **0309032-02BMS** Test Code: **E300** Units: **mg/L** Analysis Date: **09/06/03 1:39**
Client ID: Run ID: **IC201_030905A** SeqNo: **365897** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.8	0.50	10	0	98	75-125	0			
Fluoride	1.91	0.10	2	0	95.5	75-125	0			
Sulfate	10.24	1.0	10	0	102	75-125	0			
Surr: Dichloroacetic acid (surr)	4.33	0.10	5	0	86.6	80-120	0			

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B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R16057** InstrumentID: **IC201**

MS Sample ID: **0308208-01CMS** Test Code: **E300** Units: **mg/L** Analysis Date: **09/06/03 3:49**
Client ID: **RA 314** Run ID: **IC201_030905A** SeqNo: **365901** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	170.2	5.0	100	77.8	92.4	75-125	0			
Fluoride	19.5	1.0	20	0	97.5	75-125	0			
Sulfate	671.8	10	100	581.5	90.3	75-125	0			EO
Surr: Dichloroacetic acid (surr)	52.1	1.0	50	0	104	80-120	0			

MSD Sample ID: **0309032-02BMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **09/06/03 2:12**
Client ID: Run ID: **IC201_030905A** SeqNo: **365898** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.45	0.50	10	0	94.5	75-125	9.8	3.64	20	
Fluoride	1.84	0.10	2	0	92	75-125	1.91	3.73	20	
Sulfate	10.02	1.0	10	0	100	75-125	10.24	2.17	20	
Surr: Dichloroacetic acid (surr)	4.44	0.10	5	0	88.8	80-120	4.33	2.51	20	

MSD Sample ID: **0308208-01CMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **09/06/03 4:22**
Client ID: **RA 314** Run ID: **IC201_030905A** SeqNo: **365902** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	170.2	5.0	100	77.8	92.4	75-125	170.2	0	20	
Fluoride	18.5	1.0	20	0	92.5	75-125	19.5	5.26	20	
Sulfate	671.8	10	100	581.5	90.3	75-125	671.8	0	20	EO
Surr: Dichloroacetic acid (surr)	50.6	1.0	50	0	101	80-120	52.1	2.92	20	

DUP Sample ID: **0309032-02BDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/06/03 1:07**
Client ID: Run ID: **IC201_030905A** SeqNo: **365896** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50	0	0	0	0-0	0	0	20	
Fluoride	U	0.10	0	0	0	0-0	0	0	20	
Sulfate	U	1.0	0	0	0	0-0	0	0	20	
Surr: Dichloroacetic acid (surr)	5.23	0.10	5	0	105	80-120	5.3	1.33	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308208
Project: Monthly

QC BATCH REPORT

Batch ID: **R16057** InstrumentID: **IC201**

DUP Sample ID: **0308208-01CDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/06/03 3:17**
Client ID: **RA 314** Run ID: **IC201_030905A** SeqNo: **365900** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	77.9	5.0	0	0	0	0-0	77.8	0.128	20	
Fluoride	U	1.0	0	0	0	0-0	0	0	20	
Sulfate	581.8	10	0	0	0	0-0	581.5	0.0516	20	E
Surr: Dichloroacetic acid (surr)	53.9	1.0	50	0	108	80-120	52.8	2.06	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308208-01C 0308208-02C 0308208-03C 0308208-04C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

☐ e-Lab, Inc.
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

☐ e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager: | e-Lab Work Order #: 0308208

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Monthly	A	Monthly
Work Order		Project Number		B	
Company Name	Navajo	Bill To Company		C	
Send Report To	Jeff Byrd	Invoice Attn.	J Byrd	D	
Address		Address		E	
				F	
City/State/Zip		City/State/Zip		G	
Phone		Phone		H	
Fax		Fax		I	
e-Mail Address				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	RA 314	8/18/03	0915	Liquid	Y	8	X										
2	RA 4196	|	0945	|	|	|	X										
3	RA 4798	|	1010	|	|	|	X									
4	RA 3353	|	1030	|	|	|	X									
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: JByrd

Shipment Method: Fed Ex

Required Turnaround Time: ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
JByrd	8/19	1615		The MeOH Bottle for RA 3353 may not be labeled
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	
	8/20/03	0840		

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Standard QC + Raw Data
- ☐ Level IV: SW846 Methods/CLP
- ☐ Other: ____

Note: Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.

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e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING COMPAN

Date/Time Received: 8/20/2003 8:40:00 AM

Work Order Number 0308208

Received by: JJS

Checklist completed by RICHARD SANCHEZ 8-20-03 (Signature / Date)

Reviewed by HT 8/21/03 (Initials / Date)

Matrix: L

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):	4.9c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes: VOC, Metals, Anions, and Alkalinity containers not present for "RA 4196". Client will ship missing analsyis to arrive by 8-21-03.

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Lora Terrill

From: Jeff Byrd [jeffbyrd@navajo-refining.com]
Sent: Thursday, August 21, 2003 10:06 AM
To: Lora Terrill
Subject: RE: RA4196

Yea

-----Original Message-----
From: Lora Terrill [mailto:lterrill@elabi.com]
Sent: Thursday, August 21, 2003 10:03 AM
To: Jeff Byrd
Subject: RE: RA4196

Jeff:
These came in at 21C. Proceed?

-----Original Message-----
From: Jeff Byrd [mailto:jeffbyrd@navajo-refining.com]
Sent: Wednesday, August 20, 2003 4:04 PM
To: Lora Terrill
Subject: RE: RA4196

FYI; the remaining bottles for 4196 are being sent without a chain.

-----Original Message-----
From: Lora Terrill [mailto:lterrill@elabi.com]
Sent: Wednesday, August 20, 2003 12:16 PM
To: Jeff Byrd
Subject: RA4196

Did not receive sample containers for RA4196 Voa, Metals, or Wet chem (anions and Alk). Did receive Cn and SV. Proceed and ignore?

Also, received a CN container with no label except the NaOH preserve sticker but there is a missing CN for RA3353. We'll assume that's it unless you tell me different.

e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING COMPAN

Date/Time Received: 8/20/2003 8:40:00 AM 21 LT

Work Order Number 0308208

Received by: RSZ

Checklist completed by RICHARD SANCHEZ 8.21.03 (Signature / Date)

Reviewed by LT 8/26/03 (Initials / Date)

Matrix: W

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):	21.8c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes: the missing 5x5 from RA41946

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: 8/21/03 Person contacted Jeff Byrd

Contacted by: LT Regarding: TO

Comments: proceed with analysis

Corrective Action _____

NAVAJO REFINING COMPANY

501 E. MAIN STREET
ARTESIA NM 88210
5057483311

SHIP DATE: 20AUG2003
ACCOUNT # 113684186
ACTUAL WGT: 5.00 LBS

Part # 156148-434 NRIT 6-02

TO:

E-LAB
SAMPLE RECIEVING
10450 STANCLIFF ROAD STE 210
-
HOUSTON TX 77099

2815305656
BILL RECIPIENT

Delivery Address Barcode

FedEx STANDARD OVERNIGHT

THU

System # 2223500 20AUG2003

DELIVER BY:
21AUG2003

TRK# 7908 7696 5370 Form 0201

IAH A2

77099-TX-US A9 JGQA

OSUS v5.2.00 2223500 2844 04/02

Charlie Plymale

From: cs@citation.com
Sent: Thursday, September 18, 2003 8:48 AM
To: Charlie Plymale
Subject: Federal Register, State, Int'l EWS

Prepared for: Phil Youngblood

---------- WEBSITE LINK ----------

The complete documents referenced in this notification may be obtained from our website at: http://falcon.citation.com/~philyoun/citmenu1.htm

---------- FEDERAL REGISTER SEARCH CONDITIONS ----------

DATES INCLUDED: 09/18/2003 - 09/18/2003

CONDITION #1 Articles about CFR Title 40
CONDITION #2 Articles having keyword NAVAJO REFINING

---------- FEDERAL REGISTER ARTICLES FOUND ----------

REFERENCE: 09/18/2003 68 FR 54672-54677 (Vol. 68, No. 181)
Department ENVIRONMENTAL PROTECTION AGENCY
Citation 40 CFR Part 52
Citation 40 CFR Part 81
TITLE: Approval and Promulgation of Implementation Plans; New Mexico; Redesignation of Grant County to Attainment for Sulfur Dioxide
ARTICLE TYPE: FINAL RULE
CONDITION MET: #1
LINK:
http://falcon.citation.com/~philyoun/INDX/FR/L/Q/H/LQH4672A.HTM
SUMMARY: The EPA is taking direct final action on a request to redesignate Grant County, New Mexico from nonattainment area to attainment for the sulfur dioxide (SO2) National Ambient Air Quality Standards (NAAQS). In conjunction with this action, EPA is also approving the maintenance plan, and its associated contingency measures plan for the Grant County nonattainment area, which were submitted ...

REFERENCE: 09/18/2003 68 FR 54677-54678 (Vol. 68, No. 181)
Department ENVIRONMENTAL PROTECTION AGENCY
Citation 40 CFR Part 82
TITLE: Protection of Stratospheric Ozone: Supplemental Rule Regarding a Recycling Standard Under Section 608 of the Clean Air Act; Correction
ARTICLE TYPE: FINAL RULE
CONDITION MET: #1
LINK:
http://falcon.citation.com/~philyoun/INDX/FR/L/Q/H/LQH4677A.HTM
SUMMARY: Through this action, EPA is correcting the final rule published in the Federal Register on July 24, 2003 (68 FR 43786). Specifically, EPA is clarifying that the effective date for the rule, as it applies to the certification of refrigerant recycling equipment is effective 90 days after the publication date (i.e., October 22, 2003).

REFERENCE: 09/18/2003 68 FR 54705 (Vol. 68, No. 181)
Department ENVIRONMENTAL PROTECTION AGENCY
Citation 40 CFR Part 52
Citation 40 CFR Part 81
TITLE: Approval and Promulgation of Implementation Plans; New Mexico; Redesignation of Grant County to Attainment for Sulfur Dioxide
ARTICLE TYPE: PROPOSED RULE
CONDITION MET: #1
LINK:
http://falcon.citation.com/~philyoun/INDX/FR/L/Q/H/LQH4705A.HTM
SUMMARY: The EPA is proposing action on a request to redesignate Grant County, New Mexico from nonattainment area to attainment for the sulfur dioxide (SO2) National Ambient Air Quality Standards (NAAQS). In conjunction with this action, EPA is also proposing to approve the maintenance plan, and its associated contingency measures plan for the Grant County nonattainment area, which were ...

REFERENCE: 09/18/2003 68 FR 54706-54707 (Vol. 68, No. 181)
Department DEPARTMENT OF AGRICULTURE
Agency Forest Service
TITLE: Gray Mountain Coal Lease Proposal
ARTICLE TYPE: NOTICE
CONDITION MET: #1
LINK:
http://falcon.citation.com/~philyoun/INDX/FR/L/Q/H/LQH4706A.HTM
SUMMARY: The U.S. Forest Service (USFS) is preparing a Land Use Analysis/Environmental Impact Statement (LUA/EIS) to analyze the environmental impacts of leasing three federal coal reserve tracts. The three tracts total 1,210.44 acres and underlie lands administered by the Redbird Ranger District of the Daniel Boone National Forest.

REFERENCE: 09/18/2003 68 FR 54707-54715 (Vol. 68, No. 181)
Department DEPARTMENT OF AGRICULTURE
Agency Forest Service
TITLE: Revised Land and Resource Management Plans for the Huron-Manistee National Forests (Alcona, Crawford, Iosco, Lake, Manistee, Mason, Mecosta, Montcalm, Muskegon, Newaygo, Oceana, Ogemaw, Oscoda and Wex
ARTICLE TYPE: NOTICE
CONDITION MET: #1
LINK:
http://falcon.citation.com/~philyoun/INDX/FR/L/Q/H/LQH4707A.HTM
SUMMARY: The USDA Forest Service intends to prepare three separate and individual Environmental Impact Statement (EIS) documents for revising the Huron-Manistee, Hiawatha and Ottawa National Forest Land and Resource Management Plans (Forest Plan) pursuant to 16 U.S.C. 1604(f) (5) and USDA Forest Service National Forest System Land and Resource Management Planning regulations.

REFERENCE: 09/18/2003 68 FR 54728 (Vol. 68, No. 181)

Department ENVIRONMENTAL PROTECTION AGENCY
TITLE: EPA Public Meeting: Market Enhancement Opportunities for Water-Efficient Products; Notice of Public Meeting
ARTICLE TYPE: NOTICE
CONDITION MET: #1
LINK:
http://falcon.citation.com/~philyoun/INDX/FR/L/Q/H/LQH4728B.HTM
SUMMARY: The Environmental Protection Agency is hosting a one-day public meeting to discuss market enhancement opportunities for water-efficient products. EPA's goal is to bring together stakeholders from Federal, state and local governments; manufacturers; retailers; environmental groups; and other interested parties to exchange information and views on promoting water-efficient products in the m

REFERENCE: 09/18/2003 68 FR 54790-54793 (Vol. 68, No. 181)
Department ENVIRONMENTAL PROTECTION AGENCY
Citation 40 CFR Part 61
TITLE: National Emission Standards for Hazardous Air Pollutants for Asbestos
ARTICLE TYPE: FINAL RULE
CONDITION MET: #1
LINK:
http://falcon.citation.com/~philyoun/INDX/FR/L/Q/H/LQH4790A.HTM
SUMMARY: On November 20, 1990, the EPA issued national emission standards for hazardous air pollutants (NESHAP) for asbestos under section 112 of the Clean Air Act (CAA). This action will amend the citation for labeling containers of asbestos waste materials, based on requirements in the Occupational Safety and Health Administration (OSHA) asbestos standard for the construction industry for proper

REFERENCE: 09/18/2003 68 FR 54794-54796 (Vol. 68, No. 181)
Department ENVIRONMENTAL PROTECTION AGENCY
Citation 40 CFR Part 61
TITLE: National Emission Standards for Hazardous Air Pollutants for Asbestos
ARTICLE TYPE: PROPOSED RULE
CONDITION MET: #1
LINK:
http://falcon.citation.com/~philyoun/INDX/FR/L/Q/H/LQH4794A.HTM
SUMMARY: On November 20, 1990, the EPA issued national emission standards for hazardous air pollutants (NESHAP) for asbestos under section 112 of the Clean Air Act (CAA). This action would amend the citation for labeling containers of asbestos waste materials, based on requirements in the Occupational Safety and Health Administration (OSHA) asbestos standard for the construction industry for prope

---------- ADDITIONAL INFORMATION ----------

If you have problems, comments, requests, etc., we would be very happy to hear them. These may be submitted to our Customer Service Manager at 1-800-808-3372 or by E-mail to

customerservice@citation.com.

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5

September 29, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Monthly

Work Order : **0309140**

Dear Jeff Byrd,

e-Lab, Inc. received 3 samples on 9/16/2003 8:40:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 35.

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

Sincerely,

Lora Terrill

Electronically approved by: Lora Terrill

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *September 29, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: **0309140**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0309140-01	RA 307	Wate		9/15/2003 13:45	9/16/2003 08:40	☐
0309140-02	RA 419	Wate		9/15/2003 14:00	9/16/2003 08:40	☐
0309140-03	RA 479	Wate		9/15/2003 14:15	9/16/2003 08:40	☐

e-Lab, Inc.

Date: *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-01

Client Sample ID: RA 307
Collection Date: 9/15/2003 1:45:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **9/18/2003**	Analyst: **JCJ**
Mercury	ND	0.000200		mg/L	1	9/19/2003 2:18:08 PM
ICP METALS, TOTAL		**SW6020**			Prep Date: **9/23/2003**	Analyst: **ALR**
Aluminum	0.0899	0.0100		mg/L	1	9/27/2003 12:33:00 AM
Arsenic	ND	0.00500		mg/L	1	9/27/2003 12:33:00 AM
Barium	0.0128	0.00500		mg/L	1	9/27/2003 12:33:00 AM
Beryllium	ND	0.00200		mg/L	1	9/27/2003 12:33:00 AM
Boron	0.0989	0.0200		mg/L	1	9/27/2003 12:33:00 AM
Cadmium	ND	0.00100		mg/L	1	9/27/2003 12:33:00 AM
Calcium	395	25.0		mg/L	50	9/26/2003 10:40:00 PM
Chromium	ND	0.00200		mg/L	1	9/27/2003 12:33:00 AM
Cobalt	ND	0.00200		mg/L	1	9/27/2003 12:33:00 AM
Copper	0.0133	0.00200		mg/L	1	9/27/2003 12:33:00 AM
Iron	4.20	0.200		mg/L	1	9/27/2003 12:33:00 AM
Lead	ND	0.00500		mg/L	1	9/27/2003 12:33:00 AM
Magnesium	106	2.00		mg/L	10	9/26/2003 11:44:00 PM
Manganese	0.0831	0.00500		mg/L	1	9/27/2003 12:33:00 AM
Nickel	0.0143	0.00500		mg/L	1	9/27/2003 12:33:00 AM
Potassium	1.93	0.200		mg/L	1	9/27/2003 12:33:00 AM
Selenium	0.00884	0.00500		mg/L	1	9/27/2003 12:33:00 AM
Silver	ND	0.00500		mg/L	1	9/27/2003 12:33:00 AM
Sodium	68.7	2.00		mg/L	10	9/26/2003 11:44:00 PM
Vanadium	0.0139	0.00500		mg/L	1	9/27/2003 12:33:00 AM
Zinc	0.0168	0.00500		mg/L	1	9/27/2003 12:33:00 AM
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **9/18/2003**	Analyst: **HV**
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2003 2:47:00 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2003 2:47:00 PM
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
2-Methylphenol	ND	10		µg/L	1	9/24/2003 2:47:00 PM
2-Nitroaniline	ND	10		µg/L	1	9/24/2003 2:47:00 PM
2-Nitrophenol	ND	10		µg/L	1	9/24/2003 2:47:00 PM
3-Nitroaniline	ND	10		µg/L	1	9/24/2003 2:47:00 PM
4-Methylphenol	ND	10		µg/L	1	9/24/2003 2:47:00 PM
4-Nitroaniline	ND	10		µg/L	1	9/24/2003 2:47:00 PM
4-Nitrophenol	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Acenaphthene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Acenaphthylene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Aniline	ND	10		µg/L	1	9/24/2003 2:47:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-01

Client Sample ID: RA 307
Collection Date: 9/15/2003 1:45:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Benz(a)anthracene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Benzidine	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Hexachloroethane	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Isophorone	ND	10		µg/L	1	9/24/2003 2:47:00 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2003 2:47:00 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2003 2:47:00 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Naphthalene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Nitrobenzene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Pentachlorophenol	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Phenanthrene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Phenol	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Pyrene	ND	10		µg/L	1	9/24/2003 2:47:00 PM
Surr:2,4,6-Tribromophenol	90.1	39-153		%REC	1	9/24/2003 2:47:00 PM
Surr:2-Fluorobiphenyl	79.8	40-147		%REC	1	9/24/2003 2:47:00 PM
Surr:2-Fluorophenol	38.0	21-100		%REC	1	9/24/2003 2:47:00 PM
Surr:4-Terphenyl-d14	97.9	39-141		%REC	1	9/24/2003 2:47:00 PM
Surr:Nitrobenzene-d5	81.3	37-140		%REC	1	9/24/2003 2:47:00 PM
Surr: Phenol-d6	24.6	11-100		%REC	1	9/24/2003 2:47:00 PM
VOLATILES BY GC/MS		**SW8260**				Analyst: **PC**
1,1,1-Trichloroethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
1,2-Dichloroethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
2-Butanone	ND	10		µg/L	1	9/23/2003 1:36:00 PM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	9/23/2003 1:36:00 PM
2-Hexanone	ND	10		µg/L	1	9/23/2003 1:36:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/23/2003 1:36:00 PM
Acetone	ND	10		µg/L	1	9/23/2003 1:36:00 PM
Benzene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Bromodichloromethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Bromoform	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Bromomethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Carbon disulfide	ND	10		µg/L	1	9/23/2003 1:36:00 PM
Carbon tetrachloride	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Chlorobenzene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-01

Client Sample ID: RA 307
Collection Date: 9/15/2003 1:45:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Chloroform	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Chloromethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Dibromochloromethane	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Ethylbenzene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
m,p-Xylene	ND	10		µg/L	1	9/23/2003 1:36:00 PM
Methyl tert-butyl ether	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Methylene chloride	ND	10		µg/L	1	9/23/2003 1:36:00 PM
Styrene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Tetrachloroethene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Toluene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Trichloroethene	ND	5.0		µg/L	1	9/23/2003 1:36:00 PM
Vinyl acetate	ND	10		µg/L	1	9/23/2003 1:36:00 PM
Vinyl chloride	ND	2.0		µg/L	1	9/23/2003 1:36:00 PM
Xylenes, Total	ND	15		µg/L	1	9/23/2003 1:36:00 PM
Surr: 1,2-Dichloroethane-d4	89.6	70-130		%REC	1	9/23/2003 1:36:00 PM
Surr: 4-Bromofluorobenzene	92.9	70-130		%REC	1	9/23/2003 1:36:00 PM
Surr: Dibromofluoromethane	96.5	70-130		%REC	1	9/23/2003 1:36:00 PM
Surr: Toluene-d8	98.7	70-130		%REC	1	9/23/2003 1:36:00 PM
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **MG**
Chloride	153	2.50		mg/L	5	9/19/2003 6:46:00 PM
Fluoride	0.690	0.100		mg/L	1	9/18/2003 10:22:00 PM
Sulfate	1,090	50.0		mg/L	50	9/19/2003 7:19:00 PM
Surr: Dichloroacetic acid (surr)	107	80-120		%REC	50	9/19/2003 7:19:00 PM
Surr: Dichloroacetic acid (surr)	101	80-120		%REC	5	9/19/2003 6:46:00 PM
Surr: Dichloroacetic acid (surr)	91.0	80-120		%REC	1	9/18/2003 10:22:00 PM
ALKALINITY		**E310.1**				Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	175	5.00		mg/L	1	9/17/2003
Alkalinity, Carbonate (As CaCO3)	ND	5.00		mg/L	1	9/17/2003
Alkalinity, Hydroxide (As CaCO3)	ND	5.00		mg/L	1	9/17/2003
Alkalinity, Total (As CaCO3)	175	5.00		mg/L	1	9/17/2003
CYANIDE, TOTAL		**E335.3**				Analyst: **LMD**
Cyanide	ND	0.0200		mg/L	1	9/22/2003

Qualifiers:
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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-02

Client Sample ID: RA 4196
Collection Date: 9/15/2003 2:00:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **9/18/2003**	Analyst: **JCJ**
Mercury	ND	0.000200		mg/L	1	9/19/2003 2:19:38 PM
ICP METALS, TOTAL		**SW6020**			Prep Date: **9/23/2003**	Analyst: **ALR**
Aluminum	0.118	0.0100		mg/L	1	9/27/2003 12:38:00 AM
Arsenic	ND	0.00500		mg/L	1	9/27/2003 12:38:00 AM
Barium	0.0159	0.00500		mg/L	1	9/27/2003 12:38:00 AM
Beryllium	ND	0.00200		mg/L	1	9/27/2003 12:38:00 AM
Boron	0.158	0.0200		mg/L	1	9/27/2003 12:38:00 AM
Cadmium	ND	0.00100		mg/L	1	9/27/2003 12:38:00 AM
Calcium	432	25.0		mg/L	50	9/26/2003 11:31:00 PM
Chromium	0.00344	0.00200		mg/L	1	9/27/2003 12:38:00 AM
Cobalt	ND	0.00200		mg/L	1	9/27/2003 12:38:00 AM
Copper	0.0225	0.00200		mg/L	1	9/27/2003 12:38:00 AM
Iron	13.7	0.200		mg/L	1	9/27/2003 12:38:00 AM
Lead	0.00881	0.00500		mg/L	1	9/27/2003 12:38:00 AM
Magnesium	146	2.00		mg/L	10	9/26/2003 11:49:00 PM
Manganese	0.223	0.00500		mg/L	1	9/27/2003 12:38:00 AM
Nickel	0.0160	0.00500		mg/L	1	9/27/2003 12:38:00 AM
Potassium	2.17	0.200		mg/L	1	9/27/2003 12:38:00 AM
Selenium	ND	0.00500		mg/L	1	9/27/2003 12:38:00 AM
Silver	ND	0.00500		mg/L	1	9/27/2003 12:38:00 AM
Sodium	94.9	2.00		mg/L	10	9/26/2003 11:49:00 PM
Vanadium	0.00704	0.00500		mg/L	1	9/27/2003 12:38:00 AM
Zinc	0.372	0.0500		mg/L	10	9/26/2003 11:49:00 PM
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **9/18/2003**	Analyst: **HV**
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2003 3:15:00 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2003 3:15:00 PM
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
2-Methylphenol	ND	10		µg/L	1	9/24/2003 3:15:00 PM
2-Nitroaniline	ND	10		µg/L	1	9/24/2003 3:15:00 PM
2-Nitrophenol	ND	10		µg/L	1	9/24/2003 3:15:00 PM
3-Nitroaniline	ND	10		µg/L	1	9/24/2003 3:15:00 PM
4-Methylphenol	ND	10		µg/L	1	9/24/2003 3:15:00 PM
4-Nitroaniline	ND	10		µg/L	1	9/24/2003 3:15:00 PM
4-Nitrophenol	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Acenaphthene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Acenaphthylene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Aniline	ND	10		µg/L	1	9/24/2003 3:15:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-02

Client Sample ID: RA 4196
Collection Date: 9/15/2003 2:00:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Benz(a)anthracene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Benzidine	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Hexachloroethane	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Isophorone	ND	10		µg/L	1	9/24/2003 3:15:00 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2003 3:15:00 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2003 3:15:00 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Naphthalene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Nitrobenzene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Pentachlorophenol	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Phenanthrene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Phenol	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Pyrene	ND	10		µg/L	1	9/24/2003 3:15:00 PM
Surr:2,4,6-Tribromophenol	88.7	39-153		%REC	1	9/24/2003 3:15:00 PM
Surr:2-Fluorobiphenyl	80.5	40-147		%REC	1	9/24/2003 3:15:00 PM
Surr:2-Fluorophenol	37.7	21-100		%REC	1	9/24/2003 3:15:00 PM
Surr:4-Terphenyl-d14	79.3	39-141		%REC	1	9/24/2003 3:15:00 PM
Surr:Nitrobenzene-d5	80.5	37-140		%REC	1	9/24/2003 3:15:00 PM
Surr: Phenol-d6	21.7	11-100		%REC	1	9/24/2003 3:15:00 PM
VOLATILES BY GC/MS		**SW8260**				Analyst: **PC**
1,1,1-Trichloroethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
1,2-Dichloroethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
2-Butanone	ND	10		µg/L	1	9/23/2003 2:03:00 PM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	9/23/2003 2:03:00 PM
2-Hexanone	ND	10		µg/L	1	9/23/2003 2:03:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/23/2003 2:03:00 PM
Acetone	ND	10		µg/L	1	9/23/2003 2:03:00 PM
Benzene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Bromodichloromethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Bromoform	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Bromomethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Carbon disulfide	ND	10		µg/L	1	9/23/2003 2:03:00 PM
Carbon tetrachloride	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Chlorobenzene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-02

Client Sample ID: RA 4196
Collection Date: 9/15/2003 2:00:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Chloroform	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Chloromethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Dibromochloromethane	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Ethylbenzene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
m,p-Xylene	ND	10		µg/L	1	9/23/2003 2:03:00 PM
Methyl tert-butyl ether	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Methylene chloride	ND	10		µg/L	1	9/23/2003 2:03:00 PM
Styrene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Tetrachloroethene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Toluene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Trichloroethene	ND	5.0		µg/L	1	9/23/2003 2:03:00 PM
Vinyl acetate	ND	10		µg/L	1	9/23/2003 2:03:00 PM
Vinyl chloride	ND	2.0		µg/L	1	9/23/2003 2:03:00 PM
Xylenes, Total	ND	15		µg/L	1	9/23/2003 2:03:00 PM
Surr: 1,2-Dichloroethane-d4	86.9	70-130		%REC	1	9/23/2003 2:03:00 PM
Surr: 4-Bromofluorobenzene	92.3	70-130		%REC	1	9/23/2003 2:03:00 PM
Surr: Dibromofluoromethane	93.5	70-130		%REC	1	9/23/2003 2:03:00 PM
Surr: Toluene-d8	96.1	70-130		%REC	1	9/23/2003 2:03:00 PM
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **MG**
Chloride	198	5.00		mg/L	10	9/19/2003 7:51:00 PM
Fluoride	0.380	0.100		mg/L	1	9/18/2003 10:54:00 PM
Sulfate	1,450	50.0		mg/L	50	9/19/2003 8:24:00 PM
Surr: Dichloroacetic acid (surr)	105	80-120		%REC	50	9/19/2003 8:24:00 PM
Surr: Dichloroacetic acid (surr)	102	80-120		%REC	10	9/19/2003 7:51:00 PM
Surr: Dichloroacetic acid (surr)	113	80-120		%REC	1	9/18/2003 10:54:00 PM
ALKALINITY		**E310.1**				Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	210	5.00		mg/L	1	9/17/2003
Alkalinity, Carbonate (As CaCO3)	ND	5.00		mg/L	1	9/17/2003
Alkalinity, Hydroxide (As CaCO3)	ND	5.00		mg/L	1	9/17/2003
Alkalinity, Total (As CaCO3)	210	5.00		mg/L	1	9/17/2003
CYANIDE, TOTAL		**E335.3**				Analyst: **LMD**
Cyanide	ND	0.0200		mg/L	1	9/22/2003

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-03

Client Sample ID: RA 4798
Collection Date: 9/15/2003 2:15:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **9/18/2003**	Analyst: **JCJ**
Mercury	ND	0.000200		mg/L	1	9/19/2003 2:23:58 PM
ICP METALS, TOTAL		**SW6020**			Prep Date: **9/23/2003**	Analyst: **ALR**
Aluminum	ND	0.0100		mg/L	1	9/27/2003 12:43:00 AM
Arsenic	ND	0.00500		mg/L	1	9/27/2003 12:43:00 AM
Barium	0.00867	0.00500		mg/L	1	9/27/2003 12:43:00 AM
Beryllium	ND	0.00200		mg/L	1	9/27/2003 12:43:00 AM
Boron	0.210	0.0200		mg/L	1	9/27/2003 12:43:00 AM
Cadmium	ND	0.00100		mg/L	1	9/27/2003 12:43:00 AM
Calcium	439	25.0		mg/L	50	9/26/2003 11:36:00 PM
Chromium	ND	0.00200		mg/L	1	9/27/2003 12:43:00 AM
Cobalt	ND	0.00200		mg/L	1	9/27/2003 12:43:00 AM
Copper	0.00528	0.00200		mg/L	1	9/27/2003 12:43:00 AM
Iron	7.46	0.200		mg/L	1	9/27/2003 12:43:00 AM
Lead	ND	0.00500		mg/L	1	9/27/2003 12:43:00 AM
Magnesium	147	2.00		mg/L	10	9/26/2003 11:53:00 PM
Manganese	0.0378	0.00500		mg/L	1	9/27/2003 12:43:00 AM
Nickel	0.0151	0.00500		mg/L	1	9/27/2003 12:43:00 AM
Potassium	2.27	0.200		mg/L	1	9/27/2003 12:43:00 AM
Selenium	0.0113	0.00500		mg/L	1	9/27/2003 12:43:00 AM
Silver	ND	0.00500		mg/L	1	9/27/2003 12:43:00 AM
Sodium	110	2.00		mg/L	10	9/26/2003 11:53:00 PM
Vanadium	0.00605	0.00500		mg/L	1	9/27/2003 12:43:00 AM
Zinc	14.7	0.250		mg/L	50	9/26/2003 11:36:00 PM
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **9/18/2003**	Analyst: **HV**
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2003 3:43:00 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2003 3:43:00 PM
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
2-Methylphenol	ND	10		µg/L	1	9/24/2003 3:43:00 PM
2-Nitroaniline	ND	10		µg/L	1	9/24/2003 3:43:00 PM
2-Nitrophenol	ND	10		µg/L	1	9/24/2003 3:43:00 PM
3-Nitroaniline	ND	10		µg/L	1	9/24/2003 3:43:00 PM
4-Methylphenol	ND	10		µg/L	1	9/24/2003 3:43:00 PM
4-Nitroaniline	ND	10		µg/L	1	9/24/2003 3:43:00 PM
4-Nitrophenol	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Acenaphthene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Acenaphthylene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Aniline	ND	10		µg/L	1	9/24/2003 3:43:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-03

Client Sample ID: RA 4798
Collection Date: 9/15/2003 2:15:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Benz(a)anthracene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Benzidine	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Hexachloroethane	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Isophorone	ND	10		µg/L	1	9/24/2003 3:43:00 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2003 3:43:00 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2003 3:43:00 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Naphthalene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Nitrobenzene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Pentachlorophenol	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Phenanthrene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Phenol	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Pyrene	ND	10		µg/L	1	9/24/2003 3:43:00 PM
Surr:2,4,6-Tribromophenol	83.4	39-153		%REC	1	9/24/2003 3:43:00 PM
Surr:2-Fluorobiphenyl	80.1	40-147		%REC	1	9/24/2003 3:43:00 PM
Surr:2-Fluorophenol	39.0	21-100		%REC	1	9/24/2003 3:43:00 PM
Surr:4-Terphenyl-d14	94.6	39-141		%REC	1	9/24/2003 3:43:00 PM
Surr:Nitrobenzene-d5	82.8	37-140		%REC	1	9/24/2003 3:43:00 PM
Surr: Phenol-d6	22.9	11-100		%REC	1	9/24/2003 3:43:00 PM
VOLATILES BY GC/MS		**SW8260**				Analyst: **PC**
1,1,1-Trichloroethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
1,1-Dichloroethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
1,1-Dichloroethene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
1,2-Dichloroethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
2-Butanone	ND	10		µg/L	1	9/23/2003 3:28:00 PM
2-Chloroethyl vinyl ether	ND	10		µg/L	1	9/23/2003 3:28:00 PM
2-Hexanone	ND	10		µg/L	1	9/23/2003 3:28:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/23/2003 3:28:00 PM
Acetone	ND	10		µg/L	1	9/23/2003 3:28:00 PM
Benzene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Bromodichloromethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Bromoform	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Bromomethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Carbon disulfide	ND	10		µg/L	1	9/23/2003 3:28:00 PM
Carbon tetrachloride	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Chlorobenzene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM

Qualifiers:
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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *October 24, 2003*

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly
Lab ID: 0309140-03

Client Sample ID: RA 4798
Collection Date: 9/15/2003 2:15:00 PM
Matrix: WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Chloroform	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Chloromethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Dibromochloromethane	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Ethylbenzene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
m,p-Xylene	ND	10		µg/L	1	9/23/2003 3:28:00 PM
Methyl tert-butyl ether	7.2	5.0		µg/L	1	9/23/2003 3:28:00 PM
Methylene chloride	ND	10		µg/L	1	9/23/2003 3:28:00 PM
Styrene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Tetrachloroethene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Toluene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Trichloroethene	ND	5.0		µg/L	1	9/23/2003 3:28:00 PM
Vinyl acetate	ND	10		µg/L	1	9/23/2003 3:28:00 PM
Vinyl chloride	ND	2.0		µg/L	1	9/23/2003 3:28:00 PM
Xylenes, Total	ND	15		µg/L	1	9/23/2003 3:28:00 PM
Surr: 1,2-Dichloroethane-d4	87.5	70-130		%REC	1	9/23/2003 3:28:00 PM
Surr: 4-Bromofluorobenzene	92.7	70-130		%REC	1	9/23/2003 3:28:00 PM
Surr: Dibromofluoromethane	95.2	70-130		%REC	1	9/23/2003 3:28:00 PM
Surr: Toluene-d8	97.1	70-130		%REC	1	9/23/2003 3:28:00 PM
ANIONS BY ION CHROMATOGRAPHY		**E300**				Analyst: **MG**
Chloride	148	2.50		mg/L	5	9/19/2003 8:56:00 PM
Fluoride	0.700	0.100		mg/L	1	9/18/2003 11:27:00 PM
Sulfate	1,580	50.0		mg/L	50	9/25/2003 1:36:00 AM
Surr: Dichloroacetic acid (surr)	106	80-120		%REC	50	9/25/2003 1:36:00 AM
Surr: Dichloroacetic acid (surr)	101	80-120		%REC	5	9/19/2003 8:56:00 PM
Surr: Dichloroacetic acid (surr)	94.4	80-120		%REC	1	9/18/2003 11:27:00 PM
ALKALINITY		**E310.1**				Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	265	5.00		mg/L	1	9/17/2003
Alkalinity, Carbonate (As CaCO3)	ND	5.00		mg/L	1	9/17/2003
Alkalinity, Hydroxide (As CaCO3)	ND	5.00		mg/L	1	9/17/2003
Alkalinity, Total (As CaCO3)	265	5.00		mg/L	1	9/17/2003
CYANIDE, TOTAL		**E335.3**				Analyst: **LMD**
Cyanide	ND	0.0200		mg/L	1	9/22/2003

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e-Lab, Inc.

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

Date: *Oct 24 2003*

QC BATCH REPORT

Batch ID: **6671** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW1-091803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/19/03 13:42**
Client ID: Run ID: **MERCURY_030919A** SeqNo: **369769** Prep Date: **9/18/2003** 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: **GLCSW1-091803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/19/03 13:55**
Client ID: Run ID: **MERCURY_030919A** SeqNo: **369770** Prep Date: **9/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00488	0.00020	0.005	0	97.6	80-120	0			

LCS Sample ID: **GLCSDW1-091803** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/19/03 13:57**
Client ID: Run ID: **MERCURY_030919A** SeqNo: **369771** Prep Date: **9/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.005	0.00020	0.005	0	100	80-120	0	0	0	

MS Sample ID: **0309157-02AMS** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/19/03 14:06**
Client ID: Run ID: **MERCURY_030919A** SeqNo: **369774** Prep Date: **9/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00491	0.00020	0.005	-0.000022	98.6	80-120	0			

MSD Sample ID: **0309157-02AMSD** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/19/03 14:07**
Client ID: Run ID: **MERCURY_030919A** SeqNo: **369775** Prep Date: **9/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00492	0.00020	0.005	-0.000022	98.8	80-120	0.00491	0.203	20	

DUP Sample ID: **0309157-02ADUP** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/19/03 14:02**
Client ID: Run ID: **MERCURY_030919A** SeqNo: **369773** Prep Date: **9/18/2003** 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	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309140-01B 0309140-02B 0309140-03B

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B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **6721** InstrumentID: **ICP4500**

MBLK Sample ID: **MBLKW2-092303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/24/03 23:27**

Client ID: Run ID: **ICP4500_030924A** SeqNo: **371780** Prep Date: **9/23/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004602	0.010								J
Arsenic	ND	0.0050								
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Boron	ND	0.020								
Cadmium	ND	0.0010								
Calcium	ND	0.50								
Chromium	ND	0.0020								
Cobalt	ND	0.0020								
Copper	0.0007816	0.0020								J
Iron	0.07873	0.20								J
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	0.001196	0.0050								J
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

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CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **6721** InstrumentID: **ICP4500**

LCS Sample ID: **MLCSW2-092303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/24/03 23:31**

Client ID: Run ID: **ICP4500_030924A** SeqNo: **371781** Prep Date: **9/23/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09985	0.010	0.1	0	99.8	80-120	0			
Arsenic	0.09382	0.0050	0.1	0	93.8	80-120	0			
Barium	0.09531	0.0050	0.1	0	95.3	80-120	0			
Beryllium	0.1023	0.0020	0.1	0	102	80-120	0			
Boron	0.4767	0.020	0.5	0	95.3	80-120	0			
Cadmium	0.09672	0.0010	0.1	0	96.7	80-120	0			
Calcium	9.47	0.50	10	0	94.7	80-120	0			
Chromium	0.09467	0.0020	0.1	0	94.7	80-120	0			
Cobalt	0.09421	0.0020	0.1	0	94.2	80-120	0			
Copper	0.09472	0.0020	0.1	0	94.7	80-120	0			
Iron	9.324	0.20	10	0	93.2	80-120	0			
Lead	0.09745	0.0050	0.1	0	97.4	80-120	0			
Magnesium	9.548	0.20	10	0	95.5	80-120	0			
Manganese	0.09477	0.0050	0.1	0	94.8	80-120	0			
Nickel	0.09493	0.0050	0.1	0	94.9	80-120	0			
Potassium	9.926	0.20	10	0	99.3	80-120	0			
Selenium	0.09219	0.0050	0.1	0	92.2	80-120	0			
Silver	0.09674	0.0050	0.1	0	96.7	80-120	0			
Sodium	9.326	0.20	10	0	93.3	80-120	0			
Vanadium	0.09493	0.0050	0.1	0	94.9	80-120	0			
Zinc	0.09884	0.0050	0.1	0	98.8	80-120	0			

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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **6721** InstrumentID: **ICP4500**

MS Sample ID: **0309140-03BMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/27/03 0:02**

Client ID: **RA 4798** Run ID: **ICP4500_030926A** SeqNo: **372761** Prep Date: **9/23/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1091	0.10	0.1	0.009109	100	75-125	0			
Arsenic	0.09084	0.050	0.1	-0.007775	98.6	75-125	0			
Barium	0.1004	0.050	0.1	0.004933	95.5	75-125	0			
Beryllium	0.1087	0.020	0.1	-0.0001229	109	75-125	0			
Boron	0.6347	0.20	0.5	0.1406	98.8	75-125	0			
Cadmium	0.09547	0.010	0.1	-0.0002675	95.7	75-125	0			
Calcium	434.9	5.0	10	432.8	21	75-125	0			SO
Chromium	0.09784	0.020	0.1	0.001579	96.3	75-125	0			
Cobalt	0.0979	0.020	0.1	0.0007919	97.1	75-125	0			
Copper	0.09729	0.020	0.1	0.005108	92.2	75-125	0			
Iron	16.91	2.0	10	7.268	96.4	75-125	0			
Lead	0.09655	0.050	0.1	0.00121	95.3	75-125	0			
Magnesium	156.2	2.0	10	147.4	88	75-125	0			O
Manganese	0.1339	0.050	0.1	0.03671	97.2	75-125	0			
Nickel	0.1115	0.050	0.1	0.01635	95.1	75-125	0			
Potassium	11.36	2.0	10	2.032	93.3	75-125	0			
Selenium	0.09975	0.050	0.1	-0.007751	108	75-125	0			
Silver	0.09525	0.050	0.1	-0.0001711	95.4	75-125	0			
Sodium	118.8	2.0	10	110.1	87	75-125	0			O
Vanadium	0.1062	0.050	0.1	0.002091	104	75-125	0			
Zinc	13.94	0.050	0.1	13.95	-10	75-125	0			SEO

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CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **6721** InstrumentID: **ICP4500**

MSD Sample ID: **0309140-03BMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/27/03 0:07**
Client ID: **RA 4798** Run ID: **ICP4500_030926A** SeqNo: **372762** Prep Date: **9/23/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.114	0.10	0.1	0.009109	105	75-125	0.1091	4.39	25	
Arsenic	0.09577	0.050	0.1	-0.007775	104	75-125	0.09084	5.28	25	
Barium	0.1008	0.050	0.1	0.004933	95.9	75-125	0.1004	0.398	25	
Beryllium	0.1064	0.020	0.1	-0.0001229	107	75-125	0.1087	2.14	25	
Boron	0.6614	0.20	0.5	0.1406	104	75-125	0.6347	4.12	25	
Cadmium	0.09587	0.010	0.1	-0.0002675	96.1	75-125	0.09547	0.418	25	
Calcium	448.3	5.0	10	432.8	155	75-125	434.9	3.03	25	SO
Chromium	0.09908	0.020	0.1	0.001579	97.5	75-125	0.09784	1.26	25	
Cobalt	0.09942	0.020	0.1	0.0007919	98.6	75-125	0.0979	1.54	25	
Copper	0.0995	0.020	0.1	0.005108	94.4	75-125	0.09729	2.25	25	
Iron	17.25	2.0	10	7.268	99.8	75-125	16.91	1.99	25	
Lead	0.09556	0.050	0.1	0.00121	94.4	75-125	0.09655	1.03	25	
Magnesium	162.6	2.0	10	147.4	152	75-125	156.2	4.02	25	SO
Manganese	0.1355	0.050	0.1	0.03671	98.8	75-125	0.1339	1.19	25	
Nickel	0.112	0.050	0.1	0.01635	95.6	75-125	0.1115	0.447	25	
Potassium	11.49	2.0	10	2.032	94.6	75-125	11.36	1.14	25	
Selenium	0.1119	0.050	0.1	-0.007751	120	75-125	0.09975	11.5	25	
Silver	0.09553	0.050	0.1	-0.0001711	95.7	75-125	0.09525	0.294	25	
Sodium	122.5	2.0	10	110.1	124	75-125	118.8	3.07	25	O
Vanadium	0.1119	0.050	0.1	0.002091	110	75-125	0.1062	5.23	25	
Zinc	14.24	0.050	0.1	13.95	290	75-125	13.94	2.13	25	SEO

DUP Sample ID: **0309140-03BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/26/03 23:40**
Client ID: **RA 4798** Run ID: **ICP4500_030926A** SeqNo: **372756** Prep Date: **9/23/2003** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	457.4	25	0	0	0	0-0	439.2	4.06	25	
Zinc	15.2	0.25	0	0	0	0-0	14.66	3.62	25	

DUP Sample ID: **0309140-03BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/26/03 23:58**
Client ID: **RA 4798** Run ID: **ICP4500_030926A** SeqNo: **372760** Prep Date: **9/23/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Magnesium	153.1	2.0	0	0	0	0-0	147.4	3.79	25	
Sodium	112.9	2.0	0	0	0	0-0	110.1	2.51	25	

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CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **6721** InstrumentID: **ICP4500**

DUP Sample ID: **0309140-03BDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/27/03 0:47**

Client ID: **RA 4798** Run ID: **ICP4500_030926A** SeqNo: **372770** Prep Date: **9/23/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003634	0.010	0	0	0	0-0	0.003888	0	25	J
Arsenic	ND	0.0050	0	0	0	0-0	-0.001894	0	25	
Barium	0.008849	0.0050	0	0	0	0-0	0.008668	2.07	25	
Beryllium	ND	0.0020	0	0	0	0-0	-0.00001611	0	25	
Boron	0.215	0.020	0	0	0	0-0	0.2096	2.54	25	
Cadmium	ND	0.0010	0	0	0	0-0	-0.00000893	0	25	
Chromium	ND	0.0020	0	0	0	0-0	0.0004228	0	25	
Cobalt	0.0009951	0.0020	0	0	0	0-0	0.0009486	0	25	J
Copper	0.005499	0.0020	0	0	0	0-0	0.005279	4.08	25	
Iron	7.69	0.20	0	0	0	0-0	7.458	3.06	25	
Lead	0.001238	0.0050	0	0	0	0-0	0.001286	0	25	J
Manganese	0.03825	0.0050	0	0	0	0-0	0.03782	1.13	25	
Nickel	0.01552	0.0050	0	0	0	0-0	0.01512	2.61	25	
Potassium	2.334	0.20	0	0	0	0-0	2.267	2.91	25	
Selenium	0.01205	0.0050	0	0	0	0-0	0.01134	6.07	25	
Silver	ND	0.0050	0	0	0	0-0	-1.66E-07	0	25	
Vanadium	0.00607	0.0050	0	0	0	0-0	0.006048	0.363	25	

The following samples were analyzed in this batch: 0309140-01B 0309140-02B 0309140-03B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
- Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **6682** InstrumentID: **SV-3**

MBLK Sample ID: **SBLKW2-030918** Test Code: **SW8270** Units: **µg/L** Analysis Date: **09/19/03 15:12**

Client ID: Run ID: **SV-3_030919A** SeqNo: **370448** Prep Date: **9/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
3-Nitroaniline	ND	10								
4-Methylphenol	ND	10								
4-Nitroaniline	ND	10								
4-Nitrophenol	ND	10								
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Benz(a)anthracene	ND	10								
Benzidine	ND	10								
Hexachloroethane	ND	10								
[illegible]deno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
Nitrobenzene	ND	10								
Pentachlorophenol	ND	10								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr: 2,4,6-Tribromophenol	86.36	0	100	0	86.4	39-153	0			
Surr: 2-Fluorobiphenyl	79.27	0	100	0	79.3	40-147	0			
Surr: 2-Fluorophenol	61.02	0	100	0	61	21-100	0			
Surr:4-Terphenyl-d14	98.16	0	100	0	98.2	39-141	0			
Surr: Nitrobenzene-d5	85.74	0	100	0	85.7	37-140	0			
Surr: Phenol-d6	40.39	0	100	0	40.4	11-100	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
[illegible] - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **6682** InstrumentID: **SV-3**

LCS Sample ID: **SLCSW2-030918** Test Code: **SW8270** Units: **µg/L** Analysis Date: **09/19/03 15:40**

Client ID: Run ID: **SV-3_030919A** SeqNo: **370449** Prep Date: **9/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	38.68	10	50	0	77.4	50-115	0			
2,4,5-Trichlorophenol	89.69	10	100	0	89.7	72-118	0			
2,4,6-Trichlorophenol	88.29	10	100	0	88.3	72-117	0			
2-Methylnaphthalene	39.72	10	50	0	79.4	47-122	0			
2-Methylphenol	81.64	10	100	0	81.6	51-115	0			
2-Nitroaniline	46.36	10	50	0	92.7	73-119	0			
2-Nitrophenol	86.55	10	100	0	86.5	60-119	0			
3-Nitroaniline	40.09	10	50	0	80.2	61-118	0			
4-Methylphenol	116.5	10	150	0	77.6	44-115	0			
4-Nitroaniline	42.64	10	50	0	85.3	61-123	0			
4-Nitrophenol	46.59	10	100	0	46.6	17-100	0			
Acenaphthene	43.25	10	50	0	86.5	68-115	0			
Acenaphthylene	42.07	10	50	0	84.1	67-116	0			
Anthracene	46.19	10	50	0	92.4	72-124	0			
Benz(a)anthracene	45.64	10	50	0	91.3	55-131	0			
Benzidine	7.229	10	50	0	14.5	10-115	0			J
Hexachloroethane	39.02	10	50	0	78	46-115	0			
Indeno(1,2,3-cd)pyrene	41.56	10	50	0	83.1	42-123	0			
Isophorone	47.18	10	50	0	94.4	63-117	0			
N-Nitrosodi-n-propylamine	47.49	10	50	0	95	67-115	0			
N-Nitrosodimethylamine	27.52	10	50	0	55	28-115	0			
N-Nitrosodiphenylamine	53.77	10	50	0	108	72-144	0			
Naphthalene	41.02	10	50	0	82	52-115	0			
Nitrobenzene	44.71	10	50	0	89.4	65-115	0			
Pentachlorophenol	90.15	10	100	0	90.2	65-123	0			
Phenanthrene	44.73	10	50	0	89.5	69-119	0			
Phenol	46.31	10	100	0	46.3	16-115	0			
Pyrene	49.66	10	50	0	99.3	51-130	0			
Surr: 2,4,6-Tribromophenol	84.45	0	100	0	84.5	39-153	0			
Surr: 2-Fluorobiphenyl	84.1	0	100	0	84.1	40-147	0			
Surr: 2-Fluorophenol	62.91	0	100	0	62.9	21-100	0			
Surr:4-Terphenyl-d14	103.6	0	100	0	104	39-141	0			
Surr:Nitrobenzene-d5	89.68	0	100	0	89.7	37-140	0			
Surr: Phenol-d6	43.94	0	100	0	43.9	11-100	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **6682** InstrumentID: **SV-3**

LCSD Sample ID: **SLCSDW2-030918** Test Code: **SW8270** Units: **µg/L** Analysis Date: **09/19/03 16:07**

Client ID: Run ID: **SV-3_030919A** SeqNo: **370450** Prep Date: **9/18/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	40.02	10	50	0	80	50-115	38.68	3.4	30	
2,4,5-Trichlorophenol	89.61	10	100	0	89.6	72-118	89.69	0.0806	30	
2,4,6-Trichlorophenol	89.92	10	100	0	89.9	72-117	88.29	1.82	30	
2-Methylnaphthalene	40.3	10	50	0	80.6	47-122	39.72	1.45	30	
2-Methylphenol	83.77	10	100	0	83.8	51-115	81.64	2.58	30	
2-Nitroaniline	46.76	10	50	0	93.5	73-119	46.36	0.849	30	
2-Nitrophenol	86.69	10	100	0	86.7	60-119	86.55	0.17	30	
3-Nitroaniline	40.92	10	50	0	81.8	61-118	40.09	2.05	30	
4-Methylphenol	114.2	10	150	0	76.1	44-115	116.5	1.96	30	
4-Nitroaniline	42.77	10	50	0	85.5	61-123	42.64	0.282	30	
4-Nitrophenol	47.62	10	100	0	47.6	17-100	46.59	2.18	30	
Acenaphthene	43.73	10	50	0	87.5	68-115	43.25	1.11	30	
Acenaphthylene	43.06	10	50	0	86.1	67-116	42.07	2.32	30	
Anthracene	46.12	10	50	0	92.2	72-124	46.19	0.167	30	
Benz(a)anthracene	45.49	10	50	0	91	55-131	45.64	0.325	30	
Benzidine	7.68	10	50	0	15.4	10-115	7.229	0	30	J
Hexachloroethane	42.72	10	50	0	85.4	46-115	39.02	9.04	30	
Indeno(1,2,3-cd)pyrene	42.44	10	50	0	84.9	42-123	41.56	2.08	30	
Isophorone	45.54	10	50	0	91.1	63-117	47.18	3.53	30	
N-Nitrosodi-n-propylamine	47.07	10	50	0	94.1	67-115	47.49	0.885	30	
N-Nitrosodimethylamine	28.46	10	50	0	56.9	28-115	27.52	3.36	30	
N-Nitrosodiphenylamine	52.26	10	50	0	105	72-144	53.77	2.85	30	
Naphthalene	42.31	10	50	0	84.6	52-115	41.02	3.09	30	
Nitrobenzene	45.18	10	50	0	90.4	65-115	44.71	1.05	30	
Pentachlorophenol	91.74	10	100	0	91.7	65-123	90.15	1.75	30	
Phenanthrene	43.99	10	50	0	88	69-119	44.73	1.68	30	
Phenol	45.31	10	100	0	45.3	16-115	46.31	2.2	30	
Pyrene	48.72	10	50	0	97.4	51-130	49.66	1.92	30	
Surr: 2,4,6-Tribromophenol	85.35	0	100	0	85.4	39-153	84.45	1.06	30	
Surr: 2-Fluorobiphenyl	84.66	0	100	0	84.7	40-147	84.1	0.666	30	
Surr: 2-Fluorophenol	61.45	0	100	0	61.4	21-100	62.91	2.36	30	
Surr:4-Terphenyl-d14	100.8	0	100	0	101	39-141	103.6	2.72	30	
Surr: Nitrobenzene-d5	87.37	0	100	0	87.4	37-140	89.68	2.61	30	
Surr: Phenol-d6	42.4	0	100	0	42.4	11-100	43.94	3.56	30	

The following samples were analyzed in this batch: 0309140-01E 0309140-02E 0309140-03E

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16298** InstrumentID: **VOA_I**

MBLK Sample ID: **VBLKW-0923** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/23/03 12:14**

Client ID: Run ID: **VOA_I_030923A** SeqNo: **371281** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
2-Butanone	ND	10								
2-Chloroethyl vinyl ether	ND	10								
2-Hexanone	ND	10								
4-Methyl-2-pentanone	ND	10								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	10								
Carbontetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylene chloride	ND	10								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,3-Dichloropropene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl acetate	ND	10								
Vinyl chloride	ND	2.0								
Xylenes, Total	ND	15								
Surr:1,2-Dichloroethane-d4	45.56	5.0	50	0	91.1	70-130	0			
Surr:4-Bromofluorobenzene	45.74	5.0	50	0	91.5	70-130	0			
Surr:Dibromofluoromethane	48.24	5.0	50	0	96.5	70-130	0			
Surr: Toluene-d8	47.33	5.0	50	0	94.7	70-130	0			

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J - Analyte detected below quantitation limits
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16298** InstrumentID: **VOA_I**

LCS Sample ID: **VLCSW-0923** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/23/03 11:20**

Client ID: Run ID: **VOA_I_030923A** SeqNo: **371279** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.01	5.0	50	0	96	75-118	0			
1,1,2,2-Tetrachloroethane	45.59	5.0	50	0	91.2	79-120	0			
1,1,2-Trichloroethane	48.17	5.0	50	0	96.3	81-119	0			
1,1-Dichloroethane	47.74	5.0	50	0	95.5	80-120	0			
1,1-Dichloroethene	51.53	5.0	50	0	103	80-120	0			
1,2-Dichloroethane	48.07	5.0	50	0	96.1	80-120	0			
2-Butanone	95.03	10	100	0	95	70-130	0			
2-Chloroethyl vinyl ether	108.7	10	100	0	109	72-120	0			
2-Hexanone	80.67	10	100	0	80.7	70-130	0			
4-Methyl-2-pentanone	82.36	10	100	0	82.4	78-120	0			
Acetone	109.6	10	100	0	110	60-135	0			
Benzene	47.06	5.0	50	0	94.1	82-119	0			
Bromodichloromethane	49.71	5.0	50	0	99.4	81-119	0			
Bromoform	47.1	5.0	50	0	94.2	80-120	0			
Bromomethane	56.91	5.0	50	0	114	75-130	0			
Carbon disulfide	99.68	10	100	0	99.7	78-120	0			
Carbon tetrachloride	46.44	5.0	50	0	92.9	77-120	0			
Chlorobenzene	48.22	5.0	50	0	96.4	82-118	0			
Chloroethane	49.9	5.0	50	0	99.8	78-122	0			
Chloroform	50.42	5.0	50	0	101	78-120	0			
Chloromethane	46.4	5.0	50	0	92.8	75-125	0			
cis-1,3-Dichloropropene	48.65	5.0	50	0	97.3	81-120	0			
Dibromochloromethane	49.9	5.0	50	0	99.8	81-118	0			
Ethylbenzene	47.94	5.0	50	0	95.9	82-120	0			
m,p-Xylene	96.01	10	100	0	96	82-122	0			
Methyl tert-butyl ether	45.44	5.0	50	0	90.9	79-120	0			
Methylene chloride	50.07	10	50	0	100	80-122	0			
Styrene	49.63	5.0	50	0	99.3	82-121	0			
Tetrachloroethene	47	5.0	50	0	94	79-118	0			
Toluene	47.2	5.0	50	0	94.4	81-119	0			
trans-1,3-Dichloropropene	50.14	5.0	50	0	100	82-121	0			
Trichloroethene	48.04	5.0	50	0	96.1	78-118	0			
Vinyl acetate	95.93	10	100	0	95.9	75-120	0			
Vinyl chloride	49.52	2.0	50	0	99	73-127	0			
Xylenes, Total	144.3	15	150	0	96.2	80-120	0			
Surr:1,2-Dichloroethane-d4	44.77	5.0	50	0	89.5	70-130	0			
Surr:4-Bromofluorobenzene	46.65	5.0	50	0	93.3	70-130	0			
Surr:Dibromofluoromethane	47.38	5.0	50	0	94.8	70-130	0			
Surr:Toluene-d8	46.75	5.0	50	0	93.5	70-130	0			

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J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16298** InstrumentID: **VOA_I**

LCSD Sample ID: **VLCSWD-0923** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/23/03 11:47**

Client ID: Run ID: **VOA_I_030923A** SeqNo: **371280** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.35	5.0	50	0	98.7	75-118	48.01	2.75	20	
1,1,2,2-Tetrachloroethane	47.35	5.0	50	0	94.7	79-120	45.59	3.79	20	
1,1,2-Trichloroethane	50.33	5.0	50	0	101	81-119	48.17	4.4	20	
1,1-Dichloroethane	48.73	5.0	50	0	97.5	80-120	47.74	2.05	20	
1,1-Dichloroethene	52.4	5.0	50	0	105	80-120	51.53	1.68	20	
1,2-Dichloroethane	48.9	5.0	50	0	97.8	80-120	48.07	1.72	20	
2-Butanone	98.22	10	100	0	98.2	70-130	95.03	3.31	20	
2-Chloroethyl vinyl ether	110.4	10	100	0	110	72-120	108.7	1.63	20	
2-Hexanone	79.67	10	100	0	79.7	70-130	80.67	1.25	20	
4-Methyl-2-pentanone	86.69	10	100	0	86.7	78-120	82.36	5.12	20	
Acetone	114.2	10	100	0	114	60-135	109.6	4.15	20	
Benzene	47.94	5.0	50	0	95.9	82-119	47.06	1.85	20	
Bromodichloromethane	50.22	5.0	50	0	100	81-119	49.71	1.04	20	
Bromoform	50.1	5.0	50	0	100	80-120	47.1	6.17	20	
Bromomethane	56.13	5.0	50	0	112	75-130	56.91	1.39	20	
Carbon disulfide	100.7	10	100	0	101	78-120	99.68	1.04	20	
Carbon tetrachloride	47.29	5.0	50	0	94.6	77-120	46.44	1.82	20	
Chlorobenzene	49.29	5.0	50	0	98.6	82-118	48.22	2.2	20	
Chloroethane	50.1	5.0	50	0	100	78-122	49.9	0.408	20	
Chloroform	50.91	5.0	50	0	102	78-120	50.42	0.954	20	
Chloromethane	44.8	5.0	50	0	89.6	75-125	46.4	3.51	20	
cis-1,3-Dichloropropene	48.82	5.0	50	0	97.6	81-120	48.65	0.358	20	
Dibromochloromethane	51.81	5.0	50	0	104	81-118	49.9	3.76	20	
Ethylbenzene	49.1	5.0	50	0	98.2	82-120	47.94	2.37	20	
m,p-Xylene	98.87	10	100	0	98.9	82-122	96.01	2.94	20	
Methyl tert-butyl ether	46.58	5.0	50	0	93.2	79-120	45.44	2.47	20	
Methylene chloride	51.16	10	50	0	102	80-122	50.07	2.15	20	
Styrene	51.66	5.0	50	0	103	82-121	49.63	4	20	
Tetrachloroethene	48.49	5.0	50	0	97	79-118	47	3.13	20	
Toluene	48.88	5.0	50	0	97.8	81-119	47.2	3.49	20	
trans-1,3-Dichloropropene	51.28	5.0	50	0	103	82-121	50.14	2.25	20	
Trichloroethene	49.1	5.0	50	0	98.2	78-118	48.04	2.19	20	
Vinyl acetate	99.06	10	100	0	99.1	75-120	95.93	3.21	20	
Vinyl chloride	49.07	2.0	50	0	98.1	73-127	49.52	0.908	20	
Xylenes, Total	149.3	15	150	0	99.5	80-120	144.3	3.41	20	
Surr: 1,2-Dichloroethane-d4	45.06	5.0	50	0	90.1	70-130	44.77	0.632	20	
Surr: 4-Bromofluorobenzene	47.53	5.0	50	0	95.1	70-130	46.65	1.88	20	
Surr: Dibromofluoromethane	48.07	5.0	50	0	96.1	70-130	47.38	1.44	20	
Surr: Toluene-d8	47.39	5.0	50	0	94.8	70-130	46.75	1.36	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16298** InstrumentID: **VOA_I**

MS Sample ID: **0309140-02AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/23/03 14:34**

Client ID: **RA 4196** Run ID: **VOA_I_030923A** SeqNo: **371285** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	45.7	5.0	50	0	91.4	75-125	0			
1,1,2,2-Tetrachloroethane	45.8	5.0	50	0	91.6	75-125	0			
1,1,2-Trichloroethane	47.68	5.0	50	0	95.4	75-125	0			
1,1-Dichloroethane	47.5	5.0	50	0	95	75-125	0			
1,1-Dichloroethene	51.09	5.0	50	0	102	65-130	0			
1,2-Dichloroethane	44.6	5.0	50	0	89.2	70-130	0			
2-Butanone	87.25	10	100	0	87.3	64-128	0			
2-Chloroethyl vinyl ether	12.08	10	100	0	12.1	75-125	0			S
2-Hexanone	80.47	10	100	0	80.5	72-124	0			
4-Methyl-2-pentanone	88.21	10	100	0	88.2	75-125	0			
Acetone	76.53	10	100	0	76.5	60-130	0			
Benzene	47.52	5.0	50	0	95	76-127	0			
Bromodichloromethane	45.7	5.0	50	0	91.4	75-125	0			
Bromoform	45.14	5.0	50	0	90.3	75-125	0			
Bromomethane	46	5.0	50	0	92	75-125	0			
Carbon disulfide	101.9	10	100	0	102	75-125	0			
Carbontetrachloride	44.05	5.0	50	0	88.1	70-130	0			
Chlorobenzene	46.34	5.0	50	0	92.7	75-126	0			
Chloroethane	52.26	5.0	50	0	105	70-130	0			
Chloroform	47.07	5.0	50	0	94.1	75-125	0			
Chloromethane	42.64	5.0	50	0	85.3	75-125	0			
cis-1,3-Dichloropropene	46.55	5.0	50	0	93.1	75-125	0			
Dibromochloromethane	46.67	5.0	50	0	93.3	75-125	0			
Ethylbenzene	46.61	5.0	50	0	93.2	75-125	0			
m,p-Xylene	93.4	10	100	0	93.4	75-125	0			
Methyl tert-butyl ether	49.42	5.0	50	4.495	89.8	75-125	0			
Methylene chloride	48.55	10	50	0	97.1	75-125	0			
Styrene	47.96	5.0	50	0	95.9	75-125	0			
Tetrachloroethene	45.42	5.0	50	0	90.8	75-125	0			
Toluene	47.47	5.0	50	0	94.9	76-125	0			
trans-1,3-Dichloropropene	46.94	5.0	50	0	93.9	70-130	0			
Trichloroethene	45.71	5.0	50	0	91.4	71-120	0			
Vinyl acetate	98.54	10	100	0	98.5	75-125	0			
Vinyl chloride	52.45	2.0	50	0	105	60-135	0			
Xylenes, Total	140.4	15	150	0	93.6	75-125	0			
Surr:1,2-Dichloroethane-d4	43.46	5.0	50	0	86.9	70-130	0			
Surr:4-Bromofluorobenzene	47.88	5.0	50	0	95.8	70-130	0			
Surr:Dibromofluoromethane	46.29	5.0	50	0	92.6	70-130	0			
Surr: Toluene-d8	47.59	5.0	50	0	95.2	70-130	0			

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16298** InstrumentID: **VOA_I**

MSD Sample ID: **0309140-02AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/23/03 15:01**

Client ID: **RA 4196** Run ID: **VOA_I_030923A** SeqNo: **371286** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.57	5.0	50	0	97.1	75-125	45.7	6.1	20	
1,1,2,2-Tetrachloroethane	47.36	5.0	50	0	94.7	75-125	45.8	3.33	20	
1,1,2-Trichloroethane	49.48	5.0	50	0	99	75-125	47.68	3.71	20	
1,1-Dichloroethane	50.8	5.0	50	0	102	75-125	47.5	6.7	20	
1,1-Dichloroethene	54.69	5.0	50	0	109	65-130	51.09	6.81	20	
1,2-Dichloroethane	47.03	5.0	50	0	94.1	70-130	44.6	5.3	20	
2-Butanone	90.08	10	100	0	90.1	64-128	87.25	3.19	20	
2-Chloroethyl vinyl ether	13.27	10	100	0	13.3	75-125	12.08	9.45	20	S
2-Hexanone	81.51	10	100	0	81.5	72-124	80.47	1.29	20	
4-Methyl-2-pentanone	88.54	10	100	0	88.5	75-125	88.21	0.376	20	
Acetone	80.15	10	100	0	80.2	60-130	76.53	4.62	20	
Benzene	50.95	5.0	50	0	102	76-127	47.52	6.98	20	
Bromodichloromethane	49.13	5.0	50	0	98.3	75-125	45.7	7.23	20	
Bromoform	47.65	5.0	50	0	95.3	75-125	45.14	5.39	20	
Bromomethane	45.2	5.0	50	0	90.4	75-125	46	1.75	20	
Carbon disulfide	108.6	10	100	0	109	75-125	101.9	6.3	20	
Carbon tetrachloride	47.52	5.0	50	0	95	70-130	44.05	7.57	20	
Chlorobenzene	49.92	5.0	50	0	99.8	75-126	46.34	7.45	20	
Chloroethane	54.99	5.0	50	0	110	70-130	52.26	5.1	20	
Chloroform	49.91	5.0	50	0	99.8	75-125	47.07	5.86	20	
Chloromethane	45.03	5.0	50	0	90.1	75-125	42.64	5.44	20	
cis-1,3-Dichloropropene	49.04	5.0	50	0	98.1	75-125	46.55	5.2	20	
Dibromochloromethane	49.67	5.0	50	0	99.3	75-125	46.67	6.22	20	
Ethylbenzene	51.34	5.0	50	0	103	75-125	46.61	9.66	20	
m,p-Xylene	103.5	10	100	0	103	75-125	93.4	10.3	20	
Methyl tert-butyl ether	50.95	5.0	50	4.495	92.9	75-125	49.42	3.06	20	
Methylene chloride	52.04	10	50	0	104	75-125	48.55	6.94	20	
Styrene	52.05	5.0	50	0	104	75-125	47.96	8.18	20	
Tetrachloroethene	49.61	5.0	50	0	99.2	75-125	45.42	8.83	20	
Toluene	51.01	5.0	50	0	102	76-125	47.47	7.2	20	
trans-1,3-Dichloropropene	49.8	5.0	50	0	99.6	70-130	46.94	5.91	20	
Trichloroethene	49.41	5.0	50	0	98.8	71-120	45.71	7.78	20	
Vinyl acetate	103.5	10	100	0	103	75-125	98.54	4.89	20	
Vinyl chloride	54.2	2.0	50	0	108	60-135	52.45	3.28	20	
Xylenes, Total	154.5	15	150	0	103	75-125	140.4	9.56	20	
Surr: 1,2-Dichloroethane-d4	42.95	5.0	50	0	85.9	70-130	43.46	1.18	20	
Surr: 4-Bromofluorobenzene	48.5	5.0	50	0	97	70-130	47.88	1.27	20	
Surr: Dibromofluoromethane	46.38	5.0	50	0	92.8	70-130	46.29	0.183	20	
Surr: Toluene-d8	48.89	5.0	50	0	97.8	70-130	47.59	2.69	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309140-01A 0309140-02A 0309140-03A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16186** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-091703** Test Code: **E310.1** Units: **mg/L** Analysis Date: **09/17/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0309** SeqNo: **368626** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0								
Alkalinity, Carbonate (As CaCO3)	ND	5.0								
Alkalinity, Hydroxide (As CaCO3)	ND	5.0								
Alkalinity, Total (As CaCO3)	ND	5.0								

LCS Sample ID: **WLCSW1-091703** Test Code: **E310.1** Units: **mg/L** Analysis Date: **09/17/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0309** SeqNo: **368627** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1000	5.0	1000	0	100	80-120	0			

DUP Sample ID: **0309097-03E DUP** Test Code: **E310.1** Units: **mg/L** Analysis Date: **09/17/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0309** SeqNo: **368641** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	465.1	5.0	0	0	0	0-0	470.1	1.07	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	465.1	5.0	0	0	0	0-0	470.1	1.07	20	

The following samples were analyzed in this batch: 0309140-01C 0309140-02C 0309140-03C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
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CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: R16221 InstrumentID: IC201

MBLK Sample ID: **WBLKW1-091803** Test Code: **E300** Units: **mg/L** Analysis Date: **09/18/03 13:41**
Client ID: Run ID: **IC201_030918A** SeqNo: **369529** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	1.0								
Surr: Dichloroacetic acid (surr)	ND	0.10								

LCS Sample ID: **WLCSW1-091803** Test Code: **E300** Units: **mg/L** Analysis Date: **09/18/03 14:14**
Client ID: Run ID: **IC201_030918A** SeqNo: **369530** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.89	0.50	10	0	98.9	80-120	0			
Fluoride	1.88	0.10	2	0	94	80-120	0			
Sulfate	10.43	1.0	10	0	104	80-120	0			
Surr: Dichloroacetic acid (surr)	2.12	0.10	2	0	106	80-120	0			

LCSD Sample ID: **WLCSDW1-09180** Test Code: **E300** Units: **mg/L** Analysis Date: **09/18/03 14:46**
Client ID: Run ID: **IC201_030918A** SeqNo: **369531** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.86	0.50	10	0	98.6	80-120	9.89	0.304	20	
Fluoride	1.91	0.10	2	0	95.5	80-120	1.88	1.58	20	
Sulfate	10.4	1.0	10	0	104	80-120	10.43	0.288	20	
Surr: Dichloroacetic acid (surr)	2.13	0.10	2	0	106	80-120	2.12	0.471	20	

MS Sample ID: **0309157-02BMS** Test Code: **E300** Units: **mg/L** Analysis Date: **09/18/03 16:24**
Client ID: Run ID: **IC201_030918A** SeqNo: **369534** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.73	0.50	10	0	97.3	75-125	0			
Fluoride	2.01	0.10	2	0	100	75-125	0			
Sulfate	10.24	1.0	10	0	102	75-125	0			
Surr: Dichloroacetic acid (surr)	4.93	0.10	5	0	98.6	80-120	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16221** InstrumentID: **IC201**

MSD Sample ID: **0309157-02BMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **09/18/03 16:56**
Client ID: Run ID: **IC201_030918A** SeqNo: **369535** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.65	0.50	10	0	96.5	75-125	9.73	0.826	20	
Fluoride	1.92	0.10	2	0	96	75-125	2.01	4.58	20	
Sulfate	10.23	1.0	10	0	102	75-125	10.24	0.0977	20	
Surr: Dichloroacetic acid (surr)	4.39	0.10	5	0	87.8	80-120	4.93	11.6	20	

DUP Sample ID: **0309157-02BDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/18/03 15:51**
Client ID: Run ID: **IC201_030918A** SeqNo: **369533** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	ND	0.10	0	0	0	0-0	0	0	20	
Surr: Dichloroacetic acid (surr)	5.7	0.10	5	0	114	80-120	5.71	0.175	20	

DUP Sample ID: **0309167-03CDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/18/03 20:44**
Client ID: Run ID: **IC201_030918A** SeqNo: **369542** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Dichloroacetic acid (surr)	5.17	0.10	5	0	103	80-120	4.58	12.1	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309140-01C 0309140-02C 0309140-03C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16254** InstrumentID: **UV-2101PC**

MBLK Sample ID: **WMBW1-092203** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/22/03 0:00**
Client ID: Run ID: **UV-2101PC_030922A** SeqNo: **370208** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020								

LCS Sample ID: **WLCSW1-092203** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/22/03 0:00**
Client ID: Run ID: **UV-2101PC_030922A** SeqNo: **370209** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.1994	0.020	0.2	0	99.7	80-120	0			

MS Sample ID: **0309140-01DMS** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/22/03 0:00**
Client ID: **RA 307** Run ID: **UV-2101PC_030922A** SeqNo: **370218** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2068	0.020	0.2	0.002	102	75-125	0			

MSD Sample ID: **0309140-01DMSD** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/22/03 0:00**
Client ID: **RA 307** Run ID: **UV-2101PC_030922A** SeqNo: **370219** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2014	0.020	0.2	0.002	99.7	75-125	0.2068	2.65	25	

DUP Sample ID: **0309140-01D DUP** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/22/03 0:00**
Client ID: **RA 307** Run ID: **UV-2101PC_030922A** SeqNo: **370217** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	ND	0.020	0	0	0	0-0	0.002	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309140-01D 0309140-02D 0309140-03D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
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CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16282** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-091903** Test Code: **E300** Units: **mg/L** Analysis Date: **09/19/03 12:16**
Client ID: Run ID: **IC201_030919A** SeqNo: **370892** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	1.0								
Surr: Dichloroacetic acid (surr)	ND	0.10								

LCS Sample ID: **WLCSW1-091903** Test Code: **E300** Units: **mg/L** Analysis Date: **09/19/03 12:49**
Client ID: Run ID: **IC201_030919A** SeqNo: **370893** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.95	0.50	10	0	99.5	80-120	0			
Fluoride	1.93	0.10	2	0	96.5	80-120	0			
Sulfate	10.42	1.0	10	0	104	80-120	0			
Surr: Dichloroacetic acid (surr)	2.17	0.10	2	0	108	80-120	0			

LCSD Sample ID: **WLCSDW1-09190** Test Code: **E300** Units: **mg/L** Analysis Date: **09/19/03 13:21**
Client ID: Run ID: **IC201_030919A** SeqNo: **370894** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.83	0.50	10	0	98.3	80-120	9.95	1.21	20	
Fluoride	1.89	0.10	2	0	94.5	80-120	1.93	2.09	20	
Sulfate	10.4	1.0	10	0	104	80-120	10.42	0.192	20	
Surr: Dichloroacetic acid (surr)	2.06	0.10	2	0	103	80-120	2.17	5.2	20	

MS Sample ID: **0309185-01AMS** Test Code: **E300** Units: **mg/L** Analysis Date: **09/19/03 14:59**
Client ID: Run ID: **IC201_030919A** SeqNo: **370897** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	91.52	0.50	10	81.37	101	75-125	0			EO
Fluoride	39.19	0.10	2	37.96	61.5	75-125	0			SEO
Sulfate	3033	1.0	10	3082	-494	75-125	0			SEO
Surr: Dichloroacetic acid (surr)	2.92	0.10	5	0	58.4	80-120	0			S

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16282** InstrumentID: **IC201**

MSD Sample ID: **0309185-01AMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **09/19/03 15:31**
Client ID: Run ID: **IC201_030919A** SeqNo: **370898** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	91	0.50	10	81.37	96.3	75-125	91.52	0.57	20	EO
Fluoride	39.12	0.10	2	37.96	58	75-125	39.19	0.179	20	SEO
Sulfate	3007	1.0	10	3082	-750	75-125	3033	0.848	20	SEO
Surr: Dichloroacetic acid (surr)	ND	0.10	5	0	0	80-120	2.92	0	20	S

DUP Sample ID: **0309185-01ADUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/19/03 14:26**
Client ID: Run ID: **IC201_030919A** SeqNo: **370896** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	81.77	0.50	0	0	0	0-0	206	86.3	20	RE
Fluoride	38.16	0.10	0	0	0	0-0	73	62.7	20	RE
Sulfate	3079	1.0	0	0	0	0-0	3182	3.29	20	E
Surr: Dichloroacetic acid (surr)	1.17	0.10	5	0	23.4	80-120	542	199	20	SR

DUP Sample ID: **0309182-05BDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/20/03 2:54**
Client ID: Run ID: **IC201_030919A** SeqNo: **370915** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1302	0.50	0	0	0	0-0	1290	0.982	20	E
Fluoride	4.97	0.10	0	0	0	0-0	4.98	0.201	20	
Sulfate	1228	1.0	0	0	0	0-0	1227	0.121	20	E
Surr: Dichloroacetic acid (surr)	5.18	0.10	5	0	104	80-120	2.05	86.6	20	R

DUP Sample ID: **0309185-01ADUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/20/03 3:59**
Client ID: Run ID: **IC201_030919A** SeqNo: **370917** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	203	50	0	0	0	0-0	206	1.47	20	
Fluoride	69	10	0	0	0	0-0	73	5.63	20	
Sulfate	4262	100	0	0	0	0-0	3182	29	20	R
Surr: Dichloroacetic acid (surr)	548	10	500	0	110	80-120	542	1.1	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309140-01C 0309140-02C 0309140-03C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16332** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-092403** Test Code: **E300** Units: **mg/L** Analysis Date: **09/24/03 17:28**
Client ID: Run ID: **IC201_030924A** SeqNo: **372055** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Fluoride	ND	0.10								
Sulfate	ND	1.0								
Surr: Dichloroacetic acid (surr)	ND	0.10								

LCS Sample ID: **WLCSW1-092403** Test Code: **E300** Units: **mg/L** Analysis Date: **09/24/03 18:01**
Client ID: Run ID: **IC201_030924A** SeqNo: **372056** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.94	0.50	10	0	99.4	80-120	0			
Fluoride	1.78	0.10	2	0	89	80-120	0			
Sulfate	10.82	1.0	10	0	108	80-120	0			
Surr: Dichloroacetic acid (surr)	2.22	0.10	2	0	111	80-120	0			

LCSD Sample ID: **WLCSDW1-09240** Test Code: **E300** Units: **mg/L** Analysis Date: **09/24/03 18:33**
Client ID: Run ID: **IC201_030924A** SeqNo: **372057** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.93	0.50	10	0	99.3	80-120	9.94	0.101	20	
Fluoride	1.85	0.10	2	0	92.5	80-120	1.78	3.86	20	
Sulfate	10.88	1.0	10	0	109	80-120	10.82	0.553	20	
Surr: Dichloroacetic acid (surr)	1.76	0.10	2	0	88	80-120	2.22	23.1	20	R

MS Sample ID: **0309214-01BMS** Test Code: **E300** Units: **mg/L** Analysis Date: **09/24/03 20:11**
Client ID: Run ID: **IC201_030924A** SeqNo: **372060** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1324	2.5	50	1263	121	75-125	0			EO
Fluoride	10.15	0.50	10	1.45	87	75-125	0			
Sulfate	301	5.0	50	244.4	113	75-125	0			EO
Surr: Dichloroacetic acid (surr)	24.95	0.50	25	0	99.8	80-120	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0309140
Project: Monthly

QC BATCH REPORT

Batch ID: **R16332** InstrumentID: **IC201**

MSD Sample ID: **0309214-01BMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **09/24/03 20:43**
Client ID: Run ID: **IC201_030924A** SeqNo: **372061** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1307	2.5	50	1263	87.5	75-125	1324	1.29	20	EO
Fluoride	9.6	0.50	10	1.45	81.5	75-125	10.15	5.57	20	
Sulfate	293.9	5.0	50	244.4	98.9	75-125	301	2.39	20	EO
Surr: Dichloroacetic acid (surr)	20.05	0.50	25	0	80.2	80-120	24.95	21.8	20	R

DUP Sample ID: **0309214-01BDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/24/03 19:38**
Client ID: Run ID: **IC201_030924A** SeqNo: **372059** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: Dichloroacetic acid (surr)	23.75	0.50	25	0	95	80-120	22.3	6.3	20	

DUP Sample ID: **0309140-03CDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/25/03 2:08**
Client ID: **RA 4798** Run ID: **IC201_030924A** SeqNo: **372068** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	1572	50	0	0	0	0-0	1576	0.318	20	
Surr: Dichloroacetic acid (surr)	264.5	5.0	250	0	106	80-120	265.5	0.377	20	

Thefollowingsampleswereanalyzedinthisbatch: 0309140-03C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

e-Lab, Inc.
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager: G Jones | e-Lab Work Order #: 30140

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Monthly	A	Volatiles (8260) (Select list)
Work Order		Project Number		B	SVOC (8270) (Select list)
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Metals (Select list) (6020/7000)
Send Report To	Jeff Byrd	Invoice Attn	Jeff Byrd	D	Anions: Chloride,FlourideSulfate (300)
Address	P.O. Box 159	Address	P.O. Box 159	E	Alkalinity
				F	Cyanide (335)
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	505-748-3311	Phone	505-748-3311	H	
Fax	505-746-5421	Fax	505-746-5421	I	
e-Mail Address				J	

No.	Sample Description	Date	Time	Matrix	Pres	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	RA 307	9/15/03	1345	L	4	8	X	X	X	X	X	X					
2	RA 4196	"	1400	"	"	"	X	X	X	X	X	X					
3	RA 4798	"	1415	"	"	"	X	X	X	X	X	X					
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: JB

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☒ STD 30 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
JB	9/15/03	1615		
Relinquished by:	Date:	Time:	Received by (Laboratory): RICHARD FISHER 9/16/03 0840	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

e-Lab Cooler ID	Cooler Temp.
1507	3.5°C

QC Package: (Check Box Below)

	X
Level II: Standard QC	
Level III: Standard QC + Raw Data	
Level IV: SW846 Methods/CLP	
Other:	

Preservative Key: 1- HCl 2- HNO_3 3- H_2SO_4 4- NaOH 5- $Na_2S_2O_3$ 6- $NaHSO_4$ 7- Other 8- 4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.

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e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING Date/Time Received: 9/16/2003 8:40:00 AM

Work Order Number 0309140 Received by: RSZ

Checklist completed by [signature] 9/16/03 (Signature / Date) Reviewed by 99 9/16/03 (Initials / Date)

Matrix: W 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):	3.5c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5

September 19, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Monthly Work Order : **0308106**

Dear Jeff Byrd,

e-Lab, Inc. received 3 samples on 8/8/2003 9:27:00 AM for the analyses presented in the following report.

This is a REVISED REPORT. The Case Narrative provides information discussing the reason for issuing a revised report.

The original Chain of Custody, Sample Receipt Checklist, and QC Report are with the original issue of this report. If you have any questions regarding these test results, please feel free to call me. The total number of pages in this report is 12.

Sincerely,

Lora Terrill

Electronically approved by: Lora Terrill

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *August 27, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: **0308106**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0308106-01	RA1227	Liquid		8/6/2003 09:00	8/8/2003 09:27	☐
0308106-02	RA307	Liquid		8/6/2003 09:15	8/8/2003 09:27	☐
0308106-03	RA313	Liquid		8/7/2003 09:30	8/8/2003 09:27	☐

e-Lab, Inc.

Date: *August 27, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: 0308106

Case Narrative

2-Chloro-vinyl-ether LCS/LCSD recovery was high on 8/14/03. The associated samples were ND for this compound therfore the data was released for reporting.

e-Lab. Inc.

Date: *September 18, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: 0308106

Case Narrative

Volatiles LCS/LCSD recovery was above control limits. The associated samples were ND, therefore the data was released for reporting.

This report is revised to correct the alkalinity result for sample RA 1227. Hydroxide alkalinity was not previously reported. 9/18/03,lt

e-Lab, Inc.

Date: *September 18, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA1227
Work Order:	0308106	**Collection Date:**	8/6/2003 9:00:00 AM
Project:	Monthly		
Lab ID:	0308106-01	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **8/14/2003**		Analyst: **MG**
Mercury	U	0.000042	0.000200		mg/L	1	8/15/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **8/20/2003**		Analyst: **ALR**
Aluminum	0.00510	0.0016	0.0100	J	mg/L	1	8/20/2003
Arsenic	U	0.0018	0.00500		mg/L	1	8/19/2003
Barium	0.00828	0.00060	0.00500		mg/L	1	8/19/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/20/2003
Boron	0.237	0.011	0.0200		mg/L	1	8/20/2003
Cadmium	0.000402	0.00015	0.00100	J	mg/L	1	8/19/2003
Calcium	370	1.6	10.0		mg/L	20	8/20/2003
Chromium	0.00366	0.00050	0.00200		mg/L	1	8/19/2003
Cobalt	0.000449	0.00010	0.00200	J	mg/L	1	8/19/2003
Copper	0.00799	0.00030	0.00200		mg/L	1	8/19/2003
Iron	1.17	0.025	0.200		mg/L	1	8/19/2003
Lead	0.00108	0.00020	0.00500	J	mg/L	1	8/19/2003
Magnesium	149	0.25	2.00		mg/L	10	8/20/2003
Manganese	0.00265	0.0010	0.00500	J	mg/L	1	8/20/2003
Nickel	0.00771	0.00030	0.00500		mg/L	1	8/19/2003
Potassium	1.36	0.020	0.200		mg/L	1	8/19/2003
Selenium	0.0104	0.0017	0.00500		mg/L	1	8/19/2003
Silver	U	0.00020	0.00500		mg/L	1	8/19/2003
Sodium	106	0.32	2.00		mg/L	10	8/20/2003
Vanadium	0.00815	0.00040	0.00500		mg/L	1	8/19/2003
Zinc	0.0177	0.0015	0.00500		mg/L	1	8/19/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **8/11/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	8/12/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	8/12/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	8/12/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	8/12/2003
2-Methylphenol	U	2.8	10		µg/L	1	8/12/2003
2-Nitroaniline	U	1.1	10		µg/L	1	8/12/2003
2-Nitrophenol	U	2.6	10		µg/L	1	8/12/2003
3-Nitroaniline	U	1.2	10		µg/L	1	8/12/2003
4-Methylphenol	U	4.6	10		µg/L	1	8/12/2003
4-Nitroaniline	U	0.95	10		µg/L	1	8/12/2003
4-Nitrophenol	U	2.7	10		µg/L	1	8/12/2003
Acenaphthene	U	1.1	10		µg/L	1	8/12/2003
Acenaphthylene	U	1.0	10		µg/L	1	8/12/2003
Aniline	U	10	10		µg/L	1	8/12/2003

Qualifiers:

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 18, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA1227
Work Order:	0308106	**Collection Date:**	8/6/2003 9:00:00 AM
Project:	Monthly		
Lab ID:	0308106-01	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	8/12/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	8/12/2003
Benzidine	U	0.34	10		µg/L	1	8/12/2003
Hexachloroethane	U	0.64	10		µg/L	1	8/12/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	8/12/2003
Isophorone	U	1.2	10		µg/L	1	8/12/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	8/12/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	8/12/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	8/12/2003
Naphthalene	U	1.0	10		µg/L	1	8/12/2003
Nitrobenzene	U	1.7	10		µg/L	1	8/12/2003
Pentachlorophenol	U	1.5	10		µg/L	1	8/12/2003
Phenanthrene	U	1.2	10		µg/L	1	8/12/2003
Phenol	U	3.5	10		µg/L	1	8/12/2003
Pyrene	U	0.92	10		µg/L	1	8/12/2003
Surr: 2,4,6-Tribromophenol	121	0	10-123		%REC	1	8/12/2003
Surr: 2-Fluorobiphenyl	96.9	0	43-116		%REC	1	8/12/2003
Surr: 2-Fluorophenol	40.5	0	21-100		%REC	1	8/12/2003
Surr: 4-Terphenyl-d14	122	0	33-141		%REC	1	8/12/2003
Surr: Nitrobenzene-d5	94.8	0	35-114		%REC	1	8/12/2003
Surr: Phenol-d6	23.3	0	10-94		%REC	1	8/12/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	8/15/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	8/15/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	8/15/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	8/15/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	8/15/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	8/15/2003
2-Butanone	U	0.70	10		µg/L	1	8/15/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	8/15/2003
2-Hexanone	U	1.1	10		µg/L	1	8/15/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	8/15/2003
Acetone	U	1.2	10		µg/L	1	8/15/2003
Benzene	U	0.66	5.0		µg/L	1	8/15/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	8/15/2003
Bromoform	U	0.40	5.0		µg/L	1	8/15/2003
Bromomethane	U	0.70	5.0		µg/L	1	8/15/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	8/15/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	8/15/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	8/15/2003

Qualifiers:

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 18, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA1227
Work Order:	0308106	**Collection Date:**	8/6/2003 9:00:00 AM
Project:	Monthly		
Lab ID:	0308106-01	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	8/15/2003
Chloroform	U	0.52	5.0		µg/L	1	8/15/2003
Chloromethane	U	1.1	5.0		µg/L	1	8/15/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	8/15/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	8/15/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	8/15/2003
m,p-Xylene	U	1.3	10		µg/L	1	8/15/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	8/15/2003
Methylene chloride	U	0.60	10		µg/L	1	8/15/2003
Styrene	U	0.56	5.0		µg/L	1	8/15/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	8/15/2003
Toluene	U	0.69	5.0		µg/L	1	8/15/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	8/15/2003
Trichloroethene	U	0.70	5.0		µg/L	1	8/15/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	8/15/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	8/15/2003
Xylenes, Total	U	1.8	15		µg/L	1	8/15/2003
Surr: 1,2-Dichloroethane-d4	84.2	0	70-130		%REC	1	8/15/2003
Surr: 4-Bromofluorobenzene	78.2	0	70-130		%REC	1	8/15/2003
Surr: Dibromofluoromethane	87.8	0	70-130		%REC	1	8/15/2003
Surr: Toluene-d8	84.6	0	70-130		%REC	1	8/15/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	121	2.00	5.00		mg/L	10	8/13/2003
Fluoride	0.320	0.0500	0.100		mg/L	1	8/19/2003
Sulfate	1,500	50.0	100		mg/L	100	8/13/2003
Surr: Dichloroacetic acid (surr)	107	0	80-120		%REC	100	8/13/2003
Surr: Dichloroacetic acid (surr)	119	0	80-120		%REC	1	8/19/2003
Surr: Dichloroacetic acid (surr)	103	0	80-120		%REC	10	8/13/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	U	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Carbonate (As CaCO3)	920	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Hydroxide (As CaCO3)	400	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Total (As CaCO3)	1,320	2.0	5.00		mg/L	1	8/13/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	8/11/2003

Qualifiers:

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- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- S - Spike Recovery outside accepted recovery limits
- P - Dual Column results percent difference > 40%
- E - Value above quantitation range
- H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 18, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA307
Work Order:	0308106	**Collection Date:**	8/6/2003 9:15:00 AM
Project:	Monthly		
Lab ID:	0308106-02	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **8/14/2003**		Analyst: **MG**
Mercury	U	0.000042	0.000200		mg/L	1	8/15/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **8/20/2003**		Analyst: **ALR**
Aluminum	0.0314	0.0016	0.0100		mg/L	1	8/20/2003
Arsenic	U	0.0018	0.00500		mg/L	1	8/19/2003
Barium	0.0107	0.00060	0.00500		mg/L	1	8/19/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/20/2003
Boron	0.0919	0.011	0.0200		mg/L	1	8/20/2003
Cadmium	0.000226	0.00015	0.00100	J	mg/L	1	8/19/2003
Calcium	340	1.6	10.0		mg/L	20	8/20/2003
Chromium	0.00131	0.00050	0.00200	J	mg/L	1	8/19/2003
Cobalt	0.000377	0.00010	0.00200	J	mg/L	1	8/19/2003
Copper	0.0604	0.00030	0.00200		mg/L	1	8/19/2003
Iron	1.05	0.025	0.200		mg/L	1	8/19/2003
Lead	0.00307	0.00020	0.00500	J	mg/L	1	8/19/2003
Magnesium	101	0.25	2.00		mg/L	10	8/20/2003
Manganese	0.00587	0.0010	0.00500		mg/L	1	8/20/2003
Nickel	0.00778	0.00030	0.00500		mg/L	1	8/19/2003
Potassium	1.69	0.020	0.200		mg/L	1	8/19/2003
Selenium	0.0108	0.0017	0.00500		mg/L	1	8/19/2003
Silver	U	0.00020	0.00500		mg/L	1	8/19/2003
Sodium	68.9	0.32	2.00		mg/L	10	8/20/2003
Vanadium	0.00732	0.00040	0.00500		mg/L	1	8/19/2003
Zinc	0.0345	0.0015	0.00500		mg/L	1	8/19/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **8/11/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	8/12/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	8/12/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	8/12/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	8/12/2003
2-Methylphenol	U	2.8	10		µg/L	1	8/12/2003
2-Nitroaniline	U	1.1	10		µg/L	1	8/12/2003
2-Nitrophenol	U	2.6	10		µg/L	1	8/12/2003
3-Nitroaniline	U	1.2	10		µg/L	1	8/12/2003
4-Methylphenol	U	4.6	10		µg/L	1	8/12/2003
4-Nitroaniline	U	0.95	10		µg/L	1	8/12/2003
4-Nitrophenol	U	2.7	10		µg/L	1	8/12/2003
Acenaphthene	U	1.1	10		µg/L	1	8/12/2003
Acenaphthylene	U	1.0	10		µg/L	1	8/12/2003
Aniline	U	10	10		µg/L	1	8/12/2003

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S - Spike Recovery outside accepted recovery limits

P - Dual Column results percent difference > 40%

E - Value above quantitation range

H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 18, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA307
Work Order:	0308106	**Collection Date:**	8/6/2003 9:15:00 AM
Project:	Monthly		
Lab ID:	0308106-02	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	8/12/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	8/12/2003
Benzidine	U	0.34	10		µg/L	1	8/12/2003
Hexachloroethane	U	0.64	10		µg/L	1	8/12/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	8/12/2003
Isophorone	U	1.2	10		µg/L	1	8/12/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	8/12/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	8/12/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	8/12/2003
Naphthalene	U	1.0	10		µg/L	1	8/12/2003
Nitrobenzene	U	1.7	10		µg/L	1	8/12/2003
Pentachlorophenol	U	1.5	10		µg/L	1	8/12/2003
Phenanthrene	U	1.2	10		µg/L	1	8/12/2003
Phenol	U	3.5	10		µg/L	1	8/12/2003
Pyrene	U	0.92	10		µg/L	1	8/12/2003
Surr: 2,4,6-Tribromophenol	122	0	10-123		%REC	1	8/12/2003
Surr: 2-Fluorobiphenyl	92.5	0	43-116		%REC	1	8/12/2003
Surr: 2-Fluorophenol	41.5	0	21-100		%REC	1	8/12/2003
Surr: 4-Terphenyl-d14	123	0	33-141		%REC	1	8/12/2003
Surr: Nitrobenzene-d5	91.1	0	35-114		%REC	1	8/12/2003
Surr: Phenol-d6	24.0	0	10-94		%REC	1	8/12/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	8/15/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	8/15/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	8/15/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	8/15/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	8/15/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	8/15/2003
2-Butanone	U	0.70	10		µg/L	1	8/15/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	8/15/2003
2-Hexanone	U	1.1	10		µg/L	1	8/15/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	8/15/2003
Acetone	U	1.2	10		µg/L	1	8/15/2003
Benzene	U	0.66	5.0		µg/L	1	8/15/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	8/15/2003
Bromoform	U	0.40	5.0		µg/L	1	8/15/2003
Bromomethane	U	0.70	5.0		µg/L	1	8/15/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	8/15/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	8/15/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	8/15/2003

Qualifiers:

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e-Lab, Inc.

Date: *September 18, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA307
Work Order:	0308106	**Collection Date:**	8/6/2003 9:15:00 AM
Project:	Monthly		
Lab ID:	0308106-02	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	8/15/2003
Chloroform	U	0.52	5.0		µg/L	1	8/15/2003
Chloromethane	U	1.1	5.0		µg/L	1	8/15/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	8/15/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	8/15/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	8/15/2003
m,p-Xylene	U	1.3	10		µg/L	1	8/15/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	8/15/2003
Methylene chloride	U	0.60	10		µg/L	1	8/15/2003
Styrene	U	0.56	5.0		µg/L	1	8/15/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	8/15/2003
Toluene	U	0.69	5.0		µg/L	1	8/15/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	8/15/2003
Trichloroethene	U	0.70	5.0		µg/L	1	8/15/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	8/15/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	8/15/2003
Xylenes, Total	U	1.8	15		µg/L	1	8/15/2003
Surr: 1,2-Dichloroethane-d4	79.9	0	70-130		%REC	1	8/15/2003
Surr: 4-Bromofluorobenzene	76.4	0	70-130		%REC	1	8/15/2003
Surr: Dibromofluoromethane	86.5	0	70-130		%REC	1	8/15/2003
Surr: Toluene-d8	83.3	0	70-130		%REC	1	8/15/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	152	2.00	5.00		mg/L	10	8/13/2003
Fluoride	0.660	0.0500	0.100		mg/L	1	8/13/2003
Sulfate	2,360	25.0	50.0		mg/L	50	8/13/2003
Surr: Dichloroacetic acid (surr)	88.0	0	80-120		%REC	50	8/13/2003
Surr: Dichloroacetic acid (surr)	115	0	80-120		%REC	1	8/13/2003
Surr: Dichloroacetic acid (surr)	92.2	0	80-120		%REC	10	8/13/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	175	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Total (As CaCO3)	175	2.0	5.00		mg/L	1	8/13/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	8/11/2003

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 18, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly
Lab ID: 0308106-03

Client Sample ID: RA313
Collection Date: 8/7/2003 9:30:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL			**SW7470**		Prep Date: **8/14/2003**		Analyst: **MG**
Mercury	U	0.000042	0.000200		mg/L	1	8/15/2003
ICP METALS, TOTAL			**SW6020**		Prep Date: **8/20/2003**		Analyst: **ALR**
Aluminum	0.0169	0.0016	0.0100		mg/L	1	8/20/2003
Arsenic	U	0.0018	0.00500		mg/L	1	8/19/2003
Barium	0.0268	0.00060	0.00500		mg/L	1	8/19/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/20/2003
Boron	0.0494	0.011	0.0200		mg/L	1	8/20/2003
Cadmium	U	0.00015	0.00100		mg/L	1	8/19/2003
Calcium	172	0.80	5.00		mg/L	10	8/20/2003
Chromium	U	0.00050	0.00200		mg/L	1	8/19/2003
Cobalt	0.000249	0.00010	0.00200	J	mg/L	1	8/19/2003
Copper	0.00232	0.00030	0.00200		mg/L	1	8/19/2003
Iron	0.810	0.025	0.200		mg/L	1	8/19/2003
Lead	U	0.00020	0.00500		mg/L	1	8/19/2003
Magnesium	47.0	0.25	2.00		mg/L	10	8/20/2003
Manganese	0.0256	0.0010	0.00500		mg/L	1	8/20/2003
Nickel	0.00361	0.00030	0.00500	J	mg/L	1	8/19/2003
Potassium	0.955	0.020	0.200		mg/L	1	8/19/2003
Selenium	0.00524	0.0017	0.00500		mg/L	1	8/19/2003
Silver	U	0.00020	0.00500		mg/L	1	8/19/2003
Sodium	14.4	0.32	2.00		mg/L	10	8/20/2003
Vanadium	0.00206	0.00040	0.00500	J	mg/L	1	8/19/2003
Zinc	0.00891	0.0015	0.00500		mg/L	1	8/19/2003
SEMIVOLATILE ORGANICS BY GC/MS			**SW8270**		Prep Date: **8/11/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	8/12/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	8/12/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	8/12/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	8/12/2003
2-Methylphenol	U	2.8	10		µg/L	1	8/12/2003
2-Nitroaniline	U	1.1	10		µg/L	1	8/12/2003
2-Nitrophenol	U	2.6	10		µg/L	1	8/12/2003
3-Nitroaniline	U	1.2	10		µg/L	1	8/12/2003
4-Methylphenol	U	4.6	10		µg/L	1	8/12/2003
4-Nitroaniline	U	0.95	10		µg/L	1	8/12/2003
4-Nitrophenol	U	2.7	10		µg/L	1	8/12/2003
Acenaphthene	U	1.1	10		µg/L	1	8/12/2003
Acenaphthylene	U	1.0	10		µg/L	1	8/12/2003
Aniline	U	10	10		µg/L	1	8/12/2003

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 18, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA313
Work Order:	0308106	**Collection Date:**	8/7/2003 9:30:00 AM
Project:	Monthly		
Lab ID:	0308106-03	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	8/12/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	8/12/2003
Benzidine	U	0.34	10		µg/L	1	8/12/2003
Hexachloroethane	U	0.64	10		µg/L	1	8/12/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	8/12/2003
Isophorone	U	1.2	10		µg/L	1	8/12/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	8/12/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	8/12/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	8/12/2003
Naphthalene	U	1.0	10		µg/L	1	8/12/2003
Nitrobenzene	U	1.7	10		µg/L	1	8/12/2003
Pentachlorophenol	U	1.5	10		µg/L	1	8/12/2003
Phenanthrene	U	1.2	10		µg/L	1	8/12/2003
Phenol	U	3.5	10		µg/L	1	8/12/2003
Pyrene	U	0.92	10		µg/L	1	8/12/2003
Surr: 2,4,6-Tribromophenol	123	0	10-123		%REC	1	8/12/2003
Surr: 2-Fluorobiphenyl	91.3	0	43-116		%REC	1	8/12/2003
Surr: 2-Fluorophenol	41.5	0	21-100		%REC	1	8/12/2003
Surr: 4-Terphenyl-d14	121	0	33-141		%REC	1	8/12/2003
Surr: Nitrobenzene-d5	90.4	0	35-114		%REC	1	8/12/2003
Surr: Phenol-d6	24.0	0	10-94		%REC	1	8/12/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	8/15/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	8/15/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	8/15/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	8/15/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	8/15/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	8/15/2003
2-Butanone	U	0.70	10		µg/L	1	8/15/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	8/15/2003
2-Hexanone	U	1.1	10		µg/L	1	8/15/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	8/15/2003
Acetone	U	1.2	10		µg/L	1	8/15/2003
Benzene	U	0.66	5.0		µg/L	1	8/15/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	8/15/2003
Bromoform	U	0.40	5.0		µg/L	1	8/15/2003
Bromomethane	U	0.70	5.0		µg/L	1	8/15/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	8/15/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	8/15/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	8/15/2003

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 18, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA313
Work Order:	0308106	**Collection Date:**	8/7/2003 9:30:00 AM
Project:	Monthly		
Lab ID:	0308106-03	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	8/15/2003
Chloroform	U	0.52	5.0		µg/L	1	8/15/2003
Chloromethane	U	1.1	5.0		µg/L	1	8/15/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	8/15/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	8/15/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	8/15/2003
m,p-Xylene	U	1.3	10		µg/L	1	8/15/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	8/15/2003
Methylene chloride	U	0.60	10		µg/L	1	8/15/2003
Styrene	U	0.56	5.0		µg/L	1	8/15/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	8/15/2003
Toluene	U	0.69	5.0		µg/L	1	8/15/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	8/15/2003
Trichloroethene	U	0.70	5.0		µg/L	1	8/15/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	8/15/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	8/15/2003
Xylenes, Total	U	1.8	15		µg/L	1	8/15/2003
Surr: 1,2-Dichloroethane-d4	79.2	0	70-130		%REC	1	8/15/2003
Surr: 4-Bromofluorobenzene	78.3	0	70-130		%REC	1	8/15/2003
Surr: Dibromofluoromethane	85.5	0	70-130		%REC	1	8/15/2003
Surr: Toluene-d8	83.9	0	70-130		%REC	1	8/15/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	207	10.0	25.0		mg/L	50	8/13/2003
Fluoride	1.40	0.0500	0.100		mg/L	1	8/13/2003
Sulfate	507	10.0	20.0		mg/L	20	8/19/2003
Surr: Dichloroacetic acid (surr)	105	0	80-120		%REC	50	8/13/2003
Surr: Dichloroacetic acid (surr)	101	0	80-120		%REC	1	8/13/2003
Surr: Dichloroacetic acid (surr)	105	0	80-120		%REC	20	8/19/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	180	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	8/13/2003
Alkalinity, Total (As CaCO3)	180	2.0	5.00		mg/L	1	8/13/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	0.00530	0.0030	0.0200	J	mg/L	1	8/11/2003

Qualifiers:

U - Analyzed for but Not Detected

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

P - Dual Column results percent difference > 40%

E - Value above quantitation range

H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *Sep 03 2003*

CLIENT: Navajo Refining Company

Work Order: 0308106

Project: Monthly

QC BATCH REPORT

Batch ID: **6378** InstrumentID: **6020**

MBLK Sample ID: **MBLKW2-081103** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/19/03 19:40**

Client ID: Run ID: **6020_030819A** SeqNo: **358055** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Barium	U	0.0050								
Cadmium	U	0.0010								
Calcium	U	0.50								
Chromium	U	0.0020								
Cobalt	U	0.0020								
Copper	0.0006327	0.0020								J
Iron	U	0.20								
Lead	0.0003036	0.0050								J
Magnesium	U	0.20								
Nickel	0.0003616	0.0050								J
Potassium	U	0.20								
Selenium	U	0.0050								
Silver	U	0.0050								
Vanadium	U	0.0050								
Zinc	U	0.0050								

MBLK Sample ID: **MBLKW2-081103** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 14:25**

Client ID: Run ID: **6020_030820A** SeqNo: **358266** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	U	0.0050								
Sodium	U	0.20								

ND - Not Detected at the Reporting Limit

Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6378** InstrumentID: **6020**

LCS Sample ID: **MLCSW2-081103** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/19/03 19:44**
Client ID: Run ID: **6020_030819A** SeqNo: **358056** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09416	0.0050	0.1	0	94.2	80-120	0			
Barium	0.09881	0.0050	0.1	0	98.8	80-120	0			
Cadmium	0.097	0.0010	0.1	0	97	80-120	0			
Calcium	9.675	0.50	10	0	96.8	80-120	0			
Chromium	0.09771	0.0020	0.1	0	97.7	80-120	0			
Cobalt	0.09961	0.0020	0.1	0	99.6	80-120	0			
Copper	0.1001	0.0020	0.1	0	100	80-120	0			
Iron	9.704	0.20	10	0	97	80-120	0			
Lead	0.09807	0.0050	0.1	0	98.1	80-120	0			
Magnesium	9.71	0.20	10	0	97.1	80-120	0			
Nickel	0.1011	0.0050	0.1	0	101	80-120	0			
Potassium	9.739	0.20	10	0	97.4	80-120	0			
Selenium	0.09576	0.0050	0.1	0	95.8	80-120	0			
Silver	0.09908	0.0050	0.1	0	99.1	80-120	0			
Vanadium	0.09688	0.0050	0.1	0	96.9	80-120	0			
Zinc	0.09916	0.0050	0.1	0	99.2	80-120	0			

LCS Sample ID: **MLCSW2-081103** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 14:29**
Client ID: Run ID: **6020_030820A** SeqNo: **358267** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	0.09624	0.0050	0.1	0	96.2	80-120	0			
Sodium	9.511	0.20	10	0	95.1	80-120	0			

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J - Analyte detected below quantitation limits
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P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6378** InstrumentID: **6020**

MS Sample ID: **0308106-01CMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/19/03 19:58**
Client ID: **RA1227** Run ID: **6020_030819A** SeqNo: **358059** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.08943	0.0050	0.1	0.000908	88.5	75-125	0			
Barium	0.1104	0.0050	0.1	0.008278	102	75-125	0			
Cadmium	0.08706	0.0010	0.1	0.000402	86.7	75-125	0			
Calcium	421.8	0.50	10	361.6	602	75-125	0			SEO
Chromium	0.09144	0.0020	0.1	0.003655	87.8	75-125	0			
Cobalt	0.08793	0.0020	0.1	0.0004487	87.5	75-125	0			
Copper	0.08857	0.0020	0.1	0.007986	80.6	75-125	0			
Iron	10.02	0.20	10	1.172	88.5	75-125	0			
Lead	0.1033	0.0050	0.1	0.001083	102	75-125	0			
Magnesium	141.5	0.20	10	125.3	162	75-125	0			SEO
Nickel	0.09082	0.0050	0.1	0.007712	83.1	75-125	0			
Potassium	10.45	0.20	10	1.357	90.9	75-125	0			
Selenium	0.1018	0.0050	0.1	0.0104	91.4	75-125	0			
Silver	0.0842	0.0050	0.1	-0.00003671	84.2	75-125	0			
Vanadium	0.1047	0.0050	0.1	0.008149	96.6	75-125	0			
Zinc	0.08756	0.0050	0.1	0.0177	69.9	75-125	0			S

MS Sample ID: **0308106-01CMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 5:43**
Client ID: **RA1227** Run ID: **6020_030827A** SeqNo: **361944** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	0.0951	0.0050	0.1	0.002652	92.4	75-125	0			

MS Sample ID: **0308106-01CMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 6:33**
Client ID: **RA1227** Run ID: **6020_030827A** SeqNo: **361954** Prep Date: **8/11/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	130.5	2.0	100	105.9	24.6	75-125	0			S

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6378** InstrumentID: **6020**

MSD Sample ID: **0308106-01CMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/19/03 20:03**
Client ID: **RA1227** Run ID: **6020_030819A** SeqNo: **358060** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.08749	0.0050	0.1	0.000908	86.6	75-125	0.08943	2.19	25	
Barium	0.1129	0.0050	0.1	0.008278	105	75-125	0.1104	2.24	25	
Cadmium	0.08709	0.0010	0.1	0.000402	86.7	75-125	0.08706	0.0345	25	
Calcium	389.4	0.50	10	361.6	278	75-125	421.8	7.99	25	SEO
Chromium	0.09202	0.0020	0.1	0.003655	88.4	75-125	0.09144	0.632	25	
Cobalt	0.08891	0.0020	0.1	0.0004487	88.5	75-125	0.08793	1.11	25	
Copper	0.08807	0.0020	0.1	0.007986	80.1	75-125	0.08857	0.566	25	
Iron	10.06	0.20	10	1.172	88.9	75-125	10.02	0.398	25	
Lead	0.1048	0.0050	0.1	0.001083	104	75-125	0.1033	1.44	25	
Magnesium	144.4	0.20	10	125.3	191	75-125	141.5	2.03	25	SEO
Nickel	0.09094	0.0050	0.1	0.007712	83.2	75-125	0.09082	0.132	25	
Potassium	10.45	0.20	10	1.357	90.9	75-125	10.45	0	25	
Selenium	0.09698	0.0050	0.1	0.0104	86.6	75-125	0.1018	4.85	25	
Silver	0.08496	0.0050	0.1	-0.00003671	85	75-125	0.0842	0.899	25	
Vanadium	0.1062	0.0050	0.1	0.008149	98.1	75-125	0.1047	1.42	25	
Zinc	0.08718	0.0050	0.1	0.0177	69.5	75-125	0.08756	0.435	25	S

MSD Sample ID: **0308106-01CMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 5:48**
Client ID: **RA1227** Run ID: **6020_030827A** SeqNo: **361945** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	0.09661	0.0050	0.1	0.002652	94	75-125	0.1132	15.8	25	

MSD Sample ID: **0308106-01CMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 6:38**
Client ID: **RA1227** Run ID: **6020_030827A** SeqNo: **361955** Prep Date: **8/11/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	131.8	2.0	100	105.9	25.9	75-125	130.5	0.991	25	S

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6378** InstrumentID: **6020**

DUP Sample ID: **0308106-01CDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/19/03 19:53**
Client ID: **RA1227** Run ID: **6020_030819A** SeqNo: **358058** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050	0	0	0	0-0	0.000908	0	25	
Barium	0.007788	0.0050	0	0	0	0-0	0.008278	6.1	25	
Cadmium	0.0002362	0.0010	0	0	0	0-0	0.000402	0	25	J
Chromium	U	0.0020	0	0	0	0-0	0.003655	0	25	
Cobalt	0.00039	0.0020	0	0	0	0-0	0.0004487	0	25	J
Copper	0.007772	0.0020	0	0	0	0-0	0.007986	2.72	25	
Iron	1.197	0.20	0	0	0	0-0	1.172	2.11	25	
Lead	0.000717	0.0050	0	0	0	0-0	0.001083	0	25	J
Nickel	0.006737	0.0050	0	0	0	0-0	0.007712	13.5	25	
Potassium	1.362	0.20	0	0	0	0-0	1.357	0.368	25	
Selenium	0.01286	0.0050	0	0	0	0-0	0.0104	21.2	25	
Silver	U	0.0050	0	0	0	0-0	-0.00003671	0	25	
Vanadium	0.008027	0.0050	0	0	0	0-0	0.008149	1.51	25	
Zinc	0.01594	0.0050	0	0	0	0-0	0.0177	10.5	25	

DUP Sample ID: **0308106-01CDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 16:57**
Client ID: **RA1227** Run ID: **6020_030820A** SeqNo: **358335** Prep Date: **8/11/2003** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	377.4	10	0	0	0	0-0	370.1	1.95	25	

DUP Sample ID: **0308106-01CDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 17:05**
Client ID: **RA1227** Run ID: **6020_030820A** SeqNo: **358337** Prep Date: **8/11/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Magnesium	153.5	2.0	0	0	0	0-0	148.8	3.11	25	
Sodium	111.4	2.0	0	0	0	0-0	105.9	5.06	25	

DUP Sample ID: **0308106-01CDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 18:58**
Client ID: **RA1227** Run ID: **6020_030820A** SeqNo: **358451** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	0.002005	0.0050	0	0	0	0-0	0.002652	0	25	J

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01C 0308106-02C 0308106-03C

ND - Not Detected at the Reporting Limit
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CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6404** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW1-081403** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/15/03 15:06**
Client ID: Run ID: **MERCURY_030815A** SeqNo: **356885** Prep Date: **8/14/2003** DF: **1**

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

LCS Sample ID: **GLCSW1-081403** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/15/03 15:08**
Client ID: Run ID: **MERCURY_030815A** SeqNo: **356886** Prep Date: **8/14/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00497	0.00020	0.005	0	99.4	80-120	0			

LCS Sample ID: **WLCSW1-081403** Test Code: **E245.1** Units: **mg/L** Analysis Date: **08/15/03 15:08**
Client ID: Run ID: **MERCURY_030815C** SeqNo: **359536** Prep Date: **8/14/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00497	0.00020	0.005	0	99.4	80-120	0			

MS Sample ID: **0308104-01BMS** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/15/03 15:21**
Client ID: Run ID: **MERCURY_030815A** SeqNo: **356889** Prep Date: **8/14/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.00020	0.005	0.000007	99.5	80-120	0			

MSD Sample ID: **0308104-01BMSD** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/15/03 15:25**
Client ID: Run ID: **MERCURY_030815A** SeqNo: **356890** Prep Date: **8/14/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0048	0.00020	0.005	0.000007	95.9	80-120	0.00498	3.68	20	

MSD Sample ID: **0308140-01BMSD** Test Code: **E245.1** Units: **mg/L** Analysis Date: **08/15/03 15:25**
Client ID: Run ID: **MERCURY_030815B** SeqNo: **359526** Prep Date: **8/14/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0048	0.00020	0.005	0.000007	95.9	80-120	0.00498	3.68	20	

ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6404** InstrumentID: **Mercury**

DUP Sample ID: **0308104-01BDUP** Test Code: **SW7470** Units: **mg/L** Analysis Date: **08/15/03 15:12**

Client ID: Run ID: **MERCURY_030815A** SeqNo: **356888** Prep Date: **8/14/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020	0	0	0	0-0	0.000007	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01C 0308106-02C 0308106-03C

ND - Not Detected at the Reporting Limit
*Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6447** InstrumentID: **6020**

MBLK Sample ID: **MBLKW3-082003** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 20:55**
Client ID: Run ID: **6020_030820A** SeqNo: **358482** Prep Date: **8/20/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.00283	0.010								J
Barium	U	0.0050								
Beryllium	U	0.0020								
Boron	U	0.020								
Calcium	U	0.50								
Zinc	U	0.0050								

LCS Sample ID: **MLCSW3-082003** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 20:59**
Client ID: Run ID: **6020_030820A** SeqNo: **358483** Prep Date: **8/20/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09625	0.010	0.1	0	96.2	80-120	0			
Barium	0.09575	0.0050	0.1	0	95.8	80-120	0			
Beryllium	0.09341	0.0020	0.1	0	93.4	80-120	0			
Boron	0.4671	0.020	0.5	0	93.4	80-120	0			
Calcium	9.354	0.50	10	0	93.5	80-120	0			
Zinc	0.09786	0.0050	0.1	0	97.9	80-120	0			

MS Sample ID: **0308106-01CMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 22:44**
Client ID: **RA1227** Run ID: **6020_030820A** SeqNo: **358630** Prep Date: **8/20/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09617	0.0020	0.1	0.00009342	96.1	75-125	0			
Boron	0.719	0.020	0.5	0.2374	96.3	75-125	0			

MS Sample ID: **0308106-01CMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 6:02**
Client ID: **RA1227** Run ID: **6020_030827A** SeqNo: **361948** Prep Date: **8/20/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1064	0.010	0.1	0.005103	101	75-125	0			

MSD Sample ID: **0308106-01CMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 22:48**
Client ID: **RA1227** Run ID: **6020_030820A** SeqNo: **358631** Prep Date: **8/20/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09803	0.0020	0.1	0.00009342	97.9	75-125	0.09617	1.92	25	
Boron	0.722	0.020	0.5	0.2374	96.9	75-125	0.719	0.416	25	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6447** InstrumentID: **6020**

MSD Sample ID: **0308106-01CMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/28/03 6:15**
Client ID: **RA1227** Run ID: **6020_030827A** SeqNo: **361951** Prep Date: **8/20/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.112	0.010	0.1	0.005103	107	75-125	0.1064	5.13	25	

DUP Sample ID: **0308106-01CDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **08/20/03 22:13**
Client ID: **RA1227** Run ID: **6020_030820A** SeqNo: **358625** Prep Date: **8/20/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004224	0.010	0	0	0	0-0	0.005103	0	25	J
Beryllium	U	0.0020	0	0	0	0-0	0.00009342	0	25	
Boron	0.2266	0.020	0	0	0	0-0	0.2374	4.66	25	

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01C 0308106-02C 0308106-03C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6371** InstrumentID: **SV-3**

MBLK Sample ID: **SBLKW1-030811** Test Code: **SW8270** Units: **µg/L** Analysis Date: **08/13/03 14:01**

Client ID: Run ID: **SV-3_030812A** SeqNo: **356073** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	U	10								
2,4,5-Trichlorophenol	U	10								
2,4,6-Trichlorophenol	U	10								
2-Methylnaphthalene	U	10								
2-Methylphenol	U	10								
2-Nitroaniline	U	10								
2-Nitrophenol	U	10								
3-Nitroaniline	U	10								
4-Methylphenol	U	10								
4-Nitroaniline	U	10								
4-Nitrophenol	U	10								
Acenaphthene	U	10								
Acenaphthylene	U	10								
Aniline	U	10								
Anthracene	U	10								
Benz(a)anthracene	U	10								
Benzidine	U	10								
Hexachloroethane	U	10								
Indeno(1,2,3-cd)pyrene	U	10								
Isophorone	U	10								
N-Nitrosodi-n-propylamine	U	10								
N-Nitrosodimethylamine	U	10								
N-Nitrosodiphenylamine	U	10								
Naphthalene	U	10								
Nitrobenzene	U	10								
Pentachlorophenol	U	10								
Phenanthrene	U	10								
Phenol	U	10								
Pyrene	U	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr: 2,4,6-Tribromophenol	85.66	0	100	0	85.7	10-123	0			
Surr: 2-Fluorobiphenyl	80.83	0	100	0	80.8	43-116	0			
Surr: 2-Fluorophenol	47.78	0	100	0	47.8	21-100	0			
Surr:4-Terphenyl-d14	98.33	0	100	0	98.3	33-141	0			
Surr:Nitrobenzene-d5	79.9	0	100	0	79.9	35-114	0			
Surr: Phenol-d6	29.13	0	100	0	29.1	10-94	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6371** InstrumentID: **SV-3**

LCS Sample ID: **SLCSW1-030811** Test Code: **SW8270** Units: **µg/L** Analysis Date: **08/13/03 14:28**

Client ID: Run ID: **SV-3_030812A** SeqNo: **356074** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	37.14	10	50	0	74.3	51-110	0			
2,4,5-Trichlorophenol	88.82	10	100	0	88.8	55-130	0			
2,4,6-Trichlorophenol	87.85	10	100	0	87.8	55-130	0			
2-Methylnaphthalene	39.9	10	50	0	79.8	50-125	0			
2-Methylphenol	66.79	10	100	0	66.8	45-120	0			
2-Nitroaniline	45.1	10	50	0	90.2	55-130	0			
2-Nitrophenol	85.56	10	100	0	85.6	55-125	0			
3-Nitroaniline	37.95	10	50	0	75.9	55-120	0			
4-Methylphenol	89.11	10	150	0	59.4	40-120	0			
4-Nitroaniline	42.72	10	50	0	85.4	60-130	0			
4-Nitrophenol	33.01	10	100	0	33	25-100	0			
Acenaphthene	41.37	10	50	0	82.7	50-120	0			
Acenaphthylene	40.93	10	50	0	81.9	55-130	0			
Anthracene	44.95	10	50	0	89.9	60-130	0			
Benz(a)anthracene	42.2	10	50	0	84.4	60-130	0			
Benzidine	12.49	10	50	0	25	10-85	0			
Hexachloroethane	36.59	10	50	0	73.2	40-120	0			
Indeno(1,2,3-cd)pyrene	41.61	10	50	0	83.2	60-130	0			
Isophorone	42.96	10	50	0	85.9	60-130	0			
N-Nitrosodi-n-propylamine	43.18	10	50	0	86.4	55-120	0			
N-Nitrosodimethylamine	21.15	10	50	0	42.3	35-110	0			
N-Nitrosodiphenylamine	47.38	10	50	0	94.8	60-130	0			
Naphthalene	39.23	10	50	0	78.5	55-130	0			
Nitrobenzene	43.28	10	50	0	86.6	60-130	0			
Pentachlorophenol	86.85	10	100	0	86.9	45-125	0			
Phenanthrene	42.9	10	50	0	85.8	60-130	0			
Phenol	29.29	10	100	0	29.3	20-100	0			
Pyrene	40.29	10	50	0	80.6	45-120	0			
Surr: 2,4,6-Tribromophenol	90.33	0	100	0	90.3	10-123	0			
Surr: 2-Fluorobiphenyl	80.26	0	100	0	80.3	43-116	0			
Surr: 2-Fluorophenol	44.14	0	100	0	44.1	21-100	0			
Surr:4-Terphenyl-d14	92.45	0	100	0	92.4	33-141	0			
Surr: Nitrobenzene-d5	81.28	0	100	0	81.3	35-114	0			
Surr: Phenol-d6	27.42	0	100	0	27.4	10-94	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
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CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **6371** InstrumentID: **SV-3**

LCSD Sample ID: **SLCSDW1-030811** Test Code: **SW8270** Units: **µg/L** Analysis Date: **08/13/03 14:55**

Client ID: Run ID: **SV-3_030812A** SeqNo: **356075** Prep Date: **8/11/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	36.02	10	50	0	72	51-110	37.14	3.05	30	
2,4,5-Trichlorophenol	89.78	10	100	0	89.8	55-130	88.82	1.07	30	
2,4,6-Trichlorophenol	88.79	10	100	0	88.8	55-130	87.85	1.07	30	
2-Methylnaphthalene	36.79	10	50	0	73.6	50-125	39.9	8.11	30	
2-Methylphenol	61.99	10	100	0	62	45-120	66.79	7.45	30	
2-Nitroaniline	45.9	10	50	0	91.8	55-130	45.1	1.75	30	
2-Nitrophenol	82.62	10	100	0	82.6	55-125	85.56	3.49	30	
3-Nitroaniline	39.94	10	50	0	79.9	55-120	37.95	5.11	30	
4-Methylphenol	83.68	10	150	0	55.8	40-120	89.11	6.29	30	
4-Nitroaniline	43.91	10	50	0	87.8	60-130	42.72	2.75	30	
4-Nitrophenol	29.13	10	100	0	29.1	25-100	33.01	12.5	30	
Acenaphthene	42.17	10	50	0	84.3	50-120	41.37	1.92	30	
Acenaphthylene	42.2	10	50	0	84.4	55-130	40.93	3.06	30	
Anthracene	46.67	10	50	0	93.3	60-130	44.95	3.75	30	
Benz(a)anthracene	42.06	10	50	0	84.1	60-130	42.2	0.332	30	
Benzidine	9.472	10	50	0	18.9	10-85	12.49	0	30	J
Hexachloroethane	33.63	10	50	0	67.3	40-120	36.59	8.4	30	
Indeno(1,2,3-cd)pyrene	45.37	10	50	0	90.7	60-130	41.61	8.65	30	
Isophorone	43.73	10	50	0	87.5	60-130	42.96	1.79	30	
N-Nitrosodi-n-propylamine	42.72	10	50	0	85.4	55-120	43.18	1.07	30	
N-Nitrosodimethylamine	18.48	10	50	0	37	35-110	21.15	13.5	30	
N-Nitrosodiphenylamine	48.24	10	50	0	96.5	60-130	47.38	1.78	30	
Naphthalene	38.53	10	50	0	77.1	55-130	39.23	1.79	30	
Nitrobenzene	42	10	50	0	84	60-130	43.28	2.98	30	
Pentachlorophenol	86.4	10	100	0	86.4	45-125	86.85	0.53	30	
Phenanthrene	43.82	10	50	0	87.6	60-130	42.9	2.14	30	
Phenol	25.78	10	100	0	25.8	20-100	29.29	12.7	30	
Pyrene	40.19	10	50	0	80.4	45-120	40.29	0.233	30	
Surr: 2,4,6-Tribromophenol	95.44	0	100	0	95.4	10-123	90.33	5.51	30	
Surr: 2-Fluorobiphenyl	79.91	0	100	0	79.9	43-116	80.26	0.438	30	
Surr: 2-Fluorophenol	38.32	0	100	0	38.3	21-100	44.14	14.1	30	
Surr:4-Terphenyl-d14	89.12	0	100	0	89.1	33-141	92.45	3.67	30	
Surr: Nitrobenzene-d5	78.6	0	100	0	78.6	35-114	81.28	3.36	30	
Surr: Phenol-d6	24.04	0	100	0	24	10-94	27.42	13.1	30	

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01B 0308106-02B 0308106-03B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike Recovery outside accepted recovery limits
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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15673** InstrumentID: **VOA_II**

MBLK Sample ID: **VBLKW-0814** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/14/03 23:10**

Client ID: Run ID: **VOA_II_030814C** SeqNo: **356789** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
2-Butanone	U	10								
2-Chloroethyl vinyl ether	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	10								
Methyl tert-butyl ether	U	5.0								
Methylene chloride	U	10								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl acetate	U	10								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	42.13	5.0	50	0	84.3	70-130		0		
Surr: 4-Bromofluorobenzene	39.51	5.0	50	0	79	70-130		0		
Surr: Dibromofluoromethane	44.57	5.0	50	0	89.1	70-130		0		
Surr: Toluene-d8	42.37	5.0	50	0	84.7	70-130		0		

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15673** InstrumentID: **VOA_II**

LCS Sample ID: **VLCSW-0814** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/14/03 21:53**

Client ID: Run ID: **VOA_II_030814C** SeqNo: **356787** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.88	5.0	50	0	102	75-118	0			
1,1,2,2-Tetrachloroethane	41.19	5.0	50	0	82.4	79-120	0			
1,1,2-Trichloroethane	46.35	5.0	50	0	92.7	81-119	0			
1,1-Dichloroethane	50.69	5.0	50	0	101	80-120	0			
1,1-Dichloroethene	52.74	5.0	50	0	105	80-120	0			
1,2-Dichloroethane	48.26	5.0	50	0	96.5	80-120	0			
2-Butanone	103.8	10	100	0	104	70-130	0			
2-Chloroethyl vinyl ether	179.3	10	100	0	179	72-120	0			S
2-Hexanone	94.4	10	100	0	94.4	70-130	0			
4-Methyl-2-pentanone	94.02	10	100	0	94	78-120	0			
Acetone	99.71	10	100	0	99.7	60-135	0			
Benzene	50.8	5.0	50	0	102	82-119	0			
Bromodichloromethane	51.32	5.0	50	0	103	81-119	0			
Bromoform	44.96	5.0	50	0	89.9	80-120	0			
Bromomethane	48.95	5.0	50	0	97.9	75-130	0			
Carbon disulfide	100.5	10	100	0	100	78-120	0			
Carbon tetrachloride	53.63	5.0	50	0	107	77-120	0			
Chlorobenzene	46.52	5.0	50	0	93	82-118	0			
Chloroethane	48.85	5.0	50	0	97.7	78-122	0			
Chloroform	49.2	5.0	50	0	98.4	78-120	0			
Chloromethane	54.38	5.0	50	0	109	75-125	0			
cis-1,3-Dichloropropene	53.19	5.0	50	0	106	81-120	0			
Dibromochloromethane	47.12	5.0	50	0	94.2	81-118	0			
Ethylbenzene	50.86	5.0	50	0	102	82-120	0			
m,p-Xylene	101.6	10	100	0	102	82-122	0			
Methyl tert-butyl ether	47.44	5.0	50	0	94.9	79-120	0			
Methylene chloride	48.09	10	50	0	96.2	80-122	0			
Styrene	49.82	5.0	50	0	99.6	82-121	0			
Tetrachloroethene	50.96	5.0	50	0	102	79-118	0			
Toluene	50.27	5.0	50	0	101	81-119	0			
trans-1,3-Dichloropropene	50.67	5.0	50	0	101	82-121	0			
Trichloroethene	53	5.0	50	0	106	78-118	0			
Vinyl acetate	94.63	10	100	0	94.6	75-120	0			
Vinyl chloride	49.02	2.0	50	0	98	73-127	0			
Xylenes, Total	154	15	150	0	103	80-120	0			
Surr: 1,2-Dichloroethane-d4	40.99	5.0	50	0	82	70-130	0			
Surr: 4-Bromofluorobenzene	42.94	5.0	50	0	85.9	70-130	0			
Surr: Dibromofluoromethane	43.34	5.0	50	0	86.7	70-130	0			
Surr: Toluene-d8	43.25	5.0	50	0	86.5	70-130	0			

ND - Not Detected at the Reporting Limit
*Analyte detected below quantitation limits
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B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15673** InstrumentID: **VOA_II**

LCSD Sample ID: **VLCSWD-0814** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/14/03 22:19**

Client ID: Run ID: **VOA_II_030814C** SeqNo: **356788** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	51.12	5.0	50	0	102	75-118	50.88	0.458	20	
1,1,2,2-Tetrachloroethane	39.71	5.0	50	0	79.4	79-120	41.19	3.67	20	
1,1,2-Trichloroethane	45.78	5.0	50	0	91.6	81-119	46.35	1.25	20	
1,1-Dichloroethane	48.62	5.0	50	0	97.2	80-120	50.69	4.18	20	
1,1-Dichloroethene	53.22	5.0	50	0	106	80-120	52.74	0.902	20	
1,2-Dichloroethane	46.89	5.0	50	0	93.8	80-120	48.26	2.88	20	
2-Butanone	99.9	10	100	0	99.9	70-130	103.8	3.81	20	
2-Chloroethyl vinyl ether	173.7	10	100	0	174	72-120	179.3	3.2	20	S
2-Hexanone	90.38	10	100	0	90.4	70-130	94.4	4.36	20	
4-Methyl-2-pentanone	89.33	10	100	0	89.3	78-120	94.02	5.12	20	
Acetone	99.36	10	100	0	99.4	60-135	99.71	0.354	20	
Benzene	51.6	5.0	50	0	103	82-119	50.8	1.56	20	
Bromodichloromethane	51.03	5.0	50	0	102	81-119	51.32	0.564	20	
Bromoform	42.98	5.0	50	0	86	80-120	44.96	4.51	20	
Bromomethane	49.34	5.0	50	0	98.7	75-130	48.95	0.783	20	
Carbon disulfide	100.9	10	100	0	101	78-120	100.5	0.406	20	
Carbontetrachloride	52.81	5.0	50	0	106	77-120	53.63	1.54	20	
Chlorobenzene	46.95	5.0	50	0	93.9	82-118	46.52	0.904	20	
Chloroethane	49.05	5.0	50	0	98.1	78-122	48.85	0.404	20	
Chloroform	49.39	5.0	50	0	98.8	78-120	49.2	0.403	20	
Chloromethane	53.36	5.0	50	0	107	75-125	54.38	1.88	20	
cis-1,3-Dichloropropene	53.57	5.0	50	0	107	81-120	53.19	0.719	20	
Dibromochloromethane	46.52	5.0	50	0	93	81-118	47.12	1.28	20	
Ethylbenzene	50.83	5.0	50	0	102	82-120	50.86	0.0468	20	
m,p-Xylene	101.3	10	100	0	101	82-122	101.6	0.298	20	
Methyl tert-butyl ether	47.26	5.0	50	0	94.5	79-120	47.44	0.38	20	
Methylene chloride	47.43	10	50	0	94.9	80-122	48.09	1.39	20	
Styrene	50.27	5.0	50	0	101	82-121	49.82	0.888	20	
Tetrachloroethene	50.65	5.0	50	0	101	79-118	50.96	0.617	20	
Toluene	49.82	5.0	50	0	99.6	81-119	50.27	0.904	20	
trans-1,3-Dichloropropene	50.92	5.0	50	0	102	82-121	50.67	0.483	20	
Trichloroethene	53.42	5.0	50	0	107	78-118	53	0.797	20	
Vinyl acetate	89.01	10	100	0	89	75-120	94.63	6.12	20	
Vinyl chloride	49.36	2.0	50	0	98.7	73-127	49.02	0.69	20	
Xylenes, Total	153.3	15	150	0	102	80-120	154	0.425	20	
Surr: 1,2-Dichloroethane-d4	40.19	5.0	50	0	80.4	70-130	40.99	1.98	20	
Surr: 4-Bromofluorobenzene	42.48	5.0	50	0	85	70-130	42.94	1.08	20	
Surr: Dibromofluoromethane	42.97	5.0	50	0	85.9	70-130	43.34	0.867	20	
Surr: Toluene-d8	42.82	5.0	50	0	85.6	70-130	43.25	1.01	20	

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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15673** InstrumentID: **VOA_II**

MS Sample ID: **0308090-04AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/15/03 0:28**

Client ID: Run ID: **VOA_II_030814C** SeqNo: **361941** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.11	5.0	50	0	92.2	75-125	0			
1,1,2,2-Tetrachloroethane	50.6	5.0	50	0	101	75-125	0			
1,1,2-Trichloroethane	52.64	5.0	50	0	105	75-125	0			
1,1-Dichloroethane	51.35	5.0	50	0	103	75-125	0			
1,1-Dichloroethene	45.18	5.0	50	0	90.4	65-130	0			
1,2-Dichloroethane	56.83	5.0	50	0	114	70-130	0			
2-Butanone	113.7	10	100	0	114	64-128	0			
2-Chloroethyl vinyl ether	U	10	100	0	0	75-125	0			S
2-Hexanone	118.8	10	100	0	119	72-124	0			
4-Methyl-2-pentanone	117.1	10	100	0	117	75-125	0			
Acetone	112.9	10	100	3.023	110	60-130	0			
Benzene	53.68	5.0	50	0	107	76-127	0			
Bromodichloromethane	57.22	5.0	50	0	114	75-125	0			
Bromoform	51.77	5.0	50	0	104	75-125	0			
Bromomethane	47.88	5.0	50	0	95.8	75-125	0			
Carbon disulfide	92.07	10	100	2.7	89.4	75-125	0			
Carbon tetrachloride	48.44	5.0	50	0	96.9	70-130	0			
Chlorobenzene	50.85	5.0	50	0	102	75-126	0			
Chloroethane	45.51	5.0	50	0	91	70-130	0			
Chloroform	56.72	5.0	50	3.453	107	75-125	0			
Chloromethane	52.5	5.0	50	0	105	75-125	0			
cis-1,3-Dichloropropene	57.29	5.0	50	0	115	75-125	0			
Dibromochloromethane	53.15	5.0	50	0	106	75-125	0			
Ethylbenzene	51.66	5.0	50	0	103	75-125	0			
m,p-Xylene	104.3	10	100	0	104	75-125	0			
Methyl tert-butyl ether	52.59	5.0	50	0	105	75-125	0			
Methylene chloride	52.48	10	50	0	105	75-125	0			
Styrene	54.31	5.0	50	0	109	75-125	0			
Tetrachloroethene	47.86	5.0	50	0	95.7	75-125	0			
Toluene	51.39	5.0	50	0	103	76-125	0			
trans-1,3-Dichloropropene	59.11	5.0	50	0	118	70-130	0			
Trichloroethene	51.97	5.0	50	0	104	71-120	0			
Vinyl acetate	116.3	10	100	0	116	75-125	0			
Vinyl chloride	40.7	2.0	50	0	81.4	60-135	0			
Xylenes, Total	160.2	15	150	0	107	75-125	0			
Surr:1,2-Dichloroethane-d4	39.75	5.0	50	0	79.5	70-130	0			
Surr:4-Bromofluorobenzene	42.16	5.0	50	0	84.3	70-130	0			
Surr:Dibromofluoromethane	43.14	5.0	50	0	86.3	70-130	0			
Surr: Toluene-d8	42.63	5.0	50	0	85.3	70-130	0			

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CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15673** InstrumentID: **VOA_II**

MSD Sample ID: **0308090-04AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date: **08/15/03 0:54**

Client ID: Run ID: **VOA_II_030814C** SeqNo: **361942** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.4	5.0	50	0	88.8	75-125	46.11	3.79	20	
1,1,2,2-Tetrachloroethane	49.17	5.0	50	0	98.3	75-125	50.6	2.85	20	
1,1,2-Trichloroethane	51.23	5.0	50	0	102	75-125	52.64	2.71	20	
1,1-Dichloroethane	50.74	5.0	50	0	101	75-125	51.35	1.2	20	
1,1-Dichloroethene	43.21	5.0	50	0	86.4	65-130	45.18	4.46	20	
1,2-Dichloroethane	54.44	5.0	50	0	109	70-130	56.83	4.3	20	
2-Butanone	106.7	10	100	0	107	64-128	113.7	6.39	20	
2-Chloroethyl vinyl ether	U	10	100	0	0	75-125	0	0	20	S
2-Hexanone	117.1	10	100	0	117	72-124	118.8	1.49	20	
4-Methyl-2-pentanone	116.7	10	100	0	117	75-125	117.1	0.367	20	
Acetone	105.8	10	100	3.023	103	60-130	112.9	6.49	20	
Benzene	52.16	5.0	50	0	104	76-127	53.68	2.87	20	
Bromodichloromethane	55.44	5.0	50	0	111	75-125	57.22	3.17	20	
Bromoform	51.15	5.0	50	0	102	75-125	51.77	1.21	20	
Bromomethane	48.58	5.0	50	0	97.2	75-125	47.88	1.45	20	
Carbon disulfide	88.52	10	100	2.7	85.8	75-125	92.07	3.93	20	
Carbon tetrachloride	44.37	5.0	50	0	88.7	70-130	48.44	8.76	20	
Chlorobenzene	50.69	5.0	50	0	101	75-126	50.85	0.323	20	
Chloroethane	44.85	5.0	50	0	89.7	70-130	45.51	1.47	20	
Chloroform	55.64	5.0	50	3.453	104	75-125	56.72	1.92	20	
Chloromethane	52.6	5.0	50	0	105	75-125	52.5	0.179	20	
cis-1,3-Dichloropropene	56.36	5.0	50	0	113	75-125	57.29	1.64	20	
Dibromochloromethane	51.32	5.0	50	0	103	75-125	53.15	3.5	20	
Ethylbenzene	51.82	5.0	50	0	104	75-125	51.66	0.294	20	
m,p-Xylene	103.6	10	100	0	104	75-125	104.3	0.658	20	
Methyl tert-butyl ether	52.3	5.0	50	0	105	75-125	52.59	0.551	20	
Methylene chloride	51.13	10	50	0	102	75-125	52.48	2.61	20	
Styrene	54.53	5.0	50	0	109	75-125	54.31	0.41	20	
Tetrachloroethene	45.56	5.0	50	0	91.1	75-125	47.86	4.91	20	
Toluene	50.73	5.0	50	0	101	76-125	51.39	1.28	20	
trans-1,3-Dichloropropene	57.52	5.0	50	0	115	70-130	59.11	2.73	20	
Trichloroethene	50.28	5.0	50	0	101	71-120	51.97	3.31	20	
Vinyl acetate	110.8	10	100	0	111	75-125	116.3	4.88	20	
Vinyl chloride	38.42	2.0	50	0	76.8	60-135	40.7	5.76	20	
Xylenes, Total	159.4	15	150	0	106	75-125	160.2	0.466	20	
Surr: 1,2-Dichloroethane-d4	38.68	5.0	50	0	77.4	70-130	39.75	2.74	20	
Surr: 4-Bromofluorobenzene	42.02	5.0	50	0	84	70-130	42.16	0.322	20	
Surr: Dibromofluoromethane	42.09	5.0	50	0	84.2	70-130	43.14	2.46	20	
Surr: Toluene-d8	41.99	5.0	50	0	84	70-130	42.63	1.51	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01A 0308106-02A 0308106-03A

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J - Analyte detected below quantitation limits
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CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15601** InstrumentID: **UV-2101PC**

MBLK Sample ID: **WMBW1-081103** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/11/03 0:00**
Client ID: Run ID: **UV-2101PC_030811B** SeqNo: **355294** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020								

LCS Sample ID: **WLCSW1-081103** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/11/03 0:00**
Client ID: Run ID: **UV-2101PC_030811B** SeqNo: **355295** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.203	0.020	0.2	0	101	80-120	0			

MS Sample ID: **0308062-02CMS** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/11/03 0:00**
Client ID: Run ID: **UV-2101PC_030811B** SeqNo: **355310** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2064	0.020	0.2	0.00066	103	75-125	0			

MSD Sample ID: **0308062-02CMSD** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/11/03 0:00**
Client ID: Run ID: **UV-2101PC_030811B** SeqNo: **355311** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2062	0.020	0.2	0.00066	103	75-125	0.2064	0.0969	25	

DUP Sample ID: **0308062-02C DUP** Test Code: **E335.3** Units: **mg/L** Analysis Date: **08/11/03 0:00**
Client ID: Run ID: **UV-2101PC_030811B** SeqNo: **355309** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020	0	0	0	0-0	0.00066	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01E 0308106-02E 0308106-03E

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CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15643** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-081303** Test Code: **E310.1** Units: **mg/L** Analysis Date: **08/13/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0308** SeqNo: **356132** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.0								
Alkalinity, Carbonate (As CaCO3)	U	5.0								
Alkalinity, Hydroxide (As CaCO3)	U	5.0								
Alkalinity, Total (As CaCO3)	U	5.0								

LCS Sample ID: **WLCSW1-081303** Test Code: **E310.1** Units: **mg/L** Analysis Date: **08/13/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0308** SeqNo: **356133** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1000	5.0	1000	0	100	80-120	0			

DUP Sample ID: **0308106-03D DUP** Test Code: **E310.1** Units: **mg/L** Analysis Date: **08/13/03 0:00**
Client ID: **RA313** Run ID: **WET CHEMISTRY_0308** SeqNo: **356141** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	185	5.0	0	0	0	0-0	180	2.74	20	
Alkalinity, Carbonate (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	185	5.0	0	0	0	0-0	180	2.74	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01D 0308106-02D 0308106-03D

ND - Not Detected at the Reporting Limit
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CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15655** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-081203** Test Code: **E300** Units: **mg/L** Analysis Date: **08/12/03 21:01**
Client ID: Run ID: **IC201_030812A** SeqNo: **356403** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-081203** Test Code: **E300** Units: **mg/L** Analysis Date: **08/12/03 21:34**
Client ID: Run ID: **IC201_030812A** SeqNo: **356404** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.68	0.50	10	0	96.8	80-120	0			
Fluoride	1.97	0.10	2	0	98.5	80-120	0			
Sulfate	10.48	1.0	10	0	105	80-120	0			
Surr: Dichloroacetic acid (surr)	2.09	0.10	2	0	104	80-120	0			

MS Sample ID: **0308062-02BMS** Test Code: **E300** Units: **mg/L** Analysis Date: **08/12/03 23:44**
Client ID: Run ID: **IC201_030812A** SeqNo: **356407** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.15	0.50	10	0	102	75-125	0			
Fluoride	1.97	0.10	2	0	98.5	75-125	0			
Sulfate	10.94	1.0	10	0	109	75-125	0			
Surr: Dichloroacetic acid (surr)	5.38	0.10	5	0	108	80-120	0			

MSD Sample ID: **0308062-02BMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **08/13/03 0:16**
Client ID: Run ID: **IC201_030812A** SeqNo: **356408** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.9	0.50	10	0	99	75-125	10.15	2.49	20	
Fluoride	1.93	0.10	2	0	96.5	75-125	1.97	2.05	20	
Sulfate	10.71	1.0	10	0	107	75-125	10.94	2.12	20	
Surr: Dichloroacetic acid (surr)	4.85	0.10	5	0	97	80-120	5.38	10.4	20	

DUP Sample ID: **0308062-02BDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **08/12/03 23:11**
Client ID: Run ID: **IC201_030812A** SeqNo: **356406** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.10	0	0	0	0-0	0	0	20	
Surr: Dichloroacetic acid (surr)	5.5	0.10	5	0	110	80-120	5.48	0.364	20	

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CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15655** InstrumentID: **IC201**

DUP Sample ID: **0308069-01CDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **08/13/03 13:49**
Client ID: Run ID: **IC201_030812A** SeqNo: **356417** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	1858	100	0	0	0	0-0	1924	3.49	20	
Surr: Dichloroacetic acid (surr)	562	10	500	0	112	80-120	554	1.43	20	

DUP Sample ID: **0308106-03DDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **08/13/03 23:02**
Client ID: **RA313** Run ID: **IC201_030812A** SeqNo: **356432** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	206.5	25	0	0	0	0-0	207	0.242	20	
Surr: Dichloroacetic acid (surr)	254.5	5.0	250	0	102	80-120	263.5	3.47	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01D 0308106-02D 0308106-03D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308106
Project: Monthly

QC BATCH REPORT

Batch ID: **R15737** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-081803** Test Code: **E300** Units: **mg/L** Analysis Date: **08/18/03 20:17**
Client ID: Run ID: **IC201_030818B** SeqNo: **358138** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-081803** Test Code: **E300** Units: **mg/L** Analysis Date: **08/18/03 20:49**
Client ID: Run ID: **IC201_030818B** SeqNo: **358139** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.64	0.50	10	0	96.4	80-120	0			
Fluoride	1.93	0.10	2	0	96.5	80-120	0			
Sulfate	10.35	1.0	10	0	103	80-120	0			
Surr: Dichloroacetic acid (surr)	2.1	0.10	2	0	105	80-120	0			

LCSD Sample ID: **WLCSDW1-08180** Test Code: **E300** Units: **mg/L** Analysis Date: **08/19/03 8:43**
Client ID: Run ID: **IC201_030818B** SeqNo: **358153** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.65	0.50	10	0	96.5	80-120	9.64	0.104	20	
Fluoride	1.96	0.10	2	0	98	80-120	1.93	1.54	20	
Sulfate	10.08	1.0	10	0	101	80-120	10.35	2.64	20	
Surr: Dichloroacetic acid (surr)	1.79	0.10	2	0	89.5	80-120	2.1	15.9	20	

DUP Sample ID: **0308171-04DDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **08/18/03 22:59**
Client ID: Run ID: **IC201_030818B** SeqNo: **358143** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	11.12	1.0	0	0	0	0-0	11.11	0.09	20	
Surr: Dichloroacetic acid (surr)	5.95	0.10	5	0	119	80-120	4.87	20	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308106-01D 0308106-03D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

e-Lab, Inc.
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

030806

e-Lab Project Manager: | e-Lab Work Order #: 030767-85

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Monthly	A	Monthly
Work Order		Project Number		B	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	
Send Report To	Jeff Byrd	Invoice Attn	Jeff Byrd	D	
Address	P.O. Box 159	Address	P.O. Box 159	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	505-748-3311	Phone	505-748-3311	H	
Fax	505-746-5421	Fax	505-746-5421	I	
e-Mail Address				J	

No	Sample Description	Date	Time	Matrix	Pres	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	RA1224	8/6/03	0900	L	4	7	X										
2	RA304	8/6/03	0915			7	X										
3	RA313	8/7/03	0930			7	X										
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign

Shipment Method: Fed Ex

Required Turnaround Time: (Check Box) ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Byrd	8/7/03	1615		
Relinquished by:	Date:	Time:	Received by (Laboratory):	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

e-Lab Cooler ID	Cooler Temp.	QC Package: (Check Box Below)	
		Level II: Standard QC	
		Level III: Standard QC + Raw Data	
		Level IV: SW846 Methods/CLP	
		Other:	

Preservative Key: 1- HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.

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e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING COMPAN Date/Time Received: 8/8/2003 9:27:00 AM

Work Order Number 0308106 Received by: RNG

Checklist completed by: [signature] 8/8/03. (Signature / Date) Reviewed by: LT 8/11/03 (Initials / Date)

Matrix: L Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑ LT 8/11/03	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):	4.3c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

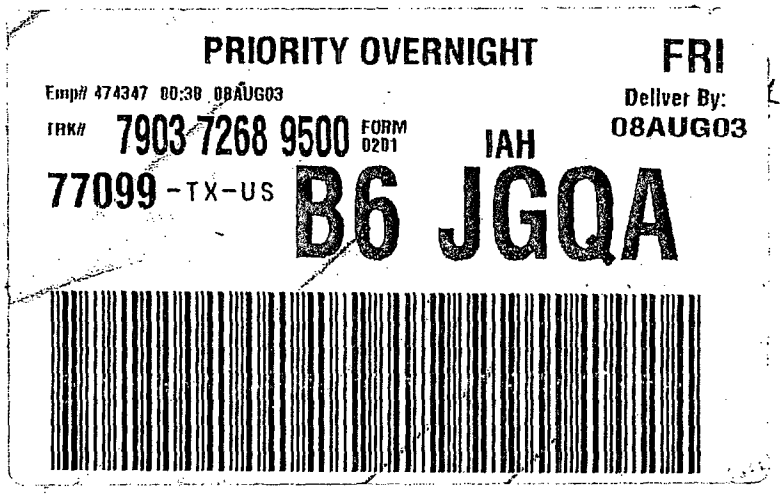
Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

W.O.# B08106.


PRIORITY OVERNIGHT
FRI
Emp# 474347 00:30 08AUG03
Deliver By:
08AUG03
TRK# 7903 7268 9500 FORM 0201
IAH
77099 -TX-US
B6 JGQA

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5887

September 11, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Monthly Work Order : **0308334**

Dear Jeff Byrd,

e-Lab, Inc. received 2 samples on 8/30/2003 9:30:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 30. If you have any questions regarding this report, please feel free to call me.

Sincerely,

Lora Terrill

Electronically approved by: Georgia Jones

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *September 10, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: **0308334**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0308334-01	RA 315€	Wate1		8/29/2003 11:0C	8/30/2003 09:3C	☐
0308334-02	Larue	Wate1		8/29/2003 11:3C	8/30/2003 09:3C	☐

e-Lab, Inc.

Date: *September 11, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: 0308334

Case Narrative

The MS/MSD for metals analysis were performed on sample "Larue" (e-Lab number 0308334-02). Percent recoveries for several compounds were outside QC limits in the MS/MSD and the PDS due to matrix interference. MS/MSD recoveries for Magnesium and Sodium could not be evaluated due to high background results.

The MS/MSD for Volatile analysis were performed on sample "Larue" (e-Lab number 0308334-02). Percent recoveries for 2-Chloroethyl vinyl ether and 2-Hexanone are outside QC limits. Both compounds passed in the LCS/LCSD.

e-Lab, Inc.

Date: *September 10, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly
Lab ID: 0308334-01

Client Sample ID: RA 3156
Collection Date: 8/29/2003 11:00:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **9/4/2003**		Analyst: **MG**
Mercury	0.0000650	0.000042	0.000200	J	mg/L	1	9/5/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **9/3/2003**		Analyst: **ALR**
Aluminum	0.0172	0.0016	0.0100		mg/L	1	9/8/2003
Arsenic	0.00455	0.0018	0.00500	J	mg/L	1	9/4/2003
Barium	0.0228	0.00060	0.00500		mg/L	1	9/8/2003
Beryllium	U	0.00030	0.00200		mg/L	1	9/4/2003
Boron	0.353	0.011	0.0200		mg/L	1	9/4/2003
Cadmium	U	0.00015	0.00100		mg/L	1	9/8/2003
Calcium	839	8.0	50.0		mg/L	100	9/8/2003
Chromium	0.000974	0.00050	0.00200	J	mg/L	1	9/4/2003
Cobalt	0.00136	0.00010	0.00200	J	mg/L	1	9/4/2003
Copper	0.0372	0.00030	0.00200		mg/L	1	9/4/2003
Iron	4.14	0.025	0.200		mg/L	1	9/4/2003
Lead	0.00340	0.00020	0.00500	J	mg/L	1	9/8/2003
Magnesium	276	1.2	10.0		mg/L	50	9/8/2003
Manganese	0.0238	0.0010	0.00500		mg/L	1	9/4/2003
Nickel	0.0249	0.00030	0.00500		mg/L	1	9/4/2003
Potassium	4.84	0.020	0.200		mg/L	1	9/8/2003
Selenium	0.0213	0.0017	0.00500		mg/L	1	9/4/2003
Silver	U	0.00020	0.00500		mg/L	1	9/8/2003
Sodium	308	1.6	10.0		mg/L	50	9/8/2003
Vanadium	0.0113	0.00040	0.00500		mg/L	1	9/4/2003
Zinc	0.504	0.0075	0.0250		mg/L	5	9/8/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **9/2/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	9/3/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	9/3/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	9/3/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	9/3/2003
2-Methylphenol	U	2.8	10		µg/L	1	9/3/2003
2-Nitroaniline	U	1.1	10		µg/L	1	9/3/2003
2-Nitrophenol	U	2.6	10		µg/L	1	9/3/2003
3-Nitroaniline	U	1.2	10		µg/L	1	9/3/2003
4-Methylphenol	U	4.6	10		µg/L	1	9/3/2003
4-Nitroaniline	U	0.95	10		µg/L	1	9/3/2003
4-Nitrophenol	U	2.7	10		µg/L	1	9/3/2003
Acenaphthene	U	1.1	10		µg/L	1	9/3/2003
Acenaphthylene	U	1.0	10		µg/L	1	9/3/2003
Aniline	U	10	10		µg/L	1	9/3/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 10, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly
Lab ID: 0308334-01

Client Sample ID: RA 3156
Collection Date: 8/29/2003 11:00:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	9/3/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	9/3/2003
Benzidine	U	0.34	10		µg/L	1	9/3/2003
Hexachloroethane	U	0.64	10		µg/L	1	9/3/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	9/3/2003
Isophorone	U	1.2	10		µg/L	1	9/3/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	9/3/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	9/3/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	9/3/2003
Naphthalene	U	1.0	10		µg/L	1	9/3/2003
Nitrobenzene	U	1.7	10		µg/L	1	9/3/2003
Pentachlorophenol	U	1.5	10		µg/L	1	9/3/2003
Phenanthrene	U	1.2	10		µg/L	1	9/3/2003
Phenol	U	3.5	10		µg/L	1	9/3/2003
Pyrene	U	0.92	10		µg/L	1	9/3/2003
Surr: 2,4,6-Tribromophenol	104	0	10-123		%REC	1	9/3/2003
Surr: 2-Fluorobiphenyl	97.6	0	43-116		%REC	1	9/3/2003
Surr: 2-Fluorophenol	43.0	0	21-100		%REC	1	9/3/2003
Surr: 4-Terphenyl-d14	105	0	33-141		%REC	1	9/3/2003
Surr: Nitrobenzene-d5	93.7	0	35-114		%REC	1	9/3/2003
Surr: Phenol-d6	26.1	0	10-94		%REC	1	9/3/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	9/5/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	9/5/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	9/5/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	9/5/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	9/5/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	9/5/2003
2-Butanone	U	0.70	10		µg/L	1	9/5/2003
2-Chloroethyl vinyl ether	U	0.63	10		µg/L	1	9/5/2003
2-Hexanone	U	1.1	10		µg/L	1	9/5/2003
4-Methyl-2-pentanone	U	0.64	10		µg/L	1	9/5/2003
Acetone	U	1.2	10		µg/L	1	9/5/2003
Benzene	U	0.66	5.0		µg/L	1	9/5/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	9/5/2003
Bromoform	U	0.40	5.0		µg/L	1	9/5/2003
Bromomethane	U	0.70	5.0		µg/L	1	9/5/2003
Carbon disulfide	U	0.76	10		µg/L	1	9/5/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	9/5/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	9/5/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 10, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA 3156
Work Order:	0308334	**Collection Date:**	8/29/2003 11:00:00 AM
Project:	Monthly		
Lab ID:	0308334-01	**Matrix:**	WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	9/5/2003
Chloroform	U	0.52	5.0		µg/L	1	9/5/2003
Chloromethane	U	1.1	5.0		µg/L	1	9/5/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	9/5/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	9/5/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	9/5/2003
m,p-Xylene	U	1.3	10		µg/L	1	9/5/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	9/5/2003
Methylene chloride	U	0.60	10		µg/L	1	9/5/2003
Styrene	U	0.56	5.0		µg/L	1	9/5/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	9/5/2003
Toluene	U	0.69	5.0		µg/L	1	9/5/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	9/5/2003
Trichloroethene	U	0.70	5.0		µg/L	1	9/5/2003
Vinyl acetate	U	0.92	10		µg/L	1	9/5/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	9/5/2003
Xylenes, Total	U	1.8	15		µg/L	1	9/5/2003
Surr: 1,2-Dichloroethane-d4	91.9	0	70-130		%REC	1	9/5/2003
Surr: 4-Bromofluorobenzene	90.7	0	70-130		%REC	1	9/5/2003
Surr: Dibromofluoromethane	95.3	0	70-130		%REC	1	9/5/2003
Surr: Toluene-d8	98.7	0	70-130		%REC	1	9/5/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **LMD**
Chloride	236	2.00	5.00		mg/L	10	9/5/2003
Fluoride	0.410	0.0500	0.100		mg/L	1	9/5/2003
Sulfate	1,600	25.0	50.0		mg/L	50	9/5/2003
Surr: Dichloroacetic acid (surr)	109	0	80-120		%REC	1	9/5/2003
Surr: Dichloroacetic acid (surr)	106	0	80-120		%REC	10	9/5/2003
Surr: Dichloroacetic acid (surr)	109	0	80-120		%REC	50	9/5/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	245	2.0	5.00		mg/L	1	9/9/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	9/9/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	9/9/2003
Alkalinity, Total (As CaCO3)	245	2.0	5.00		mg/L	1	9/9/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	9/6/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 10, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly
Lab ID: 0308334-02

Client Sample ID: Larue
Collection Date: 8/29/2003 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **9/4/2003**		Analyst: **MG**
Mercury	0.0000800	0.000042	0.000200	J	mg/L	1	9/5/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **9/3/2003**		Analyst: **ALR**
Aluminum	0.00810	0.0016	0.0100	J	mg/L	1	9/8/2003
Arsenic	U	0.0018	0.00500		mg/L	1	9/4/2003
Barium	0.00820	0.00060	0.00500		mg/L	1	9/8/2003
Beryllium	U	0.00030	0.00200		mg/L	1	9/4/2003
Boron	0.242	0.011	0.0200		mg/L	1	9/4/2003
Cadmium	U	0.00015	0.00100		mg/L	1	9/8/2003
Calcium	406	4.0	25.0		mg/L	50	9/8/2003
Chromium	0.000615	0.00050	0.00200	J	mg/L	1	9/4/2003
Cobalt	0.000739	0.00010	0.00200	J	mg/L	1	9/4/2003
Copper	0.0246	0.00030	0.00200		mg/L	1	9/4/2003
Iron	2.47	0.025	0.200		mg/L	1	9/4/2003
Lead	0.00510	0.00020	0.00500		mg/L	1	9/8/2003
Magnesium	150	0.50	4.00		mg/L	20	9/8/2003
Manganese	0.00899	0.0010	0.00500		mg/L	1	9/4/2003
Nickel	0.0147	0.00030	0.00500		mg/L	1	9/4/2003
Potassium	1.56	0.020	0.200		mg/L	1	9/8/2003
Selenium	0.0102	0.0017	0.00500		mg/L	1	9/4/2003
Silver	U	0.00020	0.00500		mg/L	1	9/8/2003
Sodium	113	0.32	2.00		mg/L	10	9/8/2003
Vanadium	0.00866	0.00040	0.00500		mg/L	1	9/4/2003
Zinc	0.277	0.015	0.0500		mg/L	10	9/8/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **9/2/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	9/3/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	9/3/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	9/3/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	9/3/2003
2-Methylphenol	U	2.8	10		µg/L	1	9/3/2003
2-Nitroaniline	U	1.1	10		µg/L	1	9/3/2003
2-Nitrophenol	U	2.6	10		µg/L	1	9/3/2003
3-Nitroaniline	U	1.2	10		µg/L	1	9/3/2003
4-Methylphenol	U	4.6	10		µg/L	1	9/3/2003
4-Nitroaniline	U	0.95	10		µg/L	1	9/3/2003
4-Nitrophenol	U	2.7	10		µg/L	1	9/3/2003
Acenaphthene	U	1.1	10		µg/L	1	9/3/2003
Acenaphthylene	U	1.0	10		µg/L	1	9/3/2003
Aniline	U	10	10		µg/L	1	9/3/2003

Qualifiers

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 10, 2003*

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly
Lab ID: 0308334-02

Client Sample ID: Larue
Collection Date: 8/29/2003 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	9/3/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	9/3/2003
Benzidine	U	0.34	10		µg/L	1	9/3/2003
Hexachloroethane	U	0.64	10		µg/L	1	9/3/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	9/3/2003
Isophorone	U	1.2	10		µg/L	1	9/3/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	9/3/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	9/3/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	9/3/2003
Naphthalene	U	1.0	10		µg/L	1	9/3/2003
Nitrobenzene	U	1.7	10		µg/L	1	9/3/2003
Pentachlorophenol	U	1.5	10		µg/L	1	9/3/2003
Phenanthrene	U	1.2	10		µg/L	1	9/3/2003
Phenol	U	3.5	10		µg/L	1	9/3/2003
Pyrene	U	0.92	10		µg/L	1	9/3/2003
Surr: 2,4,6-Tribromophenol	101	0	10-123		%REC	1	9/3/2003
Surr: 2-Fluorobiphenyl	94.5	0	43-116		%REC	1	9/3/2003
Surr: 2-Fluorophenol	43.4	0	21-100		%REC	1	9/3/2003
Surr: 4-Terphenyl-d14	106	0	33-141		%REC	1	9/3/2003
Surr: Nitrobenzene-d5	93.5	0	35-114		%REC	1	9/3/2003
Surr: Phenol-d6	26.0	0	10-94		%REC	1	9/3/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	9/5/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	9/5/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	9/5/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	9/5/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	9/5/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	9/5/2003
2-Butanone	U	0.70	10		µg/L	1	9/5/2003
2-Chloroethyl vinyl ether	U	0.63	10		µg/L	1	9/5/2003
2-Hexanone	U	1.1	10		µg/L	1	9/5/2003
4-Methyl-2-pentanone	U	0.64	10		µg/L	1	9/5/2003
Acetone	U	1.2	10		µg/L	1	9/5/2003
Benzene	U	0.66	5.0		µg/L	1	9/5/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	9/5/2003
Bromoform	U	0.40	5.0		µg/L	1	9/5/2003
Bromomethane	U	0.70	5.0		µg/L	1	9/5/2003
Carbon disulfide	U	0.76	10		µg/L	1	9/5/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	9/5/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	9/5/2003

Qualifiers

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E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *September 10, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	Larue
Work Order:	0308334	**Collection Date:**	8/29/2003 11:30:00 AM
Project:	Monthly		
Lab ID:	0308334-02	**Matrix:**	WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	9/5/2003
Chloroform	U	0.52	5.0		µg/L	1	9/5/2003
Chloromethane	U	1.1	5.0		µg/L	1	9/5/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	9/5/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	9/5/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	9/5/2003
m,p-Xylene	U	1.3	10		µg/L	1	9/5/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	9/5/2003
Methylene chloride	U	0.60	10		µg/L	1	9/5/2003
Styrene	U	0.56	5.0		µg/L	1	9/5/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	9/5/2003
Toluene	U	0.69	5.0		µg/L	1	9/5/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	9/5/2003
Trichloroethene	U	0.70	5.0		µg/L	1	9/5/2003
Vinyl acetate	U	0.92	10		µg/L	1	9/5/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	9/5/2003
Xylenes, Total	U	1.8	15		µg/L	1	9/5/2003
Surr: 1,2-Dichloroethane-d4	93.1	0	70-130		%REC	1	9/5/2003
Surr: 4-Bromofluorobenzene	90.8	0	70-130		%REC	1	9/5/2003
Surr: Dibromofluoromethane	98.2	0	70-130		%REC	1	9/5/2003
Surr: Toluene-d8	98.0	0	70-130		%REC	1	9/5/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **LMD**
Chloride	122	1.00	2.50		mg/L	5	9/5/2003
Fluoride	0.540	0.0500	0.100		mg/L	1	9/5/2003
Sulfate	1,430	25.0	50.0		mg/L	50	9/5/2003
Surr: Dichloroacetic acid (surr)	95.0	0	80-120		%REC	1	9/5/2003
Surr: Dichloroacetic acid (surr)	101	0	80-120		%REC	5	9/5/2003
Surr: Dichloroacetic acid (surr)	110	0	80-120		%REC	50	9/5/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	270	2.0	5.00		mg/L	1	9/9/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	9/9/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	9/9/2003
Alkalinity, Total (As CaCO3)	270	2.0	5.00		mg/L	1	9/9/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	0.00340	0.0030	0.0200	J	mg/L	1	9/6/2003

Qualifiers

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E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *Sep 11 2003*

CLIENT: Navajo Refining Company

QC BATCH REPORT

Work Order: 0308334

Project: Monthly

Batch ID: **6562** InstrumentID: **ICP4500**

MBLK Sample ID: **MBLKW1-090303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/04/03 18:00**

Client ID: Run ID: **ICP4500_030904A** SeqNo: **364405** Prep Date: **9/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.005572	0.010								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Boron	U	0.020								
Cadmium	U	0.0010								
Calcium	0.08578	0.50								J
Chromium	U	0.0020								
Cobalt	U	0.0020								
Copper	0.0003849	0.0020								J
Iron	U	0.20								
Lead	0.001558	0.0050								J
Magnesium	U	0.20								
Manganese	U	0.0050								
Nickel	U	0.0050								
Potassium	U	0.20								
Selenium	U	0.0050								
Silver	0.0002324	0.0050								J
Sodium	U	0.20								
Vanadium	U	0.0050								
Zinc	0.001739	0.0050								J

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6562** InstrumentID: **ICP4500**

LCS Sample ID: **MLCSW1-090303** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/04/03 18:13**
Client ID: Run ID: **ICP4500_030904A** SeqNo: **364408** Prep Date: **9/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.104	0.010	0.1	0	104	80-120	0			
Arsenic	0.1001	0.0050	0.1	0	100	80-120	0			
Barium	0.09696	0.0050	0.1	0	97	80-120	0			
Beryllium	0.1004	0.0020	0.1	0	100	80-120	0			
Boron	0.4893	0.020	0.5	0	97.9	80-120	0			
Cadmium	0.09786	0.0010	0.1	0	97.9	80-120	0			
Calcium	10.1	0.50	10	0	101	80-120	0			
Chromium	0.1	0.0020	0.1	0	100	80-120	0			
Cobalt	0.1012	0.0020	0.1	0	101	80-120	0			
Copper	0.1023	0.0020	0.1	0	102	80-120	0			
Iron	9.995	0.20	10	0	100	80-120	0			
Lead	0.09567	0.0050	0.1	0	95.7	80-120	0			
Magnesium	10.31	0.20	10	0	103	80-120	0			
Manganese	0.1004	0.0050	0.1	0	100	80-120	0			
Nickel	0.1013	0.0050	0.1	0	101	80-120	0			
Potassium	10.29	0.20	10	0	103	80-120	0			
Selenium	0.09965	0.0050	0.1	0	99.6	80-120	0			
Silver	0.1002	0.0050	0.1	0	100	80-120	0			
Sodium	10.27	0.20	10	0	103	80-120	0			
Vanadium	0.1004	0.0050	0.1	0	100	80-120	0			
Zinc	0.09964	0.0050	0.1	0	99.6	80-120	0			

MS Sample ID: **0308334-02DMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/04/03 21:18**
Client ID: **Larue** Run ID: **ICP4500_030904A** SeqNo: **364452** Prep Date: **9/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09475	0.0050	0.1	0.001187	93.6	75-125	0			
Beryllium	0.0987	0.0020	0.1	0.00002865	98.7	75-125	0			
Boron	0.7256	0.020	0.5	0.2419	96.7	75-125	0			
Calcium	461	0.50	10	419.2	418	75-125	0			SEO
Chromium	0.1025	0.0020	0.1	0.0006148	102	75-125	0			
Cobalt	0.09558	0.0020	0.1	0.0007394	94.8	75-125	0			
Copper	0.1092	0.0020	0.1	0.02464	84.6	75-125	0			
Iron	12.08	0.20	10	2.471	96.1	75-125	0			
Magnesium	U	0.20	10	0	0	75-125	0			S
Manganese	0.1025	0.0050	0.1	0.008988	93.5	75-125	0			
Nickel	0.1039	0.0050	0.1	0.01471	89.2	75-125	0			
Selenium	0.09839	0.0050	0.1	0.01022	88.2	75-125	0			
Sodium	U	0.20	10	0	0	75-125	0			S
Vanadium	0.1185	0.0050	0.1	0.008655	110	75-125	0			
Zinc	0.2553	0.0050	0.1	0.1873	68	75-125	0			S

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B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6562** InstrumentID: **ICP4500**

MS Sample ID: **0308334-02DMS** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/08/03 18:42**
Client ID: **Larue** Run ID: **ICP4500_030908A** SeqNo: **365812** Prep Date: **9/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0997	0.010	0.1	0.008104	91.6	75-125	0			
Barium	0.1129	0.0050	0.1	0.008201	105	75-125	0			
Cadmium	0.08438	0.0010	0.1	0.00002534	84.4	75-125	0			
Lead	0.1082	0.0050	0.1	0.005101	103	75-125	0			
Potassium	11.24	0.20	10	1.563	96.8	75-125	0			
Silver	0.08332	0.0050	0.1	-3.682E-06	83.3	75-125	0			

MSD Sample ID: **0308334-02DMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/04/03 21:22**
Client ID: **Larue** Run ID: **ICP4500_030904A** SeqNo: **364453** Prep Date: **9/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09674	0.0050	0.1	0.001187	95.6	75-125	0.09475	2.08	25	
Beryllium	0.09436	0.0020	0.1	0.00002865	94.3	75-125	0.0987	4.5	25	
Boron	0.7181	0.020	0.5	0.2419	95.2	75-125	0.7256	1.04	25	
Calcium	441.4	0.50	10	419.2	222	75-125	461	4.34	25	SEO
Chromium	0.104	0.0020	0.1	0.0006148	103	75-125	0.1025	1.45	25	
Cobalt	0.09746	0.0020	0.1	0.0007394	96.7	75-125	0.09558	1.95	25	
Copper	0.1104	0.0020	0.1	0.02464	85.8	75-125	0.1092	1.09	25	
Iron	12.6	0.20	10	2.471	101	75-125	12.08	4.21	25	
Magnesium	U	0.20	10	0	0	75-125	0	0	25	S
Manganese	0.1042	0.0050	0.1	0.008988	95.2	75-125	0.1025	1.64	25	
Nickel	0.1078	0.0050	0.1	0.01471	93.1	75-125	0.1039	3.68	25	
Selenium	0.09832	0.0050	0.1	0.01022	88.1	75-125	0.09839	0.0712	25	
Sodium	U	0.20	10	0	0	75-125	0	0	25	S
Vanadium	0.1212	0.0050	0.1	0.008655	113	75-125	0.1185	2.25	25	
Zinc	0.2515	0.0050	0.1	0.1873	64.2	75-125	0.2553	1.5	25	S

MSD Sample ID: **0308334-02DMSD** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/08/03 18:46**
Client ID: **Larue** Run ID: **ICP4500_030908A** SeqNo: **365813** Prep Date: **9/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1063	0.010	0.1	0.008104	98.2	75-125	0.0997	6.41	25	
Barium	0.1125	0.0050	0.1	0.008201	104	75-125	0.1129	0.355	25	
Cadmium	0.08387	0.0010	0.1	0.00002534	83.8	75-125	0.08438	0.606	25	
Lead	0.11	0.0050	0.1	0.005101	105	75-125	0.1082	1.65	25	
Potassium	11.75	0.20	10	1.563	102	75-125	11.24	4.44	25	
Silver	0.08176	0.0050	0.1	-3.682E-06	81.8	75-125	0.08332	1.89	25	

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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6562** InstrumentID: **ICP4500**

DUP Sample ID: **0308334-02DDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/04/03 21:13**
Client ID: **Larue** Run ID: **ICP4500_030904A** SeqNo: **364451** Prep Date: **9/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.002321	0.0050	0	0	0	0-0	0.001187	0	25	J
Beryllium	U	0.0020	0	0	0	0-0	0.00002865	0	25	
Boron	0.2435	0.020	0	0	0	0-0	0.2419	0.659	25	
Chromium	0.0006056	0.0020	0	0	0	0-0	0.0006148	0	25	J
Cobalt	0.000756	0.0020	0	0	0	0-0	0.0007394	0	25	J
Copper	0.02421	0.0020	0	0	0	0-0	0.02464	1.76	25	
Iron	2.508	0.20	0	0	0	0-0	2.471	1.49	25	
Manganese	0.00898	0.0050	0	0	0	0-0	0.008988	0.089	25	
Nickel	0.0155	0.0050	0	0	0	0-0	0.01471	5.23	25	
Selenium	0.009369	0.0050	0	0	0	0-0	0.01022	8.69	25	
Vanadium	0.008527	0.0050	0	0	0	0-0	0.008655	1.49	25	

DUP Sample ID: **0308334-02DDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/08/03 15:10**
Client ID: **Larue** Run ID: **ICP4500_030908A** SeqNo: **365725** Prep Date: **9/3/2003** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	400.2	25	0	0	0	0-0	406.3	1.51	25	

DUP Sample ID: **0308334-02DDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/08/03 15:59**
Client ID: **Larue** Run ID: **ICP4500_030908A** SeqNo: **365736** Prep Date: **9/3/2003** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Magnesium	152.6	4.0	0	0	0	0-0	0	0	25	

DUP Sample ID: **0308334-02DDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/08/03 17:48**
Client ID: **Larue** Run ID: **ICP4500_030908A** SeqNo: **365800** Prep Date: **9/3/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	111.6	2.0	0	0	0	0-0	113.2	1.42	25	
Zinc	0.2675	0.050	0	0	0	0-0	0.2767	3.38	25	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6562** InstrumentID: **ICP4500**

DUP Sample ID: **0308334-02DDUP** Test Code: **SW6020** Units: **mg/L** Analysis Date: **09/08/03 18:37**

Client ID: **Lanue** Run ID: **ICP4500_030908A** SeqNo: **365811** Prep Date: **9/3/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.008674	0.010	0	0	0	0-0	0.008104	0	25	J
Barium	0.00822	0.0050	0	0	0	0-0	0.008201	0.231	25	
Cadmium	U	0.0010	0	0	0	0-0	0.00002534	0	25	
Lead	0.00508	0.0050	0	0	0	0-0	0.005101	0.413	25	
Potassium	1.656	0.20	0	0	0	0-0	1.563	5.78	25	
Silver	U	0.0050	0	0	0	0-0	-3.682E-06	0	25	

Thefollowingsampleswereanalyzedinthisbatch: 0308334-01D 0308334-02D

ND - Not Detected at the Reporting Limit
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B - Analyte detected in assoc. Method Blank
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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6567** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW2-090403** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/05/03 13:16**
Client ID: Run ID: **MERCURY_030905B** SeqNo: **364748** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000062	0.00020								J

MBLK Sample ID: **GBLKW2-090403** Test Code: **E245.1** Units: **mg/L** Analysis Date: **09/05/03 13:16**
Client ID: Run ID: **MERCURY_030905C** SeqNo: **364766** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000062	0.00020								J

LCS Sample ID: **GLCSW2-090403** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/05/03 13:23**
Client ID: Run ID: **MERCURY_030905B** SeqNo: **364749** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00491	0.00020	0.005	0	98.2	80-120	0			

LCS Sample ID: **GLCSW2-090403** Test Code: **E245.1** Units: **mg/L** Analysis Date: **09/05/03 13:23**
Client ID: Run ID: **MERCURY_030905C** SeqNo: **364767** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00491	0.00020	0.005	0	98.2	80-120	0			

LCSD Sample ID: **GLCSDW2-090403** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/05/03 13:28**
Client ID: Run ID: **MERCURY_030905B** SeqNo: **364750** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00466	0.00020	0.005	0	93.2	80-120	0.00491	5.22	20	

LCSD Sample ID: **GLCSDW2-090403** Test Code: **E245.1** Units: **mg/L** Analysis Date: **09/05/03 13:28**
Client ID: Run ID: **MERCURY_030905C** SeqNo: **364768** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00466	0.00020	0.005	0	93.2	80-120	0.00491	5.22	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6567** InstrumentID: **Mercury**

MS Sample ID: **0308334-01DMS** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/05/03 13:52**
Client ID: **RA 3156** Run ID: **MERCURY_030905B** SeqNo: **364756** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00483	0.00020	0.005	0.000065	95.3	80-120		0		

MS Sample ID: **0308334-01DMS** Test Code: **E245.1** Units: **mg/L** Analysis Date: **09/05/03 13:52**
Client ID: **RA 3156** Run ID: **MERCURY_030905C** SeqNo: **364772** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00483	0.00020	0.005	0.000065	95.3	80-120		0		

MSD Sample ID: **0308334-01DMSD** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/05/03 14:12**
Client ID: **RA 3156** Run ID: **MERCURY_030905B** SeqNo: **364759** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00489	0.00020	0.005	0.000065	96.5	80-120	0.00483	1.23	20	

MSD Sample ID: **0308334-01DMSD** Test Code: **E245.1** Units: **mg/L** Analysis Date: **09/05/03 14:12**
Client ID: **RA 3156** Run ID: **MERCURY_030905C** SeqNo: **364775** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00489	0.00020	0.005	0.000065	96.5	80-120	0.00483	1.23	20	

DUP Sample ID: **0308334-01DDUP** Test Code: **SW7470** Units: **mg/L** Analysis Date: **09/05/03 13:46**
Client ID: **RA 3156** Run ID: **MERCURY_030905B** SeqNo: **364755** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000073	0.00020	0	0	0	0-0	0.000065	0	20	J

DUP Sample ID: **0308334-01DDUP** Test Code: **E245.1** Units: **mg/L** Analysis Date: **09/05/03 13:46**
Client ID: **RA 3156** Run ID: **MERCURY_030905C** SeqNo: **364771** Prep Date: **9/4/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000073	0.00020	0	0	0	0-0	0.000065	0	20	J

Thefollowingsampleswereanalyzedinthisbatch: 0308334-01D 0308334-02D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6547** InstrumentID: **SV-2**

MBLK Sample ID: **SBLKW1-030902** Test Code: **SW8270** Units: **µg/L** Analysis Date: **09/02/03 19:08**

Client ID: Run ID: **SV-2_030902B** SeqNo: **363954** Prep Date: **9/2/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	U	10								
2,4,5-Trichlorophenol	U	10								
2,4,6-Trichlorophenol	U	10								
2-Methylnaphthalene	U	10								
2-Methylphenol	U	10								
2-Nitroaniline	U	10								
2-Nitrophenol	U	10								
3-Nitroaniline	U	10								
4-Methylphenol	U	10								
4-Nitroaniline	U	10								
4-Nitrophenol	U	10								
Acenaphthene	U	10								
Acenaphthylene	U	10								
Aniline	U	10								
Anthracene	U	10								
Benz(a)anthracene	U	10								
Benzidine	U	10								
Hexachloroethane	U	10								
Indeno(1,2,3-cd)pyrene	U	10								
Isophorone	U	10								
N-Nitrosodi-n-propylamine	U	10								
N-Nitrosodimethylamine	U	10								
N-Nitrosodiphenylamine	U	10								
Naphthalene	U	10								
Nitrobenzene	U	10								
Pentachlorophenol	U	10								
Phenanthrene	U	10								
Phenol	U	10								
Pyrene	U	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr: 2,4,6-Tribromophenol	100.2	0	100	0	100	10-123	0			
Surr: 2-Fluorobiphenyl	91.42	0	100	0	91.4	43-116	0			
Surr: 2-Fluorophenol	60.78	0	100	0	60.8	21-100	0			
Surr:4-Terphenyl-d14	102.8	0	100	0	103	33-141	0			
Surr: Nitrobenzene-d5	90.26	0	100	0	90.3	35-114	0			
Surr: Phenol-d6	39.43	0	100	0	39.4	10-94	0			

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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6547** InstrumentID: **SV-2**

LCS Sample ID: **SLCSW1-030902** Test Code: **SW8270** Units: **µg/L** Analysis Date: **09/02/03 19:34**

Client ID: Run ID: **SV-2_030902B** SeqNo: **363955** Prep Date: **9/2/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	44.62	10	50	0	89.2	51-110	0			
2,4,5-Trichlorophenol	106.6	10	100	0	107	55-130	0			
2,4,6-Trichlorophenol	102.6	10	100	0	103	55-130	0			
2-Methylnaphthalene	45.81	10	50	0	91.6	50-125	0			
2-Methylphenol	91.15	10	100	0	91.1	45-120	0			
2-Nitroaniline	52.37	10	50	0	105	55-130	0			
2-Nitrophenol	98.82	10	100	0	98.8	55-125	0			
3-Nitroaniline	54.49	10	50	0	109	55-120	0			
4-Methylphenol	128.5	10	150	0	85.7	40-120	0			
4-Nitroaniline	53.95	10	50	0	108	60-130	0			
4-Nitrophenol	35.19	10	100	0	35.2	25-100	0			
Acenaphthene	49.86	10	50	0	99.7	50-120	0			
Acenaphthylene	49.44	10	50	0	98.9	55-130	0			
Anthracene	52.66	10	50	0	105	60-130	0			
Benz(a)anthracene	49.51	10	50	0	99	60-130	0			
Benzidine	29.46	10	50	0	58.9	10-85	0			
Hexachloroethane	42.03	10	50	0	84.1	40-120	0			
Indeno(1,2,3-cd)pyrene	51.76	10	50	0	104	60-130	0			
Isophorone	49.45	10	50	0	98.9	60-130	0			
N-Nitrosodi-n-propylamine	49.08	10	50	0	98.2	55-120	0			
N-Nitrosodimethylamine	32.64	10	50	0	65.3	35-110	0			
N-Nitrosodiphenylamine	56.54	10	50	0	113	60-130	0			
Naphthalene	45.77	10	50	0	91.5	55-130	0			
Nitrobenzene	48.99	10	50	0	98	60-130	0			
Pentachlorophenol	94.66	10	100	0	94.7	45-125	0			
Phenanthrene	50.31	10	50	0	101	60-130	0			
Phenol	50.3	10	100	0	50.3	20-100	0			
Pyrene	48.31	10	50	0	96.6	45-120	0			
Surr: 2,4,6-Tribromophenol	108	0	100	0	108	10-123	0			
Surr: 2-Fluorobiphenyl	97.6	0	100	0	97.6	43-116	0			
Surr: 2-Fluorophenol	72.27	0	100	0	72.3	21-100	0			
Surr:4-Terphenyl-d14	106	0	100	0	106	33-141	0			
Surr: Nitrobenzene-d5	96.85	0	100	0	96.9	35-114	0			
Surr: Phenol-d6	50.02	0	100	0	50	10-94	0			

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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **6547** InstrumentID: **SV-2**

LCSD Sample ID: **SLCSDW1-030902** Test Code: **SW8270** Units: **µg/L** Analysis Date: **09/02/03 20:00**

Client ID: Run ID: **SV-2_030902B** SeqNo: **363956** Prep Date: **9/2/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	43.39	10	50	0	86.8	51-110	44.62	2.79	30	
2,4,5-Trichlorophenol	103.7	10	100	0	104	55-130	106.6	2.78	30	
2,4,6-Trichlorophenol	101.7	10	100	0	102	55-130	102.6	0.814	30	
2-Methylnaphthalene	45.73	10	50	0	91.5	50-125	45.81	0.166	30	
2-Methylphenol	87.63	10	100	0	87.6	45-120	91.15	3.94	30	
2-Nitroaniline	51.41	10	50	0	103	55-130	52.37	1.86	30	
2-Nitrophenol	96.02	10	100	0	96	55-125	98.82	2.88	30	
3-Nitroaniline	53.28	10	50	0	107	55-120	54.49	2.24	30	
4-Methylphenol	123.3	10	150	0	82.2	40-120	128.5	4.08	30	
4-Nitroaniline	53.28	10	50	0	107	60-130	53.95	1.24	30	
4-Nitrophenol	42.49	10	100	0	42.5	25-100	35.19	18.8	30	
Acenaphthene	48.67	10	50	0	97.3	50-120	49.86	2.42	30	
Acenaphthylene	48.17	10	50	0	96.3	55-130	49.44	2.59	30	
Anthracene	51.66	10	50	0	103	60-130	52.66	1.92	30	
Benz(a)anthracene	48.35	10	50	0	96.7	60-130	49.51	2.37	30	
Benzidine	27.69	10	50	0	55.4	10-85	29.46	6.21	30	
Hexachloroethane	41.23	10	50	0	82.5	40-120	42.03	1.91	30	
ndeno(1,2,3-cd)pyrene	51.51	10	50	0	103	60-130	51.76	0.487	30	
Isophorone	48.28	10	50	0	96.6	60-130	49.45	2.41	30	
N-Nitrosodi-n-propylamine	48.45	10	50	0	96.9	55-120	49.08	1.29	30	
N-Nitrosodimethylamine	30.58	10	50	0	61.2	35-110	32.64	6.53	30	
N-Nitrosodiphenylamine	55.96	10	50	0	112	60-130	56.54	1.04	30	
Naphthalene	44.86	10	50	0	89.7	55-130	45.77	2	30	
Nitrobenzene	47.76	10	50	0	95.5	60-130	48.99	2.55	30	
Pentachlorophenol	96.12	10	100	0	96.1	45-125	94.66	1.53	30	
Phenanthrene	49.26	10	50	0	98.5	60-130	50.31	2.11	30	
Phenol	46.71	10	100	0	46.7	20-100	50.3	7.4	30	
Pyrene	47.08	10	50	0	94.2	45-120	48.31	2.59	30	
Surr: 2,4,6-Tribromophenol	107.3	0	100	0	107	10-123	108	0.628	30	
Surr: 2-Fluorobiphenyl	96.96	0	100	0	97	43-116	97.6	0.661	30	
Surr: 2-Fluorophenol	68.64	0	100	0	68.6	21-100	72.27	5.15	30	
Surr:4-Terphenyl-d14	104.1	0	100	0	104	33-141	106	1.81	30	
Surr: Nitrobenzene-d5	95.13	0	100	0	95.1	35-114	96.85	1.79	30	
Surr: Phenol-d6	46.64	0	100	0	46.6	10-94	50.02	6.99	30	

Thefollowingsampleswereanalyzedinthisbatch: 0308334-01E 0308334-02E

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16023** InstrumentID: **VOA_I**

MBLK Sample ID: **VBLKW-0905** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/05/03 10:51**

Client ID: Run ID: **VOA_I_030905A** SeqNo: **364896** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
2-Butanone	U	10								
2-Chloroethyl vinyl ether	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	10								
Carbontetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	10								
Methyl tert-butyl ether	U	5.0								
Methylene chloride	U	10								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinylacetate	U	10								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr:1,2-Dichloroethane-d4	45	5.0	50	0	90	70-130	0			
Surr:4-Bromofluorobenzene	44.51	5.0	50	0	89	70-130	0			
Surr: Dibromofluoromethane	47.86	5.0	50	0	95.7	70-130	0			
Surr: Toluene-d8	49.69	5.0	50	0	99.4	70-130	0			

ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16023** InstrumentID: **VOA_I**

LCS Sample ID: **VLCSW-0905** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/05/03 9:57**

Client ID: Run ID: **VOA_I_030905A** SeqNo: **364894** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.15	5.0	50	0	100	75-118	0			
1,1,2,2-Tetrachloroethane	51.99	5.0	50	0	104	79-120	0			
1,1,2-Trichloroethane	51.97	5.0	50	0	104	81-119	0			
1,1-Dichloroethane	55.39	5.0	50	0	111	80-120	0			
1,1-Dichloroethene	55.24	5.0	50	0	110	80-120	0			
1,2-Dichloroethane	46.15	5.0	50	0	92.3	80-120	0			
2-Butanone	109.3	10	100	0	109	70-130	0			
2-Chloroethyl vinyl ether	73.32	10	100	0	73.3	72-120	0			
2-Hexanone	89.92	10	100	0	89.9	70-130	0			
4-Methyl-2-pentanone	92.68	10	100	0	92.7	78-120	0			
Acetone	106.7	10	100	0	107	60-135	0			
Benzene	53.68	5.0	50	0	107	82-119	0			
Bromodichloromethane	48.86	5.0	50	0	97.7	81-119	0			
Bromoform	48.21	5.0	50	0	96.4	80-120	0			
Bromomethane	51.64	5.0	50	0	103	75-130	0			
Carbon disulfide	111	10	100	0	111	78-120	0			
Carbontetrachloride	46.99	5.0	50	0	94	77-120	0			
Chlorobenzene	50.32	5.0	50	0	101	82-118	0			
Chloroethane	56.68	5.0	50	0	113	78-122	0			
Chloroform	52.4	5.0	50	0	105	78-120	0			
Chloromethane	58.42	5.0	50	0	117	75-125	0			
cis-1,3-Dichloropropene	53.1	5.0	50	0	106	81-120	0			
Dibromochloromethane	49.05	5.0	50	0	98.1	81-118	0			
Ethylbenzene	52.11	5.0	50	0	104	82-120	0			
m,p-Xylene	103.2	10	100	0	103	82-122	0			
Methyl tert-butyl ether	52.85	5.0	50	0	106	79-120	0			
Methylene chloride	55.27	10	50	0	111	80-122	0			
Styrene	52.07	5.0	50	0	104	82-121	0			
Tetrachloroethene	48.22	5.0	50	0	96.4	79-118	0			
Toluene	52.77	5.0	50	0	106	81-119	0			
trans-1,3-Dichloropropene	52.91	5.0	50	0	106	82-121	0			
Trichloroethene	51.15	5.0	50	0	102	78-118	0			
Vinyl acetate	112.5	10	100	0	112	75-120	0			
Vinyl chloride	57.07	2.0	50	0	114	73-127	0			
Xylenes, Total	155.3	15	150	0	104	80-120	0			
Surr:1,2-Dichloroethane-d4	44.84	5.0	50	0	89.7	70-130	0			
Surr:4-Bromofluorobenzene	45.96	5.0	50	0	91.9	70-130	0			
Surr:Dibromofluoromethane	50.2	5.0	50	0	100	70-130	0			
Surr: Toluene-d8	49.11	5.0	50	0	98.2	70-130	0			

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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16023** InstrumentID: **VOA_I**

LCSD Sample ID: **VLCSWD-0905** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/05/03 10:24**

Client ID: Run ID: **VOA_I_030905A** SeqNo: **364895** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.56	5.0	50	0	99.1	75-118	50.15	1.17	20	
1,1,2,2-Tetrachloroethane	52.63	5.0	50	0	105	79-120	51.99	1.22	20	
1,1,2-Trichloroethane	51.06	5.0	50	0	102	81-119	51.97	1.76	20	
1,1-Dichloroethane	54.69	5.0	50	0	109	80-120	55.39	1.28	20	
1,1-Dichloroethene	54.56	5.0	50	0	109	80-120	55.24	1.25	20	
1,2-Dichloroethane	45.64	5.0	50	0	91.3	80-120	46.15	1.11	20	
2-Butanone	116.2	10	100	0	116	70-130	109.3	6.1	20	
2-Chloroethyl vinyl ether	74.06	10	100	0	74.1	72-120	73.32	0.997	20	
2-Hexanone	87.29	10	100	0	87.3	70-130	89.92	2.97	20	
4-Methyl-2-pentanone	92.53	10	100	0	92.5	78-120	92.68	0.163	20	
Acetone	105.9	10	100	0	106	60-135	106.7	0.756	20	
Benzene	53.35	5.0	50	0	107	82-119	53.68	0.612	20	
Bromodichloromethane	48.24	5.0	50	0	96.5	81-119	48.86	1.29	20	
Bromoform	48.55	5.0	50	0	97.1	80-120	48.21	0.686	20	
Bromomethane	51.51	5.0	50	0	103	75-130	51.64	0.254	20	
Carbon disulfide	108.9	10	100	0	109	78-120	111	1.96	20	
Carbon tetrachloride	44.94	5.0	50	0	89.9	77-120	46.99	4.47	20	
Chlorobenzene	50.33	5.0	50	0	101	82-118	50.32	0.00521	20	
Chloroethane	56.32	5.0	50	0	113	78-122	56.68	0.649	20	
Chloroform	51.98	5.0	50	0	104	78-120	52.4	0.805	20	
Chloromethane	57.3	5.0	50	0	115	75-125	58.42	1.94	20	
cis-1,3-Dichloropropene	52.56	5.0	50	0	105	81-120	53.1	1.02	20	
Dibromochloromethane	48.12	5.0	50	0	96.2	81-118	49.05	1.9	20	
Ethylbenzene	51.28	5.0	50	0	103	82-120	52.11	1.6	20	
m,p-Xylene	101.6	10	100	0	102	82-122	103.2	1.53	20	
Methyl tert-butyl ether	52.57	5.0	50	0	105	79-120	52.85	0.518	20	
Methylene chloride	54.64	10	50	0	109	80-122	55.27	1.14	20	
Styrene	51.42	5.0	50	0	103	82-121	52.07	1.26	20	
Tetrachloroethene	48.02	5.0	50	0	96	79-118	48.22	0.415	20	
Toluene	51.34	5.0	50	0	103	81-119	52.77	2.74	20	
trans-1,3-Dichloropropene	52.53	5.0	50	0	105	82-121	52.91	0.719	20	
Trichloroethene	51.11	5.0	50	0	102	78-118	51.15	0.0635	20	
Vinyl acetate	113.4	10	100	0	113	75-120	112.5	0.833	20	
Vinyl chloride	55.97	2.0	50	0	112	73-127	57.07	1.95	20	
Xylenes, Total	151.7	15	150	0	101	80-120	155.3	2.35	20	
Surr: 1,2-Dichloroethane-d4	44.97	5.0	50	0	89.9	70-130	44.84	0.284	20	
Surr: 4-Bromofluorobenzene	45.58	5.0	50	0	91.2	70-130	45.96	0.842	20	
Surr: Dibromofluoromethane	49.27	5.0	50	0	98.5	70-130	50.2	1.87	20	
Surr: Toluene-d8	48.1	5.0	50	0	96.2	70-130	49.11	2.07	20	

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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16023** InstrumentID: **VOA_I**

MS Sample ID: **0308334-02AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/05/03 12:40**

Client ID: **Larue** Run ID: **VOA_I_030905A** SeqNo: **364900** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.5	5.0	50	0	93	75-125	0			
1,1,2,2-Tetrachloroethane	51.04	5.0	50	0	102	75-125	0			
1,1,2-Trichloroethane	53.53	5.0	50	0	107	75-125	0			
1,1-Dichloroethane	51.9	5.0	50	0	104	75-125	0			
1,1-Dichloroethene	50.16	5.0	50	0	100	65-130	0			
1,2-Dichloroethane	43.82	5.0	50	0	87.6	70-130	0			
2-Butanone	108.2	10	100	0	108	64-128	0			
2-Chloroethyl vinyl ether	U	10	100	0	0	75-125	0			S
2-Hexanone	69.68	10	100	0	69.7	72-124	0			S
4-Methyl-2-pentanone	95.36	10	100	0	95.4	75-125	0			
Acetone	89.9	10	100	0	89.9	60-130	0			
Benzene	50.66	5.0	50	0	101	76-127	0			
Bromodichloromethane	45.73	5.0	50	0	91.5	75-125	0			
Bromoform	47.78	5.0	50	0	95.6	75-125	0			
Bromomethane	48.9	5.0	50	0	97.8	75-125	0			
Carbon disulfide	101.9	10	100	0	102	75-125	0			
Carbontetrachloride	40.88	5.0	50	0	81.8	70-130	0			
Chlorobenzene	49.23	5.0	50	0	98.5	75-126	0			
Chloroethane	52.68	5.0	50	0	105	70-130	0			
Chloroform	51.47	5.0	50	0	103	75-125	0			
Chloromethane	55.38	5.0	50	0	111	75-125	0			
cis-1,3-Dichloropropene	50.18	5.0	50	0	100	75-125	0			
Dibromochloromethane	47.13	5.0	50	0	94.3	75-125	0			
Ethylbenzene	49.41	5.0	50	0	98.8	75-125	0			
m,p-Xylene	97.96	10	100	0	98	75-125	0			
Methyl tert-butyl ether	52.99	5.0	50	0	106	75-125	0			
Methylene chloride	52.48	10	50	0	105	75-125	0			
Styrene	48.76	5.0	50	0	97.5	75-125	0			
Tetrachloroethene	44.12	5.0	50	0	88.2	75-125	0			
Toluene	50.29	5.0	50	0	101	76-125	0			
trans-1,3-Dichloropropene	51.13	5.0	50	0	102	70-130	0			
Trichloroethene	47.26	5.0	50	0	94.5	71-120	0			
Vinyl acetate	102.1	10	100	0	102	75-125	0			
Vinyl chloride	49.88	2.0	50	0	99.8	60-135	0			
Xylenes, Total	147.5	15	150	0	98.4	75-125	0			
Surr:1,2-Dichloroethane-d4	45.56	5.0	50	0	91.1	70-130	0			
Surr:4-Bromofluorobenzene	46.78	5.0	50	0	93.6	70-130	0			
Surr:Dibromofluoromethane	50.17	5.0	50	0	100	70-130	0			
Surr: Toluene-d8	49.02	5.0	50	0	98	70-130	0			

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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16023** InstrumentID: **VOA_I**

MSD Sample ID: **0308334-02AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date: **09/05/03 13:07**

Client ID: **Larue** Run ID: **VOA_I_030905A** SeqNo: **364901** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.95	5.0	50	0	97.9	75-125	46.5	5.14	20	
1,1,2,2-Tetrachloroethane	50.84	5.0	50	0	102	75-125	51.04	0.404	20	
1,1,2-Trichloroethane	52.37	5.0	50	0	105	75-125	53.53	2.18	20	
1,1-Dichloroethane	54.78	5.0	50	0	110	75-125	51.9	5.42	20	
1,1-Dichloroethene	53.67	5.0	50	0	107	65-130	50.16	6.78	20	
1,2-Dichloroethane	43.09	5.0	50	0	86.2	70-130	43.82	1.66	20	
2-Butanone	103.8	10	100	0	104	64-128	108.2	4.11	20	
2-Chloroethyl vinyl ether	U	10	100	0	0	75-125	0	0	20	S
2-Hexanone	65.13	10	100	0	65.1	72-124	69.68	6.76	20	S
4-Methyl-2-pentanone	89.6	10	100	0	89.6	75-125	95.36	6.24	20	
Acetone	82.39	10	100	0	82.4	60-130	89.9	8.72	20	
Benzene	53.19	5.0	50	0	106	76-127	50.66	4.89	20	
Bromodichloromethane	46.32	5.0	50	0	92.6	75-125	45.73	1.3	20	
Bromoform	46.72	5.0	50	0	93.4	75-125	47.78	2.24	20	
Bromomethane	51.14	5.0	50	0	102	75-125	48.9	4.48	20	
Carbon disulfide	110.9	10	100	0	111	75-125	101.9	8.38	20	
Carbontetrachloride	43.33	5.0	50	0	86.7	70-130	40.88	5.82	20	
Chlorobenzene	50.35	5.0	50	0	101	75-126	49.23	2.26	20	
Chloroethane	55.43	5.0	50	0	111	70-130	52.68	5.1	20	
Chloroform	51.69	5.0	50	0	103	75-125	51.47	0.416	20	
Chloromethane	58.09	5.0	50	0	116	75-125	55.38	4.77	20	
cis-1,3-Dichloropropene	50.35	5.0	50	0	101	75-125	50.18	0.331	20	
Dibromochloromethane	47.91	5.0	50	0	95.8	75-125	47.13	1.64	20	
Ethylbenzene	51.77	5.0	50	0	104	75-125	49.41	4.65	20	
m,p-Xylene	101.9	10	100	0	102	75-125	97.96	3.93	20	
Methyl tert-butyl ether	52.4	5.0	50	0	105	75-125	52.99	1.12	20	
Methylene chloride	53.99	10	50	0	108	75-125	52.48	2.84	20	
Styrene	50.28	5.0	50	0	101	75-125	48.76	3.07	20	
Tetrachloroethene	47.83	5.0	50	0	95.7	75-125	44.12	8.07	20	
Toluene	51.94	5.0	50	0	104	76-125	50.29	3.23	20	
trans-1,3-Dichloropropene	50.01	5.0	50	0	100	70-130	51.13	2.2	20	
Trichloroethene	49.68	5.0	50	0	99.4	71-120	47.26	4.99	20	
Vinyl acetate	109.2	10	100	0	109	75-125	102.1	6.66	20	
Vinyl chloride	54.87	2.0	50	0	110	60-135	49.88	9.54	20	
Xylenes, Total	153.1	15	150	0	102	75-125	147.5	3.72	20	
Surr:1,2-Dichloroethane-d4	44.14	5.0	50	0	88.3	70-130	45.56	3.18	20	
Surr:4-Bromofluorobenzene	45.36	5.0	50	0	90.7	70-130	46.78	3.07	20	
Surr:Dibromofluoromethane	50.36	5.0	50	0	101	70-130	50.17	0.389	20	
Surr:Toluene-d8	49.63	5.0	50	0	99.3	70-130	49.02	1.22	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308334-01A 0308334-02A

ND - Not Detected at the Reporting Limit
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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16028** InstrumentID: **UV-2101PC**

MBLK Sample ID: **WMBW1-090603** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/06/03 0:00**
Client ID: Run ID: **UV-2101PC_030906A** SeqNo: **365168** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020								

LCS Sample ID: **WLCSW1-090603** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/06/03 0:00**
Client ID: Run ID: **UV-2101PC_030906A** SeqNo: **365169** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2058	0.020	0.2	0	103	80-120	0			

MS Sample ID: **0308334-01CMS** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/06/03 0:00**
Client ID: **RA 3156** Run ID: **UV-2101PC_030906A** SeqNo: **365179** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.209	0.020	0.2	0.001	104	75-125	0			

MSD Sample ID: **0308334-01C MSD** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/06/03 0:00**
Client ID: **RA 3156** Run ID: **UV-2101PC_030906A** SeqNo: **365180** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.1982	0.020	0.2	0.001	98.6	75-125	0.209	5.3	25	

DUP Sample ID: **0308334-01C DUP** Test Code: **E335.3** Units: **mg/L** Analysis Date: **09/06/03 0:00**
Client ID: **RA 3156** Run ID: **UV-2101PC_030906A** SeqNo: **365178** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020	0	0	0	0-0	0.001	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308334-01C 0308334-02C

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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16043** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1** Test Code: **E300** Units: **mg/L** Analysis Date: **09/04/03 21:28**
Client ID: Run ID: **IC201_030904A** SeqNo: **365496** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1** Test Code: **E300** Units: **mg/L** Analysis Date: **09/04/03 22:01**
Client ID: Run ID: **IC201_030904A** SeqNo: **365497** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.69	0.50	10	0	96.9	80-120	0			
Fluoride	1.89	0.10	2	0	94.5	80-120	0			
Sulfate	10.15	1.0	10	0	102	80-120	0			
Surr: Dichloroacetic acid (surr)	1.79	0.10	2	0	89.5	80-120	0			

LCSD Sample ID: **WLCSW1-DUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/04/03 22:33**
Client ID: Run ID: **IC201_030904A** SeqNo: **365498** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.7	0.50	10	0	97	80-120	9.69	0.103	20	
Fluoride	1.82	0.10	2	0	91	80-120	1.89	3.77	20	
Sulfate	10.56	1.0	10	0	106	80-120	10.15	3.96	20	
Surr: Dichloroacetic acid (surr)	1.86	0.10	2	0	93	80-120	1.79	3.84	20	

MS Sample ID: **0308279-01BMS** Test Code: **E300** Units: **mg/L** Analysis Date: **09/05/03 0:11**
Client ID: Run ID: **IC201_030904A** SeqNo: **365501** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	380.4	0.50	10	371.7	87.1	75-125	0			EO
Fluoride	2.09	0.10	2	0.41	84	75-125	0			
Sulfate	24.76	1.0	10	14.92	98.4	75-125	0			
Surr: Dichloroacetic acid (surr)	5.16	0.10	5	0	103	80-120	0			

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CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16043** InstrumentID: **IC201**

MSD Sample ID: **0308279-01BMSD** Test Code: **E300** Units: **mg/L** Analysis Date: **09/05/03 0:43**
Client ID: Run ID: **IC201_030904A** SeqNo: **365502** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	380.7	0.50	10	371.7	90.1	75-125	380.4	0.0788	20	EO
Fluoride	2.16	0.10	2	0.41	87.5	75-125	2.09	3.29	20	
Sulfate	25.27	1.0	10	14.92	103	75-125	24.76	2.04	20	
Surr: Dichloroacetic acid (surr)	4.85	0.10	5	0	97	80-120	5.16	6.19	20	

DUP Sample ID: **0308279-01BDUP** Test Code: **E300** Units: **mg/L** Analysis Date: **09/04/03 23:38**
Client ID: Run ID: **IC201_030904A** SeqNo: **365500** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	0.42	0.10	0	0	0	0-0	0.41	2.41	20	
Sulfate	15.04	1.0	0	0	0	0-0	14.92	0.801	20	
Surr: Dichloroacetic acid (surr)	4.9	0.10	5	0	98	80-120	4.88	0.409	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308334-01B 0308334-02B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0308334
Project: Monthly

QC BATCH REPORT

Batch ID: **R16066** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-090903** Test Code: **E310.1** Units: **mg/L** Analysis Date: **09/09/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0309** SeqNo: **366071** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.0								
Alkalinity, Carbonate (As CaCO3)	U	5.0								
Alkalinity, Hydroxide (As CaCO3)	U	5.0								
Alkalinity, Total (As CaCO3)	U	5.0								

LCS Sample ID: **WLCSW1-090903** Test Code: **E310.1** Units: **mg/L** Analysis Date: **09/09/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0309** SeqNo: **366072** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	950.2	5.0	1000	0	95	80-120	0			

DUP Sample ID: **0308334-02B DUP** Test Code: **E310.1** Units: **mg/L** Analysis Date: **09/09/03 0:00**
Client ID: **Larue** Run ID: **WET CHEMISTRY_0309** SeqNo: **366081** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	270.1	5.0	0	0	0	0-0	270.1	0	20	
Alkalinity, Carbonate (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	270.1	5.0	0	0	0	0-0	270.1	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0308334-01B 0308334-02B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

e-Lab, Inc.
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager:	G Jones	e-Lab Work Order #:	6308334

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Monthly	A	Metals (6020/7000)
Work Order		Project Number		B	Cyanide
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Monthly
Send Report To	Jeff Byrd	Invoice Attn	Jeff Byrd	D	
Address	P.O. Box 159	Address	P.O. Box 159	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	505-748-3311	Phone	505-748-3311	H	
Fax	505-746-5421	Fax	505-746-5421	I	
e-Mail Address				J	

No	Sample Description	Date	Time	Matrix	Pres	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	RA3156	8/29/03	1100	L	4	8			X								
2	Larve	8/29/03	1130	L	4	8			X								
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: JB

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
JB	8/29/03	1615		
Relinquished by:	Date:	Time:	Received by (Laboratory): RICHARD SAMUEL 830 8/30/03	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

e-Lab Cooler ID	Cooler Temp.

QC Package: (Check Box Below)

- Level II: Standard QC
- Level III: Standard QC + Raw Data
- Level IV: SW846 Methods/CLP
- Other: _____

Preservative Key: 1- HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.

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e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING COMPAN

Date/Time Received: 8/30/2003 9:30:00 AM

Work Order Number 0308334

Received by: RSZ

Checklist completed by RICHARD SANCHEZ 8/30/03 (Signature / Date)

Reviewed by LT 8/2/03 (Initials / Date)

Matrix: L

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):	3.5c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5

August 05, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Monthly

Work Order : **0307233**

Dear Jeff Byrd,

e-Lab, Inc. received 2 samples on 7/23/2003 9:15:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 29.

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

Sincerely,

Lora Terrill

Electronically approved by: Lora Terrill

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *August 05, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: **0307233**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0307233-01	RA3156	Liquid		7/21/2003 10:00	7/23/2003 09:15	☐
0307233-02	RA3353	Liquid		7/21/2003 10:15	7/23/2003 09:15	☐

e-Lab, Inc.

Date: *August 05, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly
Lab ID: 0307233-01

Client Sample ID: RA3156
Collection Date: 7/21/2003 10:00:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **8/1/2003**		Analyst: **MG**
Mercury	U	0.000042	0.000200		mg/L	1	8/1/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/31/2003**		Analyst: **ALR**
Aluminum	U	0.0016	0.0100		mg/L	1	8/4/2003
Arsenic	0.00325	0.0018	0.00500	J	mg/L	1	8/4/2003
Barium	0.00827	0.00060	0.00500		mg/L	1	8/4/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/4/2003
Boron	0.195	0.011	0.0200		mg/L	1	8/4/2003
Cadmium	U	0.00015	0.00100		mg/L	1	8/4/2003
Calcium	530	4.0	25.0		mg/L	50	8/4/2003
Chromium	0.00170	0.00050	0.00200	J	mg/L	1	8/4/2003
Cobalt	0.000394	0.00010	0.00200	J	mg/L	1	8/4/2003
Copper	0.00610	0.00030	0.00200		mg/L	1	8/4/2003
Iron	2.15	0.025	0.200		mg/L	1	8/4/2003
Lead	U	0.00020	0.00500		mg/L	1	8/4/2003
Magnesium	157	0.25	2.00		mg/L	10	8/4/2003
Manganese	0.0179	0.0010	0.00500		mg/L	1	8/4/2003
Nickel	0.00571	0.00030	0.00500		mg/L	1	8/4/2003
Potassium	2.56	0.020	0.200		mg/L	1	8/4/2003
Selenium	0.0123	0.0017	0.00500		mg/L	1	8/4/2003
Silver	U	0.00020	0.00500		mg/L	1	8/4/2003
Sodium	178	0.32	2.00		mg/L	10	8/4/2003
Vanadium	0.0102	0.00040	0.00500		mg/L	1	8/4/2003
Zinc	0.0944	0.0075	0.0250		mg/L	5	8/4/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/23/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/24/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/24/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/24/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/24/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/24/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/24/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/24/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/24/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/24/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/24/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/24/2003
Acenaphthene	U	1.1	10		µg/L	1	7/24/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/24/2003
Aniline	U	10	10		µg/L	1	7/24/2003

Qualifiers

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 05, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly
Lab ID: 0307233-01

Client Sample ID: RA3156
Collection Date: 7/21/2003 10:00:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/24/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/24/2003
Benzidine	U	0.34	10		µg/L	1	7/24/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/24/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/24/2003
Isophorone	U	1.2	10		µg/L	1	7/24/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/24/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/24/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/24/2003
Naphthalene	U	1.0	10		µg/L	1	7/24/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/24/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/24/2003
Phenanthrene	U	1.2	10		µg/L	1	7/24/2003
Phenol	U	3.5	10		µg/L	1	7/24/2003
Pyrene	U	0.92	10		µg/L	1	7/24/2003
Surr: 2,4,6-Tribromophenol	94.8	0	10-123		%REC	1	7/24/2003
Surr: 2-Fluorobiphenyl	88.9	0	43-116		%REC	1	7/24/2003
Surr: 2-Fluorophenol	38.4	0	21-100		%REC	1	7/24/2003
Surr: 4-Terphenyl-d14	117	0	33-141		%REC	1	7/24/2003
Surr: Nitrobenzene-d5	84.1	0	35-114		%REC	1	7/24/2003
Surr: Phenol-d6	21.8	0	10-94		%REC	1	7/24/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/24/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/24/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/24/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/24/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/24/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/24/2003
2-Butanone	U	0.70	10		µg/L	1	7/24/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/24/2003
2-Hexanone	U	1.1	10		µg/L	1	7/24/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/24/2003
Acetone	U	1.2	10		µg/L	1	7/24/2003
Benzene	U	0.66	5.0		µg/L	1	7/24/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/24/2003
Bromoform	U	0.40	5.0		µg/L	1	7/24/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/24/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/24/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/24/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/24/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 05, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly
Lab ID: 0307233-01

Client Sample ID: RA3156
Collection Date: 7/21/2003 10:00:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/24/2003
Chloroform	U	0.52	5.0		µg/L	1	7/24/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/24/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/24/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/24/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/24/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/24/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	7/24/2003
Methylene chloride	U	0.60	10		µg/L	1	7/24/2003
Styrene	U	0.56	5.0		µg/L	1	7/24/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/24/2003
Toluene	U	0.69	5.0		µg/L	1	7/24/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/24/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/24/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/24/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/24/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/24/2003
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%REC	1	7/24/2003
Surr: 4-Bromofluorobenzene	77.2	0	70-130		%REC	1	7/24/2003
Surr: Dibromofluoromethane	96.2	0	70-130		%REC	1	7/24/2003
Surr: Toluene-d8	84.4	0	70-130		%REC	1	7/24/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **LMD**
Chloride	232	2.00	5.00		mg/L	10	7/27/2003
Fluoride	0.270	0.0500	0.100		mg/L	1	7/27/2003
Sulfate	1,720	25.0	50.0		mg/L	50	7/27/2003
Surr: Dichloroacetic acid (surr)	106	0	80-120		%REC	50	7/27/2003
Surr: Dichloroacetic acid (surr)	94.2	0	80-120		%REC	1	7/27/2003
Surr: Dichloroacetic acid (surr)	105	0	80-120		%REC	10	7/27/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	198	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Total (As CaCO3)	198	2.0	5.00		mg/L	1	7/29/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	7/25/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 05, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly
Lab ID: 0307233-02

Client Sample ID: RA3353
Collection Date: 7/21/2003 10:15:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **8/1/2003**		Analyst: **MG**
Mercury	U	0.000042	0.000200		mg/L	1	8/1/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/31/2003**		Analyst: **ALR**
Aluminum	U	0.0016	0.0100		mg/L	1	8/4/2003
Arsenic	0.00425	0.0018	0.00500	J	mg/L	1	8/4/2003
Barium	0.0102	0.00060	0.00500		mg/L	1	8/4/2003
Beryllium	U	0.00030	0.00200		mg/L	1	8/4/2003
Boron	0.120	0.011	0.0200		mg/L	1	8/4/2003
Cadmium	U	0.00015	0.00100		mg/L	1	8/4/2003
Calcium	387	4.0	25.0		mg/L	50	8/4/2003
Chromium	0.000594	0.00050	0.00200	J	mg/L	1	8/4/2003
Cobalt	0.000298	0.00010	0.00200	J	mg/L	1	8/4/2003
Copper	0.00529	0.00030	0.00200		mg/L	1	8/4/2003
Iron	1.50	0.025	0.200		mg/L	1	8/4/2003
Lead	U	0.00020	0.00500		mg/L	1	8/4/2003
Magnesium	111	0.25	2.00		mg/L	10	8/4/2003
Manganese	0.00705	0.0010	0.00500		mg/L	1	8/4/2003
Nickel	0.00413	0.00030	0.00500	J	mg/L	1	8/4/2003
Potassium	2.00	0.020	0.200		mg/L	1	8/4/2003
Selenium	0.0157	0.0017	0.00500		mg/L	1	8/4/2003
Silver	U	0.00020	0.00500		mg/L	1	8/4/2003
Sodium	90.0	0.32	2.00		mg/L	10	8/4/2003
Vanadium	0.00797	0.00040	0.00500		mg/L	1	8/4/2003
Zinc	0.790	0.015	0.0500		mg/L	10	8/4/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/23/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/24/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/24/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/24/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/24/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/24/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/24/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/24/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/24/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/24/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/24/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/24/2003
Acenaphthene	U	1.1	10		µg/L	1	7/24/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/24/2003
Aniline	U	10	10		µg/L	1	7/24/2003

Qualifiers

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 05, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly
Lab ID: 0307233-02

Client Sample ID: RA3353
Collection Date: 7/21/2003 10:15:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/24/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/24/2003
Benzidine	U	0.34	10		µg/L	1	7/24/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/24/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/24/2003
Isophorone	U	1.2	10		µg/L	1	7/24/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/24/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/24/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/24/2003
Naphthalene	U	1.0	10		µg/L	1	7/24/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/24/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/24/2003
Phenanthrene	U	1.2	10		µg/L	1	7/24/2003
Phenol	U	3.5	10		µg/L	1	7/24/2003
Pyrene	U	0.92	10		µg/L	1	7/24/2003
Surr: 2,4,6-Tribromophenol	96.3	0	10-123		%REC	1	7/24/2003
Surr: 2-Fluorobiphenyl	88.4	0	43-116		%REC	1	7/24/2003
Surr: 2-Fluorophenol	37.7	0	21-100		%REC	1	7/24/2003
Surr: 4-Terphenyl-d14	119	0	33-141		%REC	1	7/24/2003
Surr: Nitrobenzene-d5	82.9	0	35-114		%REC	1	7/24/2003
Surr: Phenol-d6	21.2	0	10-94		%REC	1	7/24/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/24/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/24/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/24/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/24/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/24/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/24/2003
2-Butanone	U	0.70	10		µg/L	1	7/24/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/24/2003
2-Hexanone	U	1.1	10		µg/L	1	7/24/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/24/2003
Acetone	U	1.2	10		µg/L	1	7/24/2003
Benzene	U	0.66	5.0		µg/L	1	7/24/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/24/2003
Bromoform	U	0.40	5.0		µg/L	1	7/24/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/24/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/24/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/24/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/24/2003

Qualifiers

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E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 05, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly
Lab ID: 0307233-02

Client Sample ID: RA3353
Collection Date: 7/21/2003 10:15:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/24/2003
Chloroform	U	0.52	5.0		µg/L	1	7/24/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/24/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/24/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/24/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/24/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/24/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	7/24/2003
Methylene chloride	U	0.60	10		µg/L	1	7/24/2003
Styrene	U	0.56	5.0		µg/L	1	7/24/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/24/2003
Toluene	U	0.69	5.0		µg/L	1	7/24/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/24/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/24/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/24/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/24/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/24/2003
Surr: 1,2-Dichloroethane-d4	98.0	0	70-130		%REC	1	7/24/2003
Surr: 4-Bromofluorobenzene	76.4	0	70-130		%REC	1	7/24/2003
Surr: Dibromofluoromethane	94.0	0	70-130		%REC	1	7/24/2003
Surr: Toluene-d8	83.4	0	70-130		%REC	1	7/24/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **LMD**
Chloride	170	2.00	5.00		mg/L	10	7/27/2003
Fluoride	0.520	0.0500	0.100		mg/L	1	7/27/2003
Sulfate	1,180	25.0	50.0		mg/L	50	7/27/2003
Surr: Dichloroacetic acid (surr)	105	0	80-120		%REC	50	7/27/2003
Surr: Dichloroacetic acid (surr)	102	0	80-120		%REC	1	7/27/2003
Surr: Dichloroacetic acid (surr)	108	0	80-120		%REC	10	7/27/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	177	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Total (As CaCO3)	177	2.0	5.00		mg/L	1	7/29/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	0.00390	0.0030	0.0200	J	mg/L	1	7/25/2003

Qualifiers

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E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *Aug 05 2003*

CLIENT: Navajo Refining Company

Work Order: 0307233

Project: Monthly

QC BATCH REPORT

Batch ID: **6289** InstrumentID: **6020**

MBLK Sample ID: **MBLKW1-073103** Test Code: **SW6020** Units: **mg/L** Analysis Date **07/31/03 21:53**

Client ID: Run ID: **6020_030731A** SeqNo: **351459** Prep Date: **7/31/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0010								
Calcium	0.1033	0.50								J
Chromium	U	0.0020								
Cobalt	U	0.0020								
Copper	0.0007779	0.0020								J
Iron	0.03326	0.20								J
Lead	0.000483	0.0050								J
Magnesium	U	0.20								
Manganese	U	0.0050								
Nickel	U	0.0050								
Potassium	U	0.20								
Selenium	U	0.0050								
Silver	U	0.0050								
Sodium	U	0.20								
Vanadium	U	0.0050								
Zinc	0.003882	0.0050								J

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **6289** InstrumentID: **6020**

LCS Sample ID: **MLCSW1-073103** Test Code: **SW6020** Units: **mg/L** Analysis Date **07/31/03 21:57**

Client ID: Run ID: **6020_030731A** SeqNo: **351460** Prep Date: **7/31/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.09117	0.0050	0.1	0	91.2	80-120	0			
Barium	0.09357	0.0050	0.1	0	93.6	80-120	0			
Beryllium	0.09294	0.0020	0.1	0	92.9	80-120	0			
Cadmium	0.09651	0.0010	0.1	0	96.5	80-120	0			
Calcium	9.931	0.50	10	0	99.3	80-120	0			
Chromium	0.09803	0.0020	0.1	0	98	80-120	0			
Cobalt	0.09938	0.0020	0.1	0	99.4	80-120	0			
Copper	0.09956	0.0020	0.1	0	99.6	80-120	0			
Iron	9.593	0.20	10	0	95.9	80-120	0			
Lead	0.09428	0.0050	0.1	0	94.3	80-120	0			
Magnesium	10.24	0.20	10	0	102	80-120	0			
Manganese	0.09564	0.0050	0.1	0	95.6	80-120	0			
Nickel	0.1001	0.0050	0.1	0	100	80-120	0			
Potassium	9.939	0.20	10	0	99.4	80-120	0			
Selenium	0.08938	0.0050	0.1	0	89.4	80-120	0			
Silver	0.09123	0.0050	0.1	0	91.2	80-120	0			
Sodium	10.16	0.20	10	0	102	80-120	0			
Vanadium	0.09692	0.0050	0.1	0	96.9	80-120	0			
Zinc	0.1015	0.0050	0.1	0	101	80-120	0			

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CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **6289** InstrumentID: **6020**

MS Sample ID: **0307233-01CMS** Test Code: **SW6020** Units: **mg/L** Analysis Date **08/04/03 21:24**
Client ID: **RA3156** Run ID: **6020_030804A** SeqNo: **352610** Prep Date: **7/31/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09127	0.010	0.1	-0.003367	94.6	75-125	0			
Arsenic	0.09115	0.0050	0.1	0.003249	87.9	75-125	0			
Barium	0.1146	0.0050	0.1	0.008274	106	75-125	0			
Beryllium	0.101	0.0020	0.1	-6.454E-06	101	75-125	0			
Boron	0.7278	0.020	0.5	0.1954	106	75-125	0			
Cadmium	0.08814	0.0010	0.1	0.00001163	88.1	75-125	0			
Calcium	472.1	0.50	10	461.2	109	75-125	0			EO
Chromium	0.09898	0.0020	0.1	0.0017	97.3	75-125	0			
Cobalt	0.09255	0.0020	0.1	0.000394	92.2	75-125	0			
Copper	0.09027	0.0020	0.1	0.006095	84.2	75-125	0			
Iron	11.37	0.20	10	2.154	92.2	75-125	0			
Lead	0.1013	0.0050	0.1	-0.00563	107	75-125	0			
Magnesium	139.9	0.20	10	132.1	78	75-125	0			EO
Manganese	0.109	0.0050	0.1	0.01791	91.1	75-125	0			
Nickel	0.0936	0.0050	0.1	0.005708	87.9	75-125	0			
Potassium	12.26	0.20	10	2.56	97	75-125	0			
Selenium	0.1019	0.0050	0.1	0.0123	89.6	75-125	0			
Silver	0.08422	0.0050	0.1	2.03E-07	84.2	75-125	0			
Sodium	U	0.20	10	0	0	75-125	0			S
Vanadium	0.1115	0.0050	0.1	0.01025	101	75-125	0			
Zinc	0.1466	0.0050	0.1	0.07547	71.1	75-125	0			S

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P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **6289** InstrumentID: **6020**

MSD Sample ID: **0307233-01CMSD** TestCode: **SW6020** Units: **mg/L** Analysis Date **08/04/03 21:29**
Client ID: **RA3156** Run ID: **6020_030804A** SeqNo: **352611** Prep Date: **7/31/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09608	0.010	0.1	-0.003367	99.4	75-125	0.09127	5.13	25	
Arsenic	0.09655	0.0050	0.1	0.003249	93.3	75-125	0.09115	5.75	25	
Barium	0.1158	0.0050	0.1	0.008274	108	75-125	0.1146	1.04	25	
Beryllium	0.1007	0.0020	0.1	-6.454E-06	101	75-125	0.101	0.297	25	
Boron	0.7271	0.020	0.5	0.1954	106	75-125	0.7278	0.0962	25	
Cadmium	0.08812	0.0010	0.1	0.00001163	88.1	75-125	0.08814	0.0227	25	
Calcium	484	0.50	10	461.2	228	75-125	472.1	2.49	25	SEO
Chromium	0.1005	0.0020	0.1	0.0017	98.8	75-125	0.09898	1.52	25	
Cobalt	0.09368	0.0020	0.1	0.000394	93.3	75-125	0.09255	1.21	25	
Copper	0.09221	0.0020	0.1	0.006095	86.1	75-125	0.09027	2.13	25	
Iron	11.57	0.20	10	2.154	94.2	75-125	11.37	1.74	25	
Lead	0.1024	0.0050	0.1	-0.00563	108	75-125	0.1013	1.08	25	
Magnesium	144.6	0.20	10	132.1	125	75-125	139.9	3.3	25	EO
Manganese	0.1098	0.0050	0.1	0.01791	91.9	75-125	0.109	0.731	25	
Nickel	0.09311	0.0050	0.1	0.005708	87.4	75-125	0.0936	0.525	25	
Potassium	12.56	0.20	10	2.56	100	75-125	12.26	2.42	25	
Selenium	0.1056	0.0050	0.1	0.0123	93.3	75-125	0.1019	3.57	25	
Silver	0.08375	0.0050	0.1	2.03E-07	83.7	75-125	0.08422	0.56	25	
Sodium	U	0.20	10	0	0	75-125	0	0	25	S
Vanadium	0.1139	0.0050	0.1	0.01025	104	75-125	0.1115	2.13	25	
Zinc	0.15	0.0050	0.1	0.07547	74.5	75-125	0.1466	2.29	25	S

DUP Sample ID: **0307233-01CDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **08/04/03 20:27**
Client ID: **RA3156** Run ID: **6020_030804A** SeqNo: **352597** Prep Date: **7/31/2003** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	504.8	25	0	0	0	0-0	530	4.87	25	

DUP Sample ID: **0307233-01CDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **08/04/03 20:40**
Client ID: **RA3156** Run ID: **6020_030804A** SeqNo: **352600** Prep Date: **7/31/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Magnesium	150.8	2.0	0	0	0	0-0	156.7	3.84	25	
Sodium	171.3	2.0	0	0	0	0-0	178.4	4.06	25	

DUP Sample ID: **0307233-01CDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **08/04/03 20:53**
Client ID: **RA3156** Run ID: **6020_030804A** SeqNo: **352603** Prep Date: **7/31/2003** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Zinc	0.09084	0.025	0	0	0	0-0	0.09084	0	25	

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CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **6289** InstrumentID: **6020**

DUP Sample ID: **0307233-01CDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **08/04/03 21:15**
Client ID: **RA3156** Run ID: **6020_030804A** SeqNo: **352608** Prep Date: **7/31/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	U	0.010	0	0	0	0-0	-0.003367	0	25	
Arsenic	0.003175	0.0050	0	0	0	0-0	0.003249	0	25	J
Barium	0.007598	0.0050	0	0	0	0-0	0.008274	8.52	25	
Beryllium	U	0.0020	0	0	0	0-0	-6.454E-06	0	25	
Boron	0.1951	0.020	0	0	0	0-0	0.1954	0.154	25	
Cadmium	U	0.0010	0	0	0	0-0	0.00001163	0	25	
Chromium	0.001189	0.0020	0	0	0	0-0	0.0017	0	25	J
Cobalt	0.0004109	0.0020	0	0	0	0-0	0.000394	0	25	J
Copper	0.00617	0.0020	0	0	0	0-0	0.006095	1.22	25	
Iron	2.113	0.20	0	0	0	0-0	2.154	1.92	25	
Lead	U	0.0050	0	0	0	0-0	-0.00563	0	25	
Manganese	0.01723	0.0050	0	0	0	0-0	0.01791	3.87	25	
Nickel	0.006402	0.0050	0	0	0	0-0	0.005708	11.5	25	
Potassium	2.47	0.20	0	0	0	0-0	2.56	3.58	25	
Selenium	0.01434	0.0050	0	0	0	0-0	0.0123	15.3	25	
Silver	U	0.0050	0	0	0	0-0	2.03E-07	0	25	
Vanadium	0.009835	0.0050	0	0	0	0-0	0.01025	4.13	25	

hefollowingsampleswereanalyzedinthisbatch: 0307233-01C 0307233-02C

ND - Not Detected at the Reporting Limit
nalyte detected below quantitation limits
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CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **6297** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW2-080103** TestCode: **SW7470** Units: **mg/L** Analysis Date **08/01/03 15:27**
Client ID: Run ID: **MERCURY_030801B** SeqNo: **351787** Prep Date: **8/1/2003** DF: **1**

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

LCS Sample ID: **GLCSW2-080103** TestCode: **SW7470** Units: **mg/L** Analysis Date **08/01/03 15:28**
Client ID: Run ID: **MERCURY_030801B** SeqNo: **351788** Prep Date: **8/1/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00544	0.00020	0.005	0	109	80-120	0			

MS Sample ID: **0307233-01CMS** TestCode: **SW7470** Units: **mg/L** Analysis Date **08/01/03 16:29**
Client ID: **RA3156** Run ID: **MERCURY_030801B** SeqNo: **351797** Prep Date: **8/1/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00507	0.00020	0.005	-0.000016	102	80-120	0			

MSD Sample ID: **0307233-01CMSD** TestCode: **SW7470** Units: **mg/L** Analysis Date **08/01/03 16:35**
Client ID: **RA3156** Run ID: **MERCURY_030801B** SeqNo: **351798** Prep Date: **8/1/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00505	0.00020	0.005	-0.000016	101	80-120	0.00507	0.395	20	

DUP Sample ID: **0307233-01CDUP** TestCode: **SW7470** Units: **mg/L** Analysis Date **08/01/03 15:31**
Client ID: **RA3156** Run ID: **MERCURY_030801B** SeqNo: **351790** Prep Date: **8/1/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020	0	0	0	0-0	-0.000016	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307233-01C 0307233-02C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **6221** InstrumentID: **SV-3**

MBLK Sample ID: **SBLKW1-030723** Test Code: **SW8270** Units: **µg/L** Analysis Date **07/24/03 11:55**
Client ID: Run ID: **SV-3_030724A** SeqNo: **350032** Prep Date: **7/23/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	U	10								
2,4,5-Trichlorophenol	U	10								
2,4,6-Trichlorophenol	U	10								
2-Methylnaphthalene	U	10								
2-Methylphenol	U	10								
2-Nitroaniline	U	10								
2-Nitrophenol	U	10								
3-Nitroaniline	U	10								
4-Methylphenol	U	10								
4-Nitroaniline	U	10								
4-Nitrophenol	U	10								
Acenaphthene	U	10								
Acenaphthylene	U	10								
Aniline	U	10								
Anthracene	U	10								
Benz(a)anthracene	U	10								
Benzidine	U	10								
Hexachloroethane	U	10								
Indeno(1,2,3-cd)pyrene	U	10								
Isophorone	U	10								
N-Nitrosodi-n-propylamine	U	10								
N-Nitrosodimethylamine	U	10								
N-Nitrosodiphenylamine	U	10								
Naphthalene	U	10								
Nitrobenzene	U	10								
Pentachlorophenol	U	10								
Phenanthrene	U	10								
Phenol	U	10								
Pyrene	U	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr:2,4,6-Tribromophenol	98.22	0	100	0	98.2	10-123	0			
Surr:2-Fluorobiphenyl	79.03	0	100	0	79	43-116	0			
Surr:2-Fluorophenol	57.41	0	100	0	57.4	21-100	0			
Surr:4-Terphenyl-d14	116.8	0	100	0	117	33-141	0			
Surr:Nitrobenzene-d5	77.19	0	100	0	77.2	35-114	0			
Surr: Phenol-d6	39.18	0	100	0	39.2	10-94	0			

ND - Not Detected at the Reporting Limit
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B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **6221** InstrumentID: **SV-3**

LCS Sample ID: **SLCSW1-030723** TestCode: **SW8270** Units: **µg/L** Analysis Date **07/24/03 12:22**

Client ID: Run ID: **SV-3_030724A** SeqNo: **350033** Prep Date: **7/23/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	43.51	10	50	0	87	51-110	0			
2,4,5-Trichlorophenol	101.5	10	100	0	101	55-130	0			
2,4,6-Trichlorophenol	100.1	10	100	0	100	55-130	0			
2-Methylnaphthalene	46.38	10	50	0	92.8	50-125	0			
2-Methylphenol	83.59	10	100	0	83.6	45-120	0			
2-Nitroaniline	47.49	10	50	0	95	55-130	0			
2-Nitrophenol	97.75	10	100	0	97.7	55-125	0			
3-Nitroaniline	47.52	10	50	0	95	55-120	0			
4-Methylphenol	117.9	10	150	0	78.6	40-120	0			
4-Nitroaniline	50.57	10	50	0	101	60-130	0			
4-Nitrophenol	53.47	10	100	0	53.5	25-100	0			
Acenaphthene	48.44	10	50	0	96.9	50-120	0			
Acenaphthylene	47.39	10	50	0	94.8	55-130	0			
Anthracene	52.07	10	50	0	104	60-130	0			
Benz(a)anthracene	54.45	10	50	0	109	60-130	0			
Benzidine	28.8	10	50	0	57.6	10-85	0			
Hexachloroethane	38.56	10	50	0	77.1	40-120	0			
Indeno(1,2,3-cd)pyrene	45.63	10	50	0	91.3	60-130	0			
Isophorone	47.55	10	50	0	95.1	60-130	0			
N-Nitrosodi-n-propylamine	44.05	10	50	0	88.1	55-120	0			
N-Nitrosodimethylamine	25.73	10	50	0	51.5	35-110	0			
N-Nitrosodiphenylamine	52.16	10	50	0	104	60-130	0			
Naphthalene	45.6	10	50	0	91.2	55-130	0			
Nitrobenzene	44.55	10	50	0	89.1	60-130	0			
Pentachlorophenol	97.32	10	100	0	97.3	45-125	0			
Phenanthrene	50.15	10	50	0	100	60-130	0			
Phenol	42.47	10	100	0	42.5	20-100	0			
Pyrene	53.67	10	50	0	107	45-120	0			
Surr:2,4,6-Tribromophenol	105.5	0	100	0	105	10-123	0			
Surr: 2-Fluorobiphenyl	89.11	0	100	0	89.1	43-116	0			
Surr: 2-Fluorophenol	62.38	0	100	0	62.4	21-100	0			
Surr:4-Terphenyl-d14	117.2	0	100	0	117	33-141	0			
Surr:Nitrobenzene-d5	88.94	0	100	0	88.9	35-114	0			
Surr: Phenol-d6	44.22	0	100	0	44.2	10-94	0			

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CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **6221** InstrumentID: **SV-3**

LCSD Sample ID: **SLCSDW1-030723** TestCode: **SW8270** Units: **µg/L** Analysis Date **07/24/03 12:49**

Client ID: Run ID: **SV-3_030724A** SeqNo: **350034** Prep Date: **7/23/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	43.52	10	50	0	87	51-110	43.51	0.028	30	
2,4,5-Trichlorophenol	97.76	10	100	0	97.8	55-130	101.5	3.72	30	
2,4,6-Trichlorophenol	98.22	10	100	0	98.2	55-130	100.1	1.94	30	
2-Methylnaphthalene	45.23	10	50	0	90.5	50-125	46.38	2.51	30	
2-Methylphenol	71.1	10	100	0	71.1	45-120	83.59	16.2	30	
2-Nitroaniline	46.3	10	50	0	92.6	55-130	47.49	2.53	30	
2-Nitrophenol	93.37	10	100	0	93.4	55-125	97.75	4.58	30	
3-Nitroaniline	45.81	10	50	0	91.6	55-120	47.52	3.67	30	
4-Methylphenol	98.25	10	150	0	65.5	40-120	117.9	18.2	30	
4-Nitroaniline	50.26	10	50	0	101	60-130	50.57	0.614	30	
4-Nitrophenol	41.6	10	100	0	41.6	25-100	53.47	25	30	
Acenaphthene	47.36	10	50	0	94.7	50-120	48.44	2.26	30	
Acenaphthylene	47.2	10	50	0	94.4	55-130	47.39	0.411	30	
Anthracene	51.02	10	50	0	102	60-130	52.07	2.04	30	
Benz(a)anthracene	52.8	10	50	0	106	60-130	54.45	3.07	30	
Benzidine	30.86	10	50	0	61.7	10-85	28.8	6.92	30	
Hexachloroethane	40.06	10	50	0	80.1	40-120	38.56	3.81	30	
Indeno(1,2,3-cd)pyrene	45.26	10	50	0	90.5	60-130	45.63	0.802	30	
Isophorone	46.05	10	50	0	92.1	60-130	47.55	3.2	30	
N-Nitrosodi-n-propylamine	42.48	10	50	0	85	55-120	44.05	3.62	30	
N-Nitrosodimethylamine	23.49	10	50	0	47	35-110	25.73	9.09	30	
N-Nitrosodiphenylamine	52.1	10	50	0	104	60-130	52.16	0.123	30	
Naphthalene	45.04	10	50	0	90.1	55-130	45.6	1.23	30	
Nitrobenzene	43.5	10	50	0	87	60-130	44.55	2.37	30	
Pentachlorophenol	96.06	10	100	0	96.1	45-125	97.32	1.31	30	
Phenanthrene	49.17	10	50	0	98.3	60-130	50.15	1.96	30	
Phenol	31.6	10	100	0	31.6	20-100	42.47	29.4	30	
Pyrene	52.74	10	50	0	105	45-120	53.67	1.75	30	
Surr:2,4,6-Tribromophenol	102	0	100	0	102	10-123	105.5	3.31	30	
Surr:2-Fluorobiphenyl	90.6	0	100	0	90.6	43-116	89.11	1.65	30	
Surr:2-Fluorophenol	48.65	0	100	0	48.6	21-100	62.38	24.7	30	
Surr:4-Terphenyl-d14	112.1	0	100	0	112	33-141	117.2	4.44	30	
Surr:Nitrobenzene-d5	85.81	0	100	0	85.8	35-114	88.94	3.59	30	
Surr: Phenol-d6	32.05	0	100	0	32.1	10-94	44.22	31.9	30	R

The following samples were analyzed in this batch: 0307233-01B 0307233-02B

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CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15343** InstrumentID: **VOA_II**

MBLK Sample ID: **VBLKW-0724** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/24/03 11:52**

Client ID: Run ID: **VOA_II_030724A** SeqNo: **349225** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
2-Butanone	U	10								
2-Chloroethyl vinyl ether	U	5.0								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	5.0								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	10								
Methyl tert-butyl ether	U	5.0								
Methylene chloride	U	10								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl acetate	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	47.48	5.0	50	0	95	70-130		0		
Surr: 4-Bromofluorobenzene	38.47	5.0	50	0	76.9	70-130		0		
Surr: Dibromofluoromethane	47.42	5.0	50	0	94.8	70-130		0		
Surr: Toluene-d8	42.02	5.0	50	0	84	70-130		0		

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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15343** InstrumentID: **VOA_II**

LCS Sample ID: **VLCSW-0724** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/24/03 10:34**
Client ID: Run ID: **VOA_II_030724A** SeqNo: **349223** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.61	5.0	50	0	99.2	75-118	0			
1,1,2,2-Tetrachloroethane	42.85	5.0	50	0	85.7	79-120	0			
1,1,2-Trichloroethane	47.1	5.0	50	0	94.2	81-119	0			
1,1-Dichloroethane	48.79	5.0	50	0	97.6	80-120	0			
1,1-Dichloroethene	49.75	5.0	50	0	99.5	80-120	0			
1,2-Dichloroethane	48.92	5.0	50	0	97.8	80-120	0			
2-Butanone	104.3	10	100	0	104	70-130	0			
2-Chloroethyl vinyl ether	99.46	5.0	100	0	99.5	72-120	0			
2-Hexanone	102.1	10	100	0	102	70-130	0			
4-Methyl-2-pentanone	95.21	5.0	100	0	95.2	78-120	0			
Acetone	115	10	100	0	115	60-135	0			
Benzene	51.37	5.0	50	0	103	82-119	0			
Bromodichloromethane	51.49	5.0	50	0	103	81-119	0			
Bromoform	48.24	5.0	50	0	96.5	80-120	0			
Bromomethane	52.27	5.0	50	0	105	75-130	0			
Carbon disulfide	103.6	5.0	100	0	104	78-120	0			
Carbon tetrachloride	49.87	5.0	50	0	99.7	77-120	0			
Chlorobenzene	45.63	5.0	50	0	91.3	82-118	0			
Chloroethane	49.41	5.0	50	0	98.8	78-122	0			
Chloroform	49.01	5.0	50	0	98	78-120	0			
Chloromethane	55.41	5.0	50	0	111	75-125	0			
cis-1,3-Dichloropropene	51.19	5.0	50	0	102	81-120	0			
Dibromochloromethane	46.31	5.0	50	0	92.6	81-118	0			
Ethylbenzene	46.39	5.0	50	0	92.8	82-120	0			
m,p-Xylene	92.82	10	100	0	92.8	82-122	0			
Methyl tert-butyl ether	45.94	5.0	50	0	91.9	79-120	0			
Methylene chloride	52.96	10	50	0	106	80-122	0			
Styrene	46.4	5.0	50	0	92.8	82-121	0			
Tetrachloroethene	44.97	5.0	50	0	89.9	79-118	0			
Toluene	47.39	5.0	50	0	94.8	81-119	0			
trans-1,3-Dichloropropene	52.61	5.0	50	0	105	82-121	0			
Trichloroethene	48.3	5.0	50	0	96.6	78-118	0			
Vinyl acetate	110	5.0	100	0	110	75-120	0			
Vinyl chloride	50.14	2.0	50	0	100	73-127	0			
Xylenes, Total	138.9	15	150	0	92.6	80-120	0			
Surr: 1,2-Dichloroethane-d4	45.75	5.0	50	0	91.5	70-130	0			
Surr: 4-Bromofluorobenzene	42.75	5.0	50	0	85.5	70-130	0			
Surr: Dibromofluoromethane	45.98	5.0	50	0	92	70-130	0			
Surr: Toluene-d8	43.9	5.0	50	0	87.8	70-130	0			

ND - Not Detected at the Reporting Limit
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U - Analyzed for but not detected
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CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15343** InstrumentID: **VOA_II**

LCSD Sample ID: **VLCSWD-0724** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/24/03 11:00**

Client ID: Run ID: **VOA_II_030724A** SeqNo: **349224** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.64	5.0	50	0	105	75-118	49.61	5.93	20	
1,1,2,2-Tetrachloroethane	41.39	5.0	50	0	82.8	79-120	42.85	3.47	20	
1,1,2-Trichloroethane	46.04	5.0	50	0	92.1	81-119	47.1	2.28	20	
1,1-Dichloroethane	50.07	5.0	50	0	100	80-120	48.79	2.59	20	
1,1-Dichloroethene	53.29	5.0	50	0	107	80-120	49.75	6.89	20	
1,2-Dichloroethane	47.57	5.0	50	0	95.1	80-120	48.92	2.8	20	
2-Butanone	99.03	10	100	0	99	70-130	104.3	5.2	20	
2-Chloroethyl vinyl ether	96.21	5.0	100	0	96.2	72-120	99.46	3.33	20	
2-Hexanone	95.46	10	100	0	95.5	70-130	102.1	6.77	20	
4-Methyl-2-pentanone	91.01	5.0	100	0	91	78-120	95.21	4.51	20	
Acetone	108.4	10	100	0	108	60-135	115	5.9	20	
Benzene	51.54	5.0	50	0	103	82-119	51.37	0.315	20	
Bromodichloromethane	50.42	5.0	50	0	101	81-119	51.49	2.09	20	
Bromoform	47.22	5.0	50	0	94.4	80-120	48.24	2.13	20	
Bromomethane	54.91	5.0	50	0	110	75-130	52.27	4.94	20	
Carbon disulfide	109.2	5.0	100	0	109	78-120	103.6	5.25	20	
Carbon tetrachloride	50.14	5.0	50	0	100	77-120	49.87	0.522	20	
Chlorobenzene	45.92	5.0	50	0	91.8	82-118	45.63	0.637	20	
Chloroethane	53.66	5.0	50	0	107	78-122	49.41	8.25	20	
Chloroform	50.01	5.0	50	0	100	78-120	49.01	2.01	20	
Chloromethane	58.36	5.0	50	0	117	75-125	55.41	5.19	20	
cis-1,3-Dichloropropene	49.58	5.0	50	0	99.2	81-120	51.19	3.21	20	
Dibromochloromethane	45.08	5.0	50	0	90.2	81-118	46.31	2.7	20	
Ethylbenzene	47.36	5.0	50	0	94.7	82-120	46.39	2.08	20	
m,p-Xylene	94.74	10	100	0	94.7	82-122	92.82	2.05	20	
Methyl tert-butyl ether	46.16	5.0	50	0	92.3	79-120	45.94	0.476	20	
Methylene chloride	57.38	10	50	0	115	80-122	52.96	8	20	
Styrene	46.51	5.0	50	0	93	82-121	46.4	0.239	20	
Tetrachloroethene	46.36	5.0	50	0	92.7	79-118	44.97	3.05	20	
Toluene	48.31	5.0	50	0	96.6	81-119	47.39	1.93	20	
trans-1,3-Dichloropropene	50.9	5.0	50	0	102	82-121	52.61	3.31	20	
Trichloroethene	49.11	5.0	50	0	98.2	78-118	48.3	1.65	20	
Vinyl acetate	107.9	5.0	100	0	108	75-120	110	1.88	20	
Vinyl chloride	53.51	2.0	50	0	107	73-127	50.14	6.51	20	
Xylenes, Total	141.6	15	150	0	94.4	80-120	138.9	1.93	20	
Surr: 1,2-Dichloroethane-d4	46.02	5.0	50	0	92	70-130	45.75	0.583	20	
Surr:4-Bromofluorobenzene	41.98	5.0	50	0	84	70-130	42.75	1.82	20	
Surr: Dibromofluoromethane	47.13	5.0	50	0	94.3	70-130	45.98	2.49	20	
Surr: Toluene-d8	43.95	5.0	50	0	87.9	70-130	43.9	0.12	20	

ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
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P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15343** InstrumentID: **VOA_II**

MS Sample ID: **0307233-01AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/24/03 13:36**

Client ID: **RA3156** Run ID: **VOA_II_030724A** SeqNo: **349227** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.88	5.0	50	0	95.8	75-125	0			
1,1,2,2-Tetrachloroethane	48.46	5.0	50	0	96.9	75-125	0			
1,1,2-Trichloroethane	48.2	5.0	50	0	96.4	75-125	0			
1,1-Dichloroethane	49.96	5.0	50	0	99.9	75-125	0			
1,1-Dichloroethene	46.63	5.0	50	0	93.3	65-130	0			
1,2-Dichloroethane	53.21	5.0	50	0	106	70-130	0			
2-Butanone	108.5	10	100	0	109	64-128	0			
2-Chloroethyl vinyl ether	39.33	5.0	100	0	39.3	75-125	0			S
2-Hexanone	113.4	10	100	0	113	72-124	0			
4-Methyl-2-pentanone	109.3	5.0	100	0	109	75-125	0			
Acetone	106.4	10	100	0	106	60-130	0			
Benzene	50.54	5.0	50	0	101	76-127	0			
Bromodichloromethane	52.9	5.0	50	0	106	75-125	0			
Bromoform	52.18	5.0	50	0	104	75-125	0			
Bromomethane	53.07	5.0	50	0	106	75-125	0			
Carbon disulfide	98.93	5.0	100	0	98.9	75-125	0			
Carbon tetrachloride	44.9	5.0	50	0	89.8	70-130	0			
Chlorobenzene	46.55	5.0	50	0	93.1	75-126	0			
Chloroethane	49.08	5.0	50	0	98.2	70-130	0			
Chloroform	52.92	5.0	50	0	106	75-125	0			
Chloromethane	57.21	5.0	50	0	114	75-125	0			
cis-1,3-Dichloropropene	48.73	5.0	50	0	97.5	75-125	0			
Dibromochloromethane	46.82	5.0	50	0	93.6	75-125	0			
Ethylbenzene	46.88	5.0	50	0	93.8	75-125	0			
m,p-Xylene	92.76	10	100	0	92.8	75-125	0			
Methyl tert-butyl ether	47.43	5.0	50	0	94.9	75-125	0			
Methylene chloride	55.28	10	50	0	111	75-125	0			
Styrene	47.57	5.0	50	0	95.1	75-125	0			
Tetrachloroethene	41.9	5.0	50	0	83.8	75-125	0			
Toluene	47.12	5.0	50	0	94.2	76-125	0			
trans-1,3-Dichloropropene	54.79	5.0	50	0	110	70-130	0			
Trichloroethene	46.2	5.0	50	0	92.4	71-120	0			
Vinyl acetate	116.4	5.0	100	0	116	75-125	0			
Vinyl chloride	46.17	2.0	50	0	92.3	60-135	0			
Xylenes, Total	140.4	15	150	0	93.6	75-125	0			
Surr: 1,2-Dichloroethane-d4	47.34	5.0	50	0	94.7	70-130	0			
Surr:4-Bromofluorobenzene	41.63	5.0	50	0	83.3	70-130	0			
Surr: Dibromofluoromethane	46.59	5.0	50	0	93.2	70-130	0			
Surr: Toluene-d8	42.52	5.0	50	0	85	70-130	0			

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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15343** InstrumentID: **VOA_II**

MSD Sample ID: **0307233-01AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/24/03 14:02**

Client ID: **RA3156** Run ID: **VOA_II_030724A** SeqNo: **349229** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.63	5.0	50	0	97.3	75-125	47.88	1.56	20	
1,1,2,2-Tetrachloroethane	45.02	5.0	50	0	90	75-125	48.46	7.36	20	
1,1,2-Trichloroethane	49.11	5.0	50	0	98.2	75-125	48.2	1.89	20	
1,1-Dichloroethane	49.1	5.0	50	0	98.2	75-125	49.96	1.73	20	
1,1-Dichloroethene	47.51	5.0	50	0	95	65-130	46.63	1.87	20	
1,2-Dichloroethane	51.34	5.0	50	0	103	70-130	53.21	3.57	20	
2-Butanone	108.4	10	100	0	108	64-128	108.5	0.152	20	
2-Chloroethyl vinyl ether	U	5.0	100	0	0	75-125	39.33	0	20	S
2-Hexanone	109.9	10	100	0	110	72-124	113.4	3.22	20	
4-Methyl-2-pentanone	104.9	5.0	100	0	105	75-125	109.3	4.16	20	
Acetone	98.56	10	100	0	98.6	60-130	106.4	7.65	20	
Benzene	50.52	5.0	50	0	101	76-127	50.54	0.0532	20	
Bromodichloromethane	51.74	5.0	50	0	103	75-125	52.9	2.23	20	
Bromoform	50.56	5.0	50	0	101	75-125	52.18	3.16	20	
Bromomethane	55.16	5.0	50	0	110	75-125	53.07	3.85	20	
Carbon disulfide	100.4	5.0	100	0	100	75-125	98.93	1.44	20	
Carbon tetrachloride	46.38	5.0	50	0	92.8	70-130	44.9	3.25	20	
Chlorobenzene	45.4	5.0	50	0	90.8	75-126	46.55	2.48	20	
Chloroethane	49.75	5.0	50	0	99.5	70-130	49.08	1.36	20	
Chloroform	50.05	5.0	50	0	100	75-125	52.92	5.58	20	
Chloromethane	56.48	5.0	50	0	113	75-125	57.21	1.29	20	
cis-1,3-Dichloropropene	48.96	5.0	50	0	97.9	75-125	48.73	0.474	20	
Dibromochloromethane	47.62	5.0	50	0	95.2	75-125	46.82	1.68	20	
Ethylbenzene	46.17	5.0	50	0	92.3	75-125	46.88	1.53	20	
m,p-Xylene	91.95	10	100	0	91.9	75-125	92.76	0.879	20	
Methyl tert-butyl ether	49.61	5.0	50	0	99.2	75-125	47.43	4.5	20	
Methylene chloride	54	10	50	0	108	75-125	55.28	2.35	20	
Styrene	46.04	5.0	50	0	92.1	75-125	47.57	3.26	20	
Tetrachloroethene	42.83	5.0	50	0	85.7	75-125	41.9	2.2	20	
Toluene	46.76	5.0	50	0	93.5	76-125	47.12	0.761	20	
trans-1,3-Dichloropropene	53.51	5.0	50	0	107	70-130	54.79	2.37	20	
Trichloroethene	47.84	5.0	50	0	95.7	71-120	46.2	3.49	20	
Vinyl acetate	118.3	5.0	100	0	118	75-125	116.4	1.6	20	
Vinyl chloride	48.8	2.0	50	0	97.6	60-135	46.17	5.53	20	
Xylenes, Total	138.1	15	150	0	92.1	75-125	140.4	1.6	20	
Surr: 1,2-Dichloroethane-d4	47.6	5.0	50	0	95.2	70-130	47.34	0.562	20	
Surr:4-Bromofluorobenzene	41.45	5.0	50	0	82.9	70-130	41.63	0.436	20	
Surr: Dibromofluoromethane	46.75	5.0	50	0	93.5	70-130	46.59	0.34	20	
Surr: Toluene-d8	42.57	5.0	50	0	85.1	70-130	42.52	0.0973	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307233-01A 0307233-02A

ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15355** InstrumentID: **UV-2101PC**

MBLK Sample ID: **WMBW1-072503** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/25/03 0:00**
Client ID: Run ID: **UV-2101PC_030725A** SeqNo: **349511** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020								

LCS Sample ID: **WLCSW1-072503** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/25/03 0:00**
Client ID: Run ID: **UV-2101PC_030725A** SeqNo: **349512** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2048	0.020	0.2	0	102	80-120	0			

MS Sample ID: **0307233-02E MS** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/25/03 0:00**
Client ID: **RA3353** Run ID: **UV-2101PC_030725A** SeqNo: **349518** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.211	0.020	0.2	0.0039	104	75-125	0			

MSD Sample ID: **0307233-02E MSD** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/25/03 0:00**
Client ID: **RA3353** Run ID: **UV-2101PC_030725A** SeqNo: **349519** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2089	0.020	0.2	0.0039	102	75-125	0.211	1	25	

DUP Sample ID: **0307233-02E DUP** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/25/03 0:00**
Client ID: **RA3353** Run ID: **UV-2101PC_030725A** SeqNo: **349517** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.0037	0.020	0	0	0	0-0	0.0039	0	20	J

Thefollowingsampleswereanalyzedinthisbatch: 0307233-01E 0307233-02E

ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15372** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-072603** TestCode: **E300** Units: **mg/L** Analysis Date **07/27/03 5:07**
Client ID: Run ID: **IC201_030726A** SeqNo: **350104** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-072603** TestCode: **E300** Units: **mg/L** Analysis Date **07/27/03 5:40**
Client ID: Run ID: **IC201_030726A** SeqNo: **350105** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.5	0.50	10	0	105	80-120	0			
Fluoride	2.11	0.10	2	0	106	80-120	0			
Sulfate	11.19	1.0	10	0	112	80-120	0			
Surr: Dichloroacetic acid (surr)	2.31	0.10	2	0	116	80-120	0			

MS Sample ID: **0307251-01D MS** TestCode: **E300** Units: **mg/L** Analysis Date **07/27/03 9:27**
Client ID: Run ID: **IC201_030726A** SeqNo: **350110** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	925.2	10	200	699.6	113	75-125	0			
Fluoride	38.4	2.0	40	0	96	75-125	0			
Sulfate	212.2	20	200	0	106	75-125	0			
Surr: Dichloroacetic acid (surr)	97	2.0	100	0	97	80-120	0			

MSD Sample ID: **0307251-01DMSD** TestCode: **E300** Units: **mg/L** Analysis Date **07/27/03 10:00**
Client ID: Run ID: **IC201_030726A** SeqNo: **350085** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	925.8	10	200	699.6	113	75-125	925.2	0.0648	20	
Fluoride	37.4	2.0	40	0	93.5	75-125	38.4	2.64	20	
Sulfate	211.6	20	200	0	106	75-125	212.2	0.283	20	
Surr: Dichloroacetic acid (surr)	97.2	2.0	100	0	97.2	80-120	97	0.206	20	

DUP Sample ID: **0307220-14BDUP** TestCode: **E300** Units: **mg/L** Analysis Date **07/27/03 23:32**
Client ID: Run ID: **IC201_030726A** SeqNo: **350101** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	288.5	10	0	0	0	0-0	288	0.173	20	
Surr: Dichloroacetic acid (surr)	53.1	1.0	50	0	106	80-120	47.6	10.9	20	

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B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15372** InstrumentID: **IC201**

DUP Sample ID: **0307251-01D DUP** TestCode: **E300** Units: **mg/L** Analysis Date **07/27/03 8:55**
Client ID: Run ID: **IC201_030726A** SeqNo: **350109** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	696.4	10	0	0	0	0-0	699.6	0.458	20	
Surr: Dichloroacetic acid (surr)	104.4	2.0	100	0	104	80-120	106.6	2.09	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307233-01D 0307233-02D

ND - Not Detected at the Reporting Limit
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CLIENT: Navajo Refining Company
Work Order: 0307233
Project: Monthly

QC BATCH REPORT

Batch ID: **R15393** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-072903** Test Code: **E310.1** Units: **mg/L** Analysis Date **07/29/03 0:00**

Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **350674** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.0								
Alkalinity, Carbonate (As CaCO3)	U	5.0								
Alkalinity, Hydroxide (As CaCO3)	U	5.0								
Alkalinity, Total (As CaCO3)	U	5.0								

LCS Sample ID: **WLCSW1-072903** Test Code: **E310.1** Units: **mg/L** Analysis Date **07/29/03 0:00**

Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **350675** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	989.9	5.0	1000	0	99	80-120	0			

DUP Sample ID: **0307181-02D DUP** Test Code: **E310.1** Units: **mg/L** Analysis Date **07/29/03 0:00**

Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **350680** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	260.5	5.0	0	0	0	0-0	265.7	1.98	20	
Alkalinity, Carbonate (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	260.5	5.0	0	0	0	0-0	265.7	1.98	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307233-01D 0307233-02D

ND - Not Detected at the Reporting Limit
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030783

Page 1 of 1

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #:

Company Name: Navajo Phone #:

Address: (Street, City, Zip) Fax #:

Contact Person: Jeff Byrd

Invoice to: (If different from above)

Project #: Project Name: Monthly

Project Location: Artesia Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
	RA3156	8		X				X	X		X	X		7/21	1000
	RA3353	8		X				X	X		X	X		7/21	1015

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	X See List (Monthly)					Turn Around Time if different from standard	Hold
															X						
															X						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Byrd	7/21/03	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			RICHARD SANCHEZ	7-23-03	0915

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp °

Log-in Review

Carrier #

REMARKS:

☐ Check If Special Reporting Limits Are Needed

e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING COMPAN

Date/Time Received: 7/23/2003 9:15:00 AM

Work Order Number 0307233

Received by: RSZ

Checklist completed by RICHARD SANCHEZ 7-23-03
Signature | Date

Reviewed by LT 7/23/03
Initials | Date

Matrix: W

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):	3.9c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

030733

Invoice:
Customer: ELAB
Dept: ENV

Track: 791447269550
Mode: FedEx Express Priority
Date: 07/22/2003
Weight: 61.00
COD: 0.00
DV: 0.00

Shipping:	0.00
Special:	0.00
Handling:	0.00
Total:	0.00

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5

August 01, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Monthly Work Order : **0307181**

Dear Jeff Byrd,

e-Lab, Inc. received 2 samples on 7/17/2003 3:45:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 29.

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

Sincerely,

Lora Terrill

Electronically approved by: Lora Terrill

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *August 01, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: **0307181**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0307181-01	RA313	Liquid		7/17/2003 09:00	7/17/2003 15:45	☐
0307181-02	RA4798	Liquid		7/17/2003 09:20	7/17/2003 15:45	☐

e-Lab, Inc.

Date: *August 01, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly
Lab ID: 0307181-01

Client Sample ID: RA313
Collection Date: 7/17/2003 9:00:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **7/21/2003**		Analyst: **JCJ**
Mercury	U	0.000042	0.000200		mg/L	1	7/22/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/28/2003**		Analyst: **ALR**
Aluminum	0.00213	0.0016	0.0100	J	mg/L	1	7/31/2003
Arsenic	0.00297	0.0018	0.00500	J	mg/L	1	7/31/2003
Barium	0.0278	0.00060	0.00500		mg/L	1	7/31/2003
Beryllium	U	0.00030	0.00200		mg/L	1	7/31/2003
Boron	0.0367	0.011	0.0200		mg/L	1	7/31/2003
Cadmium	U	0.00015	0.00100		mg/L	1	7/31/2003
Calcium	200	4.0	25.0		mg/L	50	7/31/2003
Chromium	U	0.00050	0.00200		mg/L	1	7/31/2003
Cobalt	0.000403	0.00010	0.00200	J	mg/L	1	7/31/2003
Copper	0.00270	0.00030	0.00200		mg/L	1	7/31/2003
Iron	2.08	0.025	0.200		mg/L	1	7/31/2003
Lead	0.0124	0.00020	0.00500		mg/L	1	7/31/2003
Magnesium	56.3	0.25	2.00		mg/L	10	7/31/2003
Manganese	0.0432	0.0010	0.00500		mg/L	1	7/31/2003
Nickel	0.00336	0.00030	0.00500	J	mg/L	1	7/31/2003
Potassium	0.987	0.020	0.200		mg/L	1	7/31/2003
Selenium	0.00294	0.0017	0.00500	J	mg/L	1	7/31/2003
Silver	U	0.00020	0.00500		mg/L	1	7/31/2003
Sodium	15.4	0.032	0.200		mg/L	1	7/31/2003
Vanadium	0.00265	0.00040	0.00500	J	mg/L	1	7/31/2003
Zinc	0.224	0.0075	0.0250		mg/L	5	7/31/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/21/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/22/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/22/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/22/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/22/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/22/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/22/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/22/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/22/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/22/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/22/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/22/2003
Acenaphthene	U	1.1	10		µg/L	1	7/22/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/22/2003
Aniline	U	10	10		µg/L	1	7/22/2003

Qualifiers:

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 01, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly
Lab ID: 0307181-01

Client Sample ID: RA313
Collection Date: 7/17/2003 9:00:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/22/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/22/2003
Benzidine	U	0.34	10		µg/L	1	7/22/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/22/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/22/2003
Isophorone	U	1.2	10		µg/L	1	7/22/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/22/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/22/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/22/2003
Naphthalene	U	1.0	10		µg/L	1	7/22/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/22/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/22/2003
Phenanthrene	U	1.2	10		µg/L	1	7/22/2003
Phenol	U	3.5	10		µg/L	1	7/22/2003
Pyrene	U	0.92	10		µg/L	1	7/22/2003
Surr:2,4,6-Tribromophenol	107	0	10-123		%REC	1	7/22/2003
Surr: 2-Fluorobiphenyl	97.5	0	43-116		%REC	1	7/22/2003
Surr: 2-Fluorophenol	37.8	0	21-100		%REC	1	7/22/2003
Surr:4-Terphenyl-d14	128	0	33-141		%REC	1	7/22/2003
Surr:Nitrobenzene-d5	93.7	0	35-114		%REC	1	7/22/2003
Surr: Phenol-d6	21.0	0	10-94		%REC	1	7/22/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/22/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/22/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/22/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/22/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/22/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/22/2003
2-Butanone	U	0.70	10		µg/L	1	7/22/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/22/2003
2-Hexanone	U	1.1	10		µg/L	1	7/22/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/22/2003
Acetone	U	1.2	10		µg/L	1	7/22/2003
Benzene	U	0.66	5.0		µg/L	1	7/22/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/22/2003
Bromoform	U	0.40	5.0		µg/L	1	7/22/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/22/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/22/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/22/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/22/2003

Qualifiers:

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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 01, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly
Lab ID: 0307181-01

Client Sample ID: RA313
Collection Date: 7/17/2003 9:00:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/22/2003
Chloroform	U	0.52	5.0		µg/L	1	7/22/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/22/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/22/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/22/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/22/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/22/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	7/22/2003
Methylene chloride	U	0.60	10		µg/L	1	7/22/2003
Styrene	U	0.56	5.0		µg/L	1	7/22/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/22/2003
Toluene	U	0.69	5.0		µg/L	1	7/22/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/22/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/22/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/22/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/22/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/22/2003
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%REC	1	7/22/2003
Surr: 4-Bromofluorobenzene	75.7	0	70-130		%REC	1	7/22/2003
Surr: Dibromofluoromethane	97.6	0	70-130		%REC	1	7/22/2003
Surr: Toluene-d8	82.4	0	70-130		%REC	1	7/22/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **LMD**
Chloride	17.0	0.200	0.500		mg/L	1	7/23/2003
Fluoride	0.940	0.0500	0.100		mg/L	1	7/23/2003
Sulfate	534	25.0	50.0		mg/L	50	7/23/2003
Surr: Dichloroacetic acid (surr)	102	0	80-120		%REC	50	7/23/2003
Surr: Dichloroacetic acid (surr)	102	0	80-120		%REC	1	7/23/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	203	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Total (As CaCO3)	203	2.0	5.00		mg/L	1	7/29/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	7/19/2003

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 01, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA4798
Work Order:	0307181	**Collection Date:**	7/17/2003 9:20:00 AM
Project:	Monthly		
Lab ID:	0307181-02	**Matrix:**	LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **7/21/2003**		Analyst: **JCJ**
Mercury	0.000126	0.000042	0.000200	J	mg/L	1	7/22/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/28/2003**		Analyst: **ALR**
Aluminum	0.0176	0.0016	0.0100		mg/L	1	7/31/2003
Arsenic	0.00382	0.0018	0.00500	J	mg/L	1	7/31/2003
Barium	0.00810	0.00060	0.00500		mg/L	1	7/31/2003
Beryllium	U	0.00030	0.00200		mg/L	1	7/31/2003
Boron	0.191	0.011	0.0200		mg/L	1	7/31/2003
Cadmium	U	0.00015	0.00100		mg/L	1	7/31/2003
Calcium	513	4.0	25.0		mg/L	50	7/31/2003
Chromium	0.00103	0.00050	0.00200	J	mg/L	1	7/31/2003
Cobalt	0.000387	0.00010	0.00200	J	mg/L	1	7/31/2003
Copper	0.00709	0.00030	0.00200		mg/L	1	7/31/2003
Iron	1.10	0.025	0.200		mg/L	1	7/31/2003
Lead	0.00215	0.00020	0.00500	J	mg/L	1	7/31/2003
Magnesium	155	0.25	2.00		mg/L	10	7/31/2003
Manganese	0.00365	0.0010	0.00500	J	mg/L	1	7/31/2003
Nickel	0.00617	0.00030	0.00500		mg/L	1	7/31/2003
Potassium	2.27	0.020	0.200		mg/L	1	7/31/2003
Selenium	0.0233	0.0017	0.00500		mg/L	1	7/31/2003
Silver	U	0.00020	0.00500		mg/L	1	7/31/2003
Sodium	116	0.32	2.00		mg/L	10	7/31/2003
Vanadium	0.00935	0.00040	0.00500		mg/L	1	7/31/2003
Zinc	1.62	0.015	0.0500		mg/L	10	7/31/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/21/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/22/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/22/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/22/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/22/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/22/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/22/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/22/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/22/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/22/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/22/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/22/2003
Acenaphthene	U	1.1	10		µg/L	1	7/22/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/22/2003
Aniline	U	10	10		µg/L	1	7/22/2003

Qualifiers:

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 01, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly
Lab ID: 0307181-02

Client Sample ID: RA4798
Collection Date: 7/17/2003 9:20:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/22/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/22/2003
Benzidine	U	0.34	10		µg/L	1	7/22/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/22/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/22/2003
Isophorone	U	1.2	10		µg/L	1	7/22/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/22/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/22/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/22/2003
Naphthalene	U	1.0	10		µg/L	1	7/22/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/22/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/22/2003
Phenanthrene	U	1.2	10		µg/L	1	7/22/2003
Phenol	U	3.5	10		µg/L	1	7/22/2003
Pyrene	U	0.92	10		µg/L	1	7/22/2003
Surr:2,4,6-Tribromophenol	104	0	10-123		%REC	1	7/22/2003
Surr:2-Fluorobiphenyl	98.1	0	43-116		%REC	1	7/22/2003
Surr:2-Fluorophenol	44.2	0	21-100		%REC	1	7/22/2003
Surr:4-Terphenyl-d14	128	0	33-141		%REC	1	7/22/2003
Surr:Nitrobenzene-d5	97.6	0	35-114		%REC	1	7/22/2003
Surr: Phenol-d6	24.4	0	10-94		%REC	1	7/22/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/22/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/22/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/22/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/22/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/22/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/22/2003
2-Butanone	U	0.70	10		µg/L	1	7/22/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/22/2003
2-Hexanone	U	1.1	10		µg/L	1	7/22/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/22/2003
Acetone	U	1.2	10		µg/L	1	7/22/2003
Benzene	U	0.66	5.0		µg/L	1	7/22/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/22/2003
Bromoform	U	0.40	5.0		µg/L	1	7/22/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/22/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/22/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/22/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/22/2003

Qualifiers:

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *August 01, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly
Lab ID: 0307181-02

Client Sample ID: RA4798
Collection Date: 7/17/2003 9:20:00 AM
Matrix: LIQUID

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/22/2003
Chloroform	U	0.52	5.0		µg/L	1	7/22/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/22/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/22/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/22/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/22/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/22/2003
Methyl tert-butyl ether	6.0	0.30	5.0		µg/L	1	7/22/2003
Methylene chloride	U	0.60	10		µg/L	1	7/22/2003
Styrene	U	0.56	5.0		µg/L	1	7/22/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/22/2003
Toluene	U	0.69	5.0		µg/L	1	7/22/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/22/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/22/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/22/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/22/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/22/2003
Surr: 1,2-Dichloroethane-d4	102	0	70-130		%REC	1	7/22/2003
Surr:4-Bromofluorobenzene	76.9	0	70-130		%REC	1	7/22/2003
Surr: Dibromofluoromethane	98.3	0	70-130		%REC	1	7/22/2003
Surr: Toluene-d8	84.4	0	70-130		%REC	1	7/22/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **LMD**
Chloride	145	2.00	5.00		mg/L	10	7/23/2003
Fluoride	0.490	0.0500	0.100		mg/L	1	7/23/2003
Sulfate	1,720	25.0	50.0		mg/L	50	7/24/2003
Surr: Dichloroacetic acid (surr)	105	0	80-120		%REC	50	7/24/2003
Surr: Dichloroacetic acid (surr)	99.2	0	80-120		%REC	1	7/23/2003
Surr: Dichloroacetic acid (surr)	105	0	80-120		%REC	10	7/23/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	266	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/29/2003
Alkalinity, Total (As CaCO3)	266	2.0	5.00		mg/L	1	7/29/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	7/19/2003

Qualifiers:

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

Date: *Aug 01 2003*

QC BATCH REPORT

Batch ID: **6181** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW1-072103** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 12:13**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347794** Prep Date: **7/21/2003** DF: **1**

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

LCS Sample ID: **GLCSW1-072103** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 12:14**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347795** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00482	0.00020	0.005	0	96.4	80-120	0			

LCS Sample ID: **GLCSW4-072103** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 12:20**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347796** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0049	0.00020	0.005	0	98	80-120	0			

LCS Sample ID: **GLCSW5-072103** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 12:22**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347797** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00493	0.00020	0.005	0	98.6	80-120	0			

LCS Sample ID: **GLCSW6-072103** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 12:32**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347798** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00506	0.00020	0.005	0	101	80-120	0			

LCS Sample ID: **GLCSW7-072103** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 12:36**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347799** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00484	0.00020	0.005	0	96.8	80-120	0			

MS Sample ID: **0307150-06BMS** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 13:22**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347816** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00497	0.00020	0.005	-0.000013	99.7	80-120	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
*Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6181** InstrumentID: **Mercury**

MSD Sample ID: **0307150-06BMSD** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 13:27**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347817** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00488	0.00020	0.005	-0.000013	97.9	80-120	0.00497	1.83	20	

DUP Sample ID: **0307150-06BDUP** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/22/03 13:21**
Client ID: Run ID: **MERCURY_030722A** SeqNo: **347815** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020	0	0	0	0-0	-0.000013	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307181-01C 0307181-02C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
*eferenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6264** InstrumentID: **6020**

MBLK Sample ID: **MBLKW3-072803** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/29/03 20:48**
Client ID: Run ID: **6020_030729A** SeqNo: **350750** Prep Date: **7/28/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	U	0.010								
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Boron	0.01576	0.020								J
Cadmium	U	0.0010								
Calcium	U	0.50								
Chromium	U	0.0020								
Cobalt	U	0.0020								
Copper	0.00031	0.0020								J
Iron	U	0.20								
Lead	U	0.0050								
Magnesium	U	0.20								
Manganese	U	0.0050								
Nickel	U	0.0050								
Potassium	U	0.20								
Selenium	U	0.0050								
Silver	U	0.0050								
Sodium	0.1804	0.20								J
Vanadium	U	0.0050								
Zinc	U	0.0050								

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CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6264** InstrumentID: **6020**

LCS Sample ID: **MLCSW3-072803** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/29/03 20:53**
Client ID: Run ID: **6020_030729A** SeqNo: **350751** Prep Date: **7/28/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0898	0.010	0.1	0	89.8	80-120	0			
Arsenic	0.08984	0.0050	0.1	0	89.8	80-120	0			
Barium	0.09047	0.0050	0.1	0	90.5	80-120	0			
Beryllium	0.09942	0.0020	0.1	0	99.4	80-120	0			
Boron	0.4782	0.020	0.5	0	95.6	80-120	0			
Cadmium	0.09324	0.0010	0.1	0	93.2	80-120	0			
Calcium	8.908	0.50	10	0	89.1	80-120	0			
Chromium	0.08756	0.0020	0.1	0	87.6	80-120	0			
Cobalt	0.08904	0.0020	0.1	0	89	80-120	0			
Copper	0.0925	0.0020	0.1	0	92.5	80-120	0			
Iron	8.744	0.20	10	0	87.4	80-120	0			
Lead	0.08856	0.0050	0.1	0	88.6	80-120	0			
Magnesium	8.85	0.20	10	0	88.5	80-120	0			
Manganese	0.0874	0.0050	0.1	0	87.4	80-120	0			
Nickel	0.09066	0.0050	0.1	0	90.7	80-120	0			
Potassium	8.773	0.20	10	0	87.7	80-120	0			
Selenium	0.09534	0.0050	0.1	0	95.3	80-120	0			
Silver	0.09199	0.0050	0.1	0	92	80-120	0			
Sodium	8.857	0.20	10	0	88.6	80-120	0			
Vanadium	0.0868	0.0050	0.1	0	86.8	80-120	0			
Zinc	0.1013	0.0050	0.1	0	101	80-120	0			

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ferenced analyte value is > 4 times amount spiked
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P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6264** InstrumentID: **6020**

MS Sample ID: **0307208-01CMS** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/29/03 21:06**

Client ID: Run ID: **6020_030729A** SeqNo: **350754** Prep Date: **7/28/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1061	0.010	0.1	0.005429	101	75-125	0			
Arsenic	0.105	0.0050	0.1	0.006545	98.5	75-125	0			
Barium	0.5097	0.0050	0.1	0.4039	106	75-125	0			EO
Beryllium	0.104	0.0020	0.1	0.00003431	104	75-125	0			
Boron	0.6765	0.020	0.5	0.1566	104	75-125	0			
Cadmium	0.08637	0.0010	0.1	0.0000914	86.3	75-125	0			
Calcium	137.1	0.50	10	125.3	118	75-125	0			EO
Chromium	0.1019	0.0020	0.1	0.001973	99.9	75-125	0			
Cobalt	0.1077	0.0020	0.1	0.008029	99.7	75-125	0			
Copper	0.09596	0.0020	0.1	0.002164	93.8	75-125	0			
Iron	10.69	0.20	10	0.8381	98.5	75-125	0			
Lead	0.1028	0.0050	0.1	0.0004722	102	75-125	0			
Magnesium	26.99	0.20	10	16.84	102	75-125	0			
Manganese	2.044	0.0050	0.1	1.893	151	75-125	0			SEO
Nickel	0.23	0.0050	0.1	0.1324	97.6	75-125	0			
Potassium	17.02	0.20	10	6.547	105	75-125	0			
Selenium	0.08926	0.0050	0.1	-2.983E-05	89.3	75-125	0			
Silver	0.08602	0.0050	0.1	-2.722E-05	86	75-125	0			
Sodium	U	0.20	10	0	0	75-125	0			S
Vanadium	0.106	0.0050	0.1	0.002261	104	75-125	0			
Zinc	0.129	0.0050	0.1	0.03887	90.1	75-125	0			

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*Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6264** InstrumentID: **6020**

MSD Sample ID: **0307208-01CMSD** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/29/03 21:11**

Client ID: Run ID: **6020_030729A** SeqNo: **350755** Prep Date: **7/28/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1084	0.010	0.1	0.005429	103	75-125	0.1061	2.14	25	
Arsenic	0.1048	0.0050	0.1	0.006545	98.3	75-125	0.105	0.191	25	
Barium	0.5141	0.0050	0.1	0.4039	110	75-125	0.5097	0.86	25	EO
Beryllium	0.1103	0.0020	0.1	0.00003431	110	75-125	0.104	5.88	25	
Boron	0.7224	0.020	0.5	0.1566	113	75-125	0.6765	6.56	25	
Cadmium	0.087	0.0010	0.1	0.0000914	86.9	75-125	0.08637	0.727	25	
Calcium	138.5	0.50	10	125.3	132	75-125	137.1	1.02	25	SEO
Chromium	0.1044	0.0020	0.1	0.001973	102	75-125	0.1019	2.42	25	
Cobalt	0.1102	0.0020	0.1	0.008029	102	75-125	0.1077	2.29	25	
Copper	0.09689	0.0020	0.1	0.002164	94.7	75-125	0.09596	0.964	25	
Iron	10.88	0.20	10	0.8381	100	75-125	10.69	1.76	25	
Lead	0.1037	0.0050	0.1	0.0004722	103	75-125	0.1028	0.872	25	
Magnesium	27.32	0.20	10	16.84	105	75-125	26.99	1.22	25	
Manganese	2.08	0.0050	0.1	1.893	187	75-125	2.044	1.75	25	SEO
Nickel	0.2327	0.0050	0.1	0.1324	100	75-125	0.23	1.17	25	
Potassium	17.16	0.20	10	6.547	106	75-125	17.02	0.819	25	
Selenium	0.08796	0.0050	0.1	-2.983E-05	88	75-125	0.08926	1.47	25	
Silver	0.08836	0.0050	0.1	-2.722E-05	88.4	75-125	0.08602	2.68	25	
Sodium	U	0.20	10	0	0	75-125	0	0	25	S
Vanadium	0.1092	0.0050	0.1	0.002261	107	75-125	0.106	2.97	25	
Zinc	0.1277	0.0050	0.1	0.03887	88.8	75-125	0.129	1.01	25	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6264** InstrumentID: **6020**

DUP Sample ID: **0307208-01CDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/29/03 21:02**
Client ID: Run ID: **6020_030729A** SeqNo: **350753** Prep Date: **7/28/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.005137	0.010	0	0	0	0-0	0.005429	0	25	J
Arsenic	0.007317	0.0050	0	0	0	0-0	0.006545	11.1	25	
Barium	0.4285	0.0050	0	0	0	0-0	0.4039	5.91	25	
Beryllium	U	0.0020	0	0	0	0-0	0.00003431	0	25	
Boron	0.1569	0.020	0	0	0	0-0	0.1566	0.191	25	
Cadmium	U	0.0010	0	0	0	0-0	0.0000914	0	25	
Chromium	0.002219	0.0020	0	0	0	0-0	0.001973	11.7	25	
Cobalt	0.008532	0.0020	0	0	0	0-0	0.008029	6.07	25	
Copper	0.002364	0.0020	0	0	0	0-0	0.002164	8.83	25	
Iron	0.8865	0.20	0	0	0	0-0	0.8381	5.61	25	
Lead	0.0005119	0.0050	0	0	0	0-0	0.0004722	0	25	J
Magnesium	17.84	0.20	0	0	0	0-0	16.84	5.77	25	
Nickel	0.1385	0.0050	0	0	0	0-0	0.1324	4.5	25	
Potassium	6.839	0.20	0	0	0	0-0	6.547	4.36	25	
Selenium	U	0.0050	0	0	0	0-0	-2.983E-05	0	25	
Silver	U	0.0050	0	0	0	0-0	-2.722E-05	0	25	
Vanadium	0.002389	0.0050	0	0	0	0-0	0.002261	0	25	J
Zinc	0.04137	0.0050	0	0	0	0-0	0.03887	6.23	25	

DUP Sample ID: **0307208-01CDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/30/03 14:48**
Client ID: Run ID: **6020_030730A** SeqNo: **350949** Prep Date: **7/28/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	131.1	5.0	0	0	0	0-0	147	11.4	25	

DUP Sample ID: **0307208-01CDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/30/03 20:11**
Client ID: Run ID: **6020_030730A** SeqNo: **351117** Prep Date: **7/28/2003** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	372.3	10	0	0	0	0-0	459.5	21	25	

DUP Sample ID: **0307208-01CDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/30/03 20:19**
Client ID: Run ID: **6020_030730A** SeqNo: **351119** Prep Date: **7/28/2003** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	1.714	0.10	0	0	0	0-0	1.59	7.51	25	

Thefollowingsampleswereanalyzedinthisbatch: 0307181-01C 0307181-02C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
*ferenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6186** InstrumentID: **SV-2**

MBLK Sample ID: **SBLKW1-030721** Test Code: **SW8270** Units: **µg/L** Analysis Date **07/22/03 12:24**
Client ID: Run ID: **SV-2_030722C** SeqNo: **348417** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	U	10								
2,4,5-Trichlorophenol	U	10								
2,4,6-Trichlorophenol	U	10								
2-Methylnaphthalene	U	10								
2-Methylphenol	U	10								
2-Nitroaniline	U	10								
2-Nitrophenol	U	10								
3-Nitroaniline	U	10								
4-Methylphenol	U	10								
4-Nitroaniline	U	10								
4-Nitrophenol	U	10								
Acenaphthene	U	10								
Acenaphthylene	U	10								
Aniline	U	10								
Anthracene	U	10								
Benz(a)anthracene	U	10								
Benzidine	U	10								
Hexachloroethane	U	10								
Indeno(1,2,3-cd)pyrene	U	10								
Isophorone	U	10								
N-Nitrosodi-n-propylamine	U	10								
N-Nitrosodimethylamine	U	10								
N-Nitrosodiphenylamine	U	10								
Naphthalene	U	10								
Nitrobenzene	U	10								
Pentachlorophenol	U	10								
Phenanthrene	U	10								
Phenol	U	10								
Pyrene	U	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr:2,4,6-Tribromophenol	103.4	0	100	0	103	10-123	0			
Surr:2-Fluorobiphenyl	91.34	0	100	0	91.3	43-116	0			
Surr:2-Fluorophenol	66.05	0	100	0	66.1	21-100	0			
Surr:4-Terphenyl-d14	130	0	100	0	130	33-141	0			
Surr:Nitrobenzene-d5	92.72	0	100	0	92.7	35-114	0			
Surr: Phenol-d6	46.33	0	100	0	46.3	10-94	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6186** InstrumentID: **SV-2**

LCS Sample ID: **SLCSW1-030721** TestCode: **SW8270** Units: **µg/L** Analysis Date **07/22/03 12:50**
Client ID: Run ID: **SV-2_030722C** SeqNo: **348418** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	50.01	10	50	0	100	51-110	0			
2,4,5-Trichlorophenol	108.7	10	100	0	109	55-130	0			
2,4,6-Trichlorophenol	108.6	10	100	0	109	55-130	0			
2-Methylnaphthalene	49.87	10	50	0	99.7	50-125	0			
2-Methylphenol	87.5	10	100	0	87.5	45-120	0			
2-Nitroaniline	53.55	10	50	0	107	55-130	0			
2-Nitrophenol	103.1	10	100	0	103	55-125	0			
3-Nitroaniline	51.87	10	50	0	104	55-120	0			
4-Methylphenol	127.3	10	150	0	84.9	40-120	0			
4-Nitroaniline	53.36	10	50	0	107	60-130	0			
4-Nitrophenol	61.28	10	100	0	61.3	25-100	0			
Acenaphthene	53.01	10	50	0	106	50-120	0			
Acenaphthylene	54.44	10	50	0	109	55-130	0			
Anthracene	56.48	10	50	0	113	60-130	0			
Benz(a)anthracene	58.47	10	50	0	117	60-130	0			
Benzidine	41.59	10	50	0	83.2	10-85	0			
Hexachloroethane	43.54	10	50	0	87.1	40-120	0			
Indeno(1,2,3-cd)pyrene	48.68	10	50	0	97.4	60-130	0			
Isophorone	50.82	10	50	0	102	60-130	0			
N-Nitrosodi-n-propylamine	47.76	10	50	0	95.5	55-120	0			
N-Nitrosodimethylamine	36.07	10	50	0	72.1	35-110	0			
N-Nitrosodiphenylamine	60.2	10	50	0	120	60-130	0			
Naphthalene	49.63	10	50	0	99.3	55-130	0			
Nitrobenzene	48.7	10	50	0	97.4	60-130	0			
Pentachlorophenol	112.2	10	100	0	112	45-125	0			
Phenanthrene	54.5	10	50	0	109	60-130	0			
Phenol	51.02	10	100	0	51	20-100	0			
Pyrene	59.34	10	50	0	119	45-120	0			
Surr:2,4,6-Tribromophenol	114.8	0	100	0	115	10-123	0			
Surr:2-Fluorobiphenyl	103	0	100	0	103	43-116	0			
Surr:2-Fluorophenol	74.78	0	100	0	74.8	21-100	0			
Surr:4-Terphenyl-d14	131.2	0	100	0	131	33-141	0			
Surr:Nitrobenzene-d5	97.89	0	100	0	97.9	35-114	0			
Surr: Phenol-d6	54.29	0	100	0	54.3	10-94	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - [illegible]enced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **6186** InstrumentID: **SV-2**

LCSD Sample ID: **SLCSDW1-030721** TestCode: **SW8270** Units: µg/L Analysis Date **07/22/03 13:16**
Client ID: Run ID: **SV-2_030722C** SeqNo: **348419** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	51.38	10	50	0	103	51-110	50.01	2.68	30	
2,4,5-Trichlorophenol	112	10	100	0	112	55-130	108.7	3	30	
2,4,6-Trichlorophenol	109.9	10	100	0	110	55-130	108.6	1.11	30	
2-Methylnaphthalene	50.8	10	50	0	102	50-125	49.87	1.85	30	
2-Methylphenol	86.95	10	100	0	87	45-120	87.5	0.628	30	
2-Nitroaniline	54.19	10	50	0	108	55-130	53.55	1.19	30	
2-Nitrophenol	106.7	10	100	0	107	55-125	103.1	3.46	30	
3-Nitroaniline	52.52	10	50	0	105	55-120	51.87	1.25	30	
4-Methylphenol	129.4	10	150	0	86.2	40-120	127.3	1.61	30	
4-Nitroaniline	53.39	10	50	0	107	60-130	53.36	0.0504	30	
4-Nitrophenol	57.61	10	100	0	57.6	25-100	61.28	6.17	30	
Acenaphthene	53.22	10	50	0	106	50-120	53.01	0.395	30	
Acenaphthylene	54.21	10	50	0	108	55-130	54.44	0.421	30	
Anthracene	56.99	10	50	0	114	60-130	56.48	0.9	30	
Benz(a)anthracene	58.43	10	50	0	117	60-130	58.47	0.06	30	
Benzidine	39.71	10	50	0	79.4	10-85	41.59	4.62	30	
Hexachloroethane	46.64	10	50	0	93.3	40-120	43.54	6.87	30	
Indeno(1,2,3-cd)pyrene	46.81	10	50	0	93.6	60-130	48.68	3.91	30	
Isophorone	52.52	10	50	0	105	60-130	50.82	3.29	30	
N-Nitrosodi-n-propylamine	48.97	10	50	0	97.9	55-120	47.76	2.49	30	
N-Nitrosodimethylamine	35.91	10	50	0	71.8	35-110	36.07	0.46	30	
N-Nitrosodiphenylamine	61.41	10	50	0	123	60-130	60.2	2	30	
Naphthalene	52.25	10	50	0	105	55-130	49.63	5.14	30	
Nitrobenzene	50.66	10	50	0	101	60-130	48.7	3.94	30	
Pentachlorophenol	111.7	10	100	0	112	45-125	112.2	0.497	30	
Phenanthrene	54.59	10	50	0	109	60-130	54.5	0.174	30	
Phenol	49.67	10	100	0	49.7	20-100	51.02	2.67	30	
Pyrene	59.55	10	50	0	119	45-120	59.34	0.363	30	
Surr:2,4,6-Tribromophenol	115.8	0	100	0	116	10-123	114.8	0.82	30	
Surr:2-Fluorobiphenyl	105.6	0	100	0	106	43-116	103	2.46	30	
Surr:2-Fluorophenol	74.49	0	100	0	74.5	21-100	74.78	0.384	30	
Surr:4-Terphenyl-d14	130.2	0	100	0	130	33-141	131.2	0.787	30	
Surr:Nitrobenzene-d5	104.3	0	100	0	104	35-114	97.89	6.31	30	
Surr: Phenol-d6	52.75	0	100	0	52.7	10-94	54.29	2.89	30	

Thefollowingsampleswereanalyzedinthisbatch: 0307181-01B 0307181-02B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - *Reference analyte value is > 4 times amount spiked*
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **R15284** InstrumentID: **VOA_II**

MBLK Sample ID: **VBLKW-0722** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/22/03 13:35**

Client ID: Run ID: **VOA_II_030722A** SeqNo: **347663** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
2-Butanone	U	10								
2-Chloroethyl vinyl ether	U	5.0								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	5.0								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	10								
Methyl tert-butyl ether	U	5.0								
Methylene chloride	U	10								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl acetate	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	49.8	5.0	50	0	99.6	70-130	0			
Surr:4-Bromofluorobenzene	40.33	5.0	50	0	80.7	70-130	0			
Surr: Dibromofluoromethane	48.73	5.0	50	0	97.5	70-130	0			
Surr: Toluene-d8	43.82	5.0	50	0	87.6	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - [illegible]enced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **R15284** InstrumentID: **VOA_II**

LCS Sample ID: **VLCSW-0722** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/22/03 11:51**

Client ID: Run ID: **VOA_II_030722A** SeqNo: **347661** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	54.46	5.0	50	0	109	75-118	0			
1,1,2,2-Tetrachloroethane	45.28	5.0	50	0	90.6	79-120	0			
1,1,2-Trichloroethane	46.86	5.0	50	0	93.7	81-119	0			
1,1-Dichloroethane	51.17	5.0	50	0	102	80-120	0			
1,1-Dichloroethene	52.13	5.0	50	0	104	80-120	0			
1,2-Dichloroethane	54.23	5.0	50	0	108	80-120	0			
2-Butanone	104.4	10	100	0	104	70-130	0			
2-Chloroethyl vinyl ether	90.99	5.0	100	0	91	72-120	0			
2-Hexanone	100.6	10	100	0	101	70-130	0			
4-Methyl-2-pentanone	95.85	5.0	100	0	95.9	78-120	0			
Acetone	117.3	10	100	0	117	60-135	0			
Benzene	51.41	5.0	50	0	103	82-119	0			
Bromodichloromethane	54.86	5.0	50	0	110	81-119	0			
Bromoform	49.41	5.0	50	0	98.8	80-120	0			
Bromomethane	60.53	5.0	50	0	121	75-130	0			
Carbon disulfide	109.9	5.0	100	0	110	78-120	0			
Carbon tetrachloride	53.67	5.0	50	0	107	77-120	0			
Chlorobenzene	47.79	5.0	50	0	95.6	82-118	0			
Chloroethane	57.6	5.0	50	0	115	78-122	0			
Chloroform	52.18	5.0	50	0	104	78-120	0			
Chloromethane	54.64	5.0	50	0	109	75-125	0			
cis-1,3-Dichloropropene	52.1	5.0	50	0	104	81-120	0			
Dibromochloromethane	48.35	5.0	50	0	96.7	81-118	0			
Ethylbenzene	48.31	5.0	50	0	96.6	82-120	0			
m,p-Xylene	96.8	10	100	0	96.8	82-122	0			
Methyl tert-butyl ether	48.13	5.0	50	0	96.3	79-120	0			
Methylene chloride	58.36	10	50	0	117	80-122	0			
Styrene	48.5	5.0	50	0	97	82-121	0			
Tetrachloroethene	47.24	5.0	50	0	94.5	79-118	0			
Toluene	48.8	5.0	50	0	97.6	81-119	0			
trans-1,3-Dichloropropene	53.63	5.0	50	0	107	82-121	0			
Trichloroethene	50.11	5.0	50	0	100	78-118	0			
Vinyl acetate	113.8	5.0	100	0	114	75-120	0			
Vinyl chloride	57.73	2.0	50	0	115	73-127	0			
Xylenes, Total	144.9	15	150	0	96.6	80-120	0			
Surr: 1,2-Dichloroethane-d4	49.39	5.0	50	0	98.8	70-130	0			
Surr:4-Bromofluorobenzene	42.28	5.0	50	0	84.6	70-130	0			
Surr: Dibromofluoromethane	46.93	5.0	50	0	93.9	70-130	0			
Surr: Toluene-d8	44.31	5.0	50	0	88.6	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - *Reference analyte value is > 4 times amount spiked*
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **R15284** InstrumentID: **VOA_II**

LCSD Sample ID: **VLCSWD-0722** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/22/03 12:43**

Client ID: Run ID: **VOA_II_030722A** SeqNo: **347662** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.69	5.0	50	0	105	75-118	54.46	3.31	20	
1,1,2,2-Tetrachloroethane	44.66	5.0	50	0	89.3	79-120	45.28	1.38	20	
1,1,2-Trichloroethane	45.89	5.0	50	0	91.8	81-119	46.86	2.1	20	
1,1-Dichloroethane	48.53	5.0	50	0	97.1	80-120	51.17	5.29	20	
1,1-Dichloroethene	51.6	5.0	50	0	103	80-120	52.13	1.01	20	
1,2-Dichloroethane	50.51	5.0	50	0	101	80-120	54.23	7.1	20	
2-Butanone	102.1	10	100	0	102	70-130	104.4	2.17	20	
2-Chloroethyl vinyl ether	89.68	5.0	100	0	89.7	72-120	90.99	1.46	20	
2-Hexanone	98.79	10	100	0	98.8	70-130	100.6	1.78	20	
4-Methyl-2-pentanone	94.29	5.0	100	0	94.3	78-120	95.85	1.65	20	
Acetone	120	10	100	0	120	60-135	117.3	2.23	20	
Benzene	48.49	5.0	50	0	97	82-119	51.41	5.85	20	
Bromodichloromethane	51	5.0	50	0	102	81-119	54.86	7.3	20	
Bromoform	48.13	5.0	50	0	96.3	80-120	49.41	2.62	20	
Bromomethane	57.13	5.0	50	0	114	75-130	60.53	5.79	20	
Carbon disulfide	105.4	5.0	100	0	105	78-120	109.9	4.19	20	
Carbon tetrachloride	49.72	5.0	50	0	99.4	77-120	53.67	7.64	20	
Chlorobenzene	45.54	5.0	50	0	91.1	82-118	47.79	4.83	20	
Chloroethane	54.3	5.0	50	0	109	78-122	57.6	5.89	20	
[illegible]loroform	50.58	5.0	50	0	101	78-120	52.18	3.11	20	
Chloromethane	57.43	5.0	50	0	115	75-125	54.64	4.98	20	
cis-1,3-Dichloropropene	48.88	5.0	50	0	97.8	81-120	52.1	6.38	20	
Dibromochloromethane	46.98	5.0	50	0	94	81-118	48.35	2.87	20	
Ethylbenzene	46.28	5.0	50	0	92.6	82-120	48.31	4.29	20	
m,p-Xylene	92.78	10	100	0	92.8	82-122	96.8	4.25	20	
Methyl tert-butyl ether	46.25	5.0	50	0	92.5	79-120	48.13	3.98	20	
Methylene chloride	54.31	10	50	0	109	80-122	58.36	7.18	20	
Styrene	46.03	5.0	50	0	92.1	82-121	48.5	5.22	20	
Tetrachloroethene	46.01	5.0	50	0	92	79-118	47.24	2.63	20	
Toluene	47.2	5.0	50	0	94.4	81-119	48.8	3.33	20	
trans-1,3-Dichloropropene	51.67	5.0	50	0	103	82-121	53.63	3.72	20	
Trichloroethene	46.9	5.0	50	0	93.8	78-118	50.11	6.62	20	
Vinyl acetate	109.4	5.0	100	0	109	75-120	113.8	4	20	
Vinyl chloride	54.51	2.0	50	0	109	73-127	57.73	5.73	20	
Xylenes, Total	138.9	15	150	0	92.6	80-120	144.9	4.23	20	
Surr: 1,2-Dichloroethane-d4	50.1	5.0	50	0	100	70-130	49.39	1.44	20	
Surr: 4-Bromofluorobenzene	43.01	5.0	50	0	86	70-130	42.28	1.71	20	
Surr: Dibromofluoromethane	48.61	5.0	50	0	97.2	70-130	46.93	3.52	20	
Surr: Toluene-d8	44.78	5.0	50	0	89.6	70-130	44.31	1.05	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O [illegible]renced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **R15284** InstrumentID: **VOA_II**

MS Sample ID: **0307179-18AMS** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/22/03 14:55**

Client ID: Run ID: **VOA_II_030722A** SeqNo: **348278** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.89	5.0	50	0	95.8	75-125	0			
1,1,2,2-Tetrachloroethane	51.39	5.0	50	0	103	75-125	0			
1,1,2-Trichloroethane	51.92	5.0	50	0	104	75-125	0			
1,1-Dichloroethane	64.1	5.0	50	13.95	100	75-125	0			
1,1-Dichloroethene	309.8	5.0	50	325.3	-31.1	65-130	0			SEO
1,2-Dichloroethane	57.47	5.0	50	0	115	70-130	0			
2-Butanone	103.5	10	100	0	104	64-128	0			
2-Chloroethyl vinyl ether	9.484	5.0	100	0	9.48	75-125	0			S
2-Hexanone	119	10	100	0	119	72-124	0			
4-Methyl-2-pentanone	114.6	5.0	100	0	115	75-125	0			
Acetone	94.85	10	100	0	94.8	60-130	0			
Benzene	52.33	5.0	50	0	105	76-127	0			
Bromodichloromethane	55.57	5.0	50	0	111	75-125	0			
Bromoform	55.68	5.0	50	0	111	75-125	0			
Bromomethane	57.89	5.0	50	0	116	75-125	0			
Carbon disulfide	102	5.0	100	0	102	75-125	0			
Carbon tetrachloride	44.6	5.0	50	0	89.2	70-130	0			
Chlorobenzene	49.68	5.0	50	0	99.4	75-126	0			
Chloroethane	53.24	5.0	50	0	106	70-130	0			
Chloroform	54.43	5.0	50	0	109	75-125	0			
Chloromethane	61.21	5.0	50	0	122	75-125	0			
cis-1,3-Dichloropropene	52.21	5.0	50	0	104	75-125	0			
Dibromochloromethane	51.44	5.0	50	0	103	75-125	0			
Ethylbenzene	48.08	5.0	50	0	96.2	75-125	0			
m,p-Xylene	96.3	10	100	0	96.3	75-125	0			
Methyl tert-butyl ether	49.18	5.0	50	0	98.4	75-125	0			
Methylene chloride	57.52	10	50	0	115	75-125	0			
Styrene	49.84	5.0	50	0	99.7	75-125	0			
Tetrachloroethene	44.3	5.0	50	0	88.6	75-125	0			
Toluene	50.47	5.0	50	0	101	76-125	0			
trans-1,3-Dichloropropene	58.36	5.0	50	0	117	70-130	0			
Trichloroethene	50.01	5.0	50	0	100	71-120	0			
Vinyl acetate	119	5.0	100	0	119	75-125	0			
Vinyl chloride	49.19	2.0	50	0	98.4	60-135	0			
Xylenes, Total	145.3	15	150	0	96.9	75-125	0			
Surr: 1,2-Dichloroethane-d4	47.72	5.0	50	0	95.4	70-130	0			
Surr: 4-Bromofluorobenzene	43.97	5.0	50	0	87.9	70-130	0			
Surr: Dibromofluoromethane	46.92	5.0	50	0	93.8	70-130	0			
Surr: Toluene-d8	44.58	5.0	50	0	89.2	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
erenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **R15284** InstrumentID: **VOA_II**

MSD Sample ID: **0307179-18AMSD** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/22/03 15:21**

Client ID: Run ID: **VOA_II_030722A** SeqNo: **348279** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.86	5.0	50	0	97.7	75-125	47.89	2.02	20	
1,1,2,2-Tetrachloroethane	48.01	5.0	50	0	96	75-125	51.39	6.8	20	
1,1,2-Trichloroethane	48.9	5.0	50	0	97.8	75-125	51.92	6	20	
1,1-Dichloroethane	58.87	5.0	50	13.95	89.8	75-125	64.1	8.51	20	
1,1-Dichloroethene	233.4	5.0	50	325.3	-184	65-130	309.8	28.1	20	SREO
1,2-Dichloroethane	51.62	5.0	50	0	103	70-130	57.47	10.7	20	
2-Butanone	99.85	10	100	0	99.8	64-128	103.5	3.63	20	
2-Chloroethyl vinyl ether	10.14	5.0	100	0	10.1	75-125	9.484	6.67	20	S
2-Hexanone	107.8	10	100	0	108	72-124	119	9.92	20	
4-Methyl-2-pentanone	109.5	5.0	100	0	110	75-125	114.6	4.52	20	
Acetone	92.26	10	100	0	92.3	60-130	94.85	2.77	20	
Benzene	48.85	5.0	50	0	97.7	76-127	52.33	6.87	20	
Bromodichloromethane	51.2	5.0	50	0	102	75-125	55.57	8.18	20	
Bromoform	52.93	5.0	50	0	106	75-125	55.68	5.06	20	
Bromomethane	55.8	5.0	50	0	112	75-125	57.89	3.68	20	
Carbon disulfide	99.94	5.0	100	0	99.9	75-125	102	2	20	
Carbon tetrachloride	45.71	5.0	50	0	91.4	70-130	44.6	2.46	20	
Chlorobenzene	46.77	5.0	50	0	93.5	75-126	49.68	6.04	20	
Chloroethane	51.53	5.0	50	0	103	70-130	53.24	3.27	20	
Chloroform	50.09	5.0	50	0	100	75-125	54.43	8.3	20	
Chloromethane	58.52	5.0	50	0	117	75-125	61.21	4.5	20	
cis-1,3-Dichloropropene	48.3	5.0	50	0	96.6	75-125	52.21	7.77	20	
Dibromochloromethane	48.68	5.0	50	0	97.4	75-125	51.44	5.51	20	
Ethylbenzene	46.44	5.0	50	0	92.9	75-125	48.08	3.46	20	
m,p-Xylene	92.91	10	100	0	92.9	75-125	96.3	3.58	20	
Methyl tert-butyl ether	47.89	5.0	50	0	95.8	75-125	49.18	2.65	20	
Methylene chloride	54.45	10	50	0	109	75-125	57.52	5.49	20	
Styrene	47.22	5.0	50	0	94.4	75-125	49.84	5.4	20	
Tetrachloroethene	44.21	5.0	50	0	88.4	75-125	44.3	0.195	20	
Toluene	47.92	5.0	50	0	95.8	76-125	50.47	5.19	20	
trans-1,3-Dichloropropene	53.58	5.0	50	0	107	70-130	58.36	8.54	20	
Trichloroethene	47.52	5.0	50	0	95	71-120	50.01	5.1	20	
Vinyl acetate	112.9	5.0	100	0	113	75-125	119	5.28	20	
Vinyl chloride	50.63	2.0	50	0	101	60-135	49.19	2.88	20	
Xylenes, Total	140	15	150	0	93.3	75-125	145.3	3.72	20	
Surr: 1,2-Dichloroethane-d4	47.34	5.0	50	0	94.7	70-130	47.72	0.787	20	
Surr: 4-Bromofluorobenzene	43.02	5.0	50	0	86	70-130	43.97	2.19	20	
Surr: Dibromofluoromethane	46.48	5.0	50	0	93	70-130	46.92	0.949	20	
Surr: Toluene-d8	44.21	5.0	50	0	88.4	70-130	44.58	0.84	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307181-01A 0307181-02A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
*eferenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **R15255** InstrumentID: **UV-2101PC**

MBLK Sample ID: **WMBW1-071903** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/19/03 0:00**
Client ID: Run ID: **UV-2101PC_030719A** SeqNo: **347030** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020								

LCS Sample ID: **WLCSW1-071903** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/19/03 0:00**
Client ID: Run ID: **UV-2101PC_030719A** SeqNo: **347031** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2105	0.020	0.2	0	105	80-120	0			

MS Sample ID: **0307142-02CMS** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/19/03 0:00**
Client ID: Run ID: **UV-2101PC_030719A** SeqNo: **347042** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2085	0.020	0.2	-0.00016	104	75-125	0			

MSD Sample ID: **0307142-02C MSD** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/19/03 0:00**
Client ID: Run ID: **UV-2101PC_030719A** SeqNo: **347043** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2047	0.020	0.2	-0.00016	102	75-125	0.2085	1.84	25	

DUP Sample ID: **0307142-02C DUP** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/19/03 0:00**
Client ID: Run ID: **UV-2101PC_030719A** SeqNo: **347041** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020	0	0	0	0-0	-0.00016	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307181-01E 0307181-02E

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **R15330** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-072203** TestCode: **E300** Units: **mg/L** Analysis Date **07/23/03 16:02**

Client ID: Run ID: **IC201_030722C** SeqNo: **348908** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-072203** TestCode: **E300** Units: **mg/L** Analysis Date **07/23/03 16:34**

Client ID: Run ID: **IC201_030722C** SeqNo: **348909** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.72	0.50	10	0	97.2	80-120	0			
Fluoride	1.81	0.10	2	0	90.5	80-120	0			
Sulfate	10.58	1.0	10	0	106	80-120	0			
Surr: Dichloroacetic acid (surr)	1.91	0.10	2	0	95.5	80-120	0			

MS Sample ID: **0307178-01EMS** TestCode: **E300** Units: **mg/L** Analysis Date **07/23/03 18:44**

Client ID: Run ID: **IC201_030722C** SeqNo: **348913** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	46.26	0.50	10	35.11	111	75-125	0			
Fluoride	3.74	0.10	2	1.67	104	75-125	0			
Sulfate	30.1	1.0	10	19.56	105	75-125	0			
Surr: Dichloroacetic acid (surr)	4.4	0.10	5	0	88	80-120	0			

MSD Sample ID: **0307178-01EMSD** TestCode: **E300** Units: **mg/L** Analysis Date **07/23/03 19:17**

Client ID: Run ID: **IC201_030722C** SeqNo: **348914** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	46.28	0.50	10	35.11	112	75-125	46.26	0.0432	20	
Fluoride	3.73	0.10	2	1.67	103	75-125	3.74	0.268	20	
Sulfate	29.98	1.0	10	19.56	104	75-125	30.1	0.399	20	
Surr: Dichloroacetic acid (surr)	4.4	0.10	5	0	88	80-120	4.4	0	20	

DUP Sample ID: **0307181-02DDUP** TestCode: **E300** Units: **mg/L** Analysis Date **07/24/03 0:42**

Client ID: **RA4798** Run ID: **IC201_030722C** SeqNo: **348922** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	1716	50	0	0	0	0-0	1716	0	20	
Surr: Dichloroacetic acid (surr)	264.5	5.0	250	0	106	80-120	262.5	0.759	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307181-01D 0307181-02D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
H - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307181
Project: Monthly

QC BATCH REPORT

Batch ID: **R15393** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-072903** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/29/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **350674** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.0								
Alkalinity, Carbonate (As CaCO3)	U	5.0								
Alkalinity, Hydroxide (As CaCO3)	U	5.0								
Alkalinity, Total (As CaCO3)	U	5.0								

LCS Sample ID: **WLCSW1-072903** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/29/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **350675** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	989.9	5.0	1000	0	99	80-120		0		

DUP Sample ID: **0307181-02D DUP** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/29/03 0:00**
Client ID: **RA4798** Run ID: **WET CHEMISTRY_0307** SeqNo: **350680** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	260.5	5.0	0	0	0	0-0	265.7	1.98	20	
Alkalinity, Carbonate (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	260.5	5.0	0	0	0	0-0	265.7	1.98	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307181-01D 0307181-02D

ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
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B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

e-Lab, Inc.
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager:

e-Lab Work Order #: 0307181

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Monthly	A	see List (Monthly)
Work Order		Project Number		B	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	
Send Report To	Jeff Byrd	Invoice Attn	Jeff Byrd	D	
Address	P.O. Box 159	Address	P.O. Box 159	E	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	F	
Phone	505-748-3311	Phone	505-748-3311	G	
Fax	505-746-5421	Fax	505-746-5421	H	
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	RA 313	7/17/03	0900	L	U	8	X								1		
2	RA 4798	7/17/03	0920	L	U	8	X								1		
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Byrd	7/17	1615		
Relinquished by:	Date:	Time:	Received by (Laboratory):	
Logged by (Laboratory):	Date: 7/17/03	Time: 1615	Checked by (Laboratory):	

e-Lab Cooler ID:	Cooler Temp:

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Standard QC + Raw Data
- ☐ Level IV: SW846 Methods/CLP
- ☐ Other:

Preservative Key: 1- HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-Na_2SO_3 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.

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e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING COMPAN

Date/Time Received: 7/17/2003 3:45:00 PM

Work Order Number 0307181

Received by: JAC

Checklist completed by [signature] Signature 7/17/03 Date

Reviewed by LT Initials 7/19/03 Date

Matrix: W

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):	3.6c	002	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☑	N/A ☐

Adjusted? _____ Checked by _____

Login Notes: Cyanide bottles were neat and were preserved with Ascorbic acid and NaOH

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

n This portion can be removed for Recipient's records.

e 7/17/03 FedEx Tracking Number 833541365437

ider's me Jeff Byrd Phone 505 748 3311

Company NAVAJO REFINING

Address 501 EAST MAIN STREET

Dept/Floor/Suite/Room

ARTESIA State NM ZIP 88210

ur Internal Billing Reference

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5

July 25, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Monthly Work Order : **0307088**

Dear Jeff Byrd,

e-Lab, Inc. received 3 samples on 7/9/2003 8:50:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 36.

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

Sincerely,

Lora Terrill

Electronically approved by: Lora Terrill

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT: Navajo Refining Company
Project: Monthly
Work Order: 0307088

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0307088-01	RA 314	Water		7/8/2003 10:30	7/9/2003 08:50	☐
0307088-02	RA 307	Water		7/8/2003 10:30	7/9/2003 08:50	☐
0307088-03	RA 419	Water		7/8/2003 10:30	7/9/2003 08:50	☐

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA 314
Work Order:	0307088	**Collection Date:**	7/8/2003 10:30:00 AM
Project:	Monthly		
Lab ID:	0307088-01	**Matrix:**	WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **7/10/2003**		Analyst: **MG**
Mercury	U	0.000042	0.000200		mg/L	1	7/11/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/21/2003**		Analyst: **ALR**
Aluminum	0.0335	0.0080	0.0500	J	mg/L	5	7/24/2003
Arsenic	0.00460	0.0018	0.00500	J	mg/L	1	7/22/2003
Barium	0.0225	0.00060	0.00500		mg/L	1	7/22/2003
Beryllium	U	0.00030	0.00200		mg/L	1	7/22/2003
Boron	0.0560	0.011	0.0200		mg/L	1	7/22/2003
Cadmium	U	0.00015	0.00100		mg/L	1	7/22/2003
Calcium	231	1.6	10.0		mg/L	20	7/23/2003
Chromium	0.000963	0.00050	0.00200	J	mg/L	1	7/22/2003
Cobalt	0.000412	0.00010	0.00200	J	mg/L	1	7/22/2003
Copper	0.00472	0.00030	0.00200		mg/L	1	7/22/2003
Iron	0.901	0.025	0.200		mg/L	1	7/22/2003
Lead	0.00172	0.00020	0.00500	J	mg/L	1	7/23/2003
Magnesium	81.0	0.25	2.00		mg/L	10	7/23/2003
Manganese	U	0.0010	0.00500		mg/L	1	7/22/2003
Nickel	0.00504	0.00030	0.00500		mg/L	1	7/22/2003
Potassium	1.71	0.020	0.200		mg/L	1	7/22/2003
Selenium	0.00467	0.0017	0.00500	J	mg/L	1	7/22/2003
Silver	U	0.00020	0.00500		mg/L	1	7/22/2003
Sodium	126	0.32	2.00		mg/L	10	7/23/2003
Vanadium	0.00414	0.00040	0.00500	J	mg/L	1	7/22/2003
Zinc	0.0145	0.0015	0.00500		mg/L	1	7/22/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/13/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/17/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/17/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/17/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/17/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/17/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/17/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/17/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/17/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/17/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/17/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/17/2003
Acenaphthene	U	1.1	10		µg/L	1	7/17/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/17/2003
Aniline	U	10	10		µg/L	1	7/17/2003

Qualifiers

U - Analyzed for but Not Detected

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

P - Dual Column results percent difference > 40%

E - Value above quantitation range

H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly
Lab ID: 0307088-01

Client Sample ID: RA 314
Collection Date: 7/8/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/17/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/17/2003
Benzidine	U	0.34	10		µg/L	1	7/17/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/17/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/17/2003
Isophorone	U	1.2	10		µg/L	1	7/17/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/17/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/17/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/17/2003
Naphthalene	U	1.0	10		µg/L	1	7/17/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/17/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/17/2003
Phenanthrene	U	1.2	10		µg/L	1	7/17/2003
Phenol	U	3.5	10		µg/L	1	7/17/2003
Pyrene	U	0.92	10		µg/L	1	7/17/2003
Surr: 2,4,6-Tribromophenol	107	0	10-123		%REC	1	7/17/2003
Surr: 2-Fluorobiphenyl	100	0	43-116		%REC	1	7/17/2003
Surr: 2-Fluorophenol	39.7	0	21-100		%REC	1	7/17/2003
Surr: 4-Terphenyl-d14	120	0	33-141		%REC	1	7/17/2003
Surr: Nitrobenzene-d5	96.8	0	35-114		%REC	1	7/17/2003
Surr: Phenol-d6	22.8	0	10-94		%REC	1	7/17/2003
VOLATILES BY GC/MS			**SW8260**		Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/16/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/16/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/16/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/16/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/16/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/16/2003
2-Butanone	U	0.70	10		µg/L	1	7/16/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/16/2003
2-Hexanone	U	1.1	10		µg/L	1	7/16/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/16/2003
Acetone	U	1.2	10		µg/L	1	7/16/2003
Benzene	U	0.66	5.0		µg/L	1	7/16/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/16/2003
Bromoform	U	0.40	5.0		µg/L	1	7/16/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/16/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/16/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/16/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/16/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly
Lab ID: 0307088-01

Client Sample ID: RA 314
Collection Date: 7/8/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/16/2003
Chloroform	U	0.52	5.0		µg/L	1	7/16/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/16/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/16/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/16/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/16/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/16/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	7/16/2003
Methylene chloride	U	0.60	10		µg/L	1	7/16/2003
Styrene	U	0.56	5.0		µg/L	1	7/16/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/16/2003
Toluene	U	0.69	5.0		µg/L	1	7/16/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/16/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/16/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/16/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/16/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/16/2003
Surr: 1,2-Dichloroethane-d4	86.0	0	70-130		%REC	1	7/16/2003
Surr: 4-Bromofluorobenzene	89.5	0	70-130		%REC	1	7/16/2003
Surr: Dibromofluoromethane	88.1	0	70-130		%REC	1	7/16/2003
Surr: Toluene-d8	97.8	0	70-130		%REC	1	7/16/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	225	2.00	5.00		mg/L	10	7/17/2003
Fluoride	0.930	0.0500	0.100		mg/L	1	7/17/2003
Sulfate	690	25.0	50.0		mg/L	50	7/19/2003
Surr: Dichloroacetic acid (surr)	98.2	0	80-120		%REC	1	7/17/2003
Surr: Dichloroacetic acid (surr)	103	0	80-120		%REC	10	7/17/2003
Surr: Dichloroacetic acid (surr)	109	0	80-120		%REC	50	7/19/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	179	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Total (As CaCO3)	179	2.0	5.00		mg/L	1	7/14/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	U	0.0030	0.0200		mg/L	1	7/14/2003

Qualifiers

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S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly
Lab ID: 0307088-02

Client Sample ID: RA 307
Collection Date: 7/8/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **7/10/2003**		Analyst: **MG**
Mercury	U	0.000042	0.000200		mg/L	1	7/11/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/21/2003**		Analyst: **ALR**
Aluminum	0.0284	0.0080	0.0500	J	mg/L	5	7/24/2003
Arsenic	0.00241	0.0018	0.00500	J	mg/L	1	7/23/2003
Barium	0.0102	0.00060	0.00500		mg/L	1	7/23/2003
Beryllium	U	0.0015	0.0100		mg/L	5	7/24/2003
Boron	0.108	0.055	0.100		mg/L	5	7/24/2003
Cadmium	U	0.00015	0.00100		mg/L	1	7/23/2003
Calcium	357	1.6	10.0		mg/L	20	7/23/2003
Chromium	0.000926	0.00050	0.00200	J	mg/L	1	7/23/2003
Cobalt	0.000439	0.00010	0.00200	J	mg/L	1	7/23/2003
Copper	0.0160	0.00030	0.00200		mg/L	1	7/23/2003
Iron	0.876	0.025	0.200		mg/L	1	7/23/2003
Lead	0.00113	0.00020	0.00500	J	mg/L	1	7/23/2003
Magnesium	103	0.25	2.00		mg/L	10	7/23/2003
Manganese	0.00206	0.0010	0.00500	J	mg/L	1	7/23/2003
Nickel	0.00499	0.00030	0.00500	J	mg/L	1	7/23/2003
Potassium	1.93	0.020	0.200		mg/L	1	7/23/2003
Selenium	0.0118	0.0017	0.00500		mg/L	1	7/23/2003
Silver	U	0.00020	0.00500		mg/L	1	7/23/2003
Sodium	69.7	0.32	2.00		mg/L	10	7/23/2003
Vanadium	0.00787	0.00040	0.00500		mg/L	1	7/23/2003
Zinc	0.0209	0.0015	0.00500		mg/L	1	7/23/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/13/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/17/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/17/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/17/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/17/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/17/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/17/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/17/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/17/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/17/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/17/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/17/2003
Acenaphthene	U	1.1	10		µg/L	1	7/17/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/17/2003
Aniline	U	10	10		µg/L	1	7/17/2003

Qualifiers

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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly
Lab ID: 0307088-02

Client Sample ID: RA 307
Collection Date: 7/8/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/17/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/17/2003
Benzidine	U	0.34	10		µg/L	1	7/17/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/17/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/17/2003
Isophorone	U	1.2	10		µg/L	1	7/17/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/17/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/17/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/17/2003
Naphthalene	U	1.0	10		µg/L	1	7/17/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/17/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/17/2003
Phenanthrene	U	1.2	10		µg/L	1	7/17/2003
Phenol	U	3.5	10		µg/L	1	7/17/2003
Pyrene	U	0.92	10		µg/L	1	7/17/2003
Surr: 2,4,6-Tribromophenol	109	0	10-123		%REC	1	7/17/2003
Surr: 2-Fluorobiphenyl	103	0	43-116		%REC	1	7/17/2003
Surr: 2-Fluorophenol	42.3	0	21-100		%REC	1	7/17/2003
Surr: 4-Terphenyl-d14	123	0	33-141		%REC	1	7/17/2003
Surr: Nitrobenzene-d5	105	0	35-114		%REC	1	7/17/2003
Surr: Phenol-d6	24.6	0	10-94		%REC	1	7/17/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/16/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/16/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/16/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/16/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/16/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/16/2003
2-Butanone	U	0.70	10		µg/L	1	7/16/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/16/2003
2-Hexanone	U	1.1	10		µg/L	1	7/16/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/16/2003
Acetone	U	1.2	10		µg/L	1	7/16/2003
Benzene	U	0.66	5.0		µg/L	1	7/16/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/16/2003
Bromoform	U	0.40	5.0		µg/L	1	7/16/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/16/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/16/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/16/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/16/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly
Lab ID: 0307088-02

Client Sample ID: RA 307
Collection Date: 7/8/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/16/2003
Chloroform	U	0.52	5.0		µg/L	1	7/16/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/16/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/16/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/16/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/16/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/16/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	7/16/2003
Methylene chloride	U	0.60	10		µg/L	1	7/16/2003
Styrene	U	0.56	5.0		µg/L	1	7/16/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/16/2003
Toluene	U	0.69	5.0		µg/L	1	7/16/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/16/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/16/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/16/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/16/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/16/2003
Surr: 1,2-Dichloroethane-d4	92.6	0	70-130		%REC	1	7/16/2003
Surr: 4-Bromofluorobenzene	89.4	0	70-130		%REC	1	7/16/2003
Surr: Dibromofluoromethane	92.8	0	70-130		%REC	1	7/16/2003
Surr: Toluene-d8	96.0	0	70-130		%REC	1	7/16/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	146	2.00	5.00		mg/L	10	7/17/2003
Fluoride	0.770	0.0500	0.100		mg/L	1	7/17/2003
Sulfate	1,130	25.0	50.0		mg/L	50	7/19/2003
Surr: Dichloroacetic acid (surr)	93.0	0	80-120		%REC	1	7/17/2003
Surr: Dichloroacetic acid (surr)	101	0	80-120		%REC	10	7/17/2003
Surr: Dichloroacetic acid (surr)	103	0	80-120		%REC	50	7/19/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	184	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Total (As CaCO3)	184	2.0	5.00		mg/L	1	7/14/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	0.00310	0.0030	0.0200	J	mg/L	1	7/14/2003

Qualifiers

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly
Lab ID: 0307088-03

Client Sample ID: RA 4196
Collection Date: 7/8/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **7/10/2003**		Analyst: **MG**
Mercury	U	0.000042	0.000200		mg/L	1	7/11/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/21/2003**		Analyst: **ALR**
Aluminum	0.0913	0.0080	0.0500		mg/L	5	7/24/2003
Arsenic	0.00239	0.0018	0.00500	J	mg/L	1	7/23/2003
Barium	0.0128	0.00060	0.00500		mg/L	1	7/23/2003
Beryllium	U	0.0015	0.0100		mg/L	5	7/24/2003
Boron	0.0894	0.055	0.100	J	mg/L	5	7/24/2003
Cadmium	U	0.00015	0.00100		mg/L	1	7/23/2003
Calcium	444	4.0	25.0		mg/L	50	7/23/2003
Chromium	0.000640	0.00050	0.00200	J	mg/L	1	7/23/2003
Cobalt	0.000435	0.00010	0.00200	J	mg/L	1	7/23/2003
Copper	0.0121	0.00030	0.00200		mg/L	1	7/23/2003
Iron	5.70	0.025	0.200		mg/L	1	7/23/2003
Lead	0.00177	0.00020	0.00500	J	mg/L	1	7/23/2003
Magnesium	152	0.25	2.00		mg/L	10	7/23/2003
Manganese	0.175	0.0010	0.00500		mg/L	1	7/23/2003
Nickel	0.00734	0.00030	0.00500		mg/L	1	7/23/2003
Potassium	2.02	0.020	0.200		mg/L	1	7/23/2003
Selenium	0.0110	0.0017	0.00500		mg/L	1	7/23/2003
Silver	U	0.00020	0.00500		mg/L	1	7/23/2003
Sodium	75.3	0.32	2.00		mg/L	10	7/23/2003
Vanadium	0.00389	0.00040	0.00500	J	mg/L	1	7/23/2003
Zinc	0.176	0.0015	0.00500		mg/L	1	7/23/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/13/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/17/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/17/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/17/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/17/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/17/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/17/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/17/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/17/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/17/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/17/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/17/2003
Acenaphthene	U	1.1	10		µg/L	1	7/17/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/17/2003
Aniline	U	10	10		µg/L	1	7/17/2003

Qualifiers

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 25, 2003*

CLIENT:	Navajo Refining Company	**Client Sample ID:**	RA 4196
Work Order:	0307088	**Collection Date:**	7/8/2003 10:30:00 AM
Project:	Monthly		
Lab ID:	0307088-03	**Matrix:**	WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/17/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/17/2003
Benzidine	U	0.34	10		µg/L	1	7/17/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/17/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/17/2003
Isophorone	U	1.2	10		µg/L	1	7/17/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/17/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/17/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/17/2003
Naphthalene	U	1.0	10		µg/L	1	7/17/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/17/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/17/2003
Phenanthrene	U	1.2	10		µg/L	1	7/17/2003
Phenol	U	3.5	10		µg/L	1	7/17/2003
Pyrene	U	0.92	10		µg/L	1	7/17/2003
Surr: 2,4,6-Tribromophenol	107	0	10-123		%REC	1	7/17/2003
Surr: 2-Fluorobiphenyl	99.6	0	43-116		%REC	1	7/17/2003
Surr: 2-Fluorophenol	42.0	0	21-100		%REC	1	7/17/2003
Surr: 4-Terphenyl-d14	118	0	33-141		%REC	1	7/17/2003
Surr: Nitrobenzene-d5	98.0	0	35-114		%REC	1	7/17/2003
Surr: Phenol-d6	24.6	0	10-94		%REC	1	7/17/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/16/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/16/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/16/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/16/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/16/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/16/2003
2-Butanone	U	0.70	10		µg/L	1	7/16/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/16/2003
2-Hexanone	U	1.1	10		µg/L	1	7/16/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/16/2003
Acetone	U	1.2	10		µg/L	1	7/16/2003
Benzene	U	0.66	5.0		µg/L	1	7/16/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/16/2003
Bromoform	U	0.40	5.0		µg/L	1	7/16/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/16/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/16/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/16/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/16/2003

Qualifiers

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e-Lab, Inc.

Date: *July 25, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly
Lab ID: 0307088-03

Client Sample ID: RA 4196
Collection Date: 7/8/2003 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/16/2003
Chloroform	U	0.52	5.0		µg/L	1	7/16/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/16/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/16/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/16/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/16/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/16/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	7/16/2003
Methylene chloride	U	0.60	10		µg/L	1	7/16/2003
Styrene	U	0.56	5.0		µg/L	1	7/16/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/16/2003
Toluene	U	0.69	5.0		µg/L	1	7/16/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/16/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/16/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/16/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/16/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/16/2003
Surr: 1,2-Dichloroethane-d4	87.6	0	70-130		%REC	1	7/16/2003
Surr: 4-Bromofluorobenzene	90.1	0	70-130		%REC	1	7/16/2003
Surr: Dibromofluoromethane	89.9	0	70-130		%REC	1	7/16/2003
Surr: Toluene-d8	94.3	0	70-130		%REC	1	7/16/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	305	2.00	5.00		mg/L	10	7/17/2003
Fluoride	0.590	0.0500	0.100		mg/L	1	7/17/2003
Sulfate	1,400	25.0	50.0		mg/L	50	7/19/2003
Surr: Dichloroacetic acid (surr)	91.4	0	80-120		%REC	1	7/17/2003
Surr: Dichloroacetic acid (surr)	103	0	80-120		%REC	10	7/17/2003
Surr: Dichloroacetic acid (surr)	107	0	80-120		%REC	50	7/19/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	163	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/14/2003
Alkalinity, Total (As CaCO3)	163	2.0	5.00		mg/L	1	7/14/2003
CYANIDE, TOTAL		**E335.3**			Prep Date:		Analyst: **LMD**
Cyanide	0.0133	0.0030	0.0200	J	mg/L	1	7/14/2003

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e-Lab, Inc.

Date: *Jul 25 2003*

CLIENT: Navajo Refining Company

QC BATCH REPORT

Work Order: 0307088

Project: Monthly

Batch ID: **6106** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW1-071003** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/11/03 15:01**

Client ID: Run ID: **MERCURY_030710A** SeqNo: **344208** Prep Date: **7/10/2003** DF: **1**

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

LCS Sample ID: **GLCSW1-071003** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/11/03 15:06**

Client ID: Run ID: **MERCURY_030710A** SeqNo: **344209** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00462	0.00020	0.005	0	92.4	80-120	0			

MS Sample ID: **0307059-01DMS** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/11/03 15:13**

Client ID: Run ID: **MERCURY_030710A** SeqNo: **344212** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00468	0.00020	0.005	0.000005	93.5	80-120	0			

MSD Sample ID: **0307059-01DMSD** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/11/03 15:15**

Client ID: Run ID: **MERCURY_030710A** SeqNo: **344213** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00485	0.00020	0.005	0.000005	96.9	80-120	0.00468	3.57	20	

DUP Sample ID: **0307059-01DDUP** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/11/03 15:12**

Client ID: Run ID: **MERCURY_030710A** SeqNo: **344211** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020	0	0	0	0-0	0.000005	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307088-01D 0307088-02D 0307088-03D

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O - Referenced analyte value is > 4 times amount spiked

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R - RPD outside accepted recovery limits

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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6184** InstrumentID: **6020**

MBLK Sample ID: **MBLKW1-072103** Test Code: **SW6020** Units: **mg/L** Analysis Date **07/21/03 15:47**
Client ID: Run ID: **6020_030721A** SeqNo: **347366** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	U	0.010								
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0010								
Calcium	U	0.50								
Chromium	U	0.0020								
Cobalt	0.0001145	0.0020								J
Copper	U	0.0020								
Iron	U	0.20								
Lead	U	0.0050								
Magnesium	U	0.20								
Manganese	U	0.0050								
Nickel	U	0.0050								
Potassium	U	0.20								
Selenium	U	0.0050								
Silver	U	0.0050								
Sodium	U	0.20								
Vanadium	U	0.0050								
Zinc	U	0.0050								

MBLK Sample ID: **MBLKW1-072103** Test Code: **SW6020** Units: **mg/L** Analysis Date **07/23/03 2:36**
Client ID: Run ID: **6020_030722A** SeqNo: **348148** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	U	0.020								

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CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6184** InstrumentID: **6020**

LCS Sample ID: **MLCSW1-072103** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/21/03 15:51**
Client ID: Run ID: **6020_030721A** SeqNo: **347367** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09776	0.010	0.1	0	97.8	80-120	0			
Arsenic	0.09617	0.0050	0.1	0	96.2	80-120	0			
Barium	0.09687	0.0050	0.1	0	96.9	80-120	0			
Beryllium	0.09739	0.0020	0.1	0	97.4	80-120	0			
Cadmium	0.09771	0.0010	0.1	0	97.7	80-120	0			
Calcium	9.925	0.50	10	0	99.2	80-120	0			
Chromium	0.09815	0.0020	0.1	0	98.1	80-120	0			
Cobalt	0.09833	0.0020	0.1	0	98.3	80-120	0			
Copper	0.09949	0.0020	0.1	0	99.5	80-120	0			
Iron	9.799	0.20	10	0	98	80-120	0			
Lead	0.09824	0.0050	0.1	0	98.2	80-120	0			
Magnesium	9.776	0.20	10	0	97.8	80-120	0			
Manganese	0.09674	0.0050	0.1	0	96.7	80-120	0			
Nickel	0.09874	0.0050	0.1	0	98.7	80-120	0			
Potassium	9.646	0.20	10	0	96.5	80-120	0			
Selenium	0.09866	0.0050	0.1	0	98.7	80-120	0			
Silver	0.09675	0.0050	0.1	0	96.8	80-120	0			
Sodium	9.771	0.20	10	0	97.7	80-120	0			
Vanadium	0.09645	0.0050	0.1	0	96.4	80-120	0			
Zinc	0.1047	0.0050	0.1	0	105	80-120	0			

LCS Sample ID: **MLCSW1-072103** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/23/03 2:41**
Client ID: Run ID: **6020_030722A** SeqNo: **348149** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4705	0.020	0.5	0	94.1	80-120	0			

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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6184** InstrumentID: **6020**

MS Sample ID: **0307088-01DMS** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/22/03 4:37**

Client ID: **RA 314** Run ID: **6020_030721A** SeqNo: **347575** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1217	0.010	0.1	0.04246	79.2	75-125	0			
Arsenic	0.1001	0.0050	0.1	0.004598	95.5	75-125	0			
Barium	0.1235	0.0050	0.1	0.02251	101	75-125	0			
Beryllium	0.09125	0.0020	0.1	0.0001322	91.1	75-125	0			
Boron	0.4937	0.020	0.5	0.05601	87.5	75-125	0			
Cadmium	0.08795	0.0010	0.1	0.000133	87.8	75-125	0			
Calcium	245.3	0.50	10	257.5	-122	75-125	0			SEO
Chromium	0.09925	0.0020	0.1	0.000963	98.3	75-125	0			
Cobalt	0.09436	0.0020	0.1	0.0004117	93.9	75-125	0			
Copper	0.09324	0.0020	0.1	0.004717	88.5	75-125	0			
Iron	10.25	0.20	10	0.9007	93.5	75-125	0			
Magnesium	81.48	0.20	10	82.16	-6.8	75-125	0			SEO
Manganese	0.09644	0.0050	0.1	-0.0005549	97	75-125	0			
Nickel	0.09519	0.0050	0.1	0.005043	90.1	75-125	0			
Potassium	11.97	0.20	10	1.713	103	75-125	0			
Selenium	0.09534	0.0050	0.1	0.004673	90.7	75-125	0			
Silver	0.08747	0.0050	0.1	0.000106	87.4	75-125	0			
Sodium	128.5	0.20	10	0	1280	75-125	0			SE
Vanadium	0.1054	0.0050	0.1	0.004142	101	75-125	0			
Zinc	0.09986	0.0050	0.1	0.01447	85.4	75-125	0			

MS Sample ID: **0307088-01DMS** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/24/03 20:38**

Client ID: **RA 314** Run ID: **6020_030724A** SeqNo: **349063** Prep Date: **7/21/2003** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.1012	0.025	0.1	0.002501	98.7	75-125	0			

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CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6184** InstrumentID: **6020**

MSD Sample ID: **0307088-01DMSD** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/22/03 4:42**
Client ID: **RA 314** Run ID: **6020_030721A** SeqNo: **347576** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1296	0.010	0.1	0.04246	87.1	75-125	0.1217	6.29	25	
Arsenic	0.1012	0.0050	0.1	0.004598	96.6	75-125	0.1001	1.09	25	
Barium	0.1267	0.0050	0.1	0.02251	104	75-125	0.1235	2.56	25	
Beryllium	0.09425	0.0020	0.1	0.0001322	94.1	75-125	0.09125	3.23	25	
Boron	0.5241	0.020	0.5	0.05601	93.6	75-125	0.4937	5.97	25	
Cadmium	0.08967	0.0010	0.1	0.000133	89.5	75-125	0.08795	1.94	25	
Calcium	254.1	0.50	10	257.5	-34	75-125	245.3	3.52	25	SEO
Chromium	0.1043	0.0020	0.1	0.000963	103	75-125	0.09925	4.96	25	
Cobalt	0.09824	0.0020	0.1	0.0004117	97.8	75-125	0.09436	4.03	25	
Copper	0.09557	0.0020	0.1	0.004717	90.9	75-125	0.09324	2.47	25	
Iron	10.65	0.20	10	0.9007	97.5	75-125	10.25	3.83	25	
Magnesium	84.23	0.20	10	82.16	20.7	75-125	81.48	3.32	25	SEO
Manganese	0.09935	0.0050	0.1	-0.0005549	99.9	75-125	0.09644	2.97	25	
Nickel	0.09757	0.0050	0.1	0.005043	92.5	75-125	0.09519	2.47	25	
Potassium	12.07	0.20	10	1.713	104	75-125	11.97	0.832	25	
Selenium	0.09989	0.0050	0.1	0.004673	95.2	75-125	0.09534	4.66	25	
Silver	0.09068	0.0050	0.1	0.000106	90.6	75-125	0.08747	3.6	25	
Sodium	132.3	0.20	10	0	1320	75-125	128.5	2.91	25	SE
Vanadium	0.1103	0.0050	0.1	0.004142	106	75-125	0.1054	4.54	25	
Zinc	0.09809	0.0050	0.1	0.01447	83.6	75-125	0.09986	1.79	25	

MSD Sample ID: **0307088-01DMSD** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/24/03 20:43**
Client ID: **RA 314** Run ID: **6020_030724A** SeqNo: **349064** Prep Date: **7/21/2003** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.104	0.025	0.1	0.002501	101	75-125	0.1012	2.73	25	

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J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6184** InstrumentID: **6020**

DUP Sample ID: **0307088-01DDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/22/03 4:33**
Client ID: **RA 314** Run ID: **6020_030721A** SeqNo: **347574** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.0050	0	0	0	0-0	0.004598	0	25	
Barium	0.02189	0.0050	0	0	0	0-0	0.02251	2.79	25	
Beryllium	U	0.0020	0	0	0	0-0	0.0001322	0	25	
Boron	0.04468	0.020	0	0	0	0-0	0.05601	22.5	25	
Cadmium	U	0.0010	0	0	0	0-0	0.000133	0	25	
Chromium	0.0007147	0.0020	0	0	0	0-0	0.000963	0	25	J
Cobalt	0.0002583	0.0020	0	0	0	0-0	0.0004117	0	25	J
Copper	0.004345	0.0020	0	0	0	0-0	0.004717	8.21	25	
Iron	0.7665	0.20	0	0	0	0-0	0.9007	16.1	25	
Manganese	U	0.0050	0	0	0	0-0	-0.0005549	0	25	
Nickel	0.004302	0.0050	0	0	0	0-0	0.005043	0	25	J
Potassium	1.594	0.20	0	0	0	0-0	1.713	7.2	25	
Selenium	0.003839	0.0050	0	0	0	0-0	0.004673	0	25	J
Silver	U	0.0050	0	0	0	0-0	0.000106	0	25	
Vanadium	0.00392	0.0050	0	0	0	0-0	0.004142	0	25	J
Zinc	0.01433	0.0050	0	0	0	0-0	0.01447	0.972	25	

DUP Sample ID: **0307088-01DDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/23/03 2:58**
Client ID: **RA 314** Run ID: **6020_030722A** SeqNo: **348316** Prep Date: **7/21/2003** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	232	10	0	0	0	0-0	231.1	0.389	25	

DUP Sample ID: **0307088-01DDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/23/03 3:07**
Client ID: **RA 314** Run ID: **6020_030722A** SeqNo: **348318** Prep Date: **7/21/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Magnesium	84.47	2.0	0	0	0	0-0	81.02	4.17	25	
Sodium	132.7	2.0	0	0	0	0-0	126.2	5.02	25	

DUP Sample ID: **0307088-01DDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/23/03 18:47**
Client ID: **RA 314** Run ID: **6020_030723A** SeqNo: **348632** Prep Date: **7/21/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.001708	0.0050	0	0	0	0-0	0.001722	0	25	J

DUP Sample ID: **0307088-01DDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/24/03 18:48**
Client ID: **RA 314** Run ID: **6020_030724A** SeqNo: **349013** Prep Date: **7/21/2003** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.03034	0.050	0	0	0	0-0	0.0335	0	25	J

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6184** InstrumentID: **6020**

Thefollowingsampleswereanalyzedinthisbatch: 0307088-01D 0307088-02D 0307088-03D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6124** InstrumentID: **SV-2**

MBLK Sample ID: **SBLKW1-030713** TestCode: **SW8270** Units: **µg/L** Analysis Date **07/18/03 10:40**
Client ID: Run ID: **SV-2_030717B** SeqNo: **346746** Prep Date: **7/13/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	U	10								
2,4,5-Trichlorophenol	U	10								
2,4,6-Trichlorophenol	U	10								
2-Methylnaphthalene	U	10								
2-Methylphenol	U	10								
2-Nitroaniline	U	10								
2-Nitrophenol	U	10								
3-Nitroaniline	U	10								
4-Methylphenol	U	10								
4-Nitroaniline	U	10								
4-Nitrophenol	U	10								
Acenaphthene	U	10								
Acenaphthylene	U	10								
Aniline	U	10								
Anthracene	U	10								
Benz(a)anthracene	U	10								
Benzidine	U	10								
Hexachloroethane	U	10								
ndeno(1,2,3-cd)pyrene	U	10								
Isophorone	U	10								
N-Nitrosodi-n-propylamine	U	10								
N-Nitrosodimethylamine	U	10								
N-Nitrosodiphenylamine	U	10								
Naphthalene	U	10								
Nitrobenzene	U	10								
Pentachlorophenol	U	10								
Phenanthrene	U	10								
Phenol	U	10								
Pyrene	U	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr:2,4,6-Tribromophenol	104.6	0	100	0	105	10-123	0			
Surr: 2-Fluorobiphenyl	94.93	0	100	0	94.9	43-116	0			
Surr: 2-Fluorophenol	58.47	0	100	0	58.5	21-100	0			
Surr:4-Terphenyl-d14	122	0	100	0	122	33-141	0			
Surr:Nitrobenzene-d5	94.28	0	100	0	94.3	35-114	0			
Surr: Phenol-d6	38.98	0	100	0	39	10-94	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
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CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6124** InstrumentID: **SV-2**

LCS Sample ID: **SLCSW1-030713** Test Code: **SW8270** Units: **µg/L** Analysis Date **07/18/03 11:07**

Client ID: Run ID: **SV-2_030717B** SeqNo: **346747** Prep Date: **7/13/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	47.49	10	50	0	95	51-110	0			
2,4,5-Trichlorophenol	106.7	10	100	0	107	55-130	0			
2,4,6-Trichlorophenol	107.9	10	100	0	108	55-130	0			
2-Methylnaphthalene	48.73	10	50	0	97.5	50-125	0			
2-Methylphenol	86.91	10	100	0	86.9	45-120	0			
2-Nitroaniline	50.07	10	50	0	100	55-130	0			
2-Nitrophenol	102.9	10	100	0	103	55-125	0			
3-Nitroaniline	49.35	10	50	0	98.7	55-120	0			
4-Methylphenol	123.5	10	150	0	82.3	40-120	0			
4-Nitroaniline	51.39	10	50	0	103	60-130	0			
4-Nitrophenol	53.79	10	100	0	53.8	25-100	0			
Acenaphthene	51.66	10	50	0	103	50-120	0			
Acenaphthylene	51.53	10	50	0	103	55-130	0			
Anthracene	54.82	10	50	0	110	60-130	0			
Benz(a)anthracene	54.33	10	50	0	109	60-130	0			
Benzidine	U	10	50	0	0	10-85	0			S
Hexachloroethane	42.78	10	50	0	85.6	40-120	0			
Indeno(1,2,3-cd)pyrene	53.11	10	50	0	106	60-130	0			
Isophorone	50.6	10	50	0	101	60-130	0			
N-Nitrosodi-n-propylamine	49.37	10	50	0	98.7	55-120	0			
N-Nitrosodimethylamine	25.67	10	50	0	51.3	35-110	0			
N-Nitrosodiphenylamine	57.97	10	50	0	116	60-130	0			
Naphthalene	48.6	10	50	0	97.2	55-130	0			
Nitrobenzene	47.36	10	50	0	94.7	60-130	0			
Pentachlorophenol	102.4	10	100	0	102	45-125	0			
Phenanthrene	52.56	10	50	0	105	60-130	0			
Phenol	42.68	10	100	0	42.7	20-100	0			
Pyrene	53.62	10	50	0	107	45-120	0			
Surr:2,4,6-Tribromophenol	115.2	0	100	0	115	10-123	0			
Surr:2-Fluorobiphenyl	103.7	0	100	0	104	43-116	0			
Surr:2-Fluorophenol	67.78	0	100	0	67.8	21-100	0			
Surr:4-Terphenyl-d14	122	0	100	0	122	33-141	0			
Surr:Nitrobenzene-d5	101.4	0	100	0	101	35-114	0			
Surr: Phenol-d6	45.97	0	100	0	46	10-94	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
D - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6124** InstrumentID: **SV-2**

MS Sample ID: **0307108-01DMS** Test Code: **SW8270** Units: **µg/L** Analysis Date **07/18/03 13:47**

Client ID: Run ID: **SV-2_030717B** SeqNo: **347218** Prep Date: **7/13/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	44.02	10	50	0	88	50-150	0			
2,4,5-Trichlorophenol	104.2	10	100	0	104	45-135	0			
2,4,6-Trichlorophenol	104.3	10	100	0	104	45-135	0			
2-Methylnaphthalene	47.68	10	50	0	95.4	45-135	0			
2-Methylphenol	67.57	10	100	0	67.6	45-135	0			
2-Nitroaniline	49.62	10	50	0	99.2	45-135	0			
2-Nitrophenol	98.88	10	100	0	98.9	45-135	0			
3-Nitroaniline	46.29	10	50	0	92.6	45-135	0			
4-Methylphenol	89.91	10	150	0	59.9	45-135	0			
4-Nitroaniline	49	10	50	0	98	45-135	0			
4-Nitrophenol	32.89	10	100	0	32.9	10-80	0			
Acenaphthene	50.39	10	50	0	101	46-118	0			
Acenaphthylene	49.6	10	50	0	99.2	45-135	0			
Anthracene	52.52	10	50	0	105	45-135	0			
Benz(a)anthracene	52.78	10	50	0	106	45-135	0			
Benzidine	U	10	50	0	0	45-135	0			S
Hexachloroethane	38.41	10	50	0	76.8	45-135	0			
Indeno(1,2,3-cd)pyrene	51.05	10	50	0	102	45-135	0			
Isophorone	49.4	10	50	0	98.8	45-135	0			
N-Nitrosodi-n-propylamine	47.15	10	50	0	94.3	41-116	0			
N-Nitrosodimethylamine	21.9	10	50	0	43.8	45-135	0			S
N-Nitrosodiphenylamine	55.8	10	50	0	112	45-135	0			
Naphthalene	46.42	10	50	0	92.8	45-135	0			
Nitrobenzene	46.62	10	50	0	93.2	45-135	0			
Pentachlorophenol	101.4	10	100	0	101	15-103	0			
Phenanthrene	51.47	10	50	0	103	45-135	0			
Phenol	24.94	10	100	0	24.9	15-110	0			
Pyrene	51.8	10	50	0	104	26-127	0			
Surr:2,4,6-Tribromophenol	111.3	0	100	0	111	10-123	0			
Surr:2-Fluorobiphenyl	101	0	100	0	101	43-116	0			
Surr:2-Fluorophenol	41.33	0	100	0	41.3	21-100	0			
Surr:4-Terphenyl-d14	116.6	0	100	0	117	33-141	0			
Surr:Nitrobenzene-d5	95.22	0	100	0	95.2	35-114	0			
Surr: Phenol-d6	26.41	0	100	0	26.4	10-94	0			

ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **6124** InstrumentID: **SV-2**

MSD Sample ID: **0307108-01DMSD** TestCode: **SW8270** Units: **µg/L** Analysis Date **07/18/03 14:14**

Client ID: Run ID: **SV-2_030717B** SeqNo: **347219** Prep Date: **7/13/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	44.26	10	50	0	88.5	50-150	44.02	0.547	30	
2,4,5-Trichlorophenol	103.1	10	100	0	103	45-135	104.2	1.06	30	
2,4,6-Trichlorophenol	101.2	10	100	0	101	45-135	104.3	3.06	30	
2-Methylnaphthalene	46.89	10	50	0	93.8	45-135	47.68	1.69	30	
2-Methylphenol	67.19	10	100	0	67.2	45-135	67.57	0.577	30	
2-Nitroaniline	48.6	10	50	0	97.2	45-135	49.62	2.07	30	
2-Nitrophenol	97.26	10	100	0	97.3	45-135	98.88	1.66	30	
3-Nitroaniline	44.41	10	50	0	88.8	45-135	46.29	4.14	30	
4-Methylphenol	88.5	10	150	0	59	45-135	89.91	1.59	30	
4-Nitroaniline	48.84	10	50	0	97.7	45-135	49	0.332	30	
4-Nitrophenol	31.33	10	100	0	31.3	10-80	32.89	4.86	30	
Acenaphthene	49.36	10	50	0	98.7	46-118	50.39	2.07	30	
Acenaphthylene	49.11	10	50	0	98.2	45-135	49.6	0.99	30	
Anthracene	52.86	10	50	0	106	45-135	52.52	0.657	30	
Benz(a)anthracene	52.01	10	50	0	104	45-135	52.78	1.47	30	
Benzidine	U	10	50	0	0	45-135	0	0	30	S
Hexachloroethane	40.02	10	50	0	80	45-135	38.41	4.1	30	
Indeno(1,2,3-cd)pyrene	51.43	10	50	0	103	45-135	51.05	0.751	30	
Isophorone	48.82	10	50	0	97.6	45-135	49.4	1.17	30	
N-Nitrosodi-n-propylamine	46.6	10	50	0	93.2	41-116	47.15	1.17	30	
N-Nitrosodimethylamine	21.37	10	50	0	42.7	45-135	21.9	2.44	30	S
N-Nitrosodiphenylamine	56.36	10	50	0	113	45-135	55.8	0.997	30	
Naphthalene	46.2	10	50	0	92.4	45-135	46.42	0.476	30	
Nitrobenzene	45.91	10	50	0	91.8	45-135	46.62	1.53	30	
Pentachlorophenol	103	10	100	0	103	15-103	101.4	1.49	30	
Phenanthrene	50.79	10	50	0	102	45-135	51.47	1.31	30	
Phenol	24.48	10	100	0	24.5	15-110	24.94	1.86	30	
Pyrene	50.85	10	50	0	102	26-127	51.8	1.85	30	
Surr:2,4,6-Tribromophenol	114.1	0	100	0	114	10-123	111.3	2.44	30	
Surr:2-Fluorobiphenyl	98.94	0	100	0	98.9	43-116	101	2.1	30	
Surr:2-Fluorophenol	40.57	0	100	0	40.6	21-100	41.33	1.84	30	
Surr:4-Terphenyl-d14	114.9	0	100	0	115	33-141	116.6	1.5	30	
Surr:Nitrobenzene-d5	95.07	0	100	0	95.1	35-114	95.22	0.153	30	
Surr: Phenol-d6	25.7	0	100	0	25.7	10-94	26.41	2.76	30	

Thefollowingsampleswereanalyzedinthisbatch: 0307088-01E 0307088-02E 0307088-03E

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - *Referenced analyte value is > 4 times amount spiked*
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15210** InstrumentID: **VOA_I**

MBLK Sample ID: **VBLKW-0716** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/16/03 11:26**
Client ID: Run ID: **VOA_I_030716A** SeqNo: **345932** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
2-Butanone	U	10								
2-Chloroethyl vinyl ether	U	5.0								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	5.0								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	10								
Methyl tert-butyl ether	U	5.0								
Methylene chloride	U	10								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl acetate	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	49.64	5.0	50	0	99.3	70-130		0		
Surr: 4-Bromofluorobenzene	43.11	5.0	50	0	86.2	70-130		0		
Surr: Dibromofluoromethane	50.45	5.0	50	0	101	70-130		0		
Surr: Toluene-d8	50.35	5.0	50	0	101	70-130		0		

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
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CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15210** InstrumentID: **VOA_I**

LCS Sample ID: **VLCSW-0716** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/16/03 10:04**
Client ID: Run ID: **VOA_I_030716A** SeqNo: **345930** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.93	5.0	50	0	93.9	75-118	0			
1,1,2,2-Tetrachloroethane	46.38	5.0	50	0	92.8	79-120	0			
1,1,2-Trichloroethane	45.84	5.0	50	0	91.7	81-119	0			
1,1-Dichloroethane	46.61	5.0	50	0	93.2	80-120	0			
1,1-Dichloroethene	47.43	5.0	50	0	94.9	80-120	0			
1,2-Dichloroethane	45.89	5.0	50	0	91.8	80-120	0			
2-Butanone	96.66	10	100	0	96.7	70-130	0			
2-Chloroethyl vinyl ether	84.2	5.0	100	0	84.2	72-120	0			
2-Hexanone	88.5	10	100	0	88.5	70-130	0			
4-Methyl-2-pentanone	90.98	5.0	100	0	91	78-120	0			
Acetone	101.9	10	100	0	102	60-135	0			
Benzene	52.4	5.0	50	0	105	82-119	0			
Bromodichloromethane	46.73	5.0	50	0	93.5	81-119	0			
Bromoform	47	5.0	50	0	94	80-120	0			
Bromomethane	47.25	5.0	50	0	94.5	75-130	0			
Carbon disulfide	97.64	5.0	100	0	97.6	78-120	0			
Carbon tetrachloride	46.43	5.0	50	0	92.9	77-120	0			
Chlorobenzene	46.82	5.0	50	0	93.6	82-118	0			
Chloroethane	49.95	5.0	50	0	99.9	78-122	0			
Chloroform	45.73	5.0	50	0	91.5	78-120	0			
Chloromethane	47.05	5.0	50	0	94.1	75-125	0			
cis-1,3-Dichloropropene	48.08	5.0	50	0	96.2	81-120	0			
Dibromochloromethane	46.31	5.0	50	0	92.6	81-118	0			
Ethylbenzene	48.66	5.0	50	0	97.3	82-120	0			
m,p-Xylene	100.4	10	100	0	100	82-122	0			
Methyl tert-butyl ether	50.58	5.0	50	0	101	79-120	0			
Methylene chloride	45.29	10	50	0	90.6	80-122	0			
Styrene	50.52	5.0	50	0	101	82-121	0			
Tetrachloroethene	50.2	5.0	50	0	100	79-118	0			
Toluene	50.78	5.0	50	0	102	81-119	0			
trans-1,3-Dichloropropene	48.06	5.0	50	0	96.1	82-121	0			
Trichloroethene	50.76	5.0	50	0	102	78-118	0			
Vinyl acetate	108	5.0	100	0	108	75-120	0			
Vinyl chloride	50	2.0	50	0	100	73-127	0			
Xylenes, Total	148.8	15	150	0	99.2	80-120	0			
Surr: 1,2-Dichloroethane-d4	45.72	5.0	50	0	91.4	70-130	0			
Surr: 4-Bromofluorobenzene	46.26	5.0	50	0	92.5	70-130	0			
Surr: Dibromofluoromethane	45.9	5.0	50	0	91.8	70-130	0			
Surr: Toluene-d8	51.27	5.0	50	0	103	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15210** InstrumentID: **VOA_I**

LCSD Sample ID: **VLCSWD-0716** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/16/03 10:31**

Client ID: Run ID: **VOA_I_030716A** SeqNo: **345931** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.12	5.0	50	0	98.2	75-118	46.93	4.56	20	
1,1,2,2-Tetrachloroethane	46.93	5.0	50	0	93.9	79-120	46.38	1.18	20	
1,1,2-Trichloroethane	47.07	5.0	50	0	94.1	81-119	45.84	2.65	20	
1,1-Dichloroethane	49.57	5.0	50	0	99.1	80-120	46.61	6.15	20	
1,1-Dichloroethene	50.1	5.0	50	0	100	80-120	47.43	5.46	20	
1,2-Dichloroethane	46.82	5.0	50	0	93.6	80-120	45.89	2	20	
2-Butanone	107	10	100	0	107	70-130	96.66	10.2	20	
2-Chloroethyl vinyl ether	83.11	5.0	100	0	83.1	72-120	84.2	1.3	20	
2-Hexanone	85.48	10	100	0	85.5	70-130	88.5	3.48	20	
4-Methyl-2-pentanone	92.58	5.0	100	0	92.6	78-120	90.98	1.74	20	
Acetone	106.5	10	100	0	106	60-135	101.9	4.37	20	
Benzene	53.78	5.0	50	0	108	82-119	52.4	2.61	20	
Bromodichloromethane	46.73	5.0	50	0	93.5	81-119	46.73	0.0194	20	
Bromoform	49.62	5.0	50	0	99.2	80-120	47	5.44	20	
Bromomethane	45.39	5.0	50	0	90.8	75-130	47.25	4.03	20	
Carbon disulfide	100.7	5.0	100	0	101	78-120	97.64	3.1	20	
Carbon tetrachloride	47.07	5.0	50	0	94.1	77-120	46.43	1.38	20	
Chlorobenzene	47.48	5.0	50	0	95	82-118	46.82	1.39	20	
Chloroethane	48.94	5.0	50	0	97.9	78-122	49.95	2.04	20	
Chloroform	48.14	5.0	50	0	96.3	78-120	45.73	5.15	20	
Chloromethane	43.85	5.0	50	0	87.7	75-125	47.05	7.05	20	
cis-1,3-Dichloropropene	47.5	5.0	50	0	95	81-120	48.08	1.22	20	
Dibromochloromethane	46.95	5.0	50	0	93.9	81-118	46.31	1.38	20	
Ethylbenzene	49.36	5.0	50	0	98.7	82-120	48.66	1.42	20	
m,p-Xylene	100.4	10	100	0	100	82-122	100.4	0.0884	20	
Methyl tert-butyl ether	50.57	5.0	50	0	101	79-120	50.58	0.023	20	
Methylene chloride	46.3	10	50	0	92.6	80-122	45.29	2.22	20	
Styrene	51.16	5.0	50	0	102	82-121	50.52	1.27	20	
Tetrachloroethene	51.72	5.0	50	0	103	79-118	50.2	2.98	20	
Toluene	51.71	5.0	50	0	103	81-119	50.78	1.81	20	
trans-1,3-Dichloropropene	46.65	5.0	50	0	93.3	82-121	48.06	2.99	20	
Trichloroethene	52.2	5.0	50	0	104	78-118	50.76	2.8	20	
Vinyl acetate	109.5	5.0	100	0	109	75-120	108	1.32	20	
Vinyl chloride	47.25	2.0	50	0	94.5	73-127	50	5.66	20	
Xylenes, Total	149.3	15	150	0	99.6	80-120	148.8	0.379	20	
Surr: 1,2-Dichloroethane-d4	47.23	5.0	50	0	94.5	70-130	45.72	3.27	20	
Surr: 4-Bromofluorobenzene	46.76	5.0	50	0	93.5	70-130	46.26	1.08	20	
Surr: Dibromofluoromethane	48.49	5.0	50	0	97	70-130	45.9	5.49	20	
Surr: Toluene-d8	52.01	5.0	50	0	104	70-130	51.27	1.42	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15210** InstrumentID: **VOA_I**

MS Sample ID: **0307134-01AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/16/03 14:40**

Client ID: Run ID: **VOA_I_030716A** SeqNo: **345938** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	55.64	5.0	50	0	111	75-125	0			
1,1,2,2-Tetrachloroethane	47.06	5.0	50	0	94.1	75-125	0			
1,1,2-Trichloroethane	48.92	5.0	50	0	97.8	75-125	0			
1,1-Dichloroethane	53.1	5.0	50	0	106	75-125	0			
1,1-Dichloroethene	55.68	5.0	50	0	111	65-130	0			
1,2-Dichloroethane	55.93	5.0	50	0	112	70-130	0			
2-Butanone	129.1	10	100	0	129	64-128	0			S
2-Chloroethyl vinyl ether	93.29	5.0	100	0	93.3	75-125	0			
2-Hexanone	109.6	10	100	0	110	72-124	0			
4-Methyl-2-pentanone	115.7	5.0	100	0	116	75-125	0			
Acetone	160.6	10	100	0	161	60-130	0			S
Benzene	50.6	5.0	50	0	101	76-127	0			
Bromodichloromethane	50.63	5.0	50	0	101	75-125	0			
Bromoform	57.99	5.0	50	0	116	75-125	0			
Bromomethane	44.36	5.0	50	0	88.7	75-125	0			
Carbon disulfide	106.5	5.0	100	0	106	75-125	0			
Carbon tetrachloride	58.5	5.0	50	0	117	70-130	0			
Chlorobenzene	51.89	5.0	50	5.046	93.7	75-126	0			
Chloroethane	50.01	5.0	50	0	100	70-130	0			
Chloroform	61.39	5.0	50	7.17	108	75-125	0			
Chloromethane	38.69	5.0	50	0	77.4	75-125	0			
cis-1,3-Dichloropropene	46.92	5.0	50	0	93.8	75-125	0			
Dibromochloromethane	52.68	5.0	50	0	105	75-125	0			
Ethylbenzene	47.48	5.0	50	0	95	75-125	0			
m,p-Xylene	98.62	10	100	0	98.6	75-125	0			
Methyl tert-butyl ether	68.88	5.0	50	0	138	75-125	0			S
Methylene chloride	52.62	10	50	0	105	75-125	0			
Styrene	50.8	5.0	50	0	102	75-125	0			
Tetrachloroethene	54.27	5.0	50	0	109	75-125	0			
Toluene	49.2	5.0	50	0	98.4	76-125	0			
trans-1,3-Dichloropropene	49.08	5.0	50	0	98.2	70-130	0			
Trichloroethene	53.44	5.0	50	0	107	71-120	0			
Vinyl acetate	127.5	5.0	100	0	128	75-125	0			S
Vinyl chloride	44.33	2.0	50	0	88.7	60-135	0			
Xylenes, Total	146	15	150	0	97.3	75-125	0			
Surr: 1,2-Dichloroethane-d4	57.12	5.0	50	0	114	70-130	0			
Surr: 4-Bromofluorobenzene	48.57	5.0	50	0	97.1	70-130	0			
Surr: Dibromofluoromethane	57.15	5.0	50	0	114	70-130	0			
Surr: Toluene-d8	52.75	5.0	50	0	105	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15210** InstrumentID: **VOA_I**

MSD Sample ID: **0307134-01AMSD** TestCode: **SW8260** Units: **µg/L** Analysis Date **07/16/03 15:08**

Client ID: Run ID: **VOA_I_030716A** SeqNo: **345939** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	55.03	5.0	50	0	110	75-125	55.64	1.1	20	
1,1,2,2-Tetrachloroethane	50.25	5.0	50	0	100	75-125	47.06	6.55	20	
1,1,2-Trichloroethane	50.14	5.0	50	0	100	75-125	48.92	2.45	20	
1,1-Dichloroethane	55.06	5.0	50	0	110	75-125	53.1	3.62	20	
1,1-Dichloroethene	53.25	5.0	50	0	107	65-130	55.68	4.45	20	
1,2-Dichloroethane	58.39	5.0	50	0	117	70-130	55.93	4.31	20	
2-Butanone	142.2	10	100	0	142	64-128	129.1	9.63	20	S
2-Chloroethyl vinyl ether	100.8	5.0	100	0	101	75-125	93.29	7.78	20	
2-Hexanone	117.7	10	100	0	118	72-124	109.6	7.16	20	
4-Methyl-2-pentanone	121.3	5.0	100	0	121	75-125	115.7	4.69	20	
Acetone	160.7	10	100	0	161	60-130	160.6	0.0749	20	S
Benzene	51.34	5.0	50	0	103	76-127	50.6	1.46	20	
Bromodichloromethane	52.09	5.0	50	0	104	75-125	50.63	2.85	20	
Bromoform	60.63	5.0	50	0	121	75-125	57.99	4.46	20	
Bromomethane	44.36	5.0	50	0	88.7	75-125	44.36	0.00994	20	
Carbon disulfide	105.5	5.0	100	0	106	75-125	106.5	0.901	20	
Carbon tetrachloride	55.99	5.0	50	0	112	70-130	58.5	4.39	20	
Chlorobenzene	52.73	5.0	50	5.046	95.4	75-126	51.89	1.6	20	
Chloroethane	52.08	5.0	50	0	104	70-130	50.01	4.06	20	
Chloroform	61.61	5.0	50	7.17	109	75-125	61.39	0.35	20	
Chloromethane	40.25	5.0	50	0	80.5	75-125	38.69	3.95	20	
cis-1,3-Dichloropropene	49.59	5.0	50	0	99.2	75-125	46.92	5.54	20	
Dibromochloromethane	54.44	5.0	50	0	109	75-125	52.68	3.28	20	
Ethylbenzene	49.18	5.0	50	0	98.4	75-125	47.48	3.53	20	
m,p-Xylene	100.8	10	100	0	101	75-125	98.62	2.22	20	
Methyl tert-butyl ether	73.02	5.0	50	0	146	75-125	68.88	5.83	20	S
Methylene chloride	52.12	10	50	0	104	75-125	52.62	0.955	20	
Styrene	50.54	5.0	50	0	101	75-125	50.8	0.507	20	
Tetrachloroethene	55.29	5.0	50	0	111	75-125	54.27	1.87	20	
Toluene	50.87	5.0	50	0	102	76-125	49.2	3.32	20	
trans-1,3-Dichloropropene	51.18	5.0	50	0	102	70-130	49.08	4.19	20	
Trichloroethene	56.07	5.0	50	0	112	71-120	53.44	4.81	20	
Vinyl acetate	135.6	5.0	100	0	136	75-125	127.5	6.14	20	S
Vinyl chloride	45.15	2.0	50	0	90.3	60-135	44.33	1.84	20	
Xylenes, Total	149.5	15	150	0	99.7	75-125	146	2.39	20	
Surr: 1,2-Dichloroethane-d4	55.19	5.0	50	0	110	70-130	57.12	3.43	20	
Surr: 4-Bromofluorobenzene	47	5.0	50	0	94	70-130	48.57	3.28	20	
Surr: Dibromofluoromethane	56.3	5.0	50	0	113	70-130	57.15	1.5	20	
Surr: Toluene-d8	52.74	5.0	50	0	105	70-130	52.75	0.00604	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307088-01A 0307088-02A 0307088-03A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
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B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15173** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-071403** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/14/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **345125** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	U	0.020								

LCS Sample ID: **WLCSW1-071403** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/14/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **345126** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.1919	0.020	0.2	0	95.9	80-120	0			

MS Sample ID: **0307069-01GMS** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/14/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **345136** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.2044	0.020	0.2	0.0068	98.8	75-125	0			

MSD Sample ID: **0307069-01G MSD** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/14/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **345137** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.1936	0.020	0.2	0.0068	93.4	75-125	0.2044	5.43	25	

DUP Sample ID: **0307069-01G DUP** TestCode: **E335.3** Units: **mg/L** Analysis Date **07/14/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **345135** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide	0.0063	0.020	0	0	0	0-0	0.0068	0	20	J

Thefollowingsampleswereanalyzedinthisbatch: 0307088-01C 0307088-02C 0307088-03C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15176** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-071403** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/14/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **345153** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.0								
Alkalinity, Carbonate (As CaCO3)	U	5.0								
Alkalinity, Hydroxide (As CaCO3)	U	5.0								
Alkalinity, Total (As CaCO3)	U	5.0								

LCS Sample ID: **WLCSW1-071403** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/14/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **345154** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	947.4	5.0	1000	0	94.7	80-120	0			

DUP Sample ID: **0307088-01B DUP** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/14/03 0:00**
Client ID: **RA 314** Run ID: **WET CHEMISTRY_0307** SeqNo: **345159** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	184.2	5.0	0	0	0	0-0	178.9	2.9	20	
Alkalinity, Carbonate (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	184.2	5.0	0	0	0	0-0	178.9	2.9	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307088-01B 0307088-02B 0307088-03B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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P - Dual Column results percent difference > 40%
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U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15234** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-071603** TestCode: **E300** Units: **mg/L** Analysis Date **07/16/03 17:34**
Client ID: Run ID: **IC201_030716A** SeqNo: **346555** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-071603** TestCode: **E300** Units: **mg/L** Analysis Date **07/16/03 18:07**
Client ID: Run ID: **IC201_030716A** SeqNo: **346556** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.46	0.50	10	0	94.6	80-120	0			
Fluoride	1.98	0.10	2	0	99	80-120	0			
Sulfate	10.38	1.0	10	0	104	80-120	0			
Surr: Dichloroacetic acid (surr)	2.31	0.10	2	0	116	80-120	0			

MS Sample ID: **0307142-02BMS** TestCode: **E300** Units: **mg/L** Analysis Date **07/17/03 19:02**
Client ID: Run ID: **IC201_030716A** SeqNo: **346576** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.6	0.50	10	0	96	75-125	0			
Fluoride	1.83	0.10	2	0	91.5	75-125	0			
Sulfate	10.45	1.0	10	0	104	75-125	0			
Surr: Dichloroacetic acid (surr)	4.63	0.10	5	0	92.6	80-120	0			

MSD Sample ID: **0307142-02BMSD** TestCode: **E300** Units: **mg/L** Analysis Date **07/17/03 19:35**
Client ID: Run ID: **IC201_030716A** SeqNo: **346577** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.76	0.50	10	0	97.6	75-125	9.6	1.65	20	
Fluoride	1.97	0.10	2	0	98.5	75-125	1.83	7.37	20	
Sulfate	10.62	1.0	10	0	106	75-125	10.45	1.61	20	
Surr: Dichloroacetic acid (surr)	4.82	0.10	5	0	96.4	80-120	4.63	4.02	20	

DUP Sample ID: **0307142-02BDUP** TestCode: **E300** Units: **mg/L** Analysis Date **07/16/03 19:12**
Client ID: Run ID: **IC201_030716A** SeqNo: **346558** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.10	0	0	0	0-0	0	0	20	
Surr: Dichloroacetic acid (surr)	5.36	0.10	5	0	107	80-120	5.37	0.186	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15234** InstrumentID: **IC201**

DUP Sample ID: **0307088-03BDUP** Test Code: **E300** Units: **mg/L** Analysis Date **07/17/03 14:42**
Client ID: **RA 4196** Run ID: **IC201_030716A** SeqNo: **346573** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	0.81	0.10	0	0	0	0-0	0.59	31.4	20	R
Surr: Dichloroacetic acid (surr)	4.47	0.10	5	0	89.4	80-120	4.57	2.21	20	

DUP Sample ID: **0307087-01BDUP** Test Code: **E300** Units: **mg/L** Analysis Date **07/17/03 6:02**
Client ID: Run ID: **IC201_030716A** SeqNo: **346590** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	1.91	0.10	0	0	0	0-0	1.95	2.07	20	
Surr: Dichloroacetic acid (surr)	5.04	0.10	5	0	101	80-120	27.75	139	20	R

Thefollowingsampleswereanalyzedinthisbatch: 0307088-01B 0307088-02B 0307088-03B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15273** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-071803** TestCode: **E300** Units: **mg/L** Analysis Date **07/18/03 20:03**
Client ID: Run ID: **IC201_030718A** SeqNo: **347378** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-071803** TestCode: **E300** Units: **mg/L** Analysis Date **07/18/03 20:36**
Client ID: Run ID: **IC201_030718A** SeqNo: **347379** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9.5	0.50	10	0	95	80-120	0			
Fluoride	1.93	0.10	2	0	96.5	80-120	0			
Sulfate	10.36	1.0	10	0	104	80-120	0			
Surr: Dichloroacetic acid (surr)	2.24	0.10	2	0	112	80-120	0			

MS Sample ID: **0307150-06CMS** TestCode: **E300** Units: **mg/L** Analysis Date **07/19/03 2:33**
Client ID: Run ID: **IC201_030718A** SeqNo: **347393** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	44.75	0.50	10	33.93	108	75-125	0			
Fluoride	2.81	0.10	2	1.07	87	75-125	0			
Sulfate	30.42	1.0	10	20.18	102	75-125	0			
Surr: Dichloroacetic acid (surr)	5.17	0.10	5	0	103	80-120	0			

MSD Sample ID: **0307150-06CMSD** TestCode: **E300** Units: **mg/L** Analysis Date **07/19/03 3:06**
Client ID: Run ID: **IC201_030718A** SeqNo: **347394** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	45.04	0.50	10	33.93	111	75-125	44.75	0.646	20	
Fluoride	2.82	0.10	2	1.07	87.5	75-125	2.81	0.355	20	
Sulfate	30.58	1.0	10	20.18	104	75-125	30.42	0.525	20	
Surr: Dichloroacetic acid (surr)	4.51	0.10	5	0	90.2	80-120	5.17	13.6	20	

DUP Sample ID: **0307150-01CDUP** TestCode: **E300** Units: **mg/L** Analysis Date **07/18/03 21:41**
Client ID: Run ID: **IC201_030718A** SeqNo: **347381** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	6.81	1.0	0	0	0	0-0	6.8	0.147	20	
Surr: Dichloroacetic acid (surr)	5.33	0.10	5	0	107	80-120	5.37	0.748	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307088
Project: Monthly

QC BATCH REPORT

Batch ID: **R15273** InstrumentID: **IC201**

DUP Sample ID: **0307150-06CDUP** TestCode: **E300** Units: **mg/L** Analysis Date **07/19/03 2:01**

Client ID: Run ID: **IC201_030718A** SeqNo: **347392** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	20.2	1.0	0	0	0	0-0	20.18	0.0991	20	
Surr: Dichloroacetic acid (surr)	5.06	0.10	5	0	101	80-120	4.92	2.81	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307088-01B 0307088-02B 0307088-03B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

e-Lab, Inc.
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

e-Lab, Inc.
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

e-Lab Project Manager: | e-Lab Work Order #: 0307008

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Monthly	A	See List
Work Order		Project Number		B	
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	
Send Report To	Jeff Byrd	Invoice Attn	Jeff Byrd	D	
Address	P.O. Box 159	Address	P.O. Box 159	E	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	F	
Phone	505-748-3311	Phone	505-748-3311	G	
Fax	505-746-5421	Fax	505-746-5421	H	
e-Mail Address	JeffByrd@Navajo-Refining.com			I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	RA 314	7/8/03	1030	L		3	X										
2	RA 307	"	"	"		"	X										
3	RA 4196	"	"	"		"	X										
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign | Shipment Method: | Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other | Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
[signature]	7/8/03	1615		Call Darrell Moore @ 505 746-5281
Relinquished by:	Date:	Time:	Received by (Laboratory): RICHARD SANCHEZ 7/9/03 0850	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

e-Lab Cooler ID: | Cooler Temp.:

QC Package: (Check Box Below)
- ☐ Level II: Standard QC
- ☐ Level III: Standard QC + Raw Data
- ☐ Level IV: SW846 Methods/CLP
- ☐ Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C

Note: Any changes must be made in writing once samples and COC Form have been submitted to e-Lab, Inc.

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e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING COMPAN

Date/Time Received: 7/9/2003 8:50:00 AM

Work Order Number 0307088

Received by: RSZ

Checklist completed by RICHARD SANCHEZ 7.9.03 (Signature / Date)

Reviewed by LT 7/10/03 (Initials / Date)

Matrix: W

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):	3.7c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

0307088

This portion can be removed for Recipient's records.

Date 07/08/23 FedEx Tracking Number 833541365404

Sender's Name Charlie Plymale Phone 575 748-3311

Company NAVAJO REFINING

Address 501 EAST MAIN STREET Dept/Floor/Suite/Room ENV

ARTESIA State NM ZIP 88210

Your Internal Billing Reference

e-Lab, Inc.

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 281-530-5656 Fax 281-530-5

July 16, 2003

Jeff Byrd
Navajo Refining Company
P.O. Box 159
Artesia, New Mexico 88211

Tel: (505) 746-5468
Fax: (505) 746-5421

Re: Artesia Monthly Work Order : **0307056**

Dear Jeff Byrd,

e-Lab, Inc. received 2 samples on 7/3/2003 8:30:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab, Inc. 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 e-Lab Inc. The total number of pages in this report is 27.

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

Sincerely,

Lora Terrill

Electronically approved by: Lora Terrill

Lora Terrill
VP Lab Operations

e-Lab, Inc.

Date: *July 16, 2003*

CLIENT: Navajo Refining Company
Project: ArtesiaMonthly
Work Order: **0307056**

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0307056-01	RA1227	Water		7/2/2003 13:45	7/3/2003 08:30	☐
0307056-02	Larue	Water		7/2/2003 13:55	7/3/2003 08:30	☐

e-Lab, Inc.

Date: *July 16, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly
Lab ID: 0307056-01

Client Sample ID: RA1227
Collection Date: 7/2/2003 1:45:00 PM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **7/9/2003**		Analyst: **JCJ**
Mercury	U	0.000042	0.000200		mg/L	1	7/9/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/10/2003**		Analyst: **ALR**
Aluminum	0.0188	0.0016	0.0100		mg/L	1	7/14/2003
Arsenic	0.00358	0.0018	0.00500	J	mg/L	1	7/14/2003
Barium	0.00791	0.00060	0.00500		mg/L	1	7/14/2003
Beryllium	U	0.00030	0.00200		mg/L	1	7/14/2003
Boron	0.230	0.011	0.0200		mg/L	1	7/14/2003
Cadmium	U	0.00015	0.00100		mg/L	1	7/14/2003
Calcium	400	4.0	25.0		mg/L	50	7/16/2003
Chromium	U	0.00050	0.00200		mg/L	1	7/14/2003
Cobalt	0.000693	0.00010	0.00200	J	mg/L	1	7/14/2003
Copper	0.00915	0.00030	0.00200		mg/L	1	7/14/2003
Iron	2.02	0.025	0.200		mg/L	1	7/14/2003
Lead	0.000627	0.00020	0.00500	J	mg/L	1	7/14/2003
Magnesium	151	1.2	10.0		mg/L	50	7/16/2003
Manganese	U	0.0010	0.00500		mg/L	1	7/14/2003
Nickel	0.00842	0.00030	0.00500		mg/L	1	7/14/2003
Potassium	1.68	0.020	0.200		mg/L	1	7/14/2003
Selenium	0.0125	0.0017	0.00500		mg/L	1	7/16/2003
Silver	U	0.00020	0.00500		mg/L	1	7/14/2003
Sodium	112	1.6	10.0		mg/L	50	7/16/2003
Vanadium	0.00929	0.00040	0.00500		mg/L	1	7/14/2003
Zinc	0.0151	0.0015	0.00500		mg/L	1	7/14/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/7/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/9/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/9/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/9/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/9/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/9/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/9/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/9/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/9/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/9/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/9/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/9/2003
Acenaphthene	U	1.1	10		µg/L	1	7/9/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/9/2003
Aniline	U	10	10		µg/L	1	7/9/2003

Qualifiers:

U - Analyzed for but Not Detected
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc. **Date:** *July 16, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly
Lab ID: 0307056-01

Client Sample ID: RA1227
Collection Date: 7/2/2003 1:45:00 PM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/9/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/9/2003
Benzidine	U	0.34	10		µg/L	1	7/9/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/9/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/9/2003
Isophorone	U	1.2	10		µg/L	1	7/9/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/9/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/9/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/9/2003
Naphthalene	U	1.0	10		µg/L	1	7/9/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/9/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/9/2003
Phenanthrene	U	1.2	10		µg/L	1	7/9/2003
Phenol	U	3.5	10		µg/L	1	7/9/2003
Pyrene	U	0.92	10		µg/L	1	7/9/2003
Surr:2,4,6-Tribromophenol	106	0	10-123		%REC	1	7/9/2003
Surr: 2-Fluorobiphenyl	107	0	43-116		%REC	1	7/9/2003
Surr: 2-Fluorophenol	41.0	0	21-100		%REC	1	7/9/2003
Surr:4-Terphenyl-d14	127	0	33-141		%REC	1	7/9/2003
Surr:Nitrobenzene-d5	107	0	35-114		%REC	1	7/9/2003
Surr: Phenol-d6	23.8	0	10-94		%REC	1	7/9/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/11/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/11/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/11/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/11/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/11/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/11/2003
2-Butanone	U	0.70	10		µg/L	1	7/11/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/11/2003
2-Hexanone	U	1.1	10		µg/L	1	7/11/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/11/2003
Acetone	U	1.2	10		µg/L	1	7/11/2003
Benzene	U	0.66	5.0		µg/L	1	7/11/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/11/2003
Bromoform	U	0.40	5.0		µg/L	1	7/11/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/11/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/11/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/11/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/11/2003

Qualifiers:
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E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 16, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly
Lab ID: 0307056-01

Client Sample ID: RA1227
Collection Date: 7/2/2003 1:45:00 PM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/11/2003
Chloroform	U	0.52	5.0		µg/L	1	7/11/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/11/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/11/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/11/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/11/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/11/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	7/11/2003
Methylene chloride	U	0.60	10		µg/L	1	7/11/2003
Styrene	U	0.56	5.0		µg/L	1	7/11/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/11/2003
Toluene	U	0.69	5.0		µg/L	1	7/11/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/11/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/11/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/11/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/11/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/11/2003
Surr: 1,2-Dichloroethane-d4	99.3	0	70-130		%REC	1	7/11/2003
Surr: 4-Bromofluorobenzene	87.4	0	70-130		%REC	1	7/11/2003
Surr: Dibromofluoromethane	98.2	0	70-130		%REC	1	7/11/2003
Surr: Toluene-d8	103	0	70-130		%REC	1	7/11/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	130	2.00	5.00		mg/L	10	7/10/2003
Fluoride	0.540	0.0500	0.100		mg/L	1	7/10/2003
Sulfate	1,580	50.0	100		mg/L	100	7/10/2003
Surr: Dichloroacetic acid (surr)	103	0	80-120		%REC	100	7/10/2003
Surr: Dichloroacetic acid (surr)	103	0	80-120		%REC	10	7/10/2003
Surr: Dichloroacetic acid (surr)	96.6	0	80-120		%REC	1	7/10/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	270	2.0	5.00		mg/L	1	7/7/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/7/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/7/2003
Alkalinity, Total (As CaCO3)	270	2.0	5.00		mg/L	1	7/7/2003

Qualifiers:

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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 16, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly
Lab ID: 0307056-02

Client Sample ID: Larue
Collection Date: 7/2/2003 1:55:00 PM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
MERCURY, TOTAL		**SW7470**			Prep Date: **7/9/2003**		Analyst: **JCJ**
Mercury	U	0.000042	0.000200		mg/L	1	7/9/2003
ICP METALS, TOTAL		**SW6020**			Prep Date: **7/10/2003**		Analyst: **ALR**
Aluminum	0.0235	0.0016	0.0100		mg/L	1	7/14/2003
Arsenic	0.00400	0.0018	0.00500	J	mg/L	1	7/14/2003
Barium	0.00884	0.00060	0.00500		mg/L	1	7/14/2003
Beryllium	U	0.00030	0.00200		mg/L	1	7/14/2003
Boron	0.228	0.011	0.0200		mg/L	1	7/14/2003
Cadmium	U	0.00015	0.00100		mg/L	1	7/14/2003
Calcium	386	4.0	25.0		mg/L	50	7/16/2003
Chromium	0.000791	0.00050	0.00200	J	mg/L	1	7/14/2003
Cobalt	0.000731	0.00010	0.00200	J	mg/L	1	7/14/2003
Copper	0.00547	0.00030	0.00200		mg/L	1	7/14/2003
Iron	2.29	0.025	0.200		mg/L	1	7/14/2003
Lead	0.000275	0.00020	0.00500	J	mg/L	1	7/14/2003
Magnesium	147	0.25	2.00		mg/L	10	7/16/2003
Manganese	0.0218	0.0010	0.00500		mg/L	1	7/14/2003
Nickel	0.00905	0.00030	0.00500		mg/L	1	7/14/2003
Potassium	1.67	0.020	0.200		mg/L	1	7/14/2003
Selenium	0.00910	0.0017	0.00500		mg/L	1	7/16/2003
Silver	U	0.00020	0.00500		mg/L	1	7/14/2003
Sodium	105	0.32	2.00		mg/L	10	7/16/2003
Vanadium	0.00740	0.00040	0.00500		mg/L	1	7/14/2003
Zinc	0.0520	0.0015	0.00500		mg/L	1	7/14/2003
SEMIVOLATILE ORGANICS BY GC/MS		**SW8270**			Prep Date: **7/7/2003**		Analyst: **HV**
1,2,4-Trichlorobenzene	U	0.83	10		µg/L	1	7/9/2003
2,4,5-Trichlorophenol	U	2.4	10		µg/L	1	7/9/2003
2,4,6-Trichlorophenol	U	2.7	10		µg/L	1	7/9/2003
2-Methylnaphthalene	U	0.86	10		µg/L	1	7/9/2003
2-Methylphenol	U	2.8	10		µg/L	1	7/9/2003
2-Nitroaniline	U	1.1	10		µg/L	1	7/9/2003
2-Nitrophenol	U	2.6	10		µg/L	1	7/9/2003
3-Nitroaniline	U	1.2	10		µg/L	1	7/9/2003
4-Methylphenol	U	4.6	10		µg/L	1	7/9/2003
4-Nitroaniline	U	0.95	10		µg/L	1	7/9/2003
4-Nitrophenol	U	2.7	10		µg/L	1	7/9/2003
Acenaphthene	U	1.1	10		µg/L	1	7/9/2003
Acenaphthylene	U	1.0	10		µg/L	1	7/9/2003
Aniline	U	10	10		µg/L	1	7/9/2003

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P - Dual Column results percent difference > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 16, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly
Lab ID: 0307056-02

Client Sample ID: Larue
Collection Date: 7/2/2003 1:55:00 PM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Anthracene	U	0.36	10		µg/L	1	7/9/2003
Benz(a)anthracene	U	0.77	10		µg/L	1	7/9/2003
Benzidine	U	0.34	10		µg/L	1	7/9/2003
Hexachloroethane	U	0.64	10		µg/L	1	7/9/2003
Indeno(1,2,3-cd)pyrene	U	0.77	10		µg/L	1	7/9/2003
Isophorone	U	1.2	10		µg/L	1	7/9/2003
N-Nitrosodi-n-propylamine	U	1.5	10		µg/L	1	7/9/2003
N-Nitrosodimethylamine	U	1.1	10		µg/L	1	7/9/2003
N-Nitrosodiphenylamine	U	1.3	10		µg/L	1	7/9/2003
Naphthalene	U	1.0	10		µg/L	1	7/9/2003
Nitrobenzene	U	1.7	10		µg/L	1	7/9/2003
Pentachlorophenol	U	1.5	10		µg/L	1	7/9/2003
Phenanthrene	U	1.2	10		µg/L	1	7/9/2003
Phenol	U	3.5	10		µg/L	1	7/9/2003
Pyrene	U	0.92	10		µg/L	1	7/9/2003
Surr:2,4,6-Tribromophenol	107	0	10-123		%REC	1	7/9/2003
Surr:2-Fluorobiphenyl	102	0	43-116		%REC	1	7/9/2003
Surr:2-Fluorophenol	42.6	0	21-100		%REC	1	7/9/2003
Surr:4-Terphenyl-d14	127	0	33-141		%REC	1	7/9/2003
Surr:Nitrobenzene-d5	98.6	0	35-114		%REC	1	7/9/2003
Surr: Phenol-d6	25.0	0	10-94		%REC	1	7/9/2003
VOLATILES BY GC/MS		**SW8260**			Prep Date:		Analyst: **PC**
1,1,1-Trichloroethane	U	0.62	5.0		µg/L	1	7/11/2003
1,1,2,2-Tetrachloroethane	U	0.58	5.0		µg/L	1	7/11/2003
1,1,2-Trichloroethane	U	0.41	5.0		µg/L	1	7/11/2003
1,1-Dichloroethane	U	0.43	5.0		µg/L	1	7/11/2003
1,1-Dichloroethene	U	0.53	5.0		µg/L	1	7/11/2003
1,2-Dichloroethane	U	0.38	5.0		µg/L	1	7/11/2003
2-Butanone	U	0.70	10		µg/L	1	7/11/2003
2-Chloroethyl vinyl ether	U	0.63	5.0		µg/L	1	7/11/2003
2-Hexanone	U	1.1	10		µg/L	1	7/11/2003
4-Methyl-2-pentanone	U	0.64	5.0		µg/L	1	7/11/2003
Acetone	U	1.2	10		µg/L	1	7/11/2003
Benzene	U	0.66	5.0		µg/L	1	7/11/2003
Bromodichloromethane	U	0.45	5.0		µg/L	1	7/11/2003
Bromoform	U	0.40	5.0		µg/L	1	7/11/2003
Bromomethane	U	0.70	5.0		µg/L	1	7/11/2003
Carbon disulfide	U	0.76	5.0		µg/L	1	7/11/2003
Carbon tetrachloride	U	0.65	5.0		µg/L	1	7/11/2003
Chlorobenzene	U	0.43	5.0		µg/L	1	7/11/2003

Qualifiers:

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H - Analyzed outside of Hold Time

e-Lab, Inc.

Date: *July 16, 2003*

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly
Lab ID: 0307056-02

Client Sample ID: Larue
Collection Date: 7/2/2003 1:55:00 PM
Matrix: WATER

Analyses	Result	MDL	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
Chloroethane	U	0.56	5.0		µg/L	1	7/11/2003
Chloroform	U	0.52	5.0		µg/L	1	7/11/2003
Chloromethane	U	1.1	5.0		µg/L	1	7/11/2003
cis-1,3-Dichloropropene	U	0.47	5.0		µg/L	1	7/11/2003
Dibromochloromethane	U	0.53	5.0		µg/L	1	7/11/2003
Ethylbenzene	U	0.77	5.0		µg/L	1	7/11/2003
m,p-Xylene	U	1.3	10		µg/L	1	7/11/2003
Methyl tert-butyl ether	U	0.30	5.0		µg/L	1	7/11/2003
Methylene chloride	U	0.60	10		µg/L	1	7/11/2003
Styrene	U	0.56	5.0		µg/L	1	7/11/2003
Tetrachloroethene	U	0.43	5.0		µg/L	1	7/11/2003
Toluene	U	0.69	5.0		µg/L	1	7/11/2003
trans-1,3-Dichloropropene	U	0.44	5.0		µg/L	1	7/11/2003
Trichloroethene	U	0.70	5.0		µg/L	1	7/11/2003
Vinyl acetate	U	0.92	5.0		µg/L	1	7/11/2003
Vinyl chloride	U	0.79	2.0		µg/L	1	7/11/2003
Xylenes, Total	U	1.8	15		µg/L	1	7/11/2003
Surr: 1,2-Dichloroethane-d4	103	0	70-130		%REC	1	7/11/2003
Surr: 4-Bromofluorobenzene	86.1	0	70-130		%REC	1	7/11/2003
Surr: Dibromofluoromethane	100	0	70-130		%REC	1	7/11/2003
Surr: Toluene-d8	103	0	70-130		%REC	1	7/11/2003
ANIONS BY ION CHROMATOGRAPHY		**E300**			Prep Date:		Analyst: **MG**
Chloride	112	2.00	5.00		mg/L	10	7/10/2003
Fluoride	0.720	0.0500	0.100		mg/L	1	7/10/2003
Sulfate	1,480	50.0	100		mg/L	100	7/10/2003
Surr: Dichloroacetic acid (surr)	107	0	80-120		%REC	100	7/10/2003
Surr: Dichloroacetic acid (surr)	101	0	80-120		%REC	10	7/10/2003
Surr: Dichloroacetic acid (surr)	104	0	80-120		%REC	1	7/10/2003
ALKALINITY		**E310.1**			Prep Date:		Analyst: **LMD**
Alkalinity, Bicarbonate (As CaCO3)	260	2.0	5.00		mg/L	1	7/7/2003
Alkalinity, Carbonate (As CaCO3)	U	2.0	5.00		mg/L	1	7/7/2003
Alkalinity, Hydroxide (As CaCO3)	U	2.0	5.00		mg/L	1	7/7/2003
Alkalinity, Total (As CaCO3)	260	2.0	5.00		mg/L	1	7/7/2003

Qualifiers:

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e-Lab, Inc.

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

Date: *Jul 16 2003*

QC BATCH REPORT

Batch ID: **6092** InstrumentID: **Mercury**

MBLK Sample ID: **GBLKW1-070903** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/09/03 18:16**
Client ID: Run ID: **MERCURY_030709A** SeqNo: **343296** Prep Date: **7/9/2003** DF: **1**

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

LCS Sample ID: **GLCSW1-070903** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/09/03 18:25**
Client ID: Run ID: **MERCURY_030709A** SeqNo: **343297** Prep Date: **7/9/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00454	0.00020	0.005	0	90.8	80-120	0			

MS Sample ID: **0307045-01AMS** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/09/03 18:32**
Client ID: Run ID: **MERCURY_030709A** SeqNo: **343300** Prep Date: **7/9/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00445	0.00020	0.005	-0.000023	89.5	80-120	0			

MSD Sample ID: **0307045-01AMSD** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/09/03 18:40**
Client ID: Run ID: **MERCURY_030709A** SeqNo: **343301** Prep Date: **7/9/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00462	0.00020	0.005	-0.000023	92.9	80-120	0.00445	3.75	20	

DUP Sample ID: **0307045-01ADUP** TestCode: **SW7470** Units: **mg/L** Analysis Date **07/09/03 18:30**
Client ID: Run ID: **MERCURY_030709A** SeqNo: **343299** Prep Date: **7/9/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020	0	0	0	0-0	-0.000023	0	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307056-01B 0307056-02B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **6103** InstrumentID: **6020**

MBLK Sample ID: **MBLKW2-071003** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/14/03 21:32**
Client ID: Run ID: **6020_030714A** SeqNo: **345220** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.003576	0.010								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Boron	0.013	0.020								J
Cadmium	U	0.0010								
Calcium	U	0.50								
Chromium	U	0.0020								
Cobalt	0.000157	0.0020								J
Copper	0.0004881	0.0020								J
Iron	U	0.20								
Lead	U	0.0050								
Magnesium	U	0.20								
Manganese	U	0.0050								
Nickel	U	0.0050								
Potassium	U	0.20								
Silver	U	0.0050								
Sodium	U	0.20								
Vanadium	U	0.0050								
Zinc	U	0.0050								

MBLK Sample ID: **MBLKW2-071003** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/16/03 0:28**
Client ID: Run ID: **6020_030715A** SeqNo: **345656** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.002814	0.0050								J

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CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **6103** InstrumentID: **6020**

LCS Sample ID: **MLCSW2-071003** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/14/03 21:37**
Client ID: Run ID: **6020_030714A** SeqNo: **345221** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1033	0.010	0.1	0	103	80-120	0			
Arsenic	0.1041	0.0050	0.1	0	104	80-120	0			
Barium	0.09993	0.0050	0.1	0	99.9	80-120	0			
Beryllium	0.1059	0.0020	0.1	0	106	80-120	0			
Boron	0.5024	0.020	0.5	0	100	80-120	0			
Cadmium	0.1022	0.0010	0.1	0	102	80-120	0			
Calcium	9.956	0.50	10	0	99.6	80-120	0			
Chromium	0.1018	0.0020	0.1	0	102	80-120	0			
Cobalt	0.103	0.0020	0.1	0	103	80-120	0			
Copper	0.1036	0.0020	0.1	0	104	80-120	0			
Iron	10.09	0.20	10	0	101	80-120	0			
Lead	0.1017	0.0050	0.1	0	102	80-120	0			
Magnesium	10.03	0.20	10	0	100	80-120	0			
Manganese	0.1009	0.0050	0.1	0	101	80-120	0			
Nickel	0.1035	0.0050	0.1	0	103	80-120	0			
Potassium	10.22	0.20	10	0	102	80-120	0			
Silver	0.1027	0.0050	0.1	0	103	80-120	0			
Sodium	9.734	0.20	10	0	97.3	80-120	0			
Vanadium	0.1012	0.0050	0.1	0	101	80-120	0			
Zinc	0.1046	0.0050	0.1	0	105	80-120	0			

LCS Sample ID: **MLCSW2-071003** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/16/03 0:32**
Client ID: Run ID: **6020_030715A** SeqNo: **345657** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.1002	0.0050	0.1	0	100	80-120	0			

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P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **6103** InstrumentID: **6020**

MS Sample ID: **0307039-01BMS** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/14/03 22:13**
Client ID: Run ID: **6020_030714A** SeqNo: **345229** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.5825	0.010	0.1	0.4954	87.1	75-125	0			EO
Arsenic	0.2031	0.0050	0.1	0.1106	92.5	75-125	0			
Barium	0.1209	0.0050	0.1	0.02185	99	75-125	0			
Beryllium	0.0939	0.0020	0.1	-1.261E-05	93.9	75-125	0			
Boron	0.6334	0.020	0.5	0.1667	93.3	75-125	0			
Cadmium	0.07887	0.0010	0.1	9.667E-06	78.9	75-125	0			
Calcium	164.7	0.50	10	152	127	75-125	0			SEO
Chromium	0.0975	0.0020	0.1	0.003215	94.3	75-125	0			
Cobalt	0.09713	0.0020	0.1	0.005591	91.5	75-125	0			
Copper	0.08979	0.0020	0.1	0.004448	85.3	75-125	0			
Iron	12.22	0.20	10	3.243	89.8	75-125	0			
Lead	0.1017	0.0050	0.1	0.001669	100	75-125	0			
Magnesium	28.91	0.20	10	19.56	93.5	75-125	0			
Manganese	0.1713	0.0050	0.1	0.07906	92.2	75-125	0			
Nickel	0.09461	0.0050	0.1	0.008753	85.9	75-125	0			
Potassium	28.62	0.20	10	18.04	106	75-125	0			
Silver	0.08056	0.0050	0.1	-1.567E-05	80.6	75-125	0			
Sodium	U	0.20	10	0	0	75-125	0			S
Vanadium	0.1016	0.0050	0.1	0.001548	100	75-125	0			
Zinc	0.1756	0.0050	0.1	0.1136	62	75-125	0			S

MS Sample ID: **0307039-01BMS** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/16/03 3:06**
Client ID: Run ID: **6020_030715A** SeqNo: **345685** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.4175	0.0050	0.1	0.3268	90.7	75-125	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **6103** InstrumentID: **6020**

MSD Sample ID: **0307039-01BMSD** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/14/03 23:31**
Client ID: Run ID: **6020_030714A** SeqNo: **345239** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.5901	0.010	0.1	0.4954	94.7	75-125	0.5825	1.3	25	EO
Arsenic	0.193	0.0050	0.1	0.1106	82.4	75-125	0.2031	5.1	25	
Barium	0.1167	0.0050	0.1	0.02185	94.8	75-125	0.1209	3.54	25	
Beryllium	0.08447	0.0020	0.1	-1.261E-05	84.5	75-125	0.0939	10.6	25	
Boron	0.5839	0.020	0.5	0.1667	83.4	75-125	0.6334	8.13	25	
Cadmium	0.07693	0.0010	0.1	9.667E-06	76.9	75-125	0.07887	2.49	25	
Calcium	156.4	0.50	10	152	44	75-125	164.7	5.17	25	SEO
Chromium	0.09443	0.0020	0.1	0.003215	91.2	75-125	0.0975	3.2	25	
Cobalt	0.09387	0.0020	0.1	0.005591	88.3	75-125	0.09713	3.41	25	
Copper	0.09451	0.0020	0.1	0.004448	90.1	75-125	0.08979	5.12	25	
Iron	11.76	0.20	10	3.243	85.2	75-125	12.22	3.84	25	
Lead	0.1049	0.0050	0.1	0.001669	103	75-125	0.1017	3.1	25	
Magnesium	27.97	0.20	10	19.56	84.1	75-125	28.91	3.31	25	
Manganese	0.1655	0.0050	0.1	0.07906	86.4	75-125	0.1713	3.44	25	
Nickel	0.09132	0.0050	0.1	0.008753	82.6	75-125	0.09461	3.54	25	
Potassium	27.14	0.20	10	18.04	91	75-125	28.62	5.31	25	
Silver	0.08129	0.0050	0.1	-1.567E-05	81.3	75-125	0.08056	0.902	25	
Sodium	U	0.20	10	0	0	75-125	0	0	25	S
Vanadium	0.09805	0.0050	0.1	0.001548	96.5	75-125	0.1016	3.56	25	
Zinc	0.1678	0.0050	0.1	0.1136	54.2	75-125	0.1756	4.54	25	S

MSD Sample ID: **0307039-01BMSD** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/16/03 3:10**
Client ID: Run ID: **6020_030715A** SeqNo: **345686** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.4192	0.0050	0.1	0.3268	92.4	75-125	0.4175	0.406	25	

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R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **6103** InstrumentID: **6020**

DUP Sample ID: **0307039-01BDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/14/03 22:08**
Client ID: Run ID: **6020_030714A** SeqNo: **345228** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1086	0.0050	0	0	0	0-0	0.1106	1.82	25	
Barium	0.02249	0.0050	0	0	0	0-0	0.02185	2.89	25	
Beryllium	U	0.0020	0	0	0	0-0	-1.261E-05	0	25	
Boron	0.1825	0.020	0	0	0	0-0	0.1667	9.05	25	
Cadmium	U	0.0010	0	0	0	0-0	9.667E-06	0	25	
Chromium	0.003276	0.0020	0	0	0	0-0	0.003215	1.88	25	
Cobalt	0.005659	0.0020	0	0	0	0-0	0.005591	1.21	25	
Copper	0.004735	0.0020	0	0	0	0-0	0.004448	6.25	25	
Iron	3.269	0.20	0	0	0	0-0	3.243	0.799	25	
Lead	0.001791	0.0050	0	0	0	0-0	0.001669	0	25	J
Magnesium	19.24	0.20	0	0	0	0-0	19.56	1.65	25	
Manganese	0.07962	0.0050	0	0	0	0-0	0.07906	0.706	25	
Nickel	0.008677	0.0050	0	0	0	0-0	0.008753	0.872	25	
Potassium	18.27	0.20	0	0	0	0-0	18.04	1.27	25	
Silver	U	0.0050	0	0	0	0-0	-1.567E-05	0	25	
Vanadium	0.001664	0.0050	0	0	0	0-0	0.001548	0	25	J

DUP Sample ID: **0307039-01BDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/16/03 2:08**
Client ID: Run ID: **6020_030715A** SeqNo: **345672** Prep Date: **7/10/2003** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	155.4	5.0	0	0	0	0-0	151.7	2.41	25	

DUP Sample ID: **0307039-01BDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/16/03 2:35**
Client ID: Run ID: **6020_030715A** SeqNo: **345678** Prep Date: **7/10/2003** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.5014	0.050	0	0	0	0-0	0.5049	0.696	25	
Zinc	0.114	0.025	0	0	0	0-0	0.1159	1.65	25	

DUP Sample ID: **0307039-01BDUP** TestCode: **SW6020** Units: **mg/L** Analysis Date **07/16/03 2:57**
Client ID: Run ID: **6020_030715A** SeqNo: **345683** Prep Date: **7/10/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.341	0.0050	0	0	0	0-0	0.3268	4.25	25	

Thefollowingsampleswereanalyzedinthisbatch: 0307056-01B 0307056-02B

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **6071** InstrumentID: **SV-3**

MBLK Sample ID: **SBLKW1-030707** TestCode: **SW8270** Units: **µg/L** Analysis Date **07/09/03 12:51**

Client ID: Run ID: **SV-3_030708A** SeqNo: **343183** Prep Date: **7/7/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	U	10								
2,4,5-Trichlorophenol	U	10								
2,4,6-Trichlorophenol	U	10								
2-Methylnaphthalene	U	10								
2-Methylphenol	U	10								
2-Nitroaniline	U	10								
2-Nitrophenol	U	10								
3-Nitroaniline	U	10								
4-Methylphenol	U	10								
4-Nitroaniline	U	10								
4-Nitrophenol	U	10								
Acenaphthene	U	10								
Acenaphthylene	U	10								
Aniline	U	10								
Anthracene	U	10								
Benz(a)anthracene	U	10								
Benzidine	U	10								
Hexachloroethane	U	10								
deno(1,2,3-cd)pyrene	U	10								
sophorone	U	10								
N-Nitrosodi-n-propylamine	U	10								
N-Nitrosodimethylamine	U	10								
N-Nitrosodiphenylamine	U	10								
Naphthalene	U	10								
Nitrobenzene	U	10								
Pentachlorophenol	U	10								
Phenanthrene	U	10								
Phenol	U	10								
Pyrene	U	10								
1,4-Dichlorobenzene-d4	40	0								
Acenaphthene-d10	40	0								
Chrysene-d12	40	0								
Naphthalene-d8	40	0								
Perylene-d12	40	0								
Phenanthrene-d10	40	0								
Surr:2,4,6-Tribromophenol	104.7	0	100	0	105	10-123	0			
Surr: 2-Fluorobiphenyl	103.1	0	100	0	103	43-116	0			
Surr: 2-Fluorophenol	78.83	0	100	0	78.8	21-100	0			
Surr:4-Terphenyl-d14	124	0	100	0	124	33-141	0			
Surr:Nitrobenzene-d5	105.6	0	100	0	106	35-114	0			
Surr: Phenol-d6	57.02	0	100	0	57	10-94	0			

ND - Not Detected at the Reporting Limit
nalyte detected below quantitation limits
Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **6071** InstrumentID: **SV-3**

LCS Sample ID: **SLCSW1-030707** TestCode: **SW8270** Units: **µg/L** Analysis Date **07/09/03 13:18**
Client ID: Run ID: **SV-3_030708A** SeqNo: **343184** Prep Date: **7/7/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	45.09	10	50	0	90.2	51-110	0			
2,4,5-Trichlorophenol	106.1	10	100	0	106	55-130	0			
2,4,6-Trichlorophenol	103.5	10	100	0	103	55-130	0			
2-Methylnaphthalene	46.35	10	50	0	92.7	50-125	0			
2-Methylphenol	93.13	10	100	0	93.1	45-120	0			
2-Nitroaniline	52.53	10	50	0	105	55-130	0			
2-Nitrophenol	100.5	10	100	0	100	55-125	0			
3-Nitroaniline	49.03	10	50	0	98.1	55-120	0			
4-Methylphenol	135.2	10	150	0	90.2	40-120	0			
4-Nitroaniline	51.44	10	50	0	103	60-130	0			
4-Nitrophenol	76.55	10	100	0	76.6	25-100	0			
Acenaphthene	50.49	10	50	0	101	50-120	0			
Acenaphthylene	50.04	10	50	0	100	55-130	0			
Anthracene	53.52	10	50	0	107	60-130	0			
Benz(a)anthracene	53.36	10	50	0	107	60-130	0			
Benzidine	U	10	50	0	0	10-85	0			S
Hexachloroethane	41.09	10	50	0	82.2	40-120	0			
Indeno(1,2,3-cd)pyrene	47.3	10	50	0	94.6	60-130	0			
[illegible]ophorone	51.17	10	50	0	102	60-130	0			
[illegible]-Nitrosodi-n-propylamine	49.23	10	50	0	98.5	55-120	0			
N-Nitrosodimethylamine	34.12	10	50	0	68.2	35-110	0			
N-Nitrosodiphenylamine	57.39	10	50	0	115	60-130	0			
Naphthalene	48.13	10	50	0	96.3	55-130	0			
Nitrobenzene	50.49	10	50	0	101	60-130	0			
Pentachlorophenol	96.9	10	100	0	96.9	45-125	0			
Phenanthrene	52.49	10	50	0	105	60-130	0			
Phenol	59.2	10	100	0	59.2	20-100	0			
Pyrene	53.44	10	50	0	107	45-120	0			
Surr:2,4,6-Tribromophenol	107.7	0	100	0	108	10-123	0			
Surr: 2-Fluorobiphenyl	106.2	0	100	0	106	43-116	0			
Surr: 2-Fluorophenol	84.31	0	100	0	84.3	21-100	0			
Surr:4-Terphenyl-d14	119.7	0	100	0	120	33-141	0			
Surr:Nitrobenzene-d5	106.5	0	100	0	107	35-114	0			
Surr: Phenol-d6	64.39	0	100	0	64.4	10-94	0			

Thefollowingsampleswereanalyzedinthisbatch: 0307056-01D 0307056-02D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
[illegible] Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
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CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **6071** InstrumentID: **SV-3**

LCS Sample ID: **SLCSW1-030707** Test Code: **SW8270** Units: **µg/L** Analysis Date **07/09/03 13:18**
Client ID: Run ID: **SV-3_030708A** SeqNo: **343184** Prep Date: **7/7/2003** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	45.09	10	50	0	90.2	51-110	0			
2,4,5-Trichlorophenol	106.1	10	100	0	106	55-130	0			
2,4,6-Trichlorophenol	103.5	10	100	0	103	55-130	0			
2-Methylnaphthalene	46.35	10	50	0	92.7	50-125	0			
2-Methylphenol	93.13	10	100	0	93.1	45-120	0			
2-Nitroaniline	52.53	10	50	0	105	55-130	0			
2-Nitrophenol	100.5	10	100	0	100	55-125	0			
3-Nitroaniline	49.03	10	50	0	98.1	55-120	0			
4-Methylphenol	135.2	10	150	0	90.2	40-120	0			
4-Nitroaniline	51.44	10	50	0	103	60-130	0			
4-Nitrophenol	76.55	10	100	0	76.6	25-100	0			
Acenaphthene	50.49	10	50	0	101	50-120	0			
Acenaphthylene	50.04	10	50	0	100	55-130	0			
Anthracene	53.52	10	50	0	107	60-130	0			
Benz(a)anthracene	53.36	10	50	0	107	60-130	0			
Benzidine	U	10	50	0	0	10-85	0			S
Hexachloroethane	41.09	10	50	0	82.2	40-120	0			
Indeno(1,2,3-cd)pyrene	47.3	10	50	0	94.6	60-130	0			
Isophorone	51.17	10	50	0	102	60-130	0			
N-Nitrosodi-n-propylamine	49.23	10	50	0	98.5	55-120	0			
N-Nitrosodimethylamine	34.12	10	50	0	68.2	35-110	0			
N-Nitrosodiphenylamine	57.39	10	50	0	115	60-130	0			
Naphthalene	48.13	10	50	0	96.3	55-130	0			
Nitrobenzene	50.49	10	50	0	101	60-130	0			
Pentachlorophenol	96.9	10	100	0	96.9	45-125	0			
Phenanthrene	52.49	10	50	0	105	60-130	0			
Phenol	59.2	10	100	0	59.2	20-100	0			
Pyrene	53.44	10	50	0	107	45-120	0			
Surr:2,4,6-Tribromophenol	107.7	0	100	0	108	10-123	0			
Surr: 2-Fluorobiphenyl	106.2	0	100	0	106	43-116	0			
Surr: 2-Fluorophenol	84.31	0	100	0	84.3	21-100	0			
Surr:4-Terphenyl-d14	119.7	0	100	0	120	33-141	0			
Surr:Nitrobenzene-d5	106.5	0	100	0	107	35-114	0			
Surr: Phenol-d6	64.39	0	100	0	64.4	10-94	0			

The following samples were analyzed in this batch: 0307056-01D 0307056-02D

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
*Referenced analyte value is > 4 times amount spiked
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CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **R15136** InstrumentID: **VOA_I**

MBLK Sample ID: **VBLKW-0711** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/11/03 12:02**

Client ID: Run ID: **VOA_I_030711A** SeqNo: **344142** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
2-Butanone	U	10								
2-Chloroethyl vinyl ether	U	5.0								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	10								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	5.0								
Carbon disulfide	U	5.0								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	5.0								
Chloroform	U	5.0								
Chloromethane	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	10								
Methyl tert-butyl ether	U	5.0								
Methylene chloride	U	10								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Vinyl acetate	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	15								
Surr: 1,2-Dichloroethane-d4	47.23	5.0	50	0	94.5	70-130		0		
Surr: 4-Bromofluorobenzene	43.75	5.0	50	0	87.5	70-130		0		
Surr: Dibromofluoromethane	46.49	5.0	50	0	93	70-130		0		
Surr: Toluene-d8	52.05	5.0	50	0	104	70-130		0		

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R - RPD outside accepted recovery limits
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B - Analyte detected in assoc. Method Blank
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E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **R15136** InstrumentID: **VOA_I**

LCS Sample ID: **VLCSW-0711** Test Code: **SW8260** Units: µg/L Analysis Date **07/11/03 11:07**

Client ID: Run ID: **VOA_I_030711A** SeqNo: **344140** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	51.19	5.0	50	0	102	75-118	0			
1,1,2,2-Tetrachloroethane	49.75	5.0	50	0	99.5	79-120	0			
1,1,2-Trichloroethane	50.19	5.0	50	0	100	81-119	0			
1,1-Dichloroethane	49.48	5.0	50	0	99	80-120	0			
1,1-Dichloroethene	50.01	5.0	50	0	100	80-120	0			
1,2-Dichloroethane	49.96	5.0	50	0	99.9	80-120	0			
2-Butanone	102.3	10	100	0	102	70-130	0			
2-Chloroethyl vinyl ether	88.04	5.0	100	0	88	72-120	0			
2-Hexanone	98	10	100	0	98	70-130	0			
4-Methyl-2-pentanone	99.23	5.0	100	0	99.2	78-120	0			
Acetone	100.2	10	100	0	100	60-135	0			
Benzene	52.69	5.0	50	0	105	82-119	0			
Bromodichloromethane	49.44	5.0	50	0	98.9	81-119	0			
Bromoform	52.23	5.0	50	0	104	80-120	0			
Bromomethane	46.34	5.0	50	0	92.7	75-130	0			
Carbon disulfide	98.75	5.0	100	0	98.8	78-120	0			
Carbon tetrachloride	50.83	5.0	50	0	102	77-120	0			
Chlorobenzene	50.9	5.0	50	0	102	82-118	0			
Chloroethane	48.23	5.0	50	0	96.5	78-122	0			
Chloroform	48.99	5.0	50	0	98	78-120	0			
Chloromethane	47.49	5.0	50	0	95	75-125	0			
cis-1,3-Dichloropropene	48.48	5.0	50	0	97	81-120	0			
Dibromochloromethane	51.03	5.0	50	0	102	81-118	0			
Ethylbenzene	52.53	5.0	50	0	105	82-120	0			
m,p-Xylene	107.6	10	100	0	108	82-122	0			
Methyl tert-butyl ether	51.38	5.0	50	0	103	79-120	0			
Methylene chloride	46.54	10	50	0	93.1	80-122	0			
Styrene	54.1	5.0	50	0	108	82-121	0			
Tetrachloroethene	54.02	5.0	50	0	108	79-118	0			
Toluene	56.14	5.0	50	0	112	81-119	0			
trans-1,3-Dichloropropene	47.31	5.0	50	0	94.6	82-121	0			
Trichloroethene	51.11	5.0	50	0	102	78-118	0			
Vinyl acetate	105.9	5.0	100	0	106	75-120	0			
Vinyl chloride	48.66	2.0	50	0	97.3	73-127	0			
Xylenes, Total	160.1	15	150	0	107	80-120	0			
Surr: 1,2-Dichloroethane-d4	46.44	5.0	50	0	92.9	70-130	0			
Surr: 4-Bromofluorobenzene	48.96	5.0	50	0	97.9	70-130	0			
Surr: Dibromofluoromethane	46.8	5.0	50	0	93.6	70-130	0			
Surr: Toluene-d8	54.07	5.0	50	0	108	70-130	0			

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **R15136** InstrumentID: **VOA_I**

LCSD Sample ID: **VLCSWD-0711** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/11/03 11:34**

Client ID: Run ID: **VOA_I_030711A** SeqNo: **344141** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	50.01	5.0	50	0	100	75-118	51.19	2.35	20	
1,1,2,2-Tetrachloroethane	49.38	5.0	50	0	98.8	79-120	49.75	0.756	20	
1,1,2-Trichloroethane	50.99	5.0	50	0	102	81-119	50.19	1.58	20	
1,1-Dichloroethane	48.75	5.0	50	0	97.5	80-120	49.48	1.5	20	
1,1-Dichloroethene	48.45	5.0	50	0	96.9	80-120	50.01	3.16	20	
1,2-Dichloroethane	50.57	5.0	50	0	101	80-120	49.96	1.22	20	
2-Butanone	102.3	10	100	0	102	70-130	102.3	0.0219	20	
2-Chloroethyl vinyl ether	89.35	5.0	100	0	89.3	72-120	88.04	1.48	20	
2-Hexanone	95.81	10	100	0	95.8	70-130	98	2.26	20	
4-Methyl-2-pentanone	103.9	5.0	100	0	104	78-120	99.23	4.58	20	
Acetone	98.88	10	100	0	98.9	60-135	100.2	1.28	20	
Benzene	53.85	5.0	50	0	108	82-119	52.69	2.17	20	
Bromodichloromethane	51.02	5.0	50	0	102	81-119	49.44	3.15	20	
Bromoform	51.21	5.0	50	0	102	80-120	52.23	1.98	20	
Bromomethane	45.47	5.0	50	0	90.9	75-130	46.34	1.9	20	
Carbon disulfide	97.65	5.0	100	0	97.6	78-120	98.75	1.13	20	
Carbon tetrachloride	50.66	5.0	50	0	101	77-120	50.83	0.341	20	
Chlorobenzene	50.11	5.0	50	0	100	82-118	50.9	1.57	20	
Chloroethane	47.51	5.0	50	0	95	78-122	48.23	1.5	20	
Chloroform	48.66	5.0	50	0	97.3	78-120	48.99	0.671	20	
Chloromethane	46.45	5.0	50	0	92.9	75-125	47.49	2.22	20	
cis-1,3-Dichloropropene	49	5.0	50	0	98	81-120	48.48	1.07	20	
Dibromochloromethane	50.74	5.0	50	0	101	81-118	51.03	0.575	20	
Ethylbenzene	52.03	5.0	50	0	104	82-120	52.53	0.954	20	
m,p-Xylene	107	10	100	0	107	82-122	107.6	0.617	20	
Methyl tert-butyl ether	51.82	5.0	50	0	104	79-120	51.38	0.85	20	
Methylene chloride	46.44	10	50	0	92.9	80-122	46.54	0.215	20	
Styrene	54.9	5.0	50	0	110	82-121	54.1	1.47	20	
Tetrachloroethene	52.69	5.0	50	0	105	79-118	54.02	2.49	20	
Toluene	55.43	5.0	50	0	111	81-119	56.14	1.27	20	
trans-1,3-Dichloropropene	47.85	5.0	50	0	95.7	82-121	47.31	1.13	20	
Trichloroethene	52.1	5.0	50	0	104	78-118	51.11	1.91	20	
Vinyl acetate	110.1	5.0	100	0	110	75-120	105.9	3.85	20	
Vinyl chloride	48.66	2.0	50	0	97.3	73-127	48.66	0.00514	20	
Xylenes, Total	158.6	15	150	0	106	80-120	160.1	0.967	20	
Surr: 1,2-Dichloroethane-d4	45.93	5.0	50	0	91.9	70-130	46.44	1.11	20	
Surr: 4-Bromofluorobenzene	48.15	5.0	50	0	96.3	70-130	48.96	1.67	20	
Surr: Dibromofluoromethane	46.78	5.0	50	0	93.6	70-130	46.8	0.0385	20	
Surr: Toluene-d8	53.7	5.0	50	0	107	70-130	54.07	0.696	20	

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B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **R15136** InstrumentID: **VOA_I**

MS Sample ID: **0307056-02AMS** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/11/03 16:04**

Client ID: **Larue** Run ID: **VOA_I_030711A** SeqNo: **344259** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.13	5.0	50	0	92.3	75-125	0			
1,1,2,2-Tetrachloroethane	58.54	5.0	50	0	117	75-125	0			
1,1,2-Trichloroethane	61.54	5.0	50	0	123	75-125	0			
1,1-Dichloroethane	51.26	5.0	50	0	103	75-125	0			
1,1-Dichloroethene	43.24	5.0	50	0	86.5	65-130	0			
1,2-Dichloroethane	62.78	5.0	50	0	126	70-130	0			
2-Butanone	117.2	10	100	0	117	64-128	0			
2-Chloroethyl vinyl ether	U	5.0	100	0	0	75-125	0			S
2-Hexanone	116.6	10	100	0	117	72-124	0			
4-Methyl-2-pentanone	121.9	5.0	100	0	122	75-125	0			
Acetone	105.4	10	100	0	105	60-130	0			
Benzene	54.97	5.0	50	0	110	76-127	0			
Bromodichloromethane	60.52	5.0	50	0	121	75-125	0			
Bromoform	65.17	5.0	50	0	130	75-125	0			S
Bromomethane	49.77	5.0	50	0	99.5	75-125	0			
Carbon disulfide	88.73	5.0	100	0	88.7	75-125	0			
Carbon tetrachloride	42.24	5.0	50	0	84.5	70-130	0			
Chlorobenzene	56.31	5.0	50	0	113	75-126	0			
Chloroethane	46.85	5.0	50	0	93.7	70-130	0			
Chloroform	55.72	5.0	50	0	111	75-125	0			
Chloromethane	45.07	5.0	50	0	90.1	75-125	0			
cis-1,3-Dichloropropene	53.32	5.0	50	0	107	75-125	0			
Dibromochloromethane	63.88	5.0	50	0	128	75-125	0			S
Ethylbenzene	51.26	5.0	50	0	103	75-125	0			
m,p-Xylene	109.9	10	100	0	110	75-125	0			
Methyl tert-butyl ether	63.68	5.0	50	0	127	75-125	0			S
Methylene chloride	54.77	10	50	0	110	75-125	0			
Styrene	61.79	5.0	50	0	124	75-125	0			
Tetrachloroethene	45.42	5.0	50	0	90.8	75-125	0			
Toluene	56.74	5.0	50	0	113	76-125	0			
trans-1,3-Dichloropropene	58.94	5.0	50	0	118	70-130	0			
Trichloroethene	229.2	5.0	50	0	458	71-120	0			SE
Vinyl acetate	126.9	5.0	100	0	127	75-125	0			S
Vinyl chloride	40.24	2.0	50	0	80.5	60-135	0			
Xylenes, Total	166	15	150	0	111	75-125	0			
Surr: 1,2-Dichloroethane-d4	47.46	5.0	50	0	94.9	70-130	0			
Surr: 4-Bromofluorobenzene	48.23	5.0	50	0	96.5	70-130	0			
Surr: Dibromofluoromethane	47.58	5.0	50	0	95.2	70-130	0			
Surr: Toluene-d8	52.71	5.0	50	0	105	70-130	0			

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B - Analyte detected in assoc. Method Blank
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CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **R15136** InstrumentID: **VOA_I**

MSD Sample ID: **0307056-02AMSD** Test Code: **SW8260** Units: **µg/L** Analysis Date **07/11/03 16:31**

Client ID: **Larue** Run ID: **VOA_I_030711A** SeqNo: **344260** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.59	5.0	50	0	93.2	75-125	46.13	0.988	20	
1,1,2,2-Tetrachloroethane	60.05	5.0	50	0	120	75-125	58.54	2.55	20	
1,1,2-Trichloroethane	58.44	5.0	50	0	117	75-125	61.54	5.18	20	
1,1-Dichloroethane	50.7	5.0	50	0	101	75-125	51.26	1.1	20	
1,1-Dichloroethene	42.89	5.0	50	0	85.8	65-130	43.24	0.794	20	
1,2-Dichloroethane	58.58	5.0	50	0	117	70-130	62.78	6.92	20	
2-Butanone	104.6	10	100	0	105	64-128	117.2	11.4	20	
2-Chloroethyl vinyl ether	U	5.0	100	0	0	75-125	0	0	20	S
2-Hexanone	111.6	10	100	0	112	72-124	116.6	4.42	20	
4-Methyl-2-pentanone	117.8	5.0	100	0	118	75-125	121.9	3.42	20	
Acetone	93.85	10	100	0	93.9	60-130	105.4	11.6	20	
Benzene	55.04	5.0	50	0	110	76-127	54.97	0.131	20	
Bromodichloromethane	55.67	5.0	50	0	111	75-125	60.52	8.36	20	
Bromoform	59.53	5.0	50	0	119	75-125	65.17	9.04	20	
Bromomethane	52.7	5.0	50	0	105	75-125	49.77	5.72	20	
Carbon disulfide	91.84	5.0	100	0	91.8	75-125	88.73	3.45	20	
Carbon tetrachloride	43.08	5.0	50	0	86.2	70-130	42.24	1.97	20	
Chlorobenzene	54.42	5.0	50	0	109	75-126	56.31	3.41	20	
Chloroethane	48.18	5.0	50	0	96.4	70-130	46.85	2.8	20	
Chloroform	53.76	5.0	50	0	108	75-125	55.72	3.58	20	
Chloromethane	47.77	5.0	50	0	95.5	75-125	45.07	5.81	20	
cis-1,3-Dichloropropene	51.56	5.0	50	0	103	75-125	53.32	3.36	20	
Dibromochloromethane	59.87	5.0	50	0	120	75-125	63.88	6.49	20	
Ethylbenzene	50.93	5.0	50	0	102	75-125	51.26	0.644	20	
m,p-Xylene	107.6	10	100	0	108	75-125	109.9	2.16	20	
Methyl tert-butyl ether	60.28	5.0	50	0	121	75-125	63.68	5.49	20	
Methylene chloride	52.74	10	50	0	105	75-125	54.77	3.78	20	
Styrene	58.62	5.0	50	0	117	75-125	61.79	5.26	20	
Tetrachloroethene	46.18	5.0	50	0	92.4	75-125	45.42	1.67	20	
Toluene	56.21	5.0	50	0	112	76-125	56.74	0.95	20	
trans-1,3-Dichloropropene	54.87	5.0	50	0	110	70-130	58.94	7.16	20	
Trichloroethene	60.5	5.0	50	0	121	71-120	229.2	116	20	SR
Vinyl acetate	121.7	5.0	100	0	122	75-125	126.9	4.2	20	
Vinyl chloride	43.14	2.0	50	0	86.3	60-135	40.24	6.96	20	
Xylenes, Total	161.9	15	150	0	108	75-125	166	2.51	20	
Surr: 1,2-Dichloroethane-d4	46.88	5.0	50	0	93.8	70-130	47.46	1.21	20	
Surr: 4-Bromofluorobenzene	48.99	5.0	50	0	98	70-130	48.23	1.56	20	
Surr: Dibromofluoromethane	46.84	5.0	50	0	93.7	70-130	47.58	1.58	20	
Surr: Toluene-d8	53.49	5.0	50	0	107	70-130	52.71	1.47	20	

The following samples were analyzed in this batch: 0307056-01A 0307056-02A

ND - Not Detected at the Reporting Limit
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CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **R15057** InstrumentID: **WetChemistry**

MBLK Sample ID: **WMBW1-070703** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/07/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **342227** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.0								
Alkalinity, Carbonate (As CaCO3)	U	5.0								
Alkalinity, Hydroxide (As CaCO3)	U	5.0								
Alkalinity, Total (As CaCO3)	U	5.0								

LCS Sample ID: **WLCSW1-070703** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/07/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **342228** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1071	5.0	1000	0	107	80-120	0			

DUP Sample ID: **0306268-03C DUP** TestCode: **E310.1** Units: **mg/L** Analysis Date **07/07/03 0:00**
Client ID: Run ID: **WET CHEMISTRY_0307** SeqNo: **342236** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	214.2	5.0	0	0	0	0-0	209.1	2.41	20	
Alkalinity, Carbonate (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	214.2	5.0	0	0	0	0-0	209.1	2.41	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307056-01C 0307056-02C

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CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **R15150** InstrumentID: **IC201**

MBLK Sample ID: **WBLKW1-070903** TestCode: **E300** Units: **mg/L** Analysis Date **07/09/03 17:17**
Client ID: Run ID: **IC201_030709A** SeqNo: **344355** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Fluoride	U	0.10								
Sulfate	U	1.0								
Surr: Dichloroacetic acid (surr)	U	0.10								

LCS Sample ID: **WLCSW1-070903** TestCode: **E300** Units: **mg/L** Analysis Date **07/09/03 17:49**
Client ID: Run ID: **IC201_030709A** SeqNo: **344356** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	10.39	0.50	10	0	104	80-120	0			
Fluoride	1.92	0.10	2	0	96	80-120	0			
Sulfate	10.36	1.0	10	0	104	80-120	0			
Surr: Dichloroacetic acid (surr)	2.22	0.10	2	0	111	80-120	0			

MS Sample ID: **0307059-02AMS** TestCode: **E300** Units: **mg/L** Analysis Date **07/09/03 19:27**
Client ID: Run ID: **IC201_030709A** SeqNo: **344359** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2984	0.50	10	3010	-268	75-125	902.5	0	0	SEO
Fluoride	2.5	0.10	2	1.64	43	75-125	0.83	0	0	S
Sulfate	23.14	1.0	10	13.49	96.5	75-125	17.29	0	0	
Surr: Dichloroacetic acid (surr)	5.18	0.10	5	0	104	80-120	4.27	0	0	

MSD Sample ID: **0307059-02AMSD** TestCode: **E300** Units: **mg/L** Analysis Date **07/10/03 17:40**
Client ID: Run ID: **IC201_030709A** SeqNo: **344336** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	902.5	0.50	10	3010	-21100	75-125	0			SEO
Fluoride	0.83	0.10	2	1.64	-40.5	75-125	0			S
Sulfate	17.29	1.0	10	13.49	38	75-125	0			S
Surr: Dichloroacetic acid (surr)	4.27	0.10	5	0	85.4	80-120	0			

DUP Sample ID: **0307056-02CDUP** TestCode: **E300** Units: **mg/L** Analysis Date **07/10/03 17:08**
Client ID: **Larue** Run ID: **IC201_030709A** SeqNo: **344335** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	1480	100	0	0	0	0-0	1475	0.338	20	
Surr: Dichloroacetic acid (surr)	530	10	500	0	106	80-120	534	0.752	20	

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
*Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

CLIENT: Navajo Refining Company
Work Order: 0307056
Project: Artesia Monthly

QC BATCH REPORT

Batch ID: **R15150** InstrumentID: **IC201**

DUP Sample ID: **0307059-02ADUP** Test Code: **E300** Units: **mg/L** Analysis Date **07/09/03 18:55**

Client ID: Run ID: **IC201_030709A** SeqNo: **344358** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	1.63	0.10	0	0	0	0-0	1.64	0.612	20	
Sulfate	13.47	1.0	0	0	0	0-0	13.49	0.148	20	
Surr: Dichloroacetic acid (surr)	5.37	0.10	5	0	107	80-120	4.54	16.8	20	

Thefollowingsampleswereanalyzedinthisbatch: 0307056-01C 0307056-02C

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
* - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

W.O. # 0307056.

Page 1 of 1

6701 Aberdeen [illegible]e, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #:

Company Name: Navajo

Address: (Street, City, Zip)

Phone #:

Fax #:

Contact Person: Jeff Byrd

Invoice to: (If different from above)

Project #:

Project Name: Monthly

Project Location: Artesia

Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
	RA 1227	7		X				X	X			X		7/2	1315
	Larue	7		X				X	X			X		7/2	1355

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	
														X	See List of Chemistry
														X	

Turn Around Time if different from standard

Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	7/2/03	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: [signature]	7/3/03	08:30

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp °

Log-in Review

REMARKS:

☐ Check If Special Reporting Limits Are Needed

e-Lab, Inc.

Sample Receipt Checklist

Client Name NAVAJO REFINING COMPAN

Date/Time Received: 7/3/2003 8:30:00 AM

Work Order Number 0307056

Received by: RNG

Checklist completed by _____ 7/7/03 (Signature / Date)

Reviewed by LT 7/7/03 (Initials / Date)

Matrix: W

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):	2.5c	003	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? _____ Checked by _____

Login Notes:

Any No and/or NA (not applicable) response must be detailed in the comments section below.

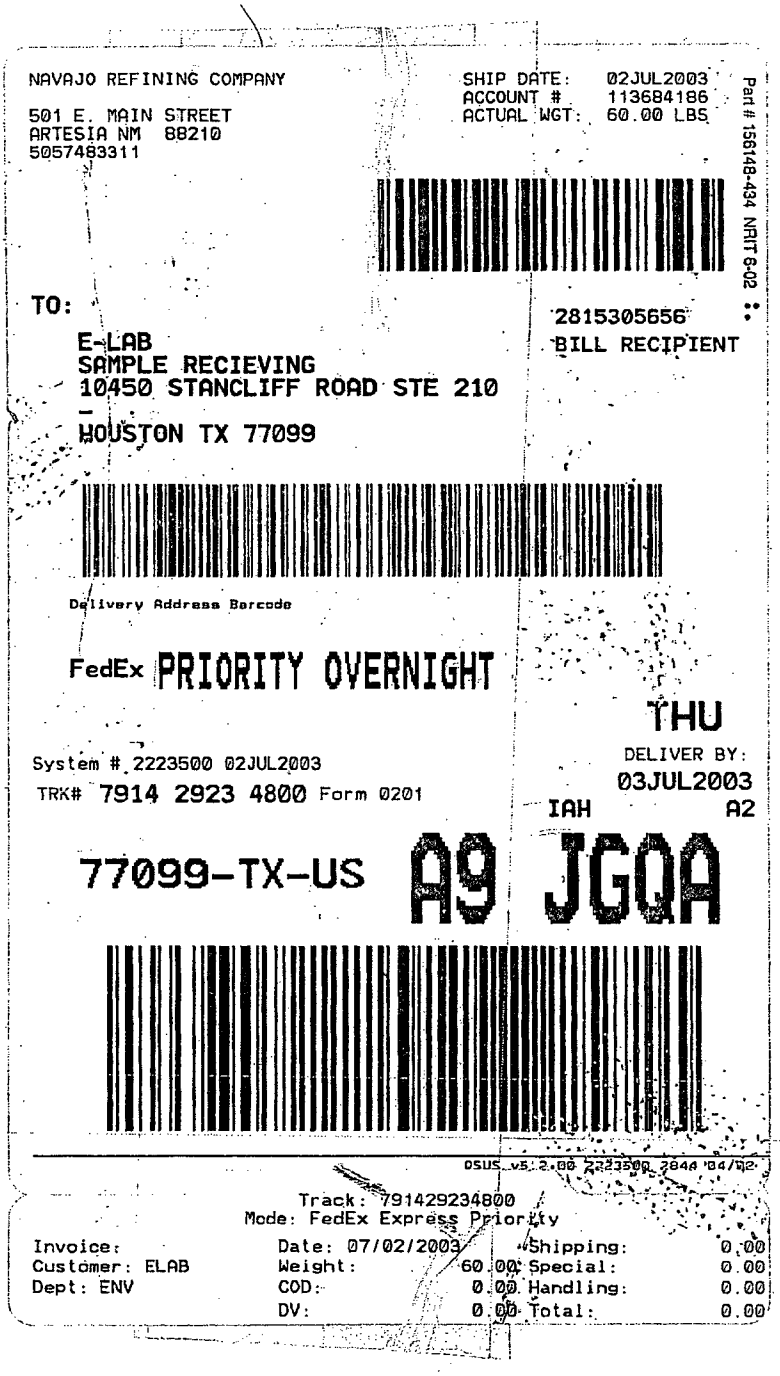
Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

W.O.# ~~0307052-TF~~
0307050



NAVAJO REFINING COMPANY

501 E. MAIN STREET
ARTESIA NM 88210
5057483311

SHIP DATE: 02JUL2003
ACCOUNT # 113684186
ACTUAL WGT: 60.00 LBS

Part # 156148-434 NRIT 6-02

TO:

E-LAB
SAMPLE RECIEVING
10450 STANCLIFF ROAD STE 210

HOUSTON TX 77099

2815305656
BILL RECIPIENT

Delivery Address Barcode

FedEx PRIORITY OVERNIGHT

THU

System # 2223500 02JUL2003
TRK# 7914 2923 4800 Form 0201

DELIVER BY:
03JUL2003
IAH A2

77099-TX-US A9 JGQA

0SUS v5.2.00 2223500 2844 04/02

Track: 791429234800
Mode: FedEx Express Priority

Invoice:	Date: 07/02/2003	Shipping:	0.00
Customer: ELAB	Weight: 60.00	Special:	0.00
Dept: ENV	COD: 0.00	Handling:	0.00
	DV: 0.00	Total:	0.00

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: July 7, 2003

Work Order: 3062420

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
11156	RA 4196	water	2003-06-16	00:00	2003-06-18
11157	RA 307	water	2003-06-16	00:00	2003-06-18
11158	RA 4798	water	2003-06-16	00:00	2003-06-18

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 11156 - RA 4196

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2624	Date Analyzed:	2003-06-29	Analyzed By:	JG
Prep Batch:	2402	Date Prepared:	2003-06-29	Prepared By:	JG

Parameter	Flag	Result	RL Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		<1.00	µg/L	1	1.00
Acetone		<10.0	µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	1	5.00
Carbon Disulfide		<1.00	µg/L	1	1.00
Acrylonitrile		<1.00	µg/L	1	1.00
2-Butanone (MEK)		<5.00	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5.00
2-Hexanone		<5.00	µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	1	10.0
1,1-Dichloroethene		<1.00	µg/L	1	1.00
Methylene chloride		<5.00	µg/L	1	5.00
MTBE		<1.00	µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1	1.00
1,1-Dichloroethane		<1.00	µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1	1.00
2,2-Dichloropropane		<1.00	µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1.00
Chloroform		<1.00	µg/L	1	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1	1.00
1,1-Dichloropropene		<1.00	µg/L	1	1.00
Benzene		<1.00	µg/L	1	1.00
Carbon Tetrachloride		<1.00	µg/L	1	1.00
1,2-Dichloropropane		<1.00	µg/L	1	1.00
Trichloroethene (TCE)		<1.00	µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1.00
Bromodichloromethane		<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		<1.00	µg/L	1	1.00

continued ...

sample 11156 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.3	µg/L	1	50.0	99	70 - 130
Toluene-d8		49.8	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		46.3	µg/L	1	50.0	93	70 - 130

Sample: 11157 - RA 307

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2624	Date Analyzed:	2003-06-29	Analyzed By:	JG
Prep Batch:	2402	Date Prepared:	2003-06-29	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00

continued ...

sample 11157 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00

continued ...

sample 11157 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.4	µg/L	1	50.0	99	70 - 130
Toluene-d8		50.2	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		46.0	µg/L	1	50.0	92	70 - 130

Sample: 11158 - RA 4798

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2624	Date Analyzed:	2003-06-29	Analyzed By:	JG
Prep Batch:	2402	Date Prepared:	2003-06-29	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		4.67		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		1.75		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00

continued ...

sample 11158 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		<1.00	µg/L	1	1.00
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00
tert-Butylbenzene		<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1.00
sec-Butylbenzene		<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1	1.00
p-Isopropyltoluene		<1.00	µg/L	1	1.00
4-Chlorotoluene		<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.6	µg/L	1	50.0	99	70 - 130
Toluene-d8		49.5	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		45.6	µg/L	1	50.0	91	70 - 130

Method Blank (1) QC Batch: 2624

Parameter	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1
Dichlorodifluoromethane		<1.00	µg/L	1

continued ...

method blank continued ...

Parameter	Flag	Result	Units	RL
Chloromethane (methyl chloride)		<1.00	µg/L	1
Vinyl Chloride		<1.00	µg/L	1
Bromomethane (methyl bromide)		<5.00	µg/L	5
Chloroethane		<1.00	µg/L	1
Trichlorofluoromethane		<1.00	µg/L	1
Acetone		<10.0	µg/L	10
Iodomethane (methyl iodide)		<5.00	µg/L	5
Carbon Disulfide		<1.00	µg/L	1
Acrylonitrile		<1.00	µg/L	1
2-Butanone (MEK)		<5.00	µg/L	5
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5
2-Hexanone		<5.00	µg/L	5
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10
1,1-Dichloroethene		<1.00	µg/L	1
Methylene chloride		<5.00	µg/L	5
MTBE		<1.00	µg/L	1
trans-1,2-Dichloroethene		<1.00	µg/L	1
1,1-Dichloroethane		<1.00	µg/L	1
cis-1,2-Dichloroethene		<1.00	µg/L	1
2,2-Dichloropropane		<1.00	µg/L	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1
Chloroform		<1.00	µg/L	1
1,1,1-Trichloroethane		<1.00	µg/L	1
1,1-Dichloropropene		<1.00	µg/L	1
Benzene		<1.00	µg/L	1
Carbon Tetrachloride		<1.00	µg/L	1
1,2-Dichloropropane		<1.00	µg/L	1
Trichloroethene (TCE)		<1.00	µg/L	1
Dibromomethane (methylene bromide)		<1.00	µg/L	1
Bromodichloromethane		<1.00	µg/L	1
2-Chloroethyl vinyl ether		<5.00	µg/L	5
cis-1,3-Dichloropropene		<1.00	µg/L	1
trans-1,3-Dichloropropene		<1.00	µg/L	1
Toluene		<1.00	µg/L	1
1,1,2-Trichloroethane		<1.00	µg/L	1
1,3-Dichloropropane		<1.00	µg/L	1
Dibromochloromethane		<1.00	µg/L	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1
Tetrachloroethene (PCE)		<1.00	µg/L	1
Chlorobenzene		<1.00	µg/L	1
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
Bromoform		<1.00	µg/L	1
Styrene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1
2-Chlorotoluene		<1.00	µg/L	1
1,2,3-Trichloropropane		<1.00	µg/L	1
Isopropylbenzene		<1.00	µg/L	1
Bromobenzene		<1.00	µg/L	1
n-Propylbenzene		<1.00	µg/L	1
1,3,5-Trimethylbenzene		<1.00	µg/L	1

continued ...

method blank continued ...

Parameter	Flag	Result	Units	RL
tert-Butylbenzene		<1.00	µg/L	1
1,2,4-Trimethylbenzene		<1.00	µg/L	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1
sec-Butylbenzene		<1.00	µg/L	1
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1
p-Isopropyltoluene		<1.00	µg/L	1
4-Chlorotoluene		<1.00	µg/L	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1
n-Butylbenzene		<1.00	µg/L	1
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5
1,2,3-Trichlorobenzene		<5.00	µg/L	5
1,2,4-Trichlorobenzene		<5.00	µg/L	5
Naphthalene		<5.00	µg/L	5
Hexachlorobutadiene		<5.00	µg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.7	µg/L	1	50.0	99	70 - 130
Toluene-d8		50.0	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		46.8	µg/L	1	50.0	94	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 2624

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	98.3	96.1	µg/L	1	100	<0.136	98	2	84 - 124	20
Benzene	98.1	97.4	µg/L	1	100	<0.146	98	1	87 - 112	20
Trichloroethene (TCE)	90.6	89.5	µg/L	1	100	0.15	91	1	81 - 105	20
Toluene	101	101	µg/L	1	100	0.17	101	0	87 - 110	20
Chlorobenzene	98.2	95.9	µg/L	1	100	<0.0540	98	2	86 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	49.8	49.0	µg/L	1	50.0	100	98	70 - 130
Toluene-d8	50.1	49.5	µg/L	1	50.0	100	99	70 - 130
4-Bromofluorobenzene (4-BFB)	47.4	46.6	µg/L	1	50.0	95	93	70 - 130

Standard (CCV-1) QC Batch: 2624

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	48.0	96	80 - 120	2003-06-29
1,1-Dichloroethene		µg/L	50.0	52.0	104	80 - 120	2003-06-29
Chloroform		µg/L	50.0	51.0	102	80 - 120	2003-06-29
1,2-Dichloropropane		µg/L	50.0	53.0	106	80 - 120	2003-06-29
Toluene		µg/L	50.0	53.0	106	80 - 120	2003-06-29
Chlorobenzene		µg/L	50.0	50.0	100	80 - 120	2003-06-29
Ethylbenzene		µg/L	50.0	53.0	106	80 - 120	2003-06-29

Summary Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: July 7, 2003

Work Order: 3062420

Project Location: Artesia
Project Name: Monthly Offsite

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
11156	RA 4196	water	2003-06-16	00:00	2003-06-18
11157	RA 307	water	2003-06-16	00:00	2003-06-18
11158	RA 4798	water	2003-06-16	00:00	2003-06-18

Sample: 11156 - RA 4196

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00

continued ...

sample 11156 continued ...

Param	Flag	Result	Units	RL
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 11157 - RA 307

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00

continued ...

sample 11157 continued ...

Param	Flag	Result	Units	RL
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00

continued ...

sample 11157 continued ...

Param	Flag	Result	Units	RL
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 11158 - RA 4798

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		4.67	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		1.75	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00

continued ...

sample 11158 continued ...

Param	Flag	Result	Units	RL
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

11156-58

Page 1

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 36624

Company Name: Navajo Phone #:

Address: (Street, City, Zip) Fax #:

Contact Person: T.E Byrd

Invoice to: (If different from above)

Project #: Project Name: Navajo Ref. Pit

Project Location: Artesia Sampler Signature:

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
11156	EA 4' pit	3	VOA	X				X				X		6/6	1400
57	EA 3'	1	1	1				1				1		6/6	1350
58	EA 4' pit	1	1	1				1				1		6/6	1500

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	8260 624							Turn Around Time if different from standard	Hold
															X								
															X								
															X								

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	6/6/03	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
				6/7/03	0952

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 18

CHART COPY

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp °

Log-in Review

Carrier #

REMARKS:

PAH 7/7/03

☐ Check If Special Reporting Limits Are Needed

06/24/2003 TUE 09:30 FAX 505 746 5283 NAVAJO D/O DEPT 002/002

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: July 2, 2003

Work Order: 3060513

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
8982	RA 313	water	2003-06-04	09:45	2003-06-05
8983	RA 1227	water	2003-06-04	14:45	2003-06-05

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 8982 - RA 313

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2174	Date Analyzed:	2003-06-10	Analyzed By:	JG
Prep Batch:	1962	Date Prepared:	2003-06-10	Prepared By:	JG

Parameter	Flag	Result	RL Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		<1.00	µg/L	1	1.00
Acetone		<10.0	µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	1	5.00
Carbon Disulfide		<1.00	µg/L	1	1.00
Acrylonitrile		<1.00	µg/L	1	1.00
2-Butanone (MEK)		<5.00	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5.00
2-Hexanone		<5.00	µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	1	10.0
1,1-Dichloroethene		<1.00	µg/L	1	1.00
Methylene chloride		<5.00	µg/L	1	5.00
MTBE		<1.00	µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1	1.00
1,1-Dichloroethane		<1.00	µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1	1.00
2,2-Dichloropropane		<1.00	µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1.00
Chloroform		<1.00	µg/L	1	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1	1.00
1,1-Dichloropropene		<1.00	µg/L	1	1.00
Benzene		<1.00	µg/L	1	1.00
Carbon Tetrachloride		<1.00	µg/L	1	1.00
1,2-Dichloropropane		<1.00	µg/L	1	1.00
Trichloroethene (TCE)		<1.00	µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1.00
Bromodichloromethane		<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		<1.00	µg/L	1	1.00

continued ...

sample 8982 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.6	µg/L	1	50.0	97	70 - 130
Toluene-d8		49.8	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		47.8	µg/L	1	50.0	96	70 - 130

Sample: 8983 - RA 1227

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2174	Date Analyzed:	2003-06-10	Analyzed By:	JG
Prep Batch:	1962	Date Prepared:	2003-06-10	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00

continued ...

sample 8983 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00

continued ...

sample 8983 continued ...

Parameter	Flag	Result	RL Units	Dilution	RL
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.3	µg/L	1	50.0	99	70 - 130
Toluene-d8		49.6	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		47.0	µg/L	1	50.0	94	70 - 130

Method Blank (1) QC Batch: 2174

Parameter	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1
Dichlorodifluoromethane		<1.00	µg/L	1
Chloromethane (methyl chloride)		<1.00	µg/L	1
Vinyl Chloride		<1.00	µg/L	1
Bromomethane (methyl bromide)		<5.00	µg/L	5
Chloroethane		<1.00	µg/L	1
Trichlorofluoromethane		<1.00	µg/L	1
Acetone		<10.0	µg/L	10
Iodomethane (methyl iodide)		<5.00	µg/L	5
Carbon Disulfide		<1.00	µg/L	1
Acrylonitrile		<1.00	µg/L	1
2-Butanone (MEK)		<5.00	µg/L	5
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5
2-Hexanone		<5.00	µg/L	5
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10
1,1-Dichloroethene		<1.00	µg/L	1
Methylene chloride		<5.00	µg/L	5
MTBE		<1.00	µg/L	1
trans-1,2-Dichloroethene		<1.00	µg/L	1
1,1-Dichloroethane		<1.00	µg/L	1
cis-1,2-Dichloroethene		<1.00	µg/L	1
2,2-Dichloropropane		<1.00	µg/L	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1
Chloroform		<1.00	µg/L	1
1,1,1-Trichloroethane		<1.00	µg/L	1
1,1-Dichloropropene		<1.00	µg/L	1
Benzene		<1.00	µg/L	1
Carbon Tetrachloride		<1.00	µg/L	1
1,2-Dichloropropane		<1.00	µg/L	1
Trichloroethene (TCE)		<1.00	µg/L	1
Dibromomethane (methylene bromide)		<1.00	µg/L	1
Bromodichloromethane		<1.00	µg/L	1
2-Chloroethyl vinyl ether		<5.00	µg/L	5
cis-1,3-Dichloropropene		<1.00	µg/L	1
trans-1,3-Dichloropropene		<1.00	µg/L	1

continued ...

method blank continued ...

Parameter	Flag	Result	Units	RL
Toluene		<1.00	µg/L	1
1,1,2-Trichloroethane		<1.00	µg/L	1
1,3-Dichloropropane		<1.00	µg/L	1
Dibromochloromethane		<1.00	µg/L	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1
Tetrachloroethene (PCE)		<1.00	µg/L	1
Chlorobenzene		<1.00	µg/L	1
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
Bromoform		<1.00	µg/L	1
Styrene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1
2-Chlorotoluene		<1.00	µg/L	1
1,2,3-Trichloropropane		<1.00	µg/L	1
Isopropylbenzene		<1.00	µg/L	1
Bromobenzene		<1.00	µg/L	1
n-Propylbenzene		<1.00	µg/L	1
1,3,5-Trimethylbenzene		<1.00	µg/L	1
tert-Butylbenzene		<1.00	µg/L	1
1,2,4-Trimethylbenzene		<1.00	µg/L	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1
sec-Butylbenzene		<1.00	µg/L	1
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1
p-Isopropyltoluene		<1.00	µg/L	1
4-Chlorotoluene		<1.00	µg/L	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1
n-Butylbenzene		<1.00	µg/L	1
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5
1,2,3-Trichlorobenzene		<5.00	µg/L	5
1,2,4-Trichlorobenzene		<5.00	µg/L	5
Naphthalene		<5.00	µg/L	5
Hexachlorobutadiene		<5.00	µg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.9	µg/L	1	50.0	98	70 - 130
Toluene-d8		49.5	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		48.0	µg/L	1	50.0	96	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 2174

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	97.1	95.6	µg/L	1	100	<0.136	97	2	84 - 124	20
Benzene	100	100	µg/L	1	100	<0.146	100	0	87 - 112	20
Trichloroethene (TCE)	94.5	93.5	µg/L	1	100	<0.117	94	1	81 - 105	20
Toluene	98.4	98.3	µg/L	1	100	<0.0600	98	0	87 - 110	20
Chlorobenzene	100	98.4	µg/L	1	100	<0.0540	100	2	86 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	50.3	46.7	µg/L	1	50.0	101	93	70 - 130
Toluene-d8	48.6	48.6	µg/L	1	50.0	97	97	70 - 130
4-Bromofluorobenzene (4-BFB)	48.4	47.8	µg/L	1	50.0	97	96	70 - 130

Standard (CCV-1) QC Batch: 2174

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	53.0	106	80 - 120	2003-06-10
1,1-Dichloroethene		µg/L	50.0	52.0	104	80 - 120	2003-06-10
Chloroform		µg/L	50.0	52.0	104	80 - 120	2003-06-10
1,2-Dichloropropane		µg/L	50.0	49.0	98	80 - 120	2003-06-10
Toluene		µg/L	50.0	49.0	98	80 - 120	2003-06-10
Chlorobenzene		µg/L	50.0	50.0	100	80 - 120	2003-06-10
Ethylbenzene		µg/L	50.0	51.0	102	80 - 120	2003-06-10

Summary Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: July 2, 2003

Work Order: 3060513

Project Location: Artesia
Project Name: Monthly Offsite

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
8982	RA 313	water	2003-06-04	09:45	2003-06-05
8983	RA 1227	water	2003-06-04	14:45	2003-06-05

Sample: 8982 - RA 313

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00

continued ...

sample 8982 continued ...

Param	Flag	Result	Units	RL
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 8983 - RA 1227

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00

continued ...

sample 8983 continued ...

Param	Flag	Result	Units	RL
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00

continued ...

sample 8983 continued ...

Param	Flag	Result	Units	RL
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

8982-83

Page 1 of 1

6701 Aberdeen Ave., Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

1[illegible] McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 3060513

Company Name: Navajo — Phone #:

Address: (Street, City, Zip) — Fax #:

Contact Person: Jeff Byrd

Invoice to: (If different from above)

Project #: — Project Name: Monthly Offsite

Project Location: Artesia — Sampler Signature: JByrd

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
8982	RA 313	2	VOA	X				X				X		6/4	0945
83	RA 1227	2	VOA	X				X				X		6/4	1445

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	X See List Comm Offsite					Turn Around Time if different from standard	Hold
															X						
															X						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
JByrd	6/4/03	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
				6-5-03	10:42

LAB USE ONLY

Intact (Y) N

Headspace Y (N)

Temp 2° C

Log-in Review MS

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier # FedEx 7903 0922 7851

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: July 2, 2003

Work Order: 3060606

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
9093	RA-314	water	2003-06-05	08:45	2003-06-06
9094	Larue	water	2003-06-05	14:45	2003-06-06

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 9093 - RA-314

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2174	Date Analyzed:	2003-06-10	Analyzed By:	JG
Prep Batch:	1962	Date Prepared:	2003-06-10	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00

continued ...

sample 9093 continued ...

Parameter	Flag	Result	RL Units	Dilution	RL
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00
tert-Butylbenzene		<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1.00
sec-Butylbenzene		<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1	1.00
p-Isopropyltoluene		<1.00	µg/L	1	1.00
4-Chlorotoluene		<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		47.8	µg/L	1	50.0	96	70 - 130
Toluene-d8		49.7	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		47.0	µg/L	1	50.0	94	70 - 130

Sample: 9094 - Larue

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2174	Date Analyzed:	2003-06-10	Analyzed By:	JG
Prep Batch:	1962	Date Prepared:	2003-06-10	Prepared By:	JG

Parameter	Flag	Result	RL Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		<1.00	µg/L	1	1.00
Acetone		<10.0	µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	1	5.00
Carbon Disulfide		<1.00	µg/L	1	1.00
Acrylonitrile		<1.00	µg/L	1	1.00
2-Butanone (MEK)		<5.00	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5.00

continued ...

sample 9094 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00

continued ...

sample 9094 continued ...

Parameter	Flag	Result	Units	Dilution	RL
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.1	µg/L	1	50.0	96	70 - 130
Toluene-d8		50.0	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		46.5	µg/L	1	50.0	93	70 - 130

Method Blank (1) QC Batch: 2174

Parameter	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1
Dichlorodifluoromethane		<1.00	µg/L	1
Chloromethane (methyl chloride)		<1.00	µg/L	1
Vinyl Chloride		<1.00	µg/L	1
Bromomethane (methyl bromide)		<5.00	µg/L	5
Chloroethane		<1.00	µg/L	1
Trichlorofluoromethane		<1.00	µg/L	1
Acetone		<10.0	µg/L	10
Iodomethane (methyl iodide)		<5.00	µg/L	5
Carbon Disulfide		<1.00	µg/L	1
Acrylonitrile		<1.00	µg/L	1
2-Butanone (MEK)		<5.00	µg/L	5
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5
2-Hexanone		<5.00	µg/L	5
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10
1,1-Dichloroethene		<1.00	µg/L	1
Methylene chloride		<5.00	µg/L	5
MTBE		<1.00	µg/L	1
trans-1,2-Dichloroethene		<1.00	µg/L	1
1,1-Dichloroethane		<1.00	µg/L	1
cis-1,2-Dichloroethene		<1.00	µg/L	1
2,2-Dichloropropane		<1.00	µg/L	1
1,2-Dichloroethane (EDC)		<1.00	µg/L	1
Chloroform		<1.00	µg/L	1
1,1,1-Trichloroethane		<1.00	µg/L	1
1,1-Dichloropropene		<1.00	µg/L	1
Benzene		<1.00	µg/L	1
Carbon Tetrachloride		<1.00	µg/L	1
1,2-Dichloropropane		<1.00	µg/L	1
Trichloroethene (TCE)		<1.00	µg/L	1
Dibromomethane (methylene bromide)		<1.00	µg/L	1
Bromodichloromethane		<1.00	µg/L	1
2-Chloroethyl vinyl ether		<5.00	µg/L	5
cis-1,3-Dichloropropene		<1.00	µg/L	1
trans-1,3-Dichloropropene		<1.00	µg/L	1

continued ...

method blank continued ...

Parameter	Flag	Result	Units	RL
Toluene		<1.00	µg/L	1
1,1,2-Trichloroethane		<1.00	µg/L	1
1,3-Dichloropropane		<1.00	µg/L	1
Dibromochloromethane		<1.00	µg/L	1
1,2-Dibromoethane (EDB)		<1.00	µg/L	1
Tetrachloroethene (PCE)		<1.00	µg/L	1
Chlorobenzene		<1.00	µg/L	1
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1
Ethylbenzene		<1.00	µg/L	1
m,p-Xylene		<1.00	µg/L	1
Bromoform		<1.00	µg/L	1
Styrene		<1.00	µg/L	1
o-Xylene		<1.00	µg/L	1
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1
2-Chlorotoluene		<1.00	µg/L	1
1,2,3-Trichloropropane		<1.00	µg/L	1
Isopropylbenzene		<1.00	µg/L	1
Bromobenzene		<1.00	µg/L	1
n-Propylbenzene		<1.00	µg/L	1
1,3,5-Trimethylbenzene		<1.00	µg/L	1
tert-Butylbenzene		<1.00	µg/L	1
1,2,4-Trimethylbenzene		<1.00	µg/L	1
1,4-Dichlorobenzene (para)		<1.00	µg/L	1
sec-Butylbenzene		<1.00	µg/L	1
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1
p-Isopropyltoluene		<1.00	µg/L	1
4-Chlorotoluene		<1.00	µg/L	1
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1
n-Butylbenzene		<1.00	µg/L	1
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5
1,2,3-Trichlorobenzene		<5.00	µg/L	5
1,2,4-Trichlorobenzene		<5.00	µg/L	5
Naphthalene		<5.00	µg/L	5
Hexachlorobutadiene		<5.00	µg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		48.9	µg/L	1	50.0	98	70 - 130
Toluene-d8		49.5	µg/L	1	50.0	99	70 - 130
4-Bromofluorobenzene (4-BFB)		48.0	µg/L	1	50.0	96	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 2174

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	97.1	95.6	µg/L	1	100	<0.136	97	2	84 - 124	20
Benzene	100	100	µg/L	1	100	<0.146	100	0	87 - 112	20
Trichloroethene (TCE)	94.5	93.5	µg/L	1	100	<0.117	94	1	81 - 105	20
Toluene	98.4	98.3	µg/L	1	100	<0.0600	98	0	87 - 110	20
Chlorobenzene	100	98.4	µg/L	1	100	<0.0540	100	2	86 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	50.3	46.7	µg/L	1	50.0	101	93	70 - 130
Toluene-d8	48.6	48.6	µg/L	1	50.0	97	97	70 - 130
4-Bromofluorobenzene (4-BFB)	48.4	47.8	µg/L	1	50.0	97	96	70 - 130

Standard (CCV-1) QC Batch: 2174

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	53.0	106	80 - 120	2003-06-10
1,1-Dichloroethene		µg/L	50.0	52.0	104	80 - 120	2003-06-10
Chloroform		µg/L	50.0	52.0	104	80 - 120	2003-06-10
1,2-Dichloropropane		µg/L	50.0	49.0	98	80 - 120	2003-06-10
Toluene		µg/L	50.0	49.0	98	80 - 120	2003-06-10
Chlorobenzene		µg/L	50.0	50.0	100	80 - 120	2003-06-10
Ethylbenzene		µg/L	50.0	51.0	102	80 - 120	2003-06-10

Summary Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: July 2, 2003

Work Order: 3060606

Project Location: Artesia
Project Name: Monthly Offsite

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
9093	RA-314	water	2003-06-05	08:45	2003-06-06
9094	Larve	water	2003-06-05	14:45	2003-06-06

Sample: 9093 - RA-314

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00

continued ...

sample 9093 continued ...

Param	Flag	Result	Units	RL
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 9094 - Larue

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00

continued ...

sample 9094 continued ...

Param	Flag	Result	Units	RL
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00

continued ...

sample 9094 continued ...

Param	Flag	Result	Units	RL
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

...aceAnalysis, Inc.

...McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 3060604

Phone #:

...et/City, Zip)

Fax #:

...son: Jeff Byrd

...oice to:
(If different from above)

Project #:

Project Name: Monthly Offsite

Project Location: Artesia

Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
9093	RA-314	2	VOA	X				X				X		6/5	845
9094	Larue	2	VOA	X				X				X		6/5	1445

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	(See List Monthly Offsite)				Turn Around Time if different from standard	Hold
														X	X					
														X	X					

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Byrd	6/5/03	1615			

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			Received at Laboratory by:	6603	10:15

LAB USE ONLY

Intact (Y / N)

Headspace (Y / N)

Temp 2° C

Log-in Review

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier # FedEx 7914 0240 0877

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

Summary Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: April 18, 2003

Work Order: 3041004

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
4873	RA 4798	water	2003-04-09	09:30	2003-04-10
4874	RA 4196	water	2003-04-09	09:40	2003-04-10
4875	RA 314	water	2003-04-09	09:45	2003-04-10
4876	RA 313	water	2003-04-09	09:50	2003-04-10

Sample: 4873 - RA 4798

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		4.87	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00

continued ...

sample 4873 continued ...

Param	Flag	Result	Units	RL
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 4874 - RA 4196

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00

continued ...

sample 4874 continued ...

Param	Flag	Result	Units	RL
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00

continued ...

sample 4874 continued ...

Param	Flag	Result	Units	RL
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 4875 - RA 314

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00

continued ...

sample 4875 continued ...

Param	Flag	Result	Units	RL
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 4876 - RA 313

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00

continued ...

sample 4876 continued ...

Param	Flag	Result	Units	RL
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: April 18, 2003

Work Order: 3041004

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
4873	RA 4798	water	2003-04-09	09:30	2003-04-10
4874	RA 4196	water	2003-04-09	09:40	2003-04-10
4875	RA 314	water	2003-04-09	09:45	2003-04-10
4876	RA 313	water	2003-04-09	09:50	2003-04-10

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 4873 - RA 4798

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1060	Date Analyzed:	2003-04-16	Analyzed By:	JG
Prep Batch:	972	Date Prepared:	2003-04-16	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		4.87		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00

continued ...

sample 4873 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.9	µg/L	1	50.0	110	70 - 130
Toluene-d8		50.5	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		42.1	µg/L	1	50.0	84	70 - 130

Sample: 4874 - RA 4196

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1060	Date Analyzed:	2003-04-16	Analyzed By:	JG
Prep Batch:	972	Date Prepared:	2003-04-16	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00

continued ...

sample 4874 continued ...

Parameter	Flag	Result	RL Units	Dilution	RL
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1.00
Chloroform		<1.00	µg/L	1	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1	1.00
1,1-Dichloropropene		<1.00	µg/L	1	1.00
Benzene		<1.00	µg/L	1	1.00
Carbon Tetrachloride		<1.00	µg/L	1	1.00
1,2-Dichloropropane		<1.00	µg/L	1	1.00
Trichloroethene (TCE)		<1.00	µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1.00
Bromodichloromethane		<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		<1.00	µg/L	1	1.00
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00
tert-Butylbenzene		<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1.00
sec-Butylbenzene		<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1	1.00
p-Isopropyltoluene		<1.00	µg/L	1	1.00
4-Chlorotoluene		<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54	µg/L	1	50.0	108	70 - 130
Toluene-d8		50.4	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		41.8	µg/L	1	50.0	84	70 - 130

Sample: 4875 - RA 314

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1060	Date Analyzed:	2003-04-16	Analyzed By:	JG
Prep Batch:	972	Date Prepared:	2003-04-16	Prepared By:	JG

Parameter	Flag	Result	RL Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		<1.00	µg/L	1	1.00
Acetone		<10.0	µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	1	5.00
Carbon Disulfide		<1.00	µg/L	1	1.00
Acrylonitrile		<1.00	µg/L	1	1.00
2-Butanone (MEK)		<5.00	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5.00
2-Hexanone		<5.00	µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	1	10.0
1,1-Dichloroethene		<1.00	µg/L	1	1.00
Methylene chloride		<5.00	µg/L	1	5.00
MTBE		<1.00	µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1	1.00
1,1-Dichloroethane		<1.00	µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1	1.00
2,2-Dichloropropane		<1.00	µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1.00
Chloroform		<1.00	µg/L	1	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1	1.00
1,1-Dichloropropene		<1.00	µg/L	1	1.00
Benzene		<1.00	µg/L	1	1.00
Carbon Tetrachloride		<1.00	µg/L	1	1.00
1,2-Dichloropropane		<1.00	µg/L	1	1.00
Trichloroethene (TCE)		<1.00	µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1.00
Bromodichloromethane		<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		<1.00	µg/L	1	1.00
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00

continued ...

sample 4875 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.7	µg/L	1	50.0	109	70 - 130
Toluene-d8		50.9	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		43	µg/L	1	50.0	86	70 - 130

Sample: 4876 - RA 313

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1060	Date Analyzed:	2003-04-16	Analyzed By:	JG
Prep Batch:	972	Date Prepared:	2003-04-16	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00

continued ...

sample 4876 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<1.00	µg/L	1	1.00
Carbon Tetrachloride		<1.00	µg/L	1	1.00
1,2-Dichloropropane		<1.00	µg/L	1	1.00
Trichloroethene (TCE)		<1.00	µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1.00
Bromodichloromethane		<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		<1.00	µg/L	1	1.00
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00
tert-Butylbenzene		<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1.00
sec-Butylbenzene		<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1	1.00
p-Isopropyltoluene		<1.00	µg/L	1	1.00
4-Chlorotoluene		<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.3	µg/L	1	50.0	107	70 - 130
Toluene-d8		51.1	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		43.3	µg/L	1	50.0	87	70 - 130

Method Blank (1) QC Batch: 1060

Parameter	Flag	Result	Units	MDL
Bromochloromethane		<0.177	µg/L	0.177

continued ...

method blank continued ...

Parameter	Flag	Result	Units	MDL
Dichlorodifluoromethane		<0.208	µg/L	0.208
Chloromethane (methyl chloride)		<0.134	µg/L	0.134
Vinyl Chloride		<0.135	µg/L	0.135
Bromomethane (methyl bromide)		<1.23	µg/L	1.227
Chloroethane		<0.182	µg/L	0.182
Trichlorofluoromethane		<0.0610	µg/L	0.061
Acetone		<5.50	µg/L	5.497
Iodomethane (methyl iodide)		<0.107	µg/L	0.107
Carbon Disulfide		<0.0360	µg/L	0.036
Acrylonitrile		<0.0970	µg/L	0.097
2-Butanone (MEK)		<0.531	µg/L	0.531
4-Methyl-2-pentanone (MIBK)		<0.421	µg/L	0.421
2-Hexanone		<0.168	µg/L	0.168
trans 1,4-Dichloro-2-butene		<0.517	µg/L	0.517
1,1-Dichloroethene		<0.136	µg/L	0.136
Methylene chloride		<0.649	µg/L	0.649
MTBE		<0.123	µg/L	0.123
trans-1,2-Dichloroethene		<0.126	µg/L	0.126
1,1-Dichloroethane		<0.0600	µg/L	0.06
cis-1,2-Dichloroethene		<0.151	µg/L	0.151
2,2-Dichloropropane		<0.180	µg/L	0.18
1,2-Dichloroethane (EDC)		<0.113	µg/L	0.113
Chloroform		<0.141	µg/L	0.141
1,1,1-Trichloroethane		<0.116	µg/L	0.116
1,1-Dichloropropene		<0.0540	µg/L	0.054
Benzene		<0.146	µg/L	0.146
Carbon Tetrachloride		<0.0790	µg/L	0.079
1,2-Dichloropropane		<0.111	µg/L	0.111
Trichloroethene (TCE)		<0.117	µg/L	0.117
Dibromomethane (methylene bromide)		<0.140	µg/L	0.14
Bromodichloromethane		<0.161	µg/L	0.161
2-Chloroethyl vinyl ether		<0.388	µg/L	0.388
cis-1,3-Dichloropropene		<0.0890	µg/L	0.089
trans-1,3-Dichloropropene		<0.0760	µg/L	0.076
Toluene		0.130	µg/L	0.06
1,1,2-Trichloroethane		<0.135	µg/L	0.135
1,3-Dichloropropane		<0.0990	µg/L	0.099
Dibromochloromethane		<0.0900	µg/L	0.09
1,2-Dibromoethane (EDB)		<0.0700	µg/L	0.07
Tetrachloroethene (PCE)		<0.270	µg/L	0.27
Chlorobenzene		<0.0540	µg/L	0.054
1,1,1,2-Tetrachloroethane		<0.0990	µg/L	0.099
Ethylbenzene		<0.0360	µg/L	0.036
m,p-Xylene		<0.0940	µg/L	0.094
Bromoform		<0.0570	µg/L	0.057
Styrene		<0.0910	µg/L	0.091
o-Xylene		<0.0960	µg/L	0.096
1,1,2,2-Tetrachloroethane		<0.125	µg/L	0.125
2-Chlorotoluene		<0.0570	µg/L	0.057
1,2,3-Trichloropropane		<0.458	µg/L	0.458
Isopropylbenzene		<0.0850	µg/L	0.085
Bromobenzene		<0.106	µg/L	0.106
n-Propylbenzene		<0.0590	µg/L	0.059
1,3,5-Trimethylbenzene		<0.0250	µg/L	0.025
tert-Butylbenzene		<0.107	µg/L	0.107
1,2,4-Trimethylbenzene		<0.0990	µg/L	0.099
1,4-Dichlorobenzene (para)		<0.217	µg/L	0.217
sec-Butylbenzene		<0.0430	µg/L	0.043

continued ...

method blank continued ...

Parameter	Flag	Result	Units	MDL
1,3-Dichlorobenzene (meta)		<0.0690	µg/L	0.069
p-Isopropyltoluene		<0.106	µg/L	0.106
4-Chlorotoluene		<0.0940	µg/L	0.094
1,2-Dichlorobenzene (ortho)		<0.100	µg/L	0.1
n-Butylbenzene		<0.0850	µg/L	0.085
1,2-Dibromo-3-chloropropane		<0.690	µg/L	0.69
1,2,3-Trichlorobenzene		<0.135	µg/L	0.135
1,2,4-Trichlorobenzene		<0.155	µg/L	0.155
Naphthalene		<0.594	µg/L	0.594
Hexachlorobutadiene		<0.248	µg/L	0.248

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		61	µg/L	1	50.0	122	70 - 130
Toluene-d8		50	µg/L	1	50.0	100	70 - 130
4-Bromofluorobenzene (4-BFB)		41.2	µg/L	1	50.0	82	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 1060

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	98.0	102	µg/L	1	100	<0.136	98	4	84 - 124	20
Benzene	97.0	100	µg/L	1	100	<0.146	97	3	87 - 112	20
Trichloroethene (TCE)	88.0	90.0	µg/L	1	100	<0.117	88	2	81 - 105	20
Toluene	99.0	101	µg/L	1	100	<0.0600	99	2	87 - 110	20
Chlorobenzene	94.0	96.0	µg/L	1	100	<0.0540	94	2	86 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	47.9	48.9	µg/L	1	50.0	96	98	70 - 130
Toluene-d8	50.0	50.1	µg/L	1	50.0	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)	49.3	49.8	µg/L	1	50.0	99	100	70 - 130

Standard (CCV-1) QC Batch: 1060

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	58.0	116	80 - 120	2003-04-16
1,1-Dichloroethene		µg/L	50.0	53.0	106	80 - 120	2003-04-16
Chloroform		µg/L	50.0	52.0	104	80 - 120	2003-04-16
1,2-Dichloropropane		µg/L	50.0	50.0	100	80 - 120	2003-04-16
Toluene		µg/L	50.0	48.0	96	80 - 120	2003-04-16
Chlorobenzene		µg/L	50.0	47.0	94	80 - 120	2003-04-16
Ethylbenzene		µg/L	50.0	46.0	92	80 - 120	2003-04-16

4873-76

301004

Page ___ of ___

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #: _____

Company Name: Navajo — Phone #:

Address: (Street, City, Zip) — Fax #:

Contact Person: Jeff Byrd

Invoice to: (If different from above)

Project #: — Project Name: Monthly Offsite

Project Location: Artesia — Sampler Signature: JB

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
4873	RA 4798	2	40A	X				X				X		4/9	0930
74	RA 4196	1	1	1				1				1		1	0940
75	RA 314	1	1	1				1				1		1	0945
76	RA 313	1	1	1				1				1		1	0950

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Monthly Offsite (See List)							Turn Around Time if different from standard	Hold
															X								
															X								
															X								
															X								

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Byrd	4/10/03	1600			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Quesada	Date: 4-10-03	Time: 10:05

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

LAB USE ONLY

Intact (Y) N

Headspace Y (N)

Temp 5C °

Log-in Review NM

REMARKS:

4118FIP

☐ Check If Special Reporting Limits Are Needed

Carrier # Fedex 7907 4849 5517

Summary Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: April 24, 2003

Work Order: 3041519

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
5113	RA 307	water	2003-04-11	09:00	2003-04-14
5114	RA 1331	water	2003-04-11	14:20	2003-04-14

Sample: 5113 - RA 307

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00

continued ...

sample 5113 continued ...

Param	Flag	Result	Units	RL
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 5114 - RA 1331

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00

continued ...

sample 5114 continued ...

Param	Flag	Result	Units	RL
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00

continued ...

sample 5114 continued ...

Param	Flag	Result	Units	RL
Hexachlorobutadiene		<5.00	µg/L	5.00

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Darrell Moore
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: April 24, 2003

Work Order: 3041519

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
5113	RA 307	water	2003-04-11	09:00	2003-04-14
5114	RA 1331	water	2003-04-11	14:20	2003-04-14

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 6 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 5113 - RA 307

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1192	Date Analyzed.	2003-04-20	Analyzed By:	JG
Prep Batch:	1068	Date Prepared:	2003-04-20	Prepared By:	JG

Parameter	Flag	Result	RL Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		<1.00	µg/L	1	1.00
Acetone		<10.0	µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	1	5.00
Carbon Disulfide		<1.00	µg/L	1	1.00
Acrylonitrile		<1.00	µg/L	1	1.00
2-Butanone (MEK)		<5.00	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5.00
2-Hexanone		<5.00	µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	1	10.0
1,1-Dichloroethene		<1.00	µg/L	1	1.00
Methylene chloride		<5.00	µg/L	1	5.00
MTBE		<1.00	µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1	1.00
1,1-Dichloroethane		<1.00	µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1	1.00
2,2-Dichloropropane		<1.00	µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1.00
Chloroform		<1.00	µg/L	1	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1	1.00
1,1-Dichloropropene		<1.00	µg/L	1	1.00
Benzene		<1.00	µg/L	1	1.00
Carbon Tetrachloride		<1.00	µg/L	1	1.00
1,2-Dichloropropane		<1.00	µg/L	1	1.00
Trichloroethene (TCE)		<1.00	µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1.00
Bromodichloromethane		<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		<1.00	µg/L	1	1.00
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00

continued ...

sample 5113 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.5	µg/L	1	50.0	107	70 - 130
Toluene-d8		51	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		47.6	µg/L	1	50.0	95	70 - 130

Sample: 5114 - RA 1331

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1192	Date Analyzed:	2003-04-20	Analyzed By:	JG
Prep Batch:	1068	Date Prepared:	2003-04-20	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00

continued ...

sample 5114 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.7	µg/L	1	50.0	107	70 - 130
Toluene-d8		50.9	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		47.4	µg/L	1	50.0	95	70 - 130

Method Blank (1) QC Batch: 1192

Parameter	Flag	Result	Units	MDL
Bromochloromethane		<0.177	µg/L	0.177
Dichlorodifluoromethane		<0.208	µg/L	0.208
Chloromethane (methyl chloride)		0.510	µg/L	0.134
Vinyl Chloride		<0.135	µg/L	0.135
Bromomethane (methyl bromide)		1.85	µg/L	1.227
Chloroethane		<0.182	µg/L	0.182
Trichlorofluoromethane		<0.0610	µg/L	0.061
Acetone		<5.50	µg/L	5.497
Iodomethane (methyl iodide)		2.58	µg/L	0.107
Carbon Disulfide		<0.0360	µg/L	0.036
Acrylonitrile		<0.0970	µg/L	0.097
2-Butanone (MEK)		<0.531	µg/L	0.531
4-Methyl-2-pentanone (MIBK)		<0.421	µg/L	0.421
2-Hexanone		<0.168	µg/L	0.168
trans 1,4-Dichloro-2-butene		<0.517	µg/L	0.517
1,1-Dichloroethene		<0.136	µg/L	0.136
Methylene chloride		0.700	µg/L	0.649
MTBE		<0.123	µg/L	0.123
trans-1,2-Dichloroethene		<0.126	µg/L	0.126
1,1-Dichloroethane		<0.0600	µg/L	0.06
cis-1,2-Dichloroethene		<0.151	µg/L	0.151
2,2-Dichloropropane		<0.180	µg/L	0.18
1,2-Dichloroethane (EDC)		<0.113	µg/L	0.113
Chloroform		<0.141	µg/L	0.141
1,1,1-Trichloroethane		<0.116	µg/L	0.116
1,1-Dichloropropene		<0.0540	µg/L	0.054
Benzene		0.160	µg/L	0.146
Carbon Tetrachloride		<0.0790	µg/L	0.079
1,2-Dichloropropane		<0.111	µg/L	0.111
Trichloroethene (TCE)		0.150	µg/L	0.117
Dibromomethane (methylene bromide)		<0.140	µg/L	0.14
Bromodichloromethane		<0.161	µg/L	0.161
2-Chloroethyl vinyl ether		<0.388	µg/L	0.388
cis-1,3-Dichloropropene		<0.0890	µg/L	0.089
trans-1,3-Dichloropropene		<0.0760	µg/L	0.076
Toluene		0.260	µg/L	0.06
1,1,2-Trichloroethane		<0.135	µg/L	0.135
1,3-Dichloropropane		<0.0990	µg/L	0.099
Dibromochloromethane		<0.0900	µg/L	0.09
1,2-Dibromoethane (EDB)		<0.0700	µg/L	0.07
Tetrachloroethene (PCE)		<0.270	µg/L	0.27
Chlorobenzene		<0.0540	µg/L	0.054
1,1,1,2-Tetrachloroethane		<0.0990	µg/L	0.099
Ethylbenzene		0.0500	µg/L	0.036
m,p-Xylene		0.100	µg/L	0.094
Bromoform		<0.0570	µg/L	0.057
Styrene		<0.0910	µg/L	0.091
o-Xylene		<0.0960	µg/L	0.096
1,1,2,2-Tetrachloroethane		<0.125	µg/L	0.125
2-Chlorotoluene		<0.0570	µg/L	0.057
1,2,3-Trichloropropane		<0.458	µg/L	0.458
Isopropylbenzene		<0.0850	µg/L	0.085
Bromobenzene		<0.106	µg/L	0.106
n-Propylbenzene		0.0700	µg/L	0.059
1,3,5-Trimethylbenzene		0.0600	µg/L	0.025
tert-Butylbenzene		<0.107	µg/L	0.107
1,2,4-Trimethylbenzene		<0.0990	µg/L	0.099
1,4-Dichlorobenzene (para)		<0.217	µg/L	0.217

continued ...

method blank continued ...

Parameter	Flag	Result	Units	MDL
sec-Butylbenzene		0.0700	µg/L	0.043
1,3-Dichlorobenzene (meta)		<0.0690	µg/L	0.069
p-Isopropyltoluene		<0.106	µg/L	0.106
4-Chlorotoluene		<0.0940	µg/L	0.094
1,2-Dichlorobenzene (ortho)		<0.100	µg/L	0.1
n-Butylbenzene		<0.0850	µg/L	0.085
1,2-Dibromo-3-chloropropane		<0.690	µg/L	0.69
1,2,3-Trichlorobenzene		<0.135	µg/L	0.135
1,2,4-Trichlorobenzene		<0.155	µg/L	0.155
Naphthalene		<0.594	µg/L	0.594
Hexachlorobutadiene		<0.248	µg/L	0.248

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.8	µg/L	1	50.0	102	70 - 130
Toluene-d8		50.6	µg/L	1	50.0	101	70 - 130
4-Bromofluorobenzene (4-BFB)		49	µg/L	1	50.0	98	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 1192

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	87.2	89.0	µg/L	1	100	<0.136	87	2	84 - 124	20
Benzene	93.5	94.2	µg/L	1	100	<0.146	94	1	87 - 112	20
Trichloroethene (TCE)	85.6	85.6	µg/L	1	100	<0.117	86	0	81 - 105	20
Toluene	92.0	92.5	µg/L	1	100	<0.0600	92	0	87 - 110	20
Chlorobenzene	91.8	93.2	µg/L	1	100	<0.0540	92	2	86 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	50.1	50.6	µg/L	1	50.0	100	101	70 - 130
Toluene-d8	50.5	51.1	µg/L	1	50.0	101	102	70 - 130
4-Bromofluorobenzene (4-BFB)	48.9	49.0	µg/L	1	50.0	98	98	70 - 130

Standard (CCV-1) QC Batch: 1192

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	49.0	98	80 - 120	2003-04-20
1,1-Dichloroethene		µg/L	50.0	50.0	100	80 - 120	2003-04-20
Chloroform		µg/L	50.0	51.0	102	80 - 120	2003-04-20
1,2-Dichloropropane		µg/L	50.0	52.0	104	80 - 120	2003-04-20
Toluene		µg/L	50.0	50.0	100	80 - 120	2003-04-20
Chlorobenzene		µg/L	50.0	51.0	102	80 - 120	2003-04-20
Ethylbenzene		µg/L	50.0	52.0	104	80 - 120	2003-04-20

5113-14

Page ___ of ___

6701 Aberdeen Av[illegible], Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

[illegible] McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 3041519

Company Name: DAVAGO — Phone #:

Address: (Street, City, Zip) — Fax #:

Contact Person: Darrell Moore

Invoice to: (If different from above)

Project #: — Project Name: MD Offsite

Project Location: — Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
5113	RA 307	2		✓				✓						4/11	9:00
5114	RA 1331	2		✓				✓						4/11	14:20

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
										✓						
										✓						

Relinquished by: — Date: — Time: — Received by: — Date: — Time:

Relinquished by: — Date: — Time: — Received by: — Date: — Time:

Relinquished by: — Date: — Time: — Received by/at Laboratory by: Vicki Chavez — Date: 4-14-03 — Time: 10:40

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

LAB USE ONLY

Intact Y / N

Headspace Y / N

Temp 4 °

Log-in Review

Carrier # FedEx

REMARKS:

AF 4/24/03

☐ Check If Special Reporting Limits Are Needed

Summary Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: May 12, 2003

Work Order: 3050804

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
6933	RA-314	water	2003-05-07	09:00	2003-05-08
6934	RA-1227	water	2003-05-07	09:15	2003-05-08
6935	RA-307	water	2003-05-07	09:30	2003-05-08

Sample: 6933 - RA-314

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00

continued ...

sample 6933 continued ...

Param	Flag	Result	Units	RL
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 6934 - RA-1227

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00

continued ...

sample 6934 continued ...

Param	Flag	Result	Units	RL
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00

continued ...

sample 6934 continued ...

Param	Flag	Result	Units	RL
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 6935 - RA-307

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00

continued ...

sample 6935 continued ...

Param	Flag	Result	Units	RL
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: May 12, 2003

Work Order: 3050804

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
6933	RA-314	water	2003-05-07	09:00	2003-05-08
6934	RA-1227	water	2003-05-07	09:15	2003-05-08
6935	RA-307	water	2003-05-07	09:30	2003-05-08

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 8 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 6933 - RA-314

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1508	Date Analyzed:	2003-05-10	Analyzed By:	JG
Prep Batch:	1348	Date Prepared:	2003-05-10	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride .		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00

continued ...

sample 6933 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.4	µg/L	1	50.0	105	70 - 130
Toluene-d8		53.3	µg/L	1	50.0	107	70 - 130
4-Bromofluorobenzene (4-BFB)		45.2	µg/L	1	50.0	90	70 - 130

Sample: 6934 - RA-1227

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1508	Date Analyzed:	2003-05-10	Analyzed By:	JG
Prep Batch:	1348	Date Prepared:	2003-05-10	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00

continued ...

sample 6934 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00

continued ...

sample 6934 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.2	µg/L	1	50.0	102	70 - 130
Toluene-d8		52.6	µg/L	1	50.0	105	70 - 130
4-Bromofluorobenzene (4-BFB)		45.7	µg/L	1	50.0	91	70 - 130

Sample: 6935 - RA-307

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1508	Date Analyzed:	2003-05-10	Analyzed By:	JG
Prep Batch:	1348	Date Prepared:	2003-05-10	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00

continued ...

sample 6935 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00		µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00		µg/L	1	5.00
Naphthalene		<5.00		µg/L	1	5.00
Hexachlorobutadiene		<5.00		µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.3	µg/L	1	50.0	105	70 - 130
Toluene-d8		52.3	µg/L	1	50.0	105	70 - 130
4-Bromofluorobenzene (4-BFB)		45.5	µg/L	1	50.0	91	70 - 130

Method Blank (1) QC Batch: 1508

Parameter	Flag	Result	Units	MDL
Bromochloromethane		<0.177	µg/L	0.177
Dichlorodifluoromethane		<0.208	µg/L	0.208

continued ...

method blank continued ...

Parameter	Flag	Result	Units	MDL
Chloromethane (methyl chloride)		0.220	µg/L	0.134
Vinyl Chloride		<0.135	µg/L	0.135
Bromomethane (methyl bromide)		1.91	µg/L	1.227
Chloroethane		<0.182	µg/L	0.182
Trichlorofluoromethane		<0.0610	µg/L	0.061
Acetone		<5.50	µg/L	5.497
Iodomethane (methyl iodide)		1.34	µg/L	0.107
Carbon Disulfide		<0.0360	µg/L	0.036
Acrylonitrile		<0.0970	µg/L	0.097
2-Butanone (MEK)		<0.531	µg/L	0.531
4-Methyl-2-pentanone (MIBK)		<0.421	µg/L	0.421
2-Hexanone		<0.168	µg/L	0.168
trans 1,4-Dichloro-2-butene		<0.517	µg/L	0.517
1,1-Dichloroethene		<0.136	µg/L	0.136
Methylene chloride		0.700	µg/L	0.649
MTBE		<0.123	µg/L	0.123
trans-1,2-Dichloroethene		<0.126	µg/L	0.126
1,1-Dichloroethane		<0.0600	µg/L	0.06
cis-1,2-Dichloroethene		<0.151	µg/L	0.151
2,2-Dichloropropane		<0.180	µg/L	0.18
1,2-Dichloroethane (EDC)		<0.113	µg/L	0.113
Chloroform		0.160	µg/L	0.141
1,1,1-Trichloroethane		<0.116	µg/L	0.116
1,1-Dichloropropene		<0.0540	µg/L	0.054
Benzene		<0.146	µg/L	0.146
Carbon Tetrachloride		<0.0790	µg/L	0.079
1,2-Dichloropropane		<0.111	µg/L	0.111
Trichloroethene (TCE)		<0.117	µg/L	0.117
Dibromomethane (methylene bromide)		<0.140	µg/L	0.14
Bromodichloromethane		<0.161	µg/L	0.161
2-Chloroethyl vinyl ether		<0.388	µg/L	0.388
cis-1,3-Dichloropropene		<0.0890	µg/L	0.089
trans-1,3-Dichloropropene		<0.0760	µg/L	0.076
Toluene		0.160	µg/L	0.06
1,1,2-Trichloroethane		<0.135	µg/L	0.135
1,3-Dichloropropane		<0.0990	µg/L	0.099
Dibromochloromethane		<0.0900	µg/L	0.09
1,2-Dibromoethane (EDB)		<0.0700	µg/L	0.07
Tetrachloroethene (PCE)		<0.270	µg/L	0.27
Chlorobenzene		<0.0540	µg/L	0.054
1,1,1,2-Tetrachloroethane		<0.0990	µg/L	0.099
Ethylbenzene		<0.0360	µg/L	0.036
m,p-Xylene		0.100	µg/L	0.094
Bromoform		<0.0570	µg/L	0.057
Styrene		<0.0910	µg/L	0.091
o-Xylene		<0.0960	µg/L	0.096
1,1,2,2-Tetrachloroethane		<0.125	µg/L	0.125
2-Chlorotoluene		<0.0570	µg/L	0.057
1,2,3-Trichloropropane		<0.458	µg/L	0.458
Isopropylbenzene		<0.0850	µg/L	0.085
Bromobenzene		<0.106	µg/L	0.106
n-Propylbenzene		<0.0590	µg/L	0.059
1,3,5-Trimethylbenzene		0.0300	µg/L	0.025

continued ...

method blank continued ...

Parameter	Flag	Result	Units	MDL
tert-Butylbenzene		<0.107	µg/L	0.107
1,2,4-Trimethylbenzene		<0.0990	µg/L	0.099
1,4-Dichlorobenzene (para)		<0.217	µg/L	0.217
sec-Butylbenzene		<0.0430	µg/L	0.043
1,3-Dichlorobenzene (meta)		<0.0690	µg/L	0.069
p-Isopropyltoluene		<0.106	µg/L	0.106
4-Chlorotoluene		<0.0940	µg/L	0.094
1,2-Dichlorobenzene (ortho)		<0.100	µg/L	0.1
n-Butylbenzene		<0.0850	µg/L	0.085
1,2-Dibromo-3-chloropropane		<0.690	µg/L	0.69
1,2,3-Trichlorobenzene		<0.135	µg/L	0.135
1,2,4-Trichlorobenzene		<0.155	µg/L	0.155
Naphthalene		<0.594	µg/L	0.594
Hexachlorobutadiene		<0.248	µg/L	0.248

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.1	µg/L	1	50.0	104	70 - 130
Toluene-d8		53.7	µg/L	1	50.0	107	70 - 130
4-Bromofluorobenzene (4-BFB)		48	µg/L	1	50.0	96	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 1508

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	99.8	101	µg/L	1	100	<0.136	100	1	84 - 124	20
Benzene	98.3	99.2	µg/L	1	100	<0.146	98	1	87 - 112	20
Trichloroethene (TCE)	94.0	94.0	µg/L	1	100	<0.117	94	0	81 - 105	20
Toluene	96.8	98.1	µg/L	1	100	<0.0600	97	1	87 - 110	20
Chlorobenzene	98.5	99.6	µg/L	1	100	<0.0540	98	1	86 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	50.5	51.2	µg/L	1	50.0	101	102	70 - 130
Toluene-d8	52.0	52.8	µg/L	1	50.0	104	106	70 - 130
4-Bromofluorobenzene (4-BFB)	48.8	48.7	µg/L	1	50.0	98	97	70 - 130

Standard (CCV-1) QC Batch: 1508

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	46.0	92	80 - 120	2003-05-10
1,1-Dichloroethene		µg/L	50.0	49.0	98	80 - 120	2003-05-10
Chloroform		µg/L	50.0	46.0	92	80 - 120	2003-05-10
1,2-Dichloropropane		µg/L	50.0	50.0	100	80 - 120	2003-05-10
Toluene		µg/L	50.0	49.0	98	80 - 120	2003-05-10
Chlorobenzene		µg/L	50.0	51.0	102	80 - 120	2003-05-10
Ethylbenzene		µg/L	50.0	52.0	104	80 - 120	2003-05-10

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6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
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1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #: _____

Company Name: Navajo Phone #:

Address: (Street, City, Zip) Fax #:

Contact Person: Jeff Byrd

Invoice to:
(If different from above)

Project #: Project Name: Monthly Off-site

Project Location: Artesia Sampler Signature: JB

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
	RA-314 6933	2	VOA	X				X				X		5/7	900
	RA-122 6934	2	1	1				1				1		1	915
	RA-307 6935	2	1	1				1				1		1	930

ANALYSIS REQUEST	
MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	X
	X
	Use List (Monthly Off-site)
Turn Around Time if different from standard	
Hold	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeff Byrd	5/7/03	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			Vicki Hensley	5-8-03	9:54
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Temp. ___°C
Log-In Review MB

REMARKS:

PAF 9/13/03

☐ Check If Special Reporting Limits Are Needed

Carrier # Fed Ex 7913 7475 4354

Summary Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: April 28, 2003

Work Order: 3042305

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
5760	RA 3553	water	2003-04-11	00:00	2003-04-23

Sample: 5760 - RA 3553

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00

continued ...

sample 5760 continued ...

Param	Flag	Result	Units	RL
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		1.10	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: April 28, 2003

Work Order: 3042305

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
5760	RA 3553	water	2003-04-11	00:00	2003-04-23

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 5760 - RA 3553

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	1239	Date Analyzed:	2003-04-24	Analyzed By:	JG
Prep Batch:	1110	Date Prepared:	2003-04-24	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		<1.00	µg/L	1	1.00
Acetone		<10.0	µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	1	5.00
Carbon Disulfide		<1.00	µg/L	1	1.00
Acrylonitrile		<1.00	µg/L	1	1.00
2-Butanone (MEK)		<5.00	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5.00
2-Hexanone		<5.00	µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	1	10.0
1,1-Dichloroethene		<1.00	µg/L	1	1.00
Methylene chloride		<5.00	µg/L	1	5.00
MTBE		<1.00	µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1	1.00
1,1-Dichloroethane		<1.00	µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1	1.00
2,2-Dichloropropane		<1.00	µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1.00
Chloroform		<1.00	µg/L	1	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1	1.00
1,1-Dichloropropene		<1.00	µg/L	1	1.00
Benzene		<1.00	µg/L	1	1.00
Carbon Tetrachloride		<1.00	µg/L	1	1.00
1,2-Dichloropropane		<1.00	µg/L	1	1.00
Trichloroethene (TCE)		<1.00	µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1.00
Bromodichloromethane		<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		1.10	µg/L	1	1.00
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00

continued ...

sample 5760 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00
tert-Butylbenzene		<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1.00
sec-Butylbenzene		<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1	1.00
p-Isopropyltoluene		<1.00	µg/L	1	1.00
4-Chlorotoluene		<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		57	µg/L	1	50.0	114	70 - 130
Toluene-d8		52.4	µg/L	1	50.0	105	70 - 130
4-Bromofluorobenzene (4-BFB)		43.1	µg/L	1	50.0	86	70 - 130

Method Blank (1) QC Batch: 1239

Parameter	Flag	Result	Units	MDL
Bromochloromethane		<0.177	µg/L	0.177
Dichlorodifluoromethane		0.250	µg/L	0.208
Chloromethane (methyl chloride)		<0.134	µg/L	0.134
Vinyl Chloride		<0.135	µg/L	0.135
Bromomethane (methyl bromide)		<1.23	µg/L	1.227
Chloroethane		<0.182	µg/L	0.182
Trichlorofluoromethane		<0.0610	µg/L	0.061
Acetone		<5.50	µg/L	5.497
Iodomethane (methyl iodide)		<0.107	µg/L	0.107
Carbon Disulfide		<0.0360	µg/L	0.036
Acrylonitrile		<0.0970	µg/L	0.097
2-Butanone (MEK)		<0.531	µg/L	0.531
4-Methyl-2-pentanone (MIBK)		<0.421	µg/L	0.421
2-Hexanone		<0.168	µg/L	0.168
trans 1,4-Dichloro-2-butene		<0.517	µg/L	0.517
1,1-Dichloroethene		<0.136	µg/L	0.136
Methylene chloride		2.15	µg/L	0.649
MTBE		<0.123	µg/L	0.123
trans-1,2-Dichloroethene		<0.126	µg/L	0.126
1,1-Dichloroethane		<0.0600	µg/L	0.06
cis-1,2-Dichloroethene		<0.151	µg/L	0.151
2,2-Dichloropropane		<0.180	µg/L	0.18
1,2-Dichloroethane (EDC)		<0.113	µg/L	0.113
Chloroform		0.200	µg/L	0.141
1,1,1-Trichloroethane		<0.116	µg/L	0.116
1,1-Dichloropropene		<0.0540	µg/L	0.054

continued ...

method blank continued ...

Parameter	Flag	Result	Units	MDL
Benzene		<0.146	µg/L	0.146
Carbon Tetrachloride		<0.0790	µg/L	0.079
1,2-Dichloropropane		<0.111	µg/L	0.111
Trichloroethene (TCE)		0.130	µg/L	0.117
Dibromomethane (methylene bromide)		<0.140	µg/L	0.14
Bromodichloromethane		<0.161	µg/L	0.161
2-Chloroethyl vinyl ether		<0.388	µg/L	0.388
cis-1,3-Dichloropropene		<0.0890	µg/L	0.089
trans-1,3-Dichloropropene		<0.0760	µg/L	0.076
Toluene		0.230	µg/L	0.06
1,1,2-Trichloroethane		<0.135	µg/L	0.135
1,3-Dichloropropane		<0.0990	µg/L	0.099
Dibromochloromethane		<0.0900	µg/L	0.09
1,2-Dibromoethane (EDB)		<0.0700	µg/L	0.07
Tetrachloroethene (PCE)		<0.270	µg/L	0.27
Chlorobenzene		<0.0540	µg/L	0.054
1,1,1,2-Tetrachloroethane		<0.0990	µg/L	0.099
Ethylbenzene		<0.0360	µg/L	0.036
m,p-Xylene		<0.0940	µg/L	0.094
Bromoform		<0.0570	µg/L	0.057
Styrene		<0.0910	µg/L	0.091
o-Xylene		<0.0960	µg/L	0.096
1,1,2,2-Tetrachloroethane		<0.125	µg/L	0.125
2-Chlorotoluene		<0.0570	µg/L	0.057
1,2,3-Trichloropropane		<0.458	µg/L	0.458
Isopropylbenzene		<0.0850	µg/L	0.085
Bromobenzene		<0.106	µg/L	0.106
n-Propylbenzene		<0.0590	µg/L	0.059
1,3,5-Trimethylbenzene		<0.0250	µg/L	0.025
tert-Butylbenzene		<0.107	µg/L	0.107
1,2,4-Trimethylbenzene		<0.0990	µg/L	0.099
1,4-Dichlorobenzene (para)		<0.217	µg/L	0.217
sec-Butylbenzene		<0.0430	µg/L	0.043
1,3-Dichlorobenzene (meta)		<0.0690	µg/L	0.069
p-Isopropyltoluene		<0.106	µg/L	0.106
4-Chlorotoluene		<0.0940	µg/L	0.094
1,2-Dichlorobenzene (ortho)		<0.100	µg/L	0.1
n-Butylbenzene		<0.0850	µg/L	0.085
1,2-Dibromo-3-chloropropane		<0.690	µg/L	0.69
1,2,3-Trichlorobenzene		<0.135	µg/L	0.135
1,2,4-Trichlorobenzene		<0.155	µg/L	0.155
Naphthalene		<0.594	µg/L	0.594
Hexachlorobutadiene		<0.248	µg/L	0.248

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		56.4	µg/L	1	50.0	113	70 - 130
Toluene-d8		51.7	µg/L	1	50.0	103	70 - 130
4-Bromofluorobenzene (4-BFB)		46.2	µg/L	1	50.0	92	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 1239

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	98.6	98.9	µg/L	1	100	<0.136	99	0	84 - 124	20

continued ...

control spikes continued ...

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	98.8	98.7	µg/L	1	100	<0.146	99	0	87 - 112	20
Trichloroethene (TCE)	89.9	89.7	µg/L	1	100	<0.117	90	0	81 - 105	20
Toluene	97.7	97.9	µg/L	1	100	<0.0600	98	0	87 - 110	20
Chlorobenzene	95.5	95.8	µg/L	1	100	<0.0540	96	0	86 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	55.1	55.2	µg/L	1	50.0	110	110	70 - 130
Toluene-d8	51.3	51.7	µg/L	1	50.0	103	103	70 - 130
4-Bromofluorobenzene (4-BFB)	46.0	46.2	µg/L	1	50.0	92	92	70 - 130

Standard (CCV-1) QC Batch: 1239

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	49.0	98	80 - 120	2003-04-24
1,1-Dichloroethene		µg/L	50.0	52.0	104	80 - 120	2003-04-24
Chloroform		µg/L	50.0	54.0	108	80 - 120	2003-04-24
1,2-Dichloropropane		µg/L	50.0	54.0	108	80 - 120	2003-04-24
Toluene		µg/L	50.0	51.0	102	80 - 120	2003-04-24
Chlorobenzene		µg/L	50.0	51.0	102	80 - 120	2003-04-24
Ethylbenzene		µg/L	50.0	51.0	102	80 - 120	2003-04-24

SITE	SCHEDULE	ANALYS.	# SAMPLE WELLS	CONTAINERS	PRESE. .TIVES
ABT-Influent	Monthly	Bod,Cod,Phenols,TKN	3 in	1 L Plastic	None+Ice
		Bod,Cod,Phenols,TKN		1L Glass	H2SO4+Ice
		Bod,Cod,Phenols,TKN		1 500 ml Plastic	H2SO4+Ice
ABT-Outfluent	Monthly	Bod,Cod,Phenols,TKN	3 out	1L Plastic	None+Ice
		Bod,Cod,Phenols,TKN		1L Glass	H2SO4+Ice
				1 500 ml Plastic	H2SO4+Ice
Alkylation Cooling Tower	Monthly	Purgeable Organics (modified 602)		2 VOA's	HCL+Ice
		Purgeable Organics (modified 602)	2in/2out		
Monitor Farm Wells (Mar.-Oct.)	Monthly	BTEX + MTBE (602)	7 wells	2 VOA's	HCL+Ice
Injection Wells (Jan, Apr, July, Oct.)	Quarterly	Aromatic & Halogenate Volatile Hydrocarbon Scan (8260c)	1out	2 VOA's	HCL+Ice
		GC/MS 8270B Inc. 1+2 methylnaphthalene	1out	1L Glass - Amber	None+Ice
		Ca,K,MS,NA,bicarbonate,carbonate,chloride,sulfate(TDS)	1out	1L Plastic	None+Ice
		PH+Cond., Mercury using cold vapor (7470) EPA RCRA cha.	1out		
		Ignitability,corrosivity+reactivity	1out		
		Heavy metals using 1 CAP scan (6010/ICPMS)	1out	500ml Plastic	HNO3+Ice
		Metals-By AA*--Al*,As,Be,Ba,B,Cd,Cr,Co,Cu,Fe,Mn,Pb*, Hg,Ni,Se*,Ag*,V,Zn,U,Mo	1out		
Offsite Sample/Measure Wells	Quarterly	MTBE+VOC (624)	22	2 VOA's	HCL+Ice
Reverse Osmosis Reject Water	Quarterly	Cations/Anions	1	500ml Plastic	HNO3+Ice
		Metals-By AA*--Al*,As,Be,Ba,B,Cd,Cr,Co,Cu,Fe,Mn,Pb*, Hg,Ni,Se*,Ag*,V,Zn,U,Mo	1	1L Plastic	None+Ice
Evaporation Ponds	Semi-Annual	BTEX (8020)	15	2 VOA's	HCL+Ice
		Naphthalene+Monomethyl,Naphthalene on MW-4+MW-6 by 8270	2	1L Glass	None+Ice
		Cations-Na,K,Ca,Mg			
		Metals-By AA*--Al*,As,Be,Ba,B,Cd,Cr,Co,Cu,Fe,Mn,Pb*, Hg,Ni,Se*,Ag*,V,Zn,U,Mo	15	1L Plastic	None+Ice
		Anions (Cl,SO4,CO3,HCO3,F-), Nitrates			
Artesia & Lovington Effluent to POTW	Semi-Annual	O and G, NH3, Cr	1	1L Glass	HCL or H2SO4+Ice
		O and G, NH3, Cr		250 ml Plastic	H2SO4+Ice
			1	250 ml Plastic	HNO3+Ice
Reverse Osmosis Reject Water	Annual	VOC, EDB (624)	1	2 VOA's	HCL+Ice
		Phenol, NO3, Cod, Ammonia	1	1L Glass	H2SO4+Ice
		BNA(625)	1	500ml Plastic	H2SO4+Ice
			2	1L Glass	None+Ice
		Organo Pest/Chlor/Tox/PCB (608)	1	1L Glass	None+Ice
		Cations-Na,K,Ca,Mg	2	500ml Plastic	H2SO4+Ice
		Metals-By AA*-Al*,As,Be,Ba,B,Cd,Cr,Co,	1	1L Glass	None+Ice
		Cu, Fe, Mn, Pb*, Hg,Ni,Se*,Ag*,V,Zn,U,Mo	4	1L Plastic	None+Ice
		Anions-(Cl,SO4,CO3,HCO3,F-)	2	500ml Plastic	HNO3+Ice
		Radium (226+228)	1	1L Plastic	HNO3+Ice
		Cyanide	1	1L Plastic	NaOH+Ice
		Bod, TSS, Ph, TDS, Ec, Chlorine		1L Plastic	None+Ice
		Fecal Coliform		125 ml Bottle	
Offsite Wells	Annual	PAH	12	1L Glass	None+Ice
		Cations-Na,K,Ca,Mg	12	1L Plastic	None+Ice
		Anions-(Cl,SO4,CO3,HCO3,F-)	12	500ml Plastic	HNO3+Ice
		Metals-By AA*-Al*,As,Be,Ba,B,Cd,Cr,Co,Cu,Fe,Mn,Pb*, Hg,Ni,Se*,Ag*,V,Zn,U,Mo			

CAP/sa mples to-01(mm)

10/19/01 FRI 12:54 FAX 7465421 NAVAJO REFINING-ENGRINGR 002

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Page ___ of ___

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 3042305

Company Name: Navajo Phone #:

Address: (Street, City, Zip) Fax #:

Contact Person: Jeff Byrd

Invoice to: (If different from above)

Project #: Project Name: Monthly Offsite

Project Location: Artesia Sampler Signature:

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	See List Monthly Offsite						Turn Around Time if different from standard	Hold
	RA 307	2	vol	X				X				X		4/1	0900	no sample														X							
	RA 1227	1	"	"				"				✓		"	1420	no sample														X							
5760	RA 3553	2	"	✓				✓				✓																		✓							

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	4/11/03	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: [signature]	Date: 4-12-03	Time: 9:58

LAB USE ONLY

Intact (Y) / N

Headspace Y / N

Temp 3° °

Log-in Review [signature]

REMARKS:

4/29 FIP

☐ Check If Special Reporting Limits Are Needed

Carrier # FedEx 7913 5974 5042

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

Summary Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: June 6, 2003

Work Order: 3052304

Project Location: Artesia
Project Name: Monthly Offsite

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
8120	RA-4196	water	2003-05-22	08:00	2003-05-23
8121	RA-4798	water	2003-05-22	08:10	2003-05-23

Sample: 8120 - RA-4196

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00

continued ...

sample 8120 continued ...

Param	Flag	Result	Units	RL
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

Sample: 8121 - RA-4798

Param	Flag	Result	Units	RL
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00

continued ...

sample 8121 continued ...

Param	Flag	Result	Units	RL
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		4.49	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		1.77	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Byrd
Navajo Refining
501 E. Main
Artesia, NM 88210

Report Date: June 6, 2003

Work Order: 3052304

Project Location: Artesia
Project Name: Monthly Offsite
Project Number: Monthly Offsite

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
8120	RA-4196	water	2003-05-22	08:00	2003-05-23
8121	RA-4798	water	2003-05-22	08:10	2003-05-23

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 7 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 8120 - RA-4196

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2038	Date Analyzed:	2003-06-03	Analyzed By:	JG
Prep Batch:	1845	Date Prepared:	2003-06-03	Prepared By:	JG

Parameter	Flag	Result	RL	Units	Dilution	RL
Bromochloromethane		<1.00		µg/L	1	1.00
Dichlorodifluoromethane		<1.00		µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00		µg/L	1	1.00
Vinyl Chloride		<1.00		µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00		µg/L	1	5.00
Chloroethane		<1.00		µg/L	1	1.00
Trichlorofluoromethane		<1.00		µg/L	1	1.00
Acetone		<10.0		µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00		µg/L	1	5.00
Carbon Disulfide		<1.00		µg/L	1	1.00
Acrylonitrile		<1.00		µg/L	1	1.00
2-Butanone (MEK)		<5.00		µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00		µg/L	1	5.00
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		<1.00		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00

continued ...

sample 8120 continued ...

Parameter	Flag	Result	RL Units	Dilution	RL
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00
tert-Butylbenzene		<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1.00
sec-Butylbenzene		<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1	1.00
p-Isopropyltoluene		<1.00	µg/L	1	1.00
4-Chlorotoluene		<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.9	µg/L	1	50.0	106	70 - 130
Toluene-d8		51.0	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		46.6	µg/L	1	50.0	93	70 - 130

Sample: 8121 - RA-4798

Analysis:	Volatiles	Analytical Method:	E 624	Prep Method:	N/A
QC Batch:	2038	Date Analyzed:	2003-06-03	Analyzed By:	JG
Prep Batch:	1845	Date Prepared:	2003-06-03	Prepared By:	JG

Parameter	Flag	Result	RL Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		<1.00	µg/L	1	1.00
Acetone		<10.0	µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	1	5.00
Carbon Disulfide		<1.00	µg/L	1	1.00
Acrylonitrile		<1.00	µg/L	1	1.00
2-Butanone (MEK)		<5.00	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5.00

continued ...

sample 8121 continued ...

Parameter	Flag	Result	RL	Units	Dilution	RL
2-Hexanone		<5.00		µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0		µg/L	1	10.0
1,1-Dichloroethene		<1.00		µg/L	1	1.00
Methylene chloride		<5.00		µg/L	1	5.00
MTBE		4.49		µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00		µg/L	1	1.00
1,1-Dichloroethane		<1.00		µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00		µg/L	1	1.00
2,2-Dichloropropane		<1.00		µg/L	1	1.00
1,2-Dichloroethane (EDC)		1.77		µg/L	1	1.00
Chloroform		<1.00		µg/L	1	1.00
1,1,1-Trichloroethane		<1.00		µg/L	1	1.00
1,1-Dichloropropene		<1.00		µg/L	1	1.00
Benzene		<1.00		µg/L	1	1.00
Carbon Tetrachloride		<1.00		µg/L	1	1.00
1,2-Dichloropropane		<1.00		µg/L	1	1.00
Trichloroethene (TCE)		<1.00		µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00		µg/L	1	1.00
Bromodichloromethane		<1.00		µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00		µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00		µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00		µg/L	1	1.00
Toluene		<1.00		µg/L	1	1.00
1,1,2-Trichloroethane		<1.00		µg/L	1	1.00
1,3-Dichloropropane		<1.00		µg/L	1	1.00
Dibromochloromethane		<1.00		µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00		µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00		µg/L	1	1.00
Chlorobenzene		<1.00		µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00		µg/L	1	1.00
Ethylbenzene		<1.00		µg/L	1	1.00
m,p-Xylene		<1.00		µg/L	1	1.00
Bromoform		<1.00		µg/L	1	1.00
Styrene		<1.00		µg/L	1	1.00
o-Xylene		<1.00		µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00		µg/L	1	1.00
2-Chlorotoluene		<1.00		µg/L	1	1.00
1,2,3-Trichloropropane		<1.00		µg/L	1	1.00
Isopropylbenzene		<1.00		µg/L	1	1.00
Bromobenzene		<1.00		µg/L	1	1.00
n-Propylbenzene		<1.00		µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00		µg/L	1	1.00
tert-Butylbenzene		<1.00		µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00		µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00		µg/L	1	1.00
sec-Butylbenzene		<1.00		µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00		µg/L	1	1.00
p-Isopropyltoluene		<1.00		µg/L	1	1.00
4-Chlorotoluene		<1.00		µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00		µg/L	1	1.00
n-Butylbenzene		<1.00		µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00		µg/L	1	5.00

continued ...

sample 8121 continued ...

Parameter	Flag	Result	RL Units	Dilution	RL
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		54.5	µg/L	1	50.0	109	70 - 130
Toluene-d8		52.1	µg/L	1	50.0	104	70 - 130
4-Bromofluorobenzene (4-BFB)		46.0	µg/L	1	50.0	92	70 - 130

Method Blank (1) QC Batch: 2038

Parameter	Flag	Result	Units	RL
Bromochloromethane		¡1.00	µg/L	1
Dichlorodifluoromethane		¡1.00	µg/L	1
Chloromethane (methyl chloride)		¡1.00	µg/L	1
Vinyl Chloride		¡1.00	µg/L	1
Bromomethane (methyl bromide)		¡5.00	µg/L	5
Chloroethane		¡1.00	µg/L	1
Trichlorofluoromethane		¡1.00	µg/L	1
Acetone		¡10.0	µg/L	10
Iodomethane (methyl iodide)		¡5.00	µg/L	5
Carbon Disulfide		¡1.00	µg/L	1
Acrylonitrile		¡1.00	µg/L	1
2-Butanone (MEK)		¡5.00	µg/L	5
4-Methyl-2-pentanone (MIBK)		¡5.00	µg/L	5
2-Hexanone		¡5.00	µg/L	5
trans 1,4-Dichloro-2-butene		¡10.0	µg/L	10
1,1-Dichloroethene		¡1.00	µg/L	1
Methylene chloride		¡5.00	µg/L	5
MTBE		¡1.00	µg/L	1
trans-1,2-Dichloroethene		¡1.00	µg/L	1
1,1-Dichloroethane		¡1.00	µg/L	1
cis-1,2-Dichloroethene		¡1.00	µg/L	1
2,2-Dichloropropane		¡1.00	µg/L	1
1,2-Dichloroethane (EDC)		¡1.00	µg/L	1
Chloroform		¡1.00	µg/L	1
1,1,1-Trichloroethane		¡1.00	µg/L	1
1,1-Dichloropropene		¡1.00	µg/L	1
Benzene		¡1.00	µg/L	1
Carbon Tetrachloride		¡1.00	µg/L	1
1,2-Dichloropropane		¡1.00	µg/L	1
Trichloroethene (TCE)		¡1.00	µg/L	1
Dibromomethane (methylene bromide)		¡1.00	µg/L	1
Bromodichloromethane		¡1.00	µg/L	1
2-Chloroethyl vinyl ether		¡5.00	µg/L	5
cis-1,3-Dichloropropene		¡1.00	µg/L	1
trans-1,3-Dichloropropene		¡1.00	µg/L	1

continued ...

method blank continued ...

Parameter	Flag	Result	Units	RL
Toluene		¡1.00	µg/L	1
1,1,2-Trichloroethane		¡1.00	µg/L	1
1,3-Dichloropropane		¡1.00	µg/L	1
Dibromochloromethane		¡1.00	µg/L	1
1,2-Dibromoethane (EDB)		¡1.00	µg/L	1
Tetrachloroethene (PCE)		¡1.00	µg/L	1
Chlorobenzene		¡1.00	µg/L	1
1,1,1,2-Tetrachloroethane		¡1.00	µg/L	1
Ethylbenzene		¡1.00	µg/L	1
m,p-Xylene		¡1.00	µg/L	1
Bromoform		¡1.00	µg/L	1
Styrene		¡1.00	µg/L	1
o-Xylene		¡1.00	µg/L	1
1,1,2,2-Tetrachloroethane		¡1.00	µg/L	1
2-Chlorotoluene		¡1.00	µg/L	1
1,2,3-Trichloropropane		¡1.00	µg/L	1
Isopropylbenzene		¡1.00	µg/L	1
Bromobenzene		¡1.00	µg/L	1
n-Propylbenzene		¡1.00	µg/L	1
1,3,5-Trimethylbenzene		¡1.00	µg/L	1
tert-Butylbenzene		¡1.00	µg/L	1
1,2,4-Trimethylbenzene		¡1.00	µg/L	1
1,4-Dichlorobenzene (para)		¡1.00	µg/L	1
sec-Butylbenzene		¡1.00	µg/L	1
1,3-Dichlorobenzene (meta)		¡1.00	µg/L	1
p-Isopropyltoluene		¡1.00	µg/L	1
4-Chlorotoluene		¡1.00	µg/L	1
1,2-Dichlorobenzene (ortho)		¡1.00	µg/L	1
n-Butylbenzene		¡1.00	µg/L	1
1,2-Dibromo-3-chloropropane		¡5.00	µg/L	5
1,2,3-Trichlorobenzene		¡5.00	µg/L	5
1,2,4-Trichlorobenzene		¡5.00	µg/L	5
Naphthalene		¡5.00	µg/L	5
Hexachlorobutadiene		¡5.00	µg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.0	µg/L	1	50.0	106	70 - 130
Toluene-d8		50.8	µg/L	1	50.0	102	70 - 130
4-Bromofluorobenzene (4-BFB)		46.8	µg/L	1	50.0	94	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 2038

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
1,1-Dichloroethene	102	105	µg/L	1	100	<0.136	102	3	84 - 124	20
Benzene	97.8	98.1	µg/L	1	100	<0.146	98	0	87 - 112	20
Trichloroethene (TCE)	97.2	96.8	µg/L	1	100	0.16	97	0	81 - 105	20
Toluene	96.4	96.7	µg/L	1	100	0.2	96	0	87 - 110	20
Chlorobenzene	97.2	97.8	µg/L	1	100	<0.0540	97	1	86 - 117	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	50.6	51.5	µg/L	1	50.0	101	103	70 - 130
Toluene-d8	50.0	50.4	µg/L	1	50.0	100	101	70 - 130
4-Bromofluorobenzene (4-BFB)	46.9	47.6	µg/L	1	50.0	94	95	70 - 130

Standard (CCV-1) QC Batch: 2038

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	48.0	96	80 - 120	2003-06-03
1,1-Dichloroethene		µg/L	50.0	47.0	94	80 - 120	2003-06-03
Chloroform		µg/L	50.0	47.0	94	80 - 120	2003-06-03
1,2-Dichloropropane		µg/L	50.0	46.0	92	80 - 120	2003-06-03
Toluene		µg/L	50.0	46.0	92	80 - 120	2003-06-03
Chlorobenzene		µg/L	50.0	46.0	92	80 - 120	2003-06-03
Ethylbenzene		µg/L	50.0	46.0	92	80 - 120	2003-06-03

8120-21

Page 1 of 1

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TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 30523304

Company Name: Navajo
Address: (Street, City, Zip)
Phone #:
Fax #:
Contact Person: Jeff Byrd
Invoice to: (If different from above)
Project #:
Project Name: Monthly Offsite
Project Location: Artesia
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
8120	RA-4196	2	VOA	X				X				X		5/22	0900
8121	RA-4798	1	1	1				1				1		1	0810

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH						Turn Around Time if different from standard	Hold
														X	See List						
														X							

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	5/22/03	1615			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Quas	Date: 5-23-03	Time: 937

LAB USE ONLY
Intact (Y) N
Headspace Y / N
Temp 1.0 °C
Log-in Review MM

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier # FedEx 7913-8960-7729

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

Project	BTEX	MTBE	VOAs	Semi-VOAs	WQCC Metals	Chemistry
Ponds	X	X		X	X	X[2]
NCL/TEL			X	X	X	X[1]
Semi-annual	X	X				
annual			X	X	X	X[1]
Monthly	X	X	X	X	X	X[2]

[1] General Chemistry including Major Anions and Cations, Nitrate/nitrite, DO, and ORP.
[2] General Chemistry including Major Anions and Cations.

Semi Annual

MW-52
KWB-2R
KWB-13
KWB-9
KWB-3A
KWB-11A
KWB-7
NP-1
NP-2
KWB-45
MW-18

Annual[1]

KWB-1A	MW-18	RW-5	RW-15
KWB-1C	MW-28	RW-6	RW-16
KWB-2R	MW-29	RW-7	RW-17
KWB-3A	MW-45	RW-8	RW-18
KWB-4	MW-48	RW-9	
KWB-5	MW-49	RW-10	
KWB-6	RW-1	RW-11	
KWB-8	RW-2	RW-12	
KWB-9	RW-3	RW-13	
KWB-10	RW-4	RW-14	

[1] Excluding any wells containing product

Monthly Offsite

RA-313
RA-314
RA-3723
RA-3156
RA-3353
RA-1331
RA-4196
RA-4798

Ponds

NCL/TEL

NCL-32	MW-55
NCL-33	
NCL-34	
NCL-44	
NCL-49	
TEL-1	
TEL-2	
TEL-3	
TEL-4	
MW-53	
MW-54A	