

**QUARTERLY**

**INJECTION**

**REPORTS**



# REFINING COMPANY, LLC

RECEIVED

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2008 NOV 3 PM 1 34

October 30, 2008

Mr. Carl Chavez  
NM Oil Conservation Division  
Environmental Bureau  
1220 S. St. Francis  
Santa Fe, NM 87505-5472

**RE: 2008 Third Quarterly Injection Report for Wells WDW-1, WDW-2 and WDW-3  
Navajo Refining Company, L.L.C.**

Dear Mr. Chavez,

Enclosed, please find the sampling results for the third quarter of 2008 from the injected fluids and a spread sheet showing various volumes and pressures as requested in your October 6, 1999 letter. You will notice that the annular pressure on wells WDW-1 and WDW-2 continues to vary unpredictably. This is due to the wide range of temperatures we are seeing at the wells. A better gauge to determine if the tubing is leaking is a volume measurement of the fluid in the annular space via the graduated tanks located at the well head. We track this fluid level and have found it to be dropping at a very slow rate in WDW-3. We are closely monitoring this well and have preformed a Mechanical Integrity Test (MIT) which the well passed. Our consultants have stated that the loss rate is so small that we would not be able to find the leak. WDW-3 has an electronic gauging system that continually reports the fluid level as a percentage of tank capacity. The volumes for these three tanks are reported in the attached table.

This report covers the period from July 1, 2008 to September 30, 2008. We have disposed a total of 39,805,630 barrels of fluid into the three wells as of June 30, 2008. The volume per well is:

- 26,054,288 barrels into WDW-1
- 12,609,107 barrels into WDW-2
- 1,142,235 barrels into WDW-3

This report is signed and certified in accordance with WQCC section 5101.G. If there are any questions, please call me at 575-748-3311.

Respectfully,  
NAVAJO REFINING COMPANY

Aaron Strange  
Sr. Environmental Technician

Encl.

ecc: DGM  
File; REF:ART: 4 A 02 D

2008 THIRD QUARTER MONTHLY INJECTION PRESSURES, RATES, AND VOLUMES

Navajo Refining Company

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maximum Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	TOTAL CUMMULATIVE Volume (barrels)
<b>WDW-1</b>													Previous Quarter	25,550,339
Jul-08	294	327	236	173	183	159	161	240	65	5,934	6,289	5,456	183,962	25,734,301
Aug-08	317	334	267	173	178	162	65	106	35	5,934	6,115	5,540	183,953	25,918,254
Sep-08	261	333	135	132	178	72	57	81	33	4,534	6,118	2,458	136,034	26,054,288
<b>WDW-2</b>													Previous Quarter	12,357,611
Jul-08	343	382	287	72	89	39	498	500	457	2,465	3,065	1,327	76,413	12,434,024
Aug-08	364	390	192	79	99	66	273	500	135	2,718	3,403	2,278	81,544	12,515,568
Sep-08	276	396	123	95	134	67	246	453	57	3,254	4,582	2,313	93,539	12,609,107
<b>WDW-3</b>													Previous Quarter	1,064,766
Jul-08	565	623	450	174	195	132	727	894	604	5,951	6,698	4,538	184,473	727,836
Aug-08	631	688	418	198	218	178	609	931	524	6,772	7,487	6,092	209,922	937,758
Sep-08	647	706	219	199	214	158	603	685	547	6,816	7,334	5,410	204,478	1,142,235
													<b>Total Injected fluids:</b>	39,805,630

2008 THIRD QUARTER WEEKLY WHAMS LEVEL TABLE

	7/2/08	7/10/08	7/18/08	7/22/08	7/30/08	8/7/08	8/14/08	8/21/08	8/27/08	9/5/08	9/10/08	9/17/08	9/25/08
WDW -1 <sup>1</sup>	195	190	190	190	190	180	180	180	180	180	180	170	170
WDW-2 <sup>1</sup>	150	140	175	175	175	175	175	170	160	145	140	135	135
WDW-3 <sup>2</sup>	52%	50%	49%	48%	46%	39%	34%	30%	26%	20%	18%	17%	13%

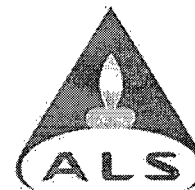
<sup>1</sup> Graduated tank gauged weekly in the field.

<sup>2</sup> Reading measured directly, and reported as percentage capacity.

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# ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



## Environmental Division

03-Sep-08

Aaron Strange  
Navajo Refining Company  
PO Box 159  
Artesia, NM 88211

Tel: (575) 746-5468  
Fax: (505) 746-5421

Re: Injection Well Quarterly

Work Order : 0808447

Dear Aaron,

ALS Laboratory Group received 2 samples on 8/20/2008 08:55 AM for the analyses presented in the following report.

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

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

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,

Electronically approved by: Glenda H. Ramos

Jaylynn F Thibault



Certificate No: T104704231-08-TX

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### ALS Group USA, Corp.

Part of the **ALS Laboratory Group**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338

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[www.alsglobal.com](http://www.alsglobal.com) [www.elabi.com](http://www.elabi.com)

A Campbell Brothers Limited Company

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**ALS Laboratory Group**

Date: 03-Sep-08

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**Client:** Navajo Refining Company  
**Project:** Injection Well Quarterly  
**Work Order:** 0808447

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0808447-01	Injection Well	Water		8/19/2008 11:30	8/20/2008 08:55	<input type="checkbox"/>

## ALS Laboratory Group

Date: 03-Sep-08

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**Client:** Navajo Refining Company  
**Project:** Injection Well Quarterly  
**Work Order:** 0808447

### Case Narrative

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pH sample (Injection Well) holding time had expired prior to request for analysis.

Batch 31577 Metals (sample 0808511-02MS/MSD) unrelated sample.

Batch R67271 Volatiles (sample 0808627-06MS/MSD) unrelated sample.

**ALS Laboratory Group**

Date: 03-Sep-08

Client: Navajo Refining Company  
 Project: Injection Well Quarterly  
 Sample ID: Injection Well  
 Collection Date: 8/19/2008 11:30 AM

Work Order: 0808447  
 Lab ID: 0808447-01  
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ICP METALS, TOTAL - SW6020A</b>			<b>SW6020</b>		Prep Date: 8/25/2008	Analyst: ALR
Aluminum	0.447		0.0100	mg/L	1	8/25/2008 09:21 PM
Arsenic	0.116		0.00500	mg/L	1	9/2/2008 03:31 PM
Barium	0.0187		0.00500	mg/L	1	8/25/2008 09:21 PM
Beryllium	ND		0.00200	mg/L	1	8/25/2008 09:21 PM
Boron	0.163		0.0200	mg/L	1	8/25/2008 09:21 PM
Cadmium	ND		0.00200	mg/L	1	8/25/2008 09:21 PM
Calcium	68.7		0.500	mg/L	1	8/25/2008 09:21 PM
Chromium	ND		0.00500	mg/L	1	9/2/2008 03:31 PM
Cobalt	ND		0.00500	mg/L	1	9/2/2008 03:31 PM
Copper	ND		0.00500	mg/L	1	8/25/2008 09:21 PM
Iron	0.240		0.200	mg/L	1	8/25/2008 09:21 PM
Lead	ND		0.00500	mg/L	1	8/25/2008 09:21 PM
Magnesium	27.1		0.200	mg/L	1	8/25/2008 09:21 PM
Manganese	0.0478		0.00500	mg/L	1	9/2/2008 03:31 PM
Molybdenum	0.0577		0.00500	mg/L	1	8/25/2008 09:21 PM
Nickel	0.00528		0.00500	mg/L	1	8/25/2008 09:21 PM
Potassium	13.0		0.200	mg/L	1	8/25/2008 09:21 PM
Selenium	0.339		0.00500	mg/L	1	9/2/2008 03:31 PM
Silver	ND		0.00500	mg/L	1	8/25/2008 09:21 PM
Sodium	985		20.0	mg/L	100	8/26/2008 04:20 PM
Vanadium	ND		0.00500	mg/L	1	9/2/2008 03:31 PM
Zinc	0.0369		0.00500	mg/L	1	8/25/2008 09:21 PM
<b>SEMIVOLATILE ORGANICS BY GC/MS</b>			<b>SW8270</b>		Prep Date: 8/22/2008	Analyst: ACN
1,2,4-Trichlorobenzene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
2-Methylnaphthalene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
2-Methylphenol	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
2-Nitroaniline	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
2-Nitrophenol	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
3&4-Methylphenol	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
3-Nitroaniline	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
4-Nitroaniline	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
4-Nitrophenol	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Acenaphthene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Acenaphthylene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Aniline	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Anthracene	ND		0.0050	mg/L	1	8/26/2008 09:58 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  
 a - Not accredited

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  
 n - Not offered for accreditation



**ALS Laboratory Group**

Date: 03-Sep-08

**Client:** Navajo Refining Company  
**Project:** Injection Well Quarterly  
**Sample ID:** Injection Well  
**Collection Date:** 8/19/2008 11:30 AM

**Work Order:** 0808447  
**Lab ID:** 0808447-01  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benz(a)anthracene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Benzidine	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Hexachloroethane	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Indeno(1,2,3-cd)pyrene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Isophorone	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
N-Nitrosodi-n-propylamine	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
N-Nitrosodimethylamine	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
N-Nitrosodiphenylamine	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Naphthalene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Nitrobenzene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Pentachlorophenol	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Phenanthrene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Phenol	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Pyrene	ND		0.0050	mg/L	1	8/26/2008 09:58 PM
Surr: 2,4,6-Tribromophenol	80.5		42-124	%REC	1	8/26/2008 09:58 PM
Surr: 2-Fluorobiphenyl	56.9		48-120	%REC	1	8/26/2008 09:58 PM
Surr: 2-Fluorophenol	43.8		20-120	%REC	1	8/26/2008 09:58 PM
Surr: 4-Terphenyl-d14	75.2		51-135	%REC	1	8/26/2008 09:58 PM
Surr: Nitrobenzene-d5	50.8		41-120	%REC	1	8/26/2008 09:58 PM
Surr: Phenol-d6	50.8		20-120	%REC	1	8/26/2008 09:58 PM
<b>VOLATILES BY GC/MS</b>			<b>SW8260</b>		<b>Analyst: PC</b>	
1,1,1-Trichloroethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
1,1,2,2-Tetrachloroethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
1,1,2-Trichloroethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
1,1-Dichloroethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
1,1-Dichloroethene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
1,2-Dichloroethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
2-Butanone	ND		0.10	mg/L	10	8/28/2008 03:56 PM
2-Chloroethyl vinyl ether	ND		0.10	mg/L	10	8/28/2008 03:56 PM
2-Hexanone	ND		0.10	mg/L	10	8/28/2008 03:56 PM
4-Methyl-2-pentanone	ND		0.10	mg/L	10	8/28/2008 03:56 PM
Acetone	ND		0.10	mg/L	10	8/28/2008 03:56 PM
Benzene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Bromodichloromethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Bromoform	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Bromomethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Carbon disulfide	ND		0.10	mg/L	10	8/28/2008 03:56 PM
Carbon tetrachloride	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Chlorobenzene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Chloroethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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 P - Dual Column results percent difference > 40%  
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 n - Not offered for accreditation

**ALS Laboratory Group**

Date: 03-Sep-08

**Client:** Navajo Refining Company  
**Project:** Injection Well Quarterly  
**Sample ID:** Injection Well  
**Collection Date:** 8/19/2008 11:30 AM

**Work Order:** 0808447  
**Lab ID:** 0808447-01  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chloroform	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Chloromethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
cis-1,3-Dichloropropene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Dibromochloromethane	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Ethylbenzene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
m,p-Xylene	ND		0.10	mg/L	10	8/28/2008 03:56 PM
Methylene chloride	ND		0.10	mg/L	10	8/28/2008 03:56 PM
Styrene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Tetrachloroethene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Toluene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
trans-1,3-Dichloropropene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Trichloroethene	ND		0.050	mg/L	10	8/28/2008 03:56 PM
Vinyl acetate	ND		0.10	mg/L	10	8/28/2008 03:56 PM
Vinyl chloride	ND		0.020	mg/L	10	8/28/2008 03:56 PM
Xylenes, Total	ND		0.15	mg/L	10	8/28/2008 03:56 PM
<i>Surr: 1,2-Dichloroethane-d4</i>	106		70-125	%REC	10	8/28/2008 03:56 PM
<i>Surr: 4-Bromofluorobenzene</i>	93.3		72-125	%REC	10	8/28/2008 03:56 PM
<i>Surr: Dibromofluoromethane</i>	105		71-125	%REC	10	8/28/2008 03:56 PM
<i>Surr: Toluene-d8</i>	102		75-125	%REC	10	8/28/2008 03:56 PM
<b>CYANIDE, REACTIVE</b>			<b>SW-846</b>			Analyst: <b>HN</b>
Reactive Cyanide	ND		40.0	mg/Kg	1	8/22/2008
<b>SULFIDE, REACTIVE</b>			<b>SW-846</b>			Analyst: <b>HN</b>
Reactive Sulfide	ND		40.0	mg/Kg	1	8/22/2008
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300</b>			Analyst: <b>PV</b>
Chloride	492		10.0	mg/L	20	8/20/2008 06:07 PM
Sulfate	1,490		50.0	mg/L	100	8/20/2008 06:30 PM
<i>Surr: Selenate (surr)</i>	98.5		85-115	%REC	100	8/20/2008 06:30 PM
<i>Surr: Selenate (surr)</i>	100		85-115	%REC	20	8/20/2008 06:07 PM
<b>ALKALINITY</b>			<b>SM2320B</b>			Analyst: <b>MAM</b>
Alkalinity, Bicarbonate (As CaCO3)	179		5.00	mg/L	1	8/21/2008 05:30 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	8/21/2008 05:30 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	8/21/2008 05:30 PM
Alkalinity, Total (As CaCO3)	179		5.00	mg/L	1	8/21/2008 05:30 PM
<b>CONDUCTIVITY</b>			<b>E120.1</b>			Analyst: <b>MAM</b>
Specific Conductance	4,710		1.00	µmhos/cm	1	8/22/2008 04:00 PM
<b>PH</b>			<b>SW9040</b>			Analyst: <b>RPM</b>
pH	7.29	H	0.100	pH units	1	8/20/2008 04:00 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  
 a - Not accredited

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  
 n - Not offered for accreditation

**ALS Laboratory Group**

Date: 03-Sep-08

**Client:** Navajo Refining Company  
**Project:** Injection Well Quarterly  
**Sample ID:** Injection Well  
**Collection Date:** 8/19/2008 11:30 AM

**Work Order:** 0808447  
**Lab ID:** 0808447-01  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>TOTAL DISSOLVED SOLIDS</b>			<b>E160.1</b>			Analyst: KKP
Total Dissolved Solids (Residue, Filterable)	3,620		10.0	mg/L	1	8/20/2008 04:00 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit  
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P - Dual Column results percent difference > 40%  
E - Value above quantitation range  
H - Analyzed outside of Hold Time  
n - Not offered for accreditation

ALS Laboratory Group

Date: 03-Sep-08

Client: Navajo Refining Company

QC BATCH REPORT

Work Order: 0808447

Project: Injection Well Quarterly

Batch ID: 31577 Instrument ID ICPMS02 Method: SW6020

MBLK Sample ID: MBLKW1-082508-31577 Units: mg/L Analysis Date: 8/25/2008 09:08 PM  
 Client ID: Run ID: ICPMS02\_080825A SeqNo: 1476311 Prep Date: 8/25/2008 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.009435	0.010								J
Barium	ND	0.0050								
Beryllium	ND	0.0020								
Boron	ND	0.050								
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Molybdenum	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Silver	ND	0.0050								
Sodium	ND	0.20								
Zinc	0.00199	0.0050								J

MBLK Sample ID: MBLKW1-082508-31577 Units: mg/L Analysis Date: 8/26/2008 06:06 PM  
 Client ID: Run ID: ICPMS02\_080826A SeqNo: 1477419 Prep Date: 8/25/2008 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.0050								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Manganese	ND	0.0050								
Selenium	ND	0.0050								
Vanadium	ND	0.0050								

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: 0808447  
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 31577 Instrument ID ICPMS02 Method: SW6020

LCS Sample ID: MLCSW1-082508-31577 Units: mg/L Analysis Date: 8/25/2008 09:14 PM

Client ID: Run ID: ICPMS02\_080825A SeqNo: 1476312 Prep Date: 8/25/2008 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05241	0.010	0.05	0	105	80-120	0			
Barium	0.04958	0.0050	0.05	0	99.2	80-120	0			
Beryllium	0.04832	0.0020	0.05	0	96.6	80-120	0			
Boron	0.9602	0.050	1	0	96	80-120	0			
Cadmium	0.05195	0.0020	0.05	0	104	80-120	0			
Calcium	4.85	0.50	5	0	97	80-120	0			
Copper	0.04442	0.0050	0.05	0	88.8	80-120	0			
Iron	4.997	0.20	5	0	99.9	80-120	0			
Lead	0.04998	0.0050	0.05	0	100	80-120	0			
Magnesium	4.729	0.20	5	0	94.6	80-120	0			
Molybdenum	0.05009	0.0050	0.05	0	100	80-120	0			
Nickel	0.04845	0.0050	0.05	0	96.9	80-120	0			
Potassium	4.876	0.20	5	0	97.5	80-120	0			
Silver	0.04927	0.0050	0.05	0	98.5	80-120	0			
Sodium	4.708	0.20	5	0	94.2	80-120	0			
Zinc	0.05174	0.0050	0.05	0	103	80-120	0			

LCS Sample ID: MLCSW1-082508-31577 Units: mg/L Analysis Date: 8/26/2008 06:12 PM

Client ID: Run ID: ICPMS02\_080826A SeqNo: 1477420 Prep Date: 8/25/2008 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05269	0.0050	0.05	0	105	80-120	0			
Chromium	0.05122	0.0050	0.05	0	102	80-120	0			
Cobalt	0.05196	0.0050	0.05	0	104	80-120	0			
Manganese	0.0518	0.0050	0.05	0	104	80-120	0			
Selenium	0.05144	0.0050	0.05	0	103	80-120	0			
Vanadium	0.05104	0.0050	0.05	0	102	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: 0808447  
 Project: Injection Well Quarterly

## QC BATCH REPORT

Batch ID: 31577 Instrument ID ICPMS02 Method: SW6020

MS Sample ID: 0808511-02BMS Units: mg/L Analysis Date: 8/27/2008 02:01 PM

Client ID: Run ID: ICPMS02\_080827A SeqNo: 1477992 Prep Date: 8/25/2008 DF: 2

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05404	0.020	0.05	0.007596	92.9	80-120	0			
Arsenic	0.05388	0.010	0.05	0.002166	103	80-120	0			
Barium	0.09094	0.010	0.05	0.03702	108	80-120	0			
Beryllium	0.04818	0.0040	0.05	0.0002298	95.9	80-120	0			
Boron	2.136	0.10	1	1.157	97.9	80-120	0			
Cadmium	0.05082	0.0040	0.05	0.0002848	101	80-120	0			
Calcium	287.2	1.0	5	278.8	168	80-120	0			SO
Chromium	0.05212	0.010	0.05	0.0006506	103	80-120	0			
Cobalt	0.05068	0.010	0.05	0.0002952	101	80-120	0			
Copper	0.05728	0.010	0.05	0.00864	97.3	80-120	0			
Iron	5.116	0.40	5	0.2318	97.7	80-120	0			
Lead	0.0531	0.010	0.05	0.001542	103	80-120	0			
Magnesium	133.9	0.40	5	126.4	152	80-120	0			SO
Manganese	0.05614	0.010	0.05	0.00613	100	80-120	0			
Molybdenum	0.06142	0.010	0.05	0.009076	105	80-120	0			
Nickel	0.0536	0.010	0.05	0.00507	97.1	80-120	0			
Potassium	12.93	0.40	5	8.01	98.4	80-120	0			
Selenium	0.0552	0.010	0.05	0.002548	105	80-120	0			
Silver	0.04754	0.010	0.05	-0.0003784	95.8	80-120	0			
Sodium	171.2	0.40	5	164.6	131	80-120	0			SO
Vanadium	0.05928	0.010	0.05	0.007996	103	80-120	0			
Zinc	0.1101	0.010	0.05	0.06128	97.7	80-120	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: 0808447  
 Project: Injection Well Quarterly

## QC BATCH REPORT

Batch ID: 31577 Instrument ID ICPMS02 Method: SW6020

MSD Sample ID: 0808511-02BMSD Units: mg/L Analysis Date: 8/27/2008 02:27 PM

Client ID: Run ID: ICPMS02\_080827A SeqNo: 1478014 Prep Date: 8/25/2008 DF: 2

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05314	0.020	0.05	0.007596	91.1	80-120	0.05404	1.68	15	
Arsenic	0.05368	0.010	0.05	0.002166	103	80-120	0.05388	0.372	15	
Barium	0.08932	0.010	0.05	0.03702	105	80-120	0.09094	1.8	15	
Beryllium	0.04804	0.0040	0.05	0.0002298	95.6	80-120	0.04818	0.291	15	
Boron	2.114	0.10	1	1.157	95.7	80-120	2.136	1.04	15	
Cadmium	0.0507	0.0040	0.05	0.0002848	101	80-120	0.05082	0.236	15	
Calcium	284.4	1.0	5	278.8	112	80-120	287.2	0.98	15	O
Chromium	0.04898	0.010	0.05	0.0006506	96.7	80-120	0.05212	6.21	15	
Cobalt	0.04924	0.010	0.05	0.0002952	97.9	80-120	0.05068	2.88	15	
Copper	0.05714	0.010	0.05	0.00864	97	80-120	0.05728	0.245	15	
Iron	5.212	0.40	5	0.2318	99.6	80-120	5.116	1.86	15	
Lead	0.05296	0.010	0.05	0.001542	103	80-120	0.0531	0.264	15	
Magnesium	132.6	0.40	5	126.4	125	80-120	133.9	1.01	15	SO
Manganese	0.05514	0.010	0.05	0.00613	98	80-120	0.05614	1.8	15	
Molybdenum	0.06142	0.010	0.05	0.009076	105	80-120	0.06142	0	15	
Nickel	0.05416	0.010	0.05	0.00507	98.2	80-120	0.0536	1.04	15	
Potassium	13.05	0.40	5	8.01	101	80-120	12.93	0.924	15	
Selenium	0.04946	0.010	0.05	0.002548	93.8	80-120	0.0552	11	15	
Silver	0.04836	0.010	0.05	-0.0003784	97.5	80-120	0.04754	1.71	15	
Sodium	171.5	0.40	5	164.6	138	80-120	171.2	0.21	15	SO
Vanadium	0.05814	0.010	0.05	0.007996	100	80-120	0.05928	1.94	15	
Zinc	0.1117	0.010	0.05	0.06128	101	80-120	0.1101	1.44	15	

DUP Sample ID: 0808511-02BDUP Units: mg/L Analysis Date: 8/26/2008 03:38 PM

Client ID: Run ID: ICP7500\_080826A SeqNo: 1477167 Prep Date: 8/25/2008 DF: 50

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	312.2	25	0	0	0	0-0	289	7.7	25	
Magnesium	140.6	10	0	0	0	0-0	136.3	3.11	25	
Sodium	181	10	0	0	0	0-0	175.8	2.94	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: 0808447  
 Project: Injection Well Quarterly

## QC BATCH REPORT

Batch ID: 31577 Instrument ID ICPMS02 Method: SW6020

DUP Sample ID: 0808511-02BDUP Units: mg/L Analysis Date: 8/27/2008 01:48 PM

Client ID: Run ID: ICPMS02\_080827A SeqNo: 1477928 Prep Date: 8/25/2008 DF: 2

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.006054	0.020	0	0	0	0-0	0.007596	0	25	J
Arsenic	ND	0.010	0	0	0	0-0	0.002166	0	25	
Barium	0.03874	0.010	0	0	0	0-0	0.03702	4.54	25	
Beryllium	ND	0.0040	0	0	0	0-0	0.0002298	0	25	
Boron	1.2	0.10	0	0	0	0-0	1.157	3.68	25	
Cadmium	ND	0.0040	0	0	0	0-0	0.0002848	0	25	
Chromium	ND	0.010	0	0	0	0-0	0.0006506	0	25	
Cobalt	ND	0.010	0	0	0	0-0	0.0002952	0	25	
Copper	0.008378	0.010	0	0	0	0-0	0.00864	0	25	J
Iron	0.241	0.40	0	0	0	0-0	0.2318	0	25	J
Lead	ND	0.010	0	0	0	0-0	0.001542	0	25	
Manganese	0.00617	0.010	0	0	0	0-0	0.00613	0	25	J
Molybdenum	0.009256	0.010	0	0	0	0-0	0.009076	0	25	J
Nickel	0.005284	0.010	0	0	0	0-0	0.00507	0	25	J
Potassium	8.234	0.40	0	0	0	0-0	8.01	2.76	25	
Selenium	ND	0.010	0	0	0	0-0	0.002548	0	25	
Silver	ND	0.010	0	0	0	0-0	-0.0003784	0	25	
Vanadium	0.008804	0.010	0	0	0	0-0	0.007996	0	25	J
Zinc	0.06038	0.010	0	0	0	0-0	0.06128	1.48	25	

The following samples were analyzed in this batch:

0808447-01B

ND - Not Detected at the Reporting Limit

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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: 0808447  
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 31556 Instrument ID SV-5 Method: SW8270

MBLK Sample ID: SBLKW3-080822-31556 Units: µg/L Analysis Date: 8/26/2008 03:21 PM

Client ID: Run ID: SV-5\_080826B SeqNo: 1477746 Prep Date: 8/22/2008 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	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
2-Nitroaniline	ND	5.0								
2-Nitrophenol	ND	5.0								
3&4-Methylphenol	ND	5.0								
3-Nitroaniline	ND	5.0								
4-Nitroaniline	ND	5.0								
4-Nitrophenol	ND	5.0								
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Aniline	ND	5.0								
Anthracene	ND	5.0								
Benz(a)anthracene	ND	5.0								
Benidine	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	5.0								
Isophorone	ND	5.0								
N-Nitrosodi-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
Naphthalene	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
Surr: 2,4,6-Tribromophenol	67.43	5.0	100	0	67.4	42-124	0			
Surr: 2-Fluorobiphenyl	72.06	5.0	100	0	72.1	48-120	0			
Surr: 2-Fluorophenol	60.11	5.0	100	0	60.1	20-120	0			
Surr: 4-Terphenyl-d14	81.01	5.0	100	0	81	51-135	0			
Surr: Nitrobenzene-d5	73.36	5.0	100	0	73.4	41-120	0			
Surr: Phenol-d6	64.98	5.0	100	0	65	20-120	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: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: 31556 Instrument ID SV-5 Method: SW8270

LCS	Sample ID: SLCSW3-080822-31556	Units: µg/L					Analysis Date: 8/26/2008 03:49 PM				
Client ID:	Run ID: SV-5_080826B	SeqNo: 1477747			Prep Date: 8/22/2008		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,2,4-Trichlorobenzene	34.72	5.0	50	0	69.4	50-120	0				
2,4,5-Trichlorophenol	77.01	5.0	100	0	77	50-120	0				
2,4,6-Trichlorophenol	75.15	5.0	100	0	75.1	50-120	0				
2-Methylnaphthalene	35.59	5.0	50	0	71.2	55-120	0				
2-Methylphenol	76.58	5.0	100	0	76.6	50-120	0				
2-Nitroaniline	38.37	5.0	50	0	76.7	55-120	0				
2-Nitrophenol	74.18	5.0	100	0	74.2	55-120	0				
3&4-Methylphenol	114.7	5.0	150	0	76.5	55-120	0				
3-Nitroaniline	34.11	5.0	50	0	68.2	40-120	0				
4-Nitroaniline	36.62	5.0	50	0	73.2	50-120	0				
4-Nitrophenol	79.01	5.0	100	0	79	45-120	0				
Acenaphthene	36.95	5.0	50	0	73.9	55-120	0				
Acenaphthylene	36.28	5.0	50	0	72.6	55-120	0				
Aniline	29.52	5.0	50	0	59	30-120	0				
Anthracene	38.39	5.0	50	0	76.8	55-120	0				
Benz(a)anthracene	36.89	5.0	50	0	73.8	55-120	0				
Benzidine	22.62	5.0	50	0	45.2	10-120	0				
Hexachloroethane	33.94	5.0	50	0	67.9	55-120	0				
Indeno(1,2,3-cd)pyrene	40.02	5.0	50	0	80	55-120	0				
Isophorone	41	5.0	50	0	82	55-120	0				
N-Nitrosodi-n-propylamine	36.91	5.0	50	0	73.8	50-120	0				
N-Nitrosodimethylamine	34.52	5.0	50	0	69	45-120	0				
N-Nitrosodiphenylamine	36.2	5.0	50	0	72.4	55-120	0				
Naphthalene	35.86	5.0	50	0	71.7	55-120	0				
Nitrobenzene	36.23	5.0	50	0	72.5	55-120	0				
Pentachlorophenol	82.21	5.0	100	0	82.2	55-120	0				
Phenanthrene	35.76	5.0	50	0	71.5	55-120	0				
Phenol	77.28	5.0	100	0	77.3	50-120	0				
Pyrene	38.67	5.0	50	0	77.3	55-120	0				
Surr: 2,4,6-Tribromophenol	75.53	5.0	100	0	75.5	42-124	0				
Surr: 2-Fluorobiphenyl	75.37	5.0	100	0	75.4	48-120	0				
Surr: 2-Fluorophenol	69.51	5.0	100	0	69.5	20-120	0				
Surr: 4-Terphenyl-d14	79.92	5.0	100	0	79.9	51-135	0				
Surr: Nitrobenzene-d5	74.24	5.0	100	0	74.2	41-120	0				
Surr: Phenol-d6	73.1	5.0	100	0	73.1	20-120	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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U - Analyzed for but not detected

E - Value above quantitation range

Client: Navajo Refining Company  
 Work Order: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: 31556 Instrument ID SV-5 Method: SW8270

MS Sample ID: 0808511-02CMS Units: µg/L Analysis Date: 8/26/2008 04:46 PM

Client ID: Run ID: SV-5\_080826B SeqNo: 1477749 Prep Date: 8/22/2008 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	33.46	5.0	50	0	66.9	50-120	0			
2,4,5-Trichlorophenol	75.07	5.0	100	0	75.1	50-120	0			
2,4,6-Trichlorophenol	73.33	5.0	100	0	73.3	50-120	0			
2-Methylnaphthalene	35.68	5.0	50	0	71.4	55-120	0			
2-Methylphenol	77.57	5.0	100	0	77.6	50-120	0			
2-Nitroaniline	37.45	5.0	50	0	74.9	55-120	0			
2-Nitrophenol	75.45	5.0	100	0	75.4	55-120	0			
3&4-Methylphenol	115.5	5.0	150	0	77	55-120	0			
3-Nitroaniline	30.01	5.0	50	0	60	40-120	0			
4-Nitroaniline	37.96	5.0	50	0	75.9	50-120	0			
4-Nitrophenol	76.56	5.0	100	0	76.6	45-120	0			
Acenaphthene	35.71	5.0	50	0	71.4	55-120	0			
Acenaphthylene	35.78	5.0	50	0	71.6	55-120	0			
Aniline	26.28	5.0	50	0	52.6	30-120	0			
Anthracene	37.89	5.0	50	0	75.8	55-120	0			
Benz(a)anthracene	35.95	5.0	50	0	71.9	55-120	0			
Benzidine	26.85	5.0	50	0	53.7	10-120	0			
Hexachloroethane	33.96	5.0	50	0	67.9	55-120	0			
Indeno(1,2,3-cd)pyrene	38.84	5.0	50	0	77.7	55-120	0			
Isophorone	41.18	5.0	50	0	82.4	55-120	0			
N-Nitrosodi-n-propylamine	37.63	5.0	50	0	75.3	50-120	0			
N-Nitrosodimethylamine	34.99	5.0	50	0	70	45-120	0			
N-Nitrosodiphenylamine	36.46	5.0	50	0	72.9	55-120	0			
Naphthalene	35.13	5.0	50	0	70.3	55-120	0			
Nitrobenzene	35.47	5.0	50	0	70.9	55-120	0			
Pentachlorophenol	80.62	5.0	100	0	80.6	55-120	0			
Phenanthrene	36.14	5.0	50	0	72.3	55-120	0			
Phenol	76.73	5.0	100	0	76.7	50-120	0			
Pyrene	37.91	5.0	50	0	75.8	55-120	0			
Surr: 2,4,6-Tribromophenol	72.83	5.0	100	0	72.8	42-124	0			
Surr: 2-Fluorobiphenyl	68.96	5.0	100	0	69	48-120	0			
Surr: 2-Fluorophenol	66.08	5.0	100	0	66.1	20-120	0			
Surr: 4-Terphenyl-d14	75.78	5.0	100	0	75.8	51-135	0			
Surr: Nitrobenzene-d5	70.47	5.0	100	0	70.5	41-120	0			
Surr: Phenol-d6	70.07	5.0	100	0	70.1	20-120	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: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: 31556 Instrument ID SV-5 Method: SW8270

MSD	Sample ID: 0808511-02CMSD	Units: µg/L					Analysis Date: 8/26/2008 05:15 PM			
Client ID:	Run ID: SV-5_080826B	SeqNo: 1477750			Prep Date: 8/22/2008		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	34.31	5.0	50	0	68.6	50-120	33.46	2.52	20	
2,4,5-Trichlorophenol	74.68	5.0	100	0	74.7	50-120	75.07	0.523	20	
2,4,6-Trichlorophenol	74.48	5.0	100	0	74.5	50-120	73.33	1.56	20	
2-Methylnaphthalene	35.49	5.0	50	0	71	55-120	35.68	0.532	20	
2-Methylphenol	75.01	5.0	100	0	75	50-120	77.57	3.35	20	
2-Nitroaniline	37.64	5.0	50	0	75.3	55-120	37.45	0.502	20	
2-Nitrophenol	74.39	5.0	100	0	74.4	55-120	75.45	1.41	20	
3&4-Methylphenol	110.4	5.0	150	0	73.6	55-120	115.5	4.5	20	
3-Nitroaniline	29.11	5.0	50	0	58.2	40-120	30.01	3.05	20	
4-Nitroaniline	36.67	5.0	50	0	73.3	50-120	37.96	3.43	20	
4-Nitrophenol	74.08	5.0	100	0	74.1	45-120	76.56	3.28	20	
Acenaphthene	36.41	5.0	50	0	72.8	55-120	35.71	1.94	20	
Acenaphthylene	36.19	5.0	50	0	72.4	55-120	35.78	1.14	20	
Aniline	26.16	5.0	50	0	52.3	30-120	26.28	0.454	20	
Anthracene	38.25	5.0	50	0	76.5	55-120	37.89	0.937	20	
Benz(a)anthracene	36.41	5.0	50	0	72.8	55-120	35.95	1.25	20	
Benzidine	23.27	5.0	50	0	46.5	10-120	26.85	14.3	20	
Hexachloroethane	33.42	5.0	50	0	66.8	55-120	33.96	1.6	20	
Indeno(1,2,3-cd)pyrene	39.46	5.0	50	0	78.9	55-120	38.84	1.6	20	
Isophorone	40.61	5.0	50	0	81.2	55-120	41.18	1.39	20	
N-Nitrosodi-n-propylamine	36.2	5.0	50	0	72.4	50-120	37.63	3.89	20	
N-Nitrosodimethylamine	34.97	5.0	50	0	69.9	45-120	34.99	0.0437	20	
N-Nitrosodiphenylamine	36.26	5.0	50	0	72.5	55-120	36.46	0.562	20	
Naphthalene	35.01	5.0	50	0	70	55-120	35.13	0.338	20	
Nitrobenzene	35.59	5.0	50	0	71.2	55-120	35.47	0.322	20	
Pentachlorophenol	82.71	5.0	100	0	82.7	55-120	80.62	2.57	20	
Phenanthrene	36.31	5.0	50	0	72.6	55-120	36.14	0.474	20	
Phenol	74.67	5.0	100	0	74.7	50-120	76.73	2.71	20	
Pyrene	38.78	5.0	50	0	77.6	55-120	37.91	2.28	20	
Surr: 2,4,6-Tribromophenol	75.82	5.0	100	0	75.8	42-124	72.83	4.02	20	
Surr: 2-Fluorobiphenyl	76.92	5.0	100	0	76.9	48-120	68.96	10.9	20	
Surr: 2-Fluorophenol	70.84	5.0	100	0	70.8	20-120	66.08	6.96	20	
Surr: 4-Terphenyl-d14	82.48	5.0	100	0	82.5	51-135	75.78	8.47	20	
Surr: Nitrobenzene-d5	74.59	5.0	100	0	74.6	41-120	70.47	5.68	20	
Surr: Phenol-d6	73.62	5.0	100	0	73.6	20-120	70.07	4.94	20	

The following samples were analyzed in this batch:

0808447-01D

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: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: R67271 Instrument ID VOA1 Method: SW8260

MBLK Sample ID: VBLKW-082808-R67271 Units: µg/L Analysis Date: 8/28/2008 11:58 AM

Client ID: Run ID: VOA1\_080828A SeqNo: 1480001 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	53.86	5.0	50	0	108	70-125	0			
Surr: 4-Bromofluorobenzene	52.67	5.0	50	0	105	72-125	0			
Surr: Dibromofluoromethane	53.07	5.0	50	0	106	71-125	0			
Surr: Toluene-d8	52.33	5.0	50	0	105	75-125	0			

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in assoc. Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

U - Analyzed for but not detected

O - Referenced analyte value is > 4 times amount spiked

P - Dual Column results percent difference > 40%

E - Value above quantitation range

Client: Navajo Refining Company  
 Work Order: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: R67271 Instrument ID VOA1 Method: SW8260

LCS Sample ID: VLCSW-082808-R67271 Units: µg/L Analysis Date: 8/28/2008 11:06 AM

Client ID: Run ID: VOA1\_080828A SeqNo: 1479999 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	48.42	5.0	50	0	96.8	80-120	0			
1,1,2,2-Tetrachloroethane	47.22	5.0	50	0	94.4	72-120	0			
1,1,2-Trichloroethane	48.36	5.0	50	0	96.7	80-120	0			
1,1-Dichloroethane	49.74	5.0	50	0	99.5	76-120	0			
1,1-Dichloroethene	49.09	5.0	50	0	98.2	73-124	0			
1,2-Dichloroethane	48.21	5.0	50	0	96.4	78-120	0			
2-Butanone	95.73	10	100	0	95.7	58-132	0			
2-Chloroethyl vinyl ether	96.27	10	100	0	96.3	74-120	0			
2-Hexanone	93.29	10	100	0	93.3	61-130	0			
4-Methyl-2-pentanone	92.5	10	100	0	92.5	65-127	0			
Acetone	85.83	10	100	0	85.8	59-137	0			
Benzene	46.72	5.0	50	0	93.4	73-121	0			
Bromodichloromethane	46.81	5.0	50	0	93.6	80-120	0			
Bromoform	47.28	5.0	50	0	94.6	79-120	0			
Bromomethane	58.96	5.0	50	0	118	66-137	0			
Carbon disulfide	90.45	10	100	0	90.4	68-141	0			
Carbon tetrachloride	47.05	5.0	50	0	94.1	75-124	0			
Chlorobenzene	48.28	5.0	50	0	96.6	80-120	0			
Chloroethane	49.6	5.0	50	0	99.2	76-121	0			
Chloroform	48.58	5.0	50	0	97.2	80-120	0			
Chloromethane	44.24	5.0	50	0	88.5	67-123	0			
cis-1,3-Dichloropropene	45.99	5.0	50	0	92	80-120	0			
Dibromochloromethane	48.32	5.0	50	0	96.6	80-120	0			
Ethylbenzene	48.09	5.0	50	0	96.2	80-120	0			
m,p-Xylene	97.7	10	100	0	97.7	78-121	0			
Methylene chloride	46.2	10	50	0	92.4	65-133	0			
Styrene	50.75	5.0	50	0	101	80-120	0			
Tetrachloroethene	47.81	5.0	50	0	95.6	79-120	0			
Toluene	47.84	5.0	50	0	95.7	80-120	0			
trans-1,3-Dichloropropene	46.15	5.0	50	0	92.3	80-120	0			
Trichloroethene	46.02	5.0	50	0	92	80-120	0			
Vinyl acetate	91.99	10	100	0	92	67-139	0			
Vinyl chloride	46.39	2.0	50	0	92.8	70-127	0			
Xylenes, Total	147.9	15	150	0	98.6	80-120	0			
Surr: 1,2-Dichloroethane-d4	54.64	5.0	50	0	109	70-125	0			
Surr: 4-Bromofluorobenzene	54.98	5.0	50	0	110	72-125	0			
Surr: Dibromofluoromethane	52.57	5.0	50	0	105	71-125	0			
Surr: Toluene-d8	53.14	5.0	50	0	106	75-125	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: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: R67271 Instrument ID VOA1 Method: SW8260

MS	Sample ID: 0808627-06AMS	Units: µg/L					Analysis Date: 8/28/2008 03:03 PM			
Client ID:	Run ID: VOA1_080828A	SeqNo: 1480008			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	45.92	5.0	50	0	91.8	80-120	0			
1,1,2,2-Tetrachloroethane	49.08	5.0	50	0	98.2	72-120	0			
1,1,2-Trichloroethane	48.76	5.0	50	0	97.5	80-120	0			
1,1-Dichloroethane	48.06	5.0	50	0	96.1	76-120	0			
1,1-Dichloroethene	43.76	5.0	50	0	87.5	73-124	0			
1,2-Dichloroethane	49.42	5.0	50	0	98.8	78-120	0			
2-Butanone	102.5	10	100	0	103	58-132	0			
2-Chloroethyl vinyl ether	ND	10	100	0	0	74-120	0			S
2-Hexanone	107.8	10	100	0	108	61-130	0			
4-Methyl-2-pentanone	105.3	10	100	0	105	65-127	0			
Acetone	100.7	10	100	3.737	97	59-137	0			
Benzene	46.44	5.0	50	0	92.9	73-121	0			
Bromodichloromethane	49.65	5.0	50	0	99.3	80-120	0			
Bromoform	49.32	5.0	50	0	98.6	79-120	0			
Bromomethane	52.71	5.0	50	0	105	66-137	0			
Carbon disulfide	86.56	10	100	0	86.6	68-141	0			
Carbon tetrachloride	45	5.0	50	0	90	75-124	0			
Chlorobenzene	46.09	5.0	50	0	92.2	80-120	0			
Chloroethane	43.6	5.0	50	0	87.2	76-121	0			
Chloroform	47.89	5.0	50	0	95.8	80-120	0			
Chloromethane	38.28	5.0	50	0	76.6	67-123	0			
cis-1,3-Dichloropropene	48.35	5.0	50	0	96.7	80-120	0			
Dibromochloromethane	50.05	5.0	50	0	100	80-120	0			
Ethylbenzene	46.95	5.0	50	0.1866	93.5	80-120	0			
m,p-Xylene	92.79	10	100	1.119	91.7	78-121	0			
Methylene chloride	46.72	10	50	0	93.4	65-133	0			
Styrene	44.75	5.0	50	0	89.5	80-120	0			
Tetrachloroethene	42.94	5.0	50	0	85.9	79-120	0			
Toluene	47.05	5.0	50	1.586	90.9	80-120	0			
trans-1,3-Dichloropropene	47.75	5.0	50	0	95.5	80-120	0			
Trichloroethene	46.39	5.0	50	0	92.8	80-120	0			
Vinyl acetate	102.3	10	100	0	102	67-139	0			
Vinyl chloride	41.12	2.0	50	0	82.2	70-127	0			
Xylenes, Total	138	15	150	1.119	91.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	54.66	5.0	50	0	109	70-125	0			
Surr: 4-Bromofluorobenzene	55.17	5.0	50	0	110	72-125	0			
Surr: Dibromofluoromethane	55.4	5.0	50	0	111	71-125	0			
Surr: Toluene-d8	53.05	5.0	50	0	106	75-125	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  
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 E - Value above quantitation range

Client: Navajo Refining Company  
 Work Order: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: R67271 Instrument ID VOA1 Method: SW8260

MSD Sample ID: 0808627-06AMSD Units: µg/L Analysis Date: 8/28/2008 03:29 PM

Client ID: Run ID: VOA1\_080828A SeqNo: 1480009 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	41.94	5.0	50	0	83.9	80-120	45.92	9.07	20	
1,1,2,2-Tetrachloroethane	53.17	5.0	50	0	106	72-120	49.08	8.01	20	
1,1,2-Trichloroethane	50.71	5.0	50	0	101	80-120	48.76	3.92	20	
1,1-Dichloroethane	46.4	5.0	50	0	92.8	76-120	48.06	3.51	20	
1,1-Dichloroethene	41.39	5.0	50	0	82.8	73-124	43.76	5.59	20	
1,2-Dichloroethane	48.13	5.0	50	0	96.3	78-120	49.42	2.64	20	
2-Butanone	112.5	10	100	0	113	58-132	102.5	9.3	20	
2-Chloroethyl vinyl ether	ND	10	100	0	0	74-120	0	0	20	S
2-Hexanone	111.1	10	100	0	111	61-130	107.8	2.99	20	
4-Methyl-2-pentanone	112.2	10	100	0	112	65-127	105.3	6.35	20	
Acetone	108.2	10	100	3.737	104	59-137	100.7	7.13	20	
Benzene	45.28	5.0	50	0	90.6	73-121	46.44	2.53	20	
Bromodichloromethane	46.83	5.0	50	0	93.7	80-120	49.65	5.84	20	
Bromoform	50.69	5.0	50	0	101	79-120	49.32	2.75	20	
Bromomethane	52.06	5.0	50	0	104	66-137	52.71	1.24	20	
Carbon disulfide	85.97	10	100	0	86	68-141	86.56	0.686	20	
Carbon tetrachloride	39.27	5.0	50	0	78.5	75-124	45	13.6	20	
Chlorobenzene	45.26	5.0	50	0	90.5	80-120	46.09	1.8	20	
Chloroethane	44.84	5.0	50	0	89.7	76-121	43.6	2.79	20	
Chloroform	46.93	5.0	50	0	93.9	80-120	47.89	2.04	20	
Chloromethane	36.88	5.0	50	0	73.8	67-123	38.28	3.71	20	
cis-1,3-Dichloropropene	47.49	5.0	50	0	95	80-120	48.35	1.8	20	
Dibromochloromethane	50.22	5.0	50	0	100	80-120	50.05	0.344	20	
Ethylbenzene	46.01	5.0	50	0.1866	91.7	80-120	46.95	2.02	20	
m,p-Xylene	91.92	10	100	1.119	90.8	78-121	92.79	0.938	20	
Methylene chloride	46.42	10	50	0	92.8	65-133	46.72	0.647	20	
Styrene	47.71	5.0	50	0	95.4	80-120	44.75	6.41	20	
Tetrachloroethene	40.18	5.0	50	0	80.4	79-120	42.94	6.65	20	
Toluene	47.34	5.0	50	1.586	91.5	80-120	47.05	0.612	20	
trans-1,3-Dichloropropene	47.04	5.0	50	0	94.1	80-120	47.75	1.5	20	
Trichloroethene	43.51	5.0	50	0	87	80-120	46.39	6.39	20	
Vinyl acetate	101.4	10	100	0	101	67-139	102.3	0.936	20	
Vinyl chloride	38.99	2.0	50	0	78	70-127	41.12	5.32	20	
Xylenes, Total	139.1	15	150	1.119	92	80-120	138	0.743	20	
Surr: 1,2-Dichloroethane-d4	51.43	5.0	50	0	103	70-125	54.66	6.1	20	
Surr: 4-Bromofluorobenzene	53.63	5.0	50	0	107	72-125	55.17	2.83	20	
Surr: Dibromofluoromethane	53.49	5.0	50	0	107	71-125	55.4	3.51	20	
Surr: Toluene-d8	54.15	5.0	50	0	108	75-125	53.05	2.05	20	

The following samples were analyzed in this batch: 0808447-01A

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



Client: Navajo Refining Company  
 Work Order: 0808447  
 Project: Injection Well Quarterly

**QC BATCH REPORT**

Batch ID: R66876 Instrument ID WetChem Method: SW9040

LCS	Sample ID: WLCSW1-082008-R66876	Units: pH units					Analysis Date: 8/20/2008 04:00 PM				
Client ID:	Run ID: WETCHEM_080820G	SeqNo: 1472036	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	6.04	0.10	6	0	101	90-110	0				

DUP	Sample ID: 0808447-01CDUP	Units: pH units					Analysis Date: 8/20/2008 04:00 PM				
Client ID: Injection Well	Run ID: WETCHEM_080820G	SeqNo: 1472039	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	7.32	0.10	0	0	0	0-0	7.29	0.411	20	H	

The following samples were analyzed in this batch: 0808447-01C

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

QC Page: 14 of 18

Client: Navajo Refining Company  
 Work Order: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: R66965 Instrument ID WetChem Method: SM2320B

MBLK Sample ID: WBLKW1-082108-R66965 Units: mg/L Analysis Date: 8/21/2008 05:30 PM

Client ID: Run ID: WETCHEM\_0808211 SeqNo: 1473296 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: WLCSW1-082108-R66965 Units: mg/L Analysis Date: 8/21/2008 05:30 PM

Client ID: Run ID: WETCHEM\_0808211 SeqNo: 1473297 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)	1011	5.0	1000	0	101	80-120	0			
Alkalinity, Total (As CaCO3)	1011	5.0	1000	0	101	80-120	0			

DUP Sample ID: 0808436-02DDUP Units: mg/L Analysis Date: 8/21/2008 05:30 PM

Client ID: Run ID: WETCHEM\_0808211 SeqNo: 1473318 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)	357	5.0	0	0	0	0-0	359	0.559	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)	357	5.0	0	0	0	0-0	359	0.559	20	

The following samples were analyzed in this batch: 0808447-01C

- 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

Client: Navajo Refining Company  
 Work Order: 0808447  
 Project: Injection Well Quarterly

# QC BATCH REPORT

Batch ID: **R67012** Instrument ID **ICS3000** Method: **E300**

MBLK	Sample ID: WBLKW1-082008-R67012	Units: mg/L					Analysis Date: 8/20/2008 11:47 AM				
Client ID:	Run ID: ICS3000_080820A	SeqNo: 1474281	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	0.50									
Surr: Selenate (surr)	5.084	0.10	5	0	102	85-115		0			

LCS	Sample ID: WLCSW1-082008-R67012	Units: mg/L					Analysis Date: 8/20/2008 12:10 PM				
Client ID:	Run ID: ICS3000_080820A	SeqNo: 1474282	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	19.88	0.50	20	0	99.4	90-110		0			
Sulfate	19.89	0.50	20	0	99.5	90-110		0			
Surr: Selenate (surr)	4.925	0.10	5	0	98.5	85-115		0			

MS	Sample ID: 0808436-03DMS	Units: mg/L					Analysis Date: 8/20/2008 01:46 PM				
Client ID:	Run ID: ICS3000_080820A	SeqNo: 1474286	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	79.05	0.50	10	71.12	79.3	80-120		0		SEO	
Sulfate	68.28	0.50	10	60.14	81.4	80-120		0		EO	
Surr: Selenate (surr)	4.676	0.10	5	0	93.5	85-115		0			

DUP	Sample ID: 0808436-03DDUP	Units: mg/L					Analysis Date: 8/20/2008 01:22 PM				
Client ID:	Run ID: ICS3000_080820A	SeqNo: 1474285	Prep Date:	DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	69.26	0.50	0	0	0	0-0	71.12	2.65	20	E	
Sulfate	59.16	0.50	0	0	0	0-0	60.14	1.64	20	E	
Surr: Selenate (surr)	4.502	0.10	5	0	90	85-115	4.576	1.63	20		

The following samples were analyzed in this batch: 0808447-01C

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

Client: Navajo Refining Company  
 Work Order: 0808447  
 Project: Injection Well Quarterly

## QC BATCH REPORT

Batch ID: R67013 Instrument ID Balance1 Method: E160.1 (Dissolve)

MBLK Sample ID: BLANK-R67013 Units: mg/L Analysis Date: 8/20/2008 04:00 PM  
 Client ID: Run ID: BALANCE1\_080820E SeqNo: 1474298 Prep Date: DF: 1

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

LCS Sample ID: LCS-R67013 Units: mg/L Analysis Date: 8/20/2008 04:00 PM  
 Client ID: Run ID: BALANCE1\_080820E SeqNo: 1474300 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	1038	10	1000	0	104	85-115	0			

DUP Sample ID: 0808424-02ADUP Units: mg/L Analysis Date: 8/20/2008 04:00 PM  
 Client ID: Run ID: BALANCE1\_080820E SeqNo: 1474292 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	1508	10	0	0	0	0-0	1488	1.34	20	

The following samples were analyzed in this batch:

0808447-01C

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

Client: Navajo Refining Company  
 Work Order: 0808447  
 Project: Injection Well Quarterly

## QC BATCH REPORT

Batch ID: R67035 Instrument ID WetChem Method: E120.1

MBLK Sample ID: WBLKW1-082208-R67035 Units:  $\mu$ hos/cm Analysis Date: 8/22/2008 04:00 PM

Client ID: Run ID: WETCHEM\_080822C SeqNo: 1474821 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: WLCSW1-082208-R67035 Units:  $\mu$ hos/cm Analysis Date: 8/22/2008 04:00 PM

Client ID: Run ID: WETCHEM\_080822C SeqNo: 1474822 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductance	1420	1.0	1413	0	100	80-120	0			

DUP Sample ID: 0808333-01CDUP Units:  $\mu$ hos/cm Analysis Date: 8/22/2008 04:00 PM

Client ID: Run ID: WETCHEM\_080822C SeqNo: 1474836 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductance	711	1.0	0	0	0	0-0	716	0.701	20	

DUP Sample ID: 0808447-01CDUP Units:  $\mu$ hos/cm Analysis Date: 8/22/2008 04:00 PM

Client ID: Injection Well Run ID: WETCHEM\_080822C SeqNo: 1474837 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductance	4690	1.0	0	0	0	0-0	4710	0.426	20	

The following samples were analyzed in this batch:

0808447-01C

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



ALS Group USA, Corp.

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 8/20/2008 08:55


Work Order Number 0808447

Received by: RSZ

Checklist completed by

 8-2008  
Signature Date

Reviewed by

Initials  Date 8/20/08

Matrix: water

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temperature Blank temperature in compliance? Yes  No
- Temperature(s)/Thermometer(s): 0.6c 002
- Cooler(s)/Kit(s): 0394
- 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.

Client contacted:

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action





Subcontractor:  
 ALS Laboratory Group  
 3352 128th Ave.  
 Holland, MI 49424

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

Date: 20-Aug-08  
 COC ID: 6639  
 Due Date 01-Sep-08

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

## Parameter/Method Request for Analysis

Customer Information		Project Information		Parameter/Method Request for Analysis																		
Purchase Order	Project Name	Project Number	0808447	A	B	C	D	E	F	G	H	I	J									
Work Order	ALS Group USA, Comp.	ALS Group USA, Comp.	Accounts Payable	Cyanide, Reactive (SW-846)	Sulfide, Reactive (SW-846)																	
Company Name	Jeffrey L. Croston	Inv Alt#	Address	10450 Stancliff Rd, Suite 210																		
Send Report To	10450 Stancliff Rd, Suite 210	City/State/Zip	Phone	Houston, Texas 77099-4338																		
Address	(281) 530-5636	Phone	Fax	(281) 530-5656																		
City/State/Zip	(281) 530-5887	Fax	eMail	jeff.croston@alsenviro.com																		
Phone	jeff.croston@alsenviro.com	eMail	CC	glenda.ramos@alsenviro.com																		
Fax	Matrix	Collection Date	24hr	Bottle	A	B	C	D	E	F	G	H	I	J								
eMail Address	Water	8/19/2008 11:30	(1) 1LPNEAT	X	X	X	X	X	X	X	X	X	X	X								
Sample ID	0808447-01E (Injection Well)																					

Comments:

Relinquished by: *[Signature]* Date/Time: 8/20/08  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Cooler IDs: \_\_\_\_\_  
 Report/QC Level: \_\_\_\_\_  
 Std: \_\_\_\_\_

# ALS Laboratory Group

Date: 22-Aug-08

Client: ALS Laboratory Group  
Project: 0808447  
Work Order: 0808386

## Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0808386-01	0808447-01E	Water		8/19/2008 11:30	8/21/2008 14:10	<input type="checkbox"/>

# ALS Laboratory Group

Date: 22-Aug-08

Client: ALS Laboratory Group  
Project: 0808447  
Sample ID: 0808447-01E  
Collection Date: 8/19/2008 11:30 AM

Work Order: 0808386  
Lab ID: 0808386-01  
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>CYANIDE, REACTIVE</b> Cyanide, Reactive	ND		EPA 7.3.3.2 40.0	mg/Kg	1	Analyst: DB 8/22/2008
<b>SULFIDE, REACTIVE</b> Sulfide, Reactive	ND		EPA 7.3.4.2 40.0	mg/Kg	1	Analyst: DB 8/22/2008

**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

ALS Laboratory Group

Date: 22-Aug-08

Client: ALS Laboratory Group

QC BATCH REPORT

Work Order: 0808386

Project: 0808447

Batch ID: R61249 Instrument ID WETCHEM Method: EPA 7.3.4.2

MBLK Sample ID: WBLKS1-082208 Units: mg/Kg Analysis Date: 8/22/2008

Client ID: Run ID: WETCHEM\_080822C SeqNo: 1018085 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: 0808386-01A

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in assoc. Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

U - Analyzed for but not detected

O - Referenced analyte value is > 4 times amount spiked

P - Dual Column results percent difference > 40%

E - Value above quantitation range

Client: ALS Laboratory Group  
 Work Order: 0808386  
 Project: 0808447

## QC BATCH REPORT

Batch ID: R61250 Instrument ID WETCHEM Method: EPA 7.3.3.2

MBLK	Sample ID: WBLKS1-082208	Units: mg/Kg					Analysis Date: 8/22/2008			
Client ID:	Run ID: WETCHEM_080822D	SeqNo: 1018091	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	40								

LCS	Sample ID: WLCSS1-082208	Units: mg/Kg					Analysis Date: 8/22/2008			
Client ID:	Run ID: WETCHEM_080822D	SeqNo: 1018092	Prep Date:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	278.9	40	250	0	112	75-125	0			

LCSD	Sample ID: WLCSDS1-082208	Units: mg/Kg					Analysis Date: 8/22/2008			
Client ID:	Run ID: WETCHEM_080822D	SeqNo: 1018100	Prep Date:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	278.9	40	250	0	112	75-125	278.9	0	35	

MS	Sample ID: 0808386-01A MS	Units: mg/Kg					Analysis Date: 8/22/2008			
Client ID: 0808447-01E	Run ID: WETCHEM_080822D	SeqNo: 1018096	Prep Date:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD	Sample ID: 0808386-01A MSD	Units: mg/Kg					Analysis Date: 8/22/2008			
Client ID: 0808447-01E	Run ID: WETCHEM_080822D	SeqNo: 1018097	Prep Date:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch:

0808386-01A

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

0808386  
 Date: 20-Aug-08  
 COC ID: 6639  
 Due Date 01-Sep-08

**CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

Subcontractor:  
 ALS Laboratory Group  
 3352 128th Ave.  
 Holland, MI 49424

TEL: (616) 399-6070  
 FAX: (616) 399-6185  
 Accl #: \_\_\_\_\_

Parameter/Method Request for Analysis

Project Information  
 Project Name 0808447

Customer Information  
 Purchase Order \_\_\_\_\_  
 Work Order \_\_\_\_\_

Company Name ALS Group USA, Corp.  
 Send Report To Jeffrey L Croston  
 Address 10450 Stancilff Rd, Suite 210  
 City/State/Zip Houston, Texas 77099-4338  
 Phone (281) 530-5656  
 Fax (281) 530-5887  
 eMail Address jeff.croston@alsenviro.com

Project Information  
 Project Number 0808447  
 Bill To Company ALS Group USA, Corp.  
 Inv Ath Accounts Payable  
 Address 10450 Stancilff Rd, Suite 210  
 City/State/Zip Houston, Texas 77099-4338  
 Phone (281) 530-5656  
 Fax (281) 530-5887  
 eMail CC glenda.ramos@alsenviro.com

Sample ID 0808447-01E (Injection Well)  
 Matrix Water  
 Collection Date 24hr 8/19/2008 11:30  
 Bottle (1) 1LPNEAT

A Cyanide, Reactive (SW-846)  
 B Sulfide, Reactive (SW-846)  
 C  
 D  
 E  
 F  
 G  
 H  
 I  
 J

A B C D E F G H I J  
 X X

Comments:

Relinquished by: *[Signature]* Date/Time 8/20/08  
 Relinquished by: *[Signature]* Date/Time 8/21/08 2:10P  
 Received by: *[Signature]* Date/Time 8/21/08 2:10P  
 Cooler IDs  
 Report/QC Level Std *[Signature]*

ALS Laboratory Group

Sample Receipt Checklist

Client Name ELAB-HOU

Date/Time Received: 8/21/2008 14:10

Work Order Number 0808386

Received by: ARB

Checklist completed by

*[Signature]* 8/21/08  
Signature Date

Reviewed by

*[Initials]* 8/21/08  
initials Date

Matrix: Water

Carrier name: UPS

- 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): 3.1 C

Cooler(s)/Kit(s):

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

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

Adjusted? N Checked by *[Signature]*

Login Notes:

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

Date: 8/20/78  
 Name: R. SANCHEZ  
 Company: ALS  
 Time: 1:00  
 CUSTODY SEAL  
 Sent Broken By: AB

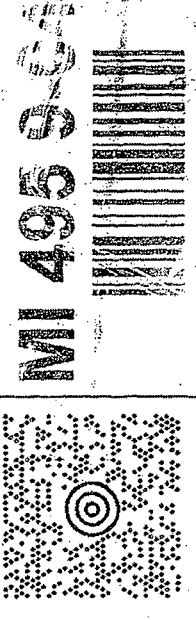
ALS Laboratory Group  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. 281 530 5656



SX  
 W

WEIGHT: 3.5  
 DIMENSIONAL WEIGHT: 3.5  
 LARGEST DIMENSION: 10.0  
 PARCEL WEIGHT:

**Saver**  
 No other services to be added to this shipment.



MI 495 999

UPS Next Day Air  
 PARCEL & DOCUMENTS

1Z 698 174 23 1005 316  
 1Z 698 174 23 1005  
 SHIPMENT ID NUMBER: 698J 747B 897

UPS Next Day Air Saver  
 Shipping Document

SHIPMENT FROM:  
 UPS ACCOUNT NO. 698174

SUB CONTRACT

RICHARD SANCHEZ  
 TELEPHONE 281-530-5656

ALS LABORATORY GROUP  
 1450 STANCLIFF RD STE # 210

HOUSTON TX 77099

RECEIVING  
 TELEPHONE 616-399-6070

ALS LABORATORY GROUP

3352 128TH AVE

HOLLAND MI 49424

(URC #72.5A 10/2007)  
 0201952542609 1107 S  
 United Parcel Service, Louisville, KY

02778  
 18259789  
 9 91 500





# REFINING COMPANY, L.P.

FAX  
(505) 746-5283 DIV. ORDERS  
(505) 746-5481 TRUCKING  
(505) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159  
ARTESIA, NEW MEXICO 88211-0159  
TELEPHONE (505) 748-3311

FAX  
(505) 746-5419 ACCOUNTING  
(505) 746-5451 EXEC/MKTG  
(505) 746-5421 ENGINEERING  
(505) 746-5480 PIPELINE

July 5, 2007

Mr. Wayne Price  
NM Oil Conservation Division  
Environmental Bureau  
1220 S. St. Francis  
Santa Fe, NM 87505-5472

RECEIVED

JUL 09 2007

Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

**RE: 2007 Second Quarterly Injection Report for Navajo Refining WDW-1 and WDW-2**

Dear Mr. Price,

Enclosed, please find sampling results for the second quarter of 2007 from the injected fluids and a spread sheet showing various volumes and pressures as requested in your October 6, 1999 letter. You will notice that the annular pressure on the two wells continues to vary unpredictably. This is due to the wide range of temperatures we are seeing at the wells. A better gauge to determine if the tubing is leaking is a volume measurement of the fluid in the annular space via the 200 gallon tanks located at the well head. We track this fluid level and it has not varied more than 5% since the wells went on-line.

This report covers the period from April 1, 2007 to June 30, 2007. We have disposed a total of 33,831,096 barrels of fluid into the two wells as of June 30, 2007. This is broken down as follows: 22,883,147 barrels into WDW-1 and 10,947,950 barrels into WDW-2.

This report is signed and certified in accordance with WQCC section 5101.G. If there are any questions, please call me at 505-748-3311.

Respectfully,  
**NAVAJO REFINING COMPANY**

Jefferson L. Byrd  
Environmental Scientist

Encl.

ecc: DGM  
File: REF:ART: 4 A 02 D

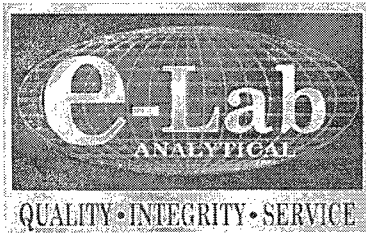
2007 SECOND QUARTER WEEKLY WHAMS LEVEL TABLE

	4/2/07	4/9/07	4/16/07	4/23/07	4/30/07	5/7/07	5/14/07	5/14/07	5/21/07	5/28/07	6/4/07	6/11/07	6/18/07	6/25/2007
WDW -1	200	200	200	200	200	200	200	200	200	200	200	200	200	200
WDW-2	160	160	160	160	160	160	160	160	160	160	160	160	160	160

2007 SECOND QUARTER MONTHLY INJECTION PRESSURES, RATES, AND VOLUMES

Navajo Refining Company

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maximum Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Volume (barrels)	TOTAL CUMMULATIVE Volume (barrels)	
<b>WDW-1</b>															
Apr-07	264	326	172	254	292	162	331	472	263	8,723	10,023	5,539	270,406	22,038,386	
May-07	625	687	303	278	300	240	234	412	56	9,530	10,281	8,221	295,426	22,308,792	
Jun-07	633	738	158	262	297	112	131	201	15	8,998	10,168	3,824	278,929	22,604,218	
<b>WDW-2</b>															
Apr-07	325	500	6	125	160	42	193	500	0	4,269	5,498	1,452	132,346	10,639,312	
May-07	657	721	321	148	169	129	491	500	357	5,064	5,802	4,408	156,971	10,796,284	
Jun-07	647	762	149	143	181	0	489	500	312	4,892	6,204	0	151,666	10,947,950	
													<b>Total Injected fluids:</b>		<b>33,831,096</b>



**e-Lab Analytical, Inc.**

10450 Standliff Rd, Suite 210 Houston, Texas 77099-4338 (281) 530-5656 Fax (281) 530-5887

June 05, 2007

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

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

Re: Inj. Well

Work Order : **0705513**

Dear Jeff Byrd,

e-Lab Analytical, Inc. received 2 samples on 5/24/2007 08:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab Analytical, 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 Analytical, Inc. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 44.

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

Sincerely,

*Jeffrey L Croston*

Electronically approved by: Odette E. Elliston

Jeffrey L Croston  
Project Manager



Certificate No: T104704231-06-TX

---

**CLIENT:** Navajo Refining Company  
**Project:** Inj. Well  
**Work Order:** 0705513

**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0705513-01	Inj. Well	Water		5/23/2007 10:30	5/24/2007 08:45	<input type="checkbox"/>
0705513-02	Trip Blank	Water		5/23/2007 10:30	5/24/2007 08:45	<input type="checkbox"/>

---

**CLIENT:** Navajo Refining Company  
**Project:** Inj. Well  
**Work Order:** 0705513

---

**Case Narrative**

Samples were received outside of the recommended holding time for pH.

Batch 23689 Metals MS/MSD was an unrelated sample.

Batch 23644 Semivolatiles LCS/LCSD RPD recovery was above the control limits for Benzidine (22.5%). Recoveries met method criteria in the LCS/LCSD.

Batch R50560 Volatiles MS/MSD was an unrelated sample.

Batch R50283 Anions MS/MSD was an unrelated sample.

**e-Lab Analytical, Inc.**

Date: June 05, 2007

CLIENT: Navajo Refining Company  
 Work Order: 0705513  
 Project: Inj. Well  
 Lab ID: 0705513-01

Client Sample ID: Inj. Well  
 Collection Date: 5/23/2007 10:30:00 AM  
 Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>MERCURY, TOTAL</b>			<b>SW7470</b>		Prep Date: 5/29/2007	Analyst: JCJ
Mercury	ND		0.000200	mg/L	1	5/30/2007 4:59:27 PM
<b>ICP METALS, TOTAL</b>			<b>SW6020</b>		Prep Date: 5/29/2007	Analyst: ALR
Aluminum	0.104		0.0100	mg/L	1	5/30/2007 2:16:00 PM
Arsenic	0.168		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Barium	0.107		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Beryllium	ND		0.0400	mg/L	20	6/1/2007 12:02:00 PM
Boron	0.516		0.400	mg/L	20	6/1/2007 8:07:00 PM
Cadmium	ND		0.00200	mg/L	1	5/30/2007 2:16:00 PM
Calcium	213		50.0	mg/L	100	5/30/2007 2:10:00 PM
Chromium	ND		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Cobalt	ND		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Copper	0.0111		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Iron	1.93		0.200	mg/L	1	5/30/2007 2:16:00 PM
Lead	ND		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Magnesium	43.7		0.200	mg/L	1	5/30/2007 2:16:00 PM
Manganese	0.108		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Molybdenum	0.157		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Nickel	0.0134		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Potassium	67.6		0.200	mg/L	1	5/30/2007 2:16:00 PM
Selenium	0.330		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Silver	ND		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Sodium	1,270		20.0	mg/L	100	5/30/2007 2:10:00 PM
Vanadium	ND		0.00500	mg/L	1	5/30/2007 2:16:00 PM
Zinc	0.0294		0.00500	mg/L	1	5/30/2007 2:16:00 PM
<b>SEMIVOLATILE ORGANICS BY GC/MS</b>			<b>SW8270</b>		Prep Date: 5/25/2007	Analyst: ACN
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
2-Methylnaphthalene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
2-Methylphenol	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
2-Nitroaniline	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
2-Nitrophenol	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
3&4-Methylphenol	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
3-Nitroaniline	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
4-Nitroaniline	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
4-Nitrophenol	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Acenaphthene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Acenaphthylene	ND		5.0	µg/L	1	5/30/2007 9:38:00 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 Analytical, Inc.**

Date: June 05, 2007

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well  
**Lab ID:** 0705513-01

**Client Sample ID:** Inj. Well  
**Collection Date:** 5/23/2007 10:30:00 AM  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Aniline	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Anthracene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Benz(a)anthracene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Benzidine	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Hexachloroethane	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Indeno(1,2,3-cd)pyrene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Isophorone	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
N-Nitrosodi-n-propylamine	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
N-Nitrosodimethylamine	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
N-Nitrosodiphenylamine	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Naphthalene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Nitrobenzene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Pentachlorophenol	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Phenanthrene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Phenol	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Pyrene	ND		5.0	µg/L	1	5/30/2007 9:38:00 PM
Surr: 2,4,6-Tribromophenol	76.7		42-124	%REC	1	5/30/2007 9:38:00 PM
Surr: 2-Fluorobiphenyl	71.4		48-120	%REC	1	5/30/2007 9:38:00 PM
Surr: 2-Fluorophenol	67.9		20-120	%REC	1	5/30/2007 9:38:00 PM
Surr: 4-Terphenyl-d14	65.4		51-135	%REC	1	5/30/2007 9:38:00 PM
Surr: Nitrobenzene-d5	70.5		41-120	%REC	1	5/30/2007 9:38:00 PM
Surr: Phenol-d6	72.5		20-120	%REC	1	5/30/2007 9:38:00 PM
<b>VOLATILES BY GC/MS</b>			<b>SW8260</b>			<b>Analyst: PC</b>
1,1,1-Trichloroethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
2-Butanone	ND		10	µg/L	1	6/4/2007 1:10:00 PM
2-Chloroethyl vinyl ether	ND		10	µg/L	1	6/4/2007 1:10:00 PM
2-Hexanone	ND		10	µg/L	1	6/4/2007 1:10:00 PM
4-Methyl-2-pentanone	ND		10	µg/L	1	6/4/2007 1:10:00 PM
Acetone	ND		10	µg/L	1	6/4/2007 1:10:00 PM
Benzene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Bromodichloromethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Bromoform	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Bromomethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Carbon disulfide	ND		10	µg/L	1	6/4/2007 1:10:00 PM
Carbon tetrachloride	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM

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



**e-Lab Analytical, Inc.**

Date: June 05, 2007

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well  
**Lab ID:** 0705513-01

**Client Sample ID:** Inj. Well  
**Collection Date:** 5/23/2007 10:30:00 AM  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Chloroethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Chloroform	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Chloromethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Dibromochloromethane	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Ethylbenzene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
m,p-Xylene	ND		10	µg/L	1	6/4/2007 1:10:00 PM
Methylene chloride	ND		10	µg/L	1	6/4/2007 1:10:00 PM
Styrene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Tetrachloroethene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Toluene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Trichloroethene	ND		5.0	µg/L	1	6/4/2007 1:10:00 PM
Vinyl acetate	ND		10	µg/L	1	6/4/2007 1:10:00 PM
Vinyl chloride	ND		2.0	µg/L	1	6/4/2007 1:10:00 PM
Xylenes, Total	ND		15	µg/L	1	6/4/2007 1:10:00 PM
<i>Surr: 1,2-Dichloroethane-d4</i>	102		70-125	%REC	1	6/4/2007 1:10:00 PM
<i>Surr: 4-Bromofluorobenzene</i>	107		72-125	%REC	1	6/4/2007 1:10:00 PM
<i>Surr: Dibromofluoromethane</i>	106		71-125	%REC	1	6/4/2007 1:10:00 PM
<i>Surr: Toluene-d8</i>	103		75-125	%REC	1	6/4/2007 1:10:00 PM
<b>CYANIDE, REACTIVE</b>			<b>SW-846</b>			Analyst: <b>MAG</b>
Reactive Cyanide	ND		40.0	mg/Kg	1	6/1/2007
<b>SULFIDE, REACTIVE</b>			<b>SW-846</b>			Analyst: <b>MAG</b>
Reactive Sulfide	ND		40.0	mg/Kg	1	6/1/2007
<b>ANIONS BY ION CHROMATOGRAPHY</b>			<b>E300</b>			Analyst: <b>LMD</b>
Chloride	1,790		50.0	mg/L	100	5/26/2007 12:47:00 AM
Sulfate	1,140		100	mg/L	100	5/26/2007 12:47:00 AM
<i>Surr: Selenate (surr)</i>	93.7		85-115	%REC	100	5/26/2007 12:47:00 AM
<b>ALKALINITY</b>			<b>E310.1</b>			Analyst: <b>PV</b>
Alkalinity, Bicarbonate (As CaCO3)	183		5.00	mg/L	1	5/30/2007
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	5/30/2007
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	5/30/2007
Alkalinity, Total (As CaCO3)	183		5.00	mg/L	1	5/30/2007
<b>CONDUCTIVITY</b>			<b>E120.1</b>			Analyst: <b>PV</b>
Specific Conductance	7,250		1.00	µmhos/cm	1	5/25/2007
<b>FLASHPOINT</b>			<b>SW1010</b>			Analyst: <b>MAM</b>
Ignitability	>160		50.0	°F	1	5/31/2007

**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 Analytical, Inc.**

**Date:** June 05, 2007

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well  
**Lab ID:** 0705513-01

**Client Sample ID:** Inj. Well  
**Collection Date:** 5/23/2007 10:30:00 AM  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PH			E150.1			Analyst: <b>RPM</b>
pH	6.89	H	0.100	pH units	1	5/24/2007
<b>TOTAL DISSOLVED SOLIDS</b>			E160.1			Analyst: <b>MAM</b>
Total Dissolved Solids (Residue, Filterable)	4,900		10.0	mg/L	1	5/25/2007

**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 Analytical, Inc.**

Date: June 05, 2007

**CLIENT:** Navajo Refining Company

**Client Sample ID:** Trip Blank

**Work Order:** 0705513

**Collection Date:** 5/23/2007 10:30:00 AM

**Project:** Inj. Well

**Lab ID:** 0705513-02

**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>VOLATILES BY GC/MS</b>			<b>SW8260</b>			Analyst: <b>PC</b>
1,1,1-Trichloroethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
2-Butanone	ND		10	µg/L	1	6/4/2007 12:44:00 PM
2-Chloroethyl vinyl ether	ND		10	µg/L	1	6/4/2007 12:44:00 PM
2-Hexanone	ND		10	µg/L	1	6/4/2007 12:44:00 PM
4-Methyl-2-pentanone	ND		10	µg/L	1	6/4/2007 12:44:00 PM
Acetone	ND		10	µg/L	1	6/4/2007 12:44:00 PM
Benzene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Bromodichloromethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Bromoform	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Bromomethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Carbon disulfide	ND		10	µg/L	1	6/4/2007 12:44:00 PM
Carbon tetrachloride	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Chlorobenzene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Chloroethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Chloroform	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Chloromethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Dibromochloromethane	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Ethylbenzene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
m,p-Xylene	ND		10	µg/L	1	6/4/2007 12:44:00 PM
Methylene chloride	ND		10	µg/L	1	6/4/2007 12:44:00 PM
Styrene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Tetrachloroethene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Toluene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Trichloroethene	ND		5.0	µg/L	1	6/4/2007 12:44:00 PM
Vinyl acetate	ND		10	µg/L	1	6/4/2007 12:44:00 PM
Vinyl chloride	ND		2.0	µg/L	1	6/4/2007 12:44:00 PM
Xylenes, Total	ND		15	µg/L	1	6/4/2007 12:44:00 PM
Surr: 1,2-Dichloroethane-d4	101		70-125	%REC	1	6/4/2007 12:44:00 PM
Surr: 4-Bromofluorobenzene	111		72-125	%REC	1	6/4/2007 12:44:00 PM
Surr: Dibromofluoromethane	106		71-125	%REC	1	6/4/2007 12:44:00 PM
Surr: Toluene-d8	105		75-125	%REC	1	6/4/2007 12:44:00 PM

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

e-Lab Analytical, Inc.

Date: Jun 05 2007

CLIENT: Navajo Refining Company  
 Work Order: 0705513  
 Project: Inj. Well

QC BATCH REPORT

Batch ID: 23689 Instrument ID ICPMS03 Method: SW6020

MBLK	Sample ID: MBLKW1-052907	Units: mg/L				Analysis Date: 05/30/07 17:57				
Client ID:	Run ID: ICPMS03_070530A	SeqNo: 1128686	Prep Date: 5/29/2007	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.008143	0.010								J
Arsenic	ND	0.0050								
Barium	0.000877	0.0050								J
Beryllium	0.0006936	0.0020								J
Cadmium	0.0006878	0.0020								J
Calcium	0.1271	0.50								J
Chromium	ND	0.0050								
Cobalt	0.0004824	0.0050								J
Copper	0.0003064	0.0050								J
Iron	0.09751	0.20								J
Lead	0.0007161	0.0050								J
Magnesium	0.0741	0.20								J
Manganese	ND	0.0050								
Molybdenum	ND	0.0050								
Nickel	0.0008725	0.0050								J
Potassium	0.1308	0.20								J
Selenium	0.002683	0.0050								J
Silver	0.0005825	0.0050								J
Sodium	0.1592	0.20								J
Vanadium	0.001008	0.0050								J
Zinc	ND	0.0050								

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: 0705513  
 Project: Inj. Well

## QC BATCH REPORT

Batch ID: 23689 Instrument ID ICPMS03 Method: SW6020

LCS Sample ID: MLCSW1-052907 Units: mg/L Analysis Date: 05/30/07 18:03

Client ID: Run ID: ICPMS03\_070530A SeqNo: 1128688 Prep Date: 5/29/2007 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.04894	0.010	0.05	0	97.9	80-120	0			
Arsenic	0.04796	0.0050	0.05	0	95.9	80-120	0			
Barium	0.05185	0.0050	0.05	0	104	80-120	0			
Beryllium	0.04809	0.0020	0.05	0	96.2	80-120	0			
Cadmium	0.05066	0.0020	0.05	0	101	80-120	0			
Calcium	4.849	0.50	5	0	97	80-120	0			
Chromium	0.04798	0.0050	0.05	0	96	80-120	0			
Cobalt	0.05183	0.0050	0.05	0	104	80-120	0			
Copper	0.04918	0.0050	0.05	0	98.4	80-120	0			
Iron	4.953	0.20	5	0	99.1	80-120	0			
Lead	0.04859	0.0050	0.05	0	97.2	80-120	0			
Magnesium	4.958	0.20	5	0	99.2	80-120	0			
Manganese	0.049	0.0050	0.05	0	98	80-120	0			
Molybdenum	0.04952	0.0050	0.05	0	99	80-120	0			
Nickel	0.05056	0.0050	0.05	0	101	80-120	0			
Potassium	4.937	0.20	5	0	98.7	80-120	0			
Selenium	0.05188	0.0050	0.05	0	104	80-120	0			
Silver	0.04921	0.0050	0.05	0	98.4	80-120	0			
Sodium	4.941	0.20	5	0	98.8	80-120	0			
Vanadium	0.04891	0.0050	0.05	0	97.8	80-120	0			
Zinc	0.04989	0.0050	0.05	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:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: **23689**      Instrument ID **ICPMS03**      Method: **SW6020**

MS		Sample ID: 0705545-03AMS				Units: mg/L		Analysis Date: 05/30/07 1:13		
Client ID:		Run ID: ICPMS03_070529A			SeqNo: 1127698		Prep Date: 5/29/2007		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.04736	0.0050	0.05	0.0003295	94.1	80-120	0			
Barium	0.04688	0.0050	0.05	0.001811	90.1	80-120	0			
Beryllium	0.04669	0.0020	0.05	0.00004217	93.3	80-120	0			
Cadmium	0.04781	0.0020	0.05	0.00003437	95.6	80-120	0			
Chromium	0.04621	0.0050	0.05	0.0001879	92	80-120	0			
Cobalt	0.05032	0.0050	0.05	0.00004692	101	80-120	0			
Copper	0.04731	0.0050	0.05	-0.0001381	94.9	80-120	0			
Iron	4.675	0.20	5	0.06959	92.1	80-120	0			
Lead	0.0466	0.0050	0.05	0.0002154	92.8	80-120	0			
Magnesium	4.713	0.20	5	0.2482	89.3	80-120	0			
Manganese	0.04709	0.0050	0.05	0.001315	91.6	80-120	0			
Molybdenum	0.04674	0.0050	0.05	0.0000414	93.4	80-120	0			
Nickel	0.04684	0.0050	0.05	0.00003806	93.6	80-120	0			
Potassium	4.646	0.20	5	0.00119	92.9	80-120	0			
Selenium	0.04813	0.0050	0.05	0.0009332	94.4	80-120	0			
Silver	0.0471	0.0050	0.05	-0.00002559	94.3	80-120	0			
Vanadium	0.04523	0.0050	0.05	-0.004859	100	80-120	0			
Zinc	0.06274	0.0050	0.05	0.001244	123	80-120	0			S

MS		Sample ID: 0705545-03AMS				Units: mg/L		Analysis Date: 05/30/07 18:37		
Client ID:		Run ID: ICPMS03_070530A			SeqNo: 1128696		Prep Date: 5/29/2007		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05031	0.010	0.05	0.006099	88.4	80-120	0			
Calcium	4.83	0.50	5	0.02323	96.1	80-120	0			
Sodium	5.043	0.20	5	-0.1149	103	80-120	0			

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

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well

**QC BATCH REPORT**

Batch ID: **23689**      Instrument ID **ICPMS03**      Method: **SW6020**

**MSD**      Sample ID: **0705545-03AMSD**      Units: **mg/L**      Analysis Date: **05/30/07 1:19**

Client ID:      Run ID: **ICPMS03\_070529A**      SeqNo: **1127699**      Prep Date: **5/29/2007**      DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.0487	0.0050	0.05	0.0003295	96.7	80-120	0.04736	2.79	15	
Barium	0.04684	0.0050	0.05	0.001811	90.1	80-120	0.04688	0.0854	15	
Beryllium	0.04645	0.0020	0.05	0.00004217	92.8	80-120	0.04669	0.515	15	
Cadmium	0.04645	0.0020	0.05	0.00003437	92.8	80-120	0.04781	2.89	15	
Chromium	0.04842	0.0050	0.05	0.0001879	96.5	80-120	0.04621	4.67	15	
Cobalt	0.05142	0.0050	0.05	0.00004692	103	80-120	0.05032	2.16	15	
Copper	0.04871	0.0050	0.05	-0.0001381	97.7	80-120	0.04731	2.92	15	
Iron	4.588	0.20	5	0.06959	90.4	80-120	4.675	1.88	15	
Lead	0.0456	0.0050	0.05	0.0002154	90.8	80-120	0.0466	2.17	15	
Magnesium	4.655	0.20	5	0.2482	88.1	80-120	4.713	1.24	15	
Manganese	0.04909	0.0050	0.05	0.001315	95.6	80-120	0.04709	4.16	15	
Molybdenum	0.04661	0.0050	0.05	0.0000414	93.1	80-120	0.04674	0.279	15	
Nickel	0.04659	0.0050	0.05	0.00003806	93.1	80-120	0.04684	0.535	15	
Potassium	4.589	0.20	5	0.00119	91.8	80-120	4.646	1.23	15	
Selenium	0.0457	0.0050	0.05	0.0009332	89.5	80-120	0.04813	5.18	15	
Silver	0.04575	0.0050	0.05	-0.00002559	91.6	80-120	0.0471	2.91	15	
Vanadium	0.04889	0.0050	0.05	-0.004859	107	80-120	0.04523	7.78	15	
Zinc	0.04837	0.0050	0.05	0.001244	94.3	80-120	0.06274	25.9	15	R

**MSD**      Sample ID: **0705545-03AMSD**      Units: **mg/L**      Analysis Date: **05/30/07 18:43**

Client ID:      Run ID: **ICPMS03\_070530A**      SeqNo: **1128698**      Prep Date: **5/29/2007**      DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.04941	0.010	0.05	0.006099	86.6	80-120	0.05031	1.81	15	
Calcium	4.826	0.50	5	0.02323	96.1	80-120	4.83	0.0829	15	
Sodium	4.978	0.20	5	-0.1149	102	80-120	5.043	1.3	15	

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

CLIENT: Navajo Refining Company  
 Work Order: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: 23689 Instrument ID ICPMS03 Method: SW6020

DUP		Sample ID: 0705545-03ADUP				Units: mg/L			Analysis Date: 05/30/07 1:02		
Client ID:		Run ID: ICPMS03_070529A			SeqNo: 1127696		Prep Date: 5/29/2007		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	ND	0.0050	0	0	0	0-0	0.0003295	0	25		
Barium	ND	0.0050	0	0	0	0-0	0.001811	0	25		
Beryllium	ND	0.0020	0	0	0	0-0	0.00004217	0	25		
Cadmium	ND	0.0020	0	0	0	0-0	0.00003437	0	25		
Calcium	ND	0.50	0	0	0	0-0	0.7346	0	25		
Chromium	ND	0.0050	0	0	0	0-0	0.0001879	0	25		
Cobalt	ND	0.0050	0	0	0	0-0	0.00004692	0	25		
Copper	ND	0.0050	0	0	0	0-0	-0.0001381	0	25		
Iron	0.04867	0.20	0	0	0	0-0	0.06959	0	25	J	
Lead	ND	0.0050	0	0	0	0-0	0.0002154	0	25		
Magnesium	ND	0.20	0	0	0	0-0	0.2482	0	25		
Manganese	ND	0.0050	0	0	0	0-0	0.001315	0	25		
Molybdenum	ND	0.0050	0	0	0	0-0	0.0000414	0	25		
Nickel	ND	0.0050	0	0	0	0-0	0.00003806	0	25		
Potassium	ND	0.20	0	0	0	0-0	0.00119	0	25		
Selenium	ND	0.0050	0	0	0	0-0	0.0009332	0	25		
Silver	ND	0.0050	0	0	0	0-0	-0.00002559	0	25		
Sodium	ND	0.20	0	0	0	0-0	0.627	0	25		
Vanadium	ND	0.0050	0	0	0	0-0	-0.004859	0	25		
Zinc	ND	0.0050	0	0	0	0-0	0.001244	0	25		

DUP		Sample ID: 0705545-03ADUP				Units: mg/L			Analysis Date: 05/31/07 14:58		
Client ID:		Run ID: ICPMS03_070531A			SeqNo: 1129277		Prep Date: 5/29/2007		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.006979	0.010	0	0	0	0-0	0.006099	0	25	J	

The following samples were analyzed in this batch: 0705513-01B

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:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: **23704**      Instrument ID **Mercury**      Method: **SW7470**

MBLK		Sample ID: <b>GBLKW2-052907</b>			Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 16:18</b>		
Client ID:		Run ID: <b>MERCURY_070530C</b>			SeqNo: <b>1128585</b>	Prep Date: <b>5/29/2007</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000053	0.00020								J

LCS		Sample ID: <b>GLCSW2-052907</b>			Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 16:20</b>		
Client ID:		Run ID: <b>MERCURY_070530C</b>			SeqNo: <b>1128586</b>	Prep Date: <b>5/29/2007</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00529	0.00020	0.005	0	106	85-115	0			

LCSD		Sample ID: <b>GLCSDW2-052907</b>			Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 16:22</b>		
Client ID:		Run ID: <b>MERCURY_070530C</b>			SeqNo: <b>1128587</b>	Prep Date: <b>5/29/2007</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00522	0.00020	0.005	0	104	85-115	0.00529	1.33	20	

MS		Sample ID: <b>0705445-02FMS</b>			Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 16:35</b>		
Client ID:		Run ID: <b>MERCURY_070530C</b>			SeqNo: <b>1128590</b>	Prep Date: <b>5/29/2007</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00511	0.00020	0.005	0	102	85-115	0			

MSD		Sample ID: <b>0705445-02FMSD</b>			Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 16:37</b>		
Client ID:		Run ID: <b>MERCURY_070530C</b>			SeqNo: <b>1128591</b>	Prep Date: <b>5/29/2007</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00517	0.00020	0.005	0	103	85-115	0.00511	1.17	20	

DUP		Sample ID: <b>0705445-02FDUP</b>			Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 16:33</b>		
Client ID:		Run ID: <b>MERCURY_070530C</b>			SeqNo: <b>1128589</b>	Prep Date: <b>5/29/2007</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000178	0.00020	0	0	0	0-0	0			J

The following samples were analyzed in this batch:

0705513-01B

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:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: **23738**      Instrument ID **ICPMS02**      Method: **SW6020**

**MBLK**      Sample ID: **MBLKW1-060107**      Units: **mg/L**      Analysis Date: **06/01/07 19:17**

Client ID:      Run ID: **ICPMS02\_070601A**      SeqNo: **1130597**      Prep Date: **6/1/2007**      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	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Sodium	ND	0.20								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

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:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: 23738      Instrument ID ICPMS02      Method: SW6020

**LCS**      Sample ID: MLCSW1-060107      Units: mg/L      Analysis Date: 06/01/07 19:23

Client ID:      Run ID: ICPMS02\_070601A      SeqNo: 1130599      Prep Date: 6/1/2007      DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.04686	0.010	0.05	0	93.7	80-120	0			
Arsenic	0.05062	0.0050	0.05	0	101	80-120	0			
Barium	0.05021	0.0050	0.05	0	100	80-120	0			
Beryllium	0.04826	0.0020	0.05	0	96.5	80-120	0			
Boron	0.5006	0.020	0.5	0	100	80-120	0			
Cadmium	0.05089	0.0020	0.05	0	102	80-120	0			
Calcium	4.75	0.50	5	0	95	80-120	0			
Chromium	0.04835	0.0050	0.05	0	96.7	80-120	0			
Cobalt	0.05211	0.0050	0.05	0	104	80-120	0			
Copper	0.04979	0.0050	0.05	0	99.6	80-120	0			
Iron	4.822	0.20	5	0	96.4	80-120	0			
Lead	0.05005	0.0050	0.05	0	100	80-120	0			
Magnesium	4.965	0.20	5	0	99.3	80-120	0			
Manganese	0.04939	0.0050	0.05	0	98.8	80-120	0			
Nickel	0.04991	0.0050	0.05	0	99.8	80-120	0			
Potassium	4.968	0.20	5	0	99.4	80-120	0			
Selenium	0.04876	0.0050	0.05	0	97.5	80-120	0			
Sodium	4.931	0.20	5	0	98.6	80-120	0			
Vanadium	0.04909	0.0050	0.05	0	98.2	80-120	0			
Zinc	0.05179	0.0050	0.05	0	104	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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: 23738 Instrument ID ICPMS02 Method: SW6020

MS Sample ID: 0705584-17BMS Units: mg/L Analysis Date: 06/01/07 19:48

Client ID: Run ID: ICPMS02\_070601A SeqNo: 1130603 Prep Date: 6/1/2007 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09165	0.010	0.05	0.03487	114	80-120	0			
Arsenic	0.04888	0.0050	0.05	-0.0004787	98.7	80-120	0			
Barium	0.05102	0.0050	0.05	-0.0002312	103	80-120	0			
Beryllium	0.04868	0.0020	0.05	-0.0002001	97.8	80-120	0			
Boron	0.5024	0.020	0.5	0.006157	99.2	80-120	0			
Cadmium	0.05024	0.0020	0.05	-0.0005976	102	80-120	0			
Calcium	4.826	0.50	5	0.05115	95.5	80-120	0			
Chromium	0.04856	0.0050	0.05	-0.0003882	97.9	80-120	0			
Cobalt	0.05204	0.0050	0.05	-0.0006047	105	80-120	0			
Copper	0.04897	0.0050	0.05	-0.0008224	99.6	80-120	0			
Iron	4.901	0.20	5	-0.01837	98.4	80-120	0			
Lead	0.04939	0.0050	0.05	-0.0002864	99.4	80-120	0			
Magnesium	5.023	0.20	5	-0.04002	101	80-120	0			
Manganese	0.05141	0.0050	0.05	0.00007164	103	80-120	0			
Nickel	0.04961	0.0050	0.05	-0.0005432	100	80-120	0			
Potassium	5.006	0.20	5	-0.01892	100	80-120	0			
Selenium	0.04954	0.0050	0.05	0.0003524	98.4	80-120	0			
Sodium	5.074	0.20	5	0.114	99.2	80-120	0			
Vanadium	0.0501	0.0050	0.05	-0.0003341	101	80-120	0			
Zinc	0.05075	0.0050	0.05	0.0002193	101	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: 0705513  
 Project: Inj. Well

**QC BATCH REPORT**

Batch ID: 23738 Instrument ID ICPMS02 Method: SW6020

MSD Sample ID: 0705584-17BMSD Units: mg/L Analysis Date: 06/01/07 19:54

Client ID: Run ID: ICPMS02\_070601A SeqNo: 1130604 Prep Date: 6/1/2007 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09242	0.010	0.05	0.03487	115	80-120	0.09165	0.837	15	
Arsenic	0.04836	0.0050	0.05	-0.0004787	97.7	80-120	0.04888	1.07	15	
Barium	0.05043	0.0050	0.05	-0.0002312	101	80-120	0.05102	1.16	15	
Beryllium	0.04766	0.0020	0.05	-0.0002001	95.7	80-120	0.04868	2.12	15	
Boron	0.5011	0.020	0.5	0.006157	99	80-120	0.5024	0.259	15	
Cadmium	0.04973	0.0020	0.05	-0.0005976	101	80-120	0.05024	1.02	15	
Calcium	4.792	0.50	5	0.05115	94.8	80-120	4.826	0.707	15	
Chromium	0.0479	0.0050	0.05	-0.0003882	96.6	80-120	0.04856	1.37	15	
Cobalt	0.05153	0.0050	0.05	-0.0006047	104	80-120	0.05204	0.985	15	
Copper	0.04927	0.0050	0.05	-0.0008224	100	80-120	0.04897	0.611	15	
Iron	4.855	0.20	5	-0.01837	97.5	80-120	4.901	0.943	15	
Lead	0.04972	0.0050	0.05	-0.0002864	100	80-120	0.04939	0.666	15	
Magnesium	4.986	0.20	5	-0.04002	101	80-120	5.023	0.739	15	
Manganese	0.05004	0.0050	0.05	0.00007164	99.9	80-120	0.05141	2.7	15	
Nickel	0.04886	0.0050	0.05	-0.0005432	98.8	80-120	0.04961	1.52	15	
Potassium	4.988	0.20	5	-0.01892	100	80-120	5.006	0.36	15	
Selenium	0.04929	0.0050	0.05	0.0003524	97.9	80-120	0.04954	0.506	15	
Sodium	5.036	0.20	5	0.114	98.4	80-120	5.074	0.752	15	
Vanadium	0.04901	0.0050	0.05	-0.0003341	98.7	80-120	0.0501	2.2	15	
Zinc	0.05043	0.0050	0.05	0.0002193	100	80-120	0.05075	0.633	15	

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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: 23738 Instrument ID ICPMS02 Method: SW6020

DUP Sample ID: 0705584-17BDUP Units: mg/L Analysis Date: 06/01/07 19:35

Client ID: Run ID: ICPMS02\_070601A SeqNo: 1130601 Prep Date: 6/1/2007 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.03972	0.010	0	0	0	0-0	0.03487	13	25	
Arsenic	ND	0.0050	0	0	0	0-0	-0.0004787	0	25	
Barium	ND	0.0050	0	0	0	0-0	-0.0002312	0	25	
Beryllium	ND	0.0020	0	0	0	0-0	-0.0002001	0	25	
Boron	ND	0.020	0	0	0	0-0	0.006157	0	25	
Cadmium	ND	0.0020	0	0	0	0-0	-0.0005976	0	25	
Calcium	ND	0.50	0	0	0	0-0	0.05115	0	25	
Chromium	ND	0.0050	0	0	0	0-0	-0.0003882	0	25	
Cobalt	ND	0.0050	0	0	0	0-0	-0.0006047	0	25	
Copper	ND	0.0050	0	0	0	0-0	-0.0008224	0	25	
Iron	ND	0.20	0	0	0	0-0	-0.01837	0	25	
Lead	ND	0.0050	0	0	0	0-0	-0.0002864	0	25	
Magnesium	ND	0.20	0	0	0	0-0	-0.04002	0	25	
Manganese	ND	0.0050	0	0	0	0-0	0.00007164	0	25	
Nickel	ND	0.0050	0	0	0	0-0	-0.0005432	0	25	
Potassium	ND	0.20	0	0	0	0-0	-0.01892	0	25	
Selenium	ND	0.0050	0	0	0	0-0	0.0003524	0	25	
Sodium	0.1134	0.20	0	0	0	0-0	0.114	0	25	J
Vanadium	ND	0.0050	0	0	0	0-0	-0.0003341	0	25	
Zinc	ND	0.0050	0	0	0	0-0	0.0002193	0	25	

The following samples were analyzed in this batch:

0705513-01B

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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: 23644 Instrument ID SV-5 Method: SW8270

MBLK Sample ID: SBLKW1-070525 Units: µg/L Analysis Date: 05/30/07 17:37

Client ID: Run ID: SV-5\_070530A SeqNo: 1128744 Prep Date: 5/25/2007 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	5.0								
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	5.0								
2-Nitroaniline	ND	5.0								
2-Nitrophenol	ND	5.0								
3&4-Methylphenol	ND	5.0								
3-Nitroaniline	ND	5.0								
4-Nitroaniline	ND	5.0								
4-Nitrophenol	ND	5.0								
Acenaphthene	ND	5.0								
Acenaphthylene	ND	5.0								
Aniline	ND	5.0								
Anthracene	ND	5.0								
Benz(a)anthracene	ND	5.0								
Benzdine	ND	5.0								
Hexachloroethane	ND	5.0								
Indeno(1,2,3-cd)pyrene	ND	5.0								
Isophorone	ND	5.0								
N-Nitrosodj-n-propylamine	ND	5.0								
N-Nitrosodimethylamine	ND	5.0								
N-Nitrosodiphenylamine	ND	5.0								
Naphthalene	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Phenanthrene	ND	5.0								
Phenol	ND	5.0								
Pyrene	ND	5.0								
Surr: 2,4,6-Tribromophenol	78.67	5.0	100	0	78.7	42-124	0			
Surr: 2-Fluorobiphenyl	74.02	5.0	100	0	74	48-120	0			
Surr: 2-Fluorophenol	70.91	5.0	100	0	70.9	20-120	0			
Surr: 4-Terphenyl-d14	75.48	5.0	100	0	75.5	51-135	0			
Surr: Nitrobenzene-d5	75.08	5.0	100	0	75.1	41-120	0			
Surr: Phenol-d6	75.38	5.0	100	0	75.4	20-120	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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: 23644 Instrument ID SV-5 Method: SW8270

LCS		Sample ID: SLCSW1-070525			Units: µg/L			Analysis Date: 05/31/07 9:42		
Client ID:		Run ID: SV-5_070530A			SeqNo: 1128765		Prep Date: 5/25/2007		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	40.59	5.0	50	0	81.2	54-118	0			
2,4,5-Trichlorophenol	83.44	5.0	100	0	83.4	52-115	0			
2,4,6-Trichlorophenol	83.87	5.0	100	0	83.9	56-115	0			
2-Methylnaphthalene	38.48	5.0	50	0	77	46-117	0			
2-Methylphenol	77.26	5.0	100	0	77.3	53-115	0			
2-Nitroaniline	41.03	5.0	50	0	82.1	53-123	0			
2-Nitrophenol	81.12	5.0	100	0	81.1	53-115	0			
3&4-Methylphenol	115.3	5.0	150	0	76.9	48-115	0			
3-Nitroaniline	34.77	5.0	50	0	69.5	26-115	0			
4-Nitroaniline	38.17	5.0	50	0	76.3	47-115	0			
4-Nitrophenol	88.59	5.0	100	0	88.6	26-133	0			
Acenaphthene	39.5	5.0	50	0	79	57-115	0			
Acenaphthylene	39.33	5.0	50	0	78.7	57-118	0			
Aniline	31.49	5.0	50	0	63	36-115	0			
Anthracene	39.81	5.0	50	0	79.6	65-115	0			
Benz(a)anthracene	39.26	5.0	50	0	78.5	53-115	0			
Benzidine	15.64	5.0	50	0	31.3	10-115	0			
Hexachloroethane	39.6	5.0	50	0	79.2	54-115	0			
Indeno(1,2,3-cd)pyrene	39.93	5.0	50	0	79.9	51-115	0			
Isophorone	40.68	5.0	50	0	81.4	55-115	0			
N-Nitrosodi-n-propylamine	37.07	5.0	50	0	74.1	55-115	0			
N-Nitrosodimethylamine	36.86	5.0	50	0	73.7	42-115	0			
N-Nitrosodiphenylamine	40.01	5.0	50	0	80	52-115	0			
Naphthalene	40.7	5.0	50	0	81.4	55-115	0			
Nitrobenzene	40.57	5.0	50	0	81.1	40-124	0			
Pentachlorophenol	84.23	5.0	100	0	84.2	45-125	0			
Phenanthrene	39.15	5.0	50	0	78.3	57-115	0			
Phenol	73.21	5.0	100	0	73.2	38-115	0			
Pyrene	37.13	5.0	50	0	74.3	51-115	0			
Surr: 2,4,6-Tribromophenol	83.83	5.0	100	0	83.8	42-124	0			
Surr: 2-Fluorobiphenyl	78.05	5.0	100	0	78.1	48-120	0			
Surr: 2-Fluorophenol	76.67	5.0	100	0	76.7	20-120	0			
Surr: 4-Terphenyl-d14	71.41	5.0	100	0	71.4	51-135	0			
Surr: Nitrobenzene-d5	77.88	5.0	100	0	77.9	41-120	0			
Surr: Phenol-d6	78.13	5.0	100	0	78.1	20-120	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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: 23644 Instrument ID SV-5 Method: SW8270

LCSD Sample ID: SLCSDW1-070525 Units: µg/L Analysis Date: 05/30/07 18:25

Client ID: Run ID: SV-5\_070530A SeqNo: 1128745 Prep Date: 5/25/2007 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	40.88	5.0	50	0	81.8	54-118	40.59	0.708	20	
2,4,5-Trichlorophenol	81.2	5.0	100	0	81.2	52-115	83.44	2.72	20	
2,4,6-Trichlorophenol	81.21	5.0	100	0	81.2	56-115	83.87	3.22	20	
2-Methylnaphthalene	41.33	5.0	50	0	82.7	46-117	38.48	7.13	20	
2-Methylphenol	83.04	5.0	100	0	83	53-115	77.26	7.22	20	
2-Nitroaniline	48.95	5.0	50	0	97.9	53-123	41.03	17.6	20	
2-Nitrophenol	81.41	5.0	100	0	81.4	53-115	81.12	0.353	20	
3&4-Methylphenol	126.6	5.0	150	0	84.4	48-115	115.3	9.38	20	
3-Nitroaniline	38.69	5.0	50	0	77.4	26-115	34.77	10.7	20	
4-Nitroaniline	42.6	5.0	50	0	85.2	47-115	38.17	11	20	
4-Nitrophenol	91.94	5.0	100	0	91.9	26-133	88.59	3.72	20	
Acenaphthene	40.37	5.0	50	0	80.7	57-115	39.5	2.17	20	
Acenaphthylene	39.66	5.0	50	0	79.3	57-118	39.33	0.852	20	
Aniline	33.94	5.0	50	0	67.9	36-115	31.49	7.49	20	
Anthracene	39.75	5.0	50	0	79.5	65-115	39.81	0.141	20	
Benz(a)anthracene	38.42	5.0	50	0	76.8	53-115	39.26	2.15	20	
Benzidine	12.47	5.0	50	0	24.9	10-115	15.64	22.5	20	R
Hexachloroethane	38.58	5.0	50	0	77.2	54-115	39.6	2.61	20	
Indeno(1,2,3-cd)pyrene	41.97	5.0	50	0	83.9	51-115	39.93	4.97	20	
Isophorone	42.2	5.0	50	0	84.4	55-115	40.68	3.68	20	
N-Nitrosodi-n-propylamine	40.42	5.0	50	0	80.8	55-115	37.07	8.66	20	
N-Nitrosodimethylamine	34.55	5.0	50	0	69.1	42-115	36.86	6.49	20	
N-Nitrosodiphenylamine	38.84	5.0	50	0	77.7	52-115	40.01	2.98	20	
Naphthalene	40.52	5.0	50	0	81	55-115	40.7	0.447	20	
Nitrobenzene	39.14	5.0	50	0	78.3	40-124	40.57	3.58	20	
Pentachlorophenol	83.86	5.0	100	0	83.9	45-125	84.23	0.435	20	
Phenanthrene	40.41	5.0	50	0	80.8	57-115	39.15	3.16	20	
Phenol	78.43	5.0	100	0	78.4	38-115	73.21	6.89	20	
Pyrene	37.83	5.0	50	0	75.7	51-115	37.13	1.88	20	
Surr: 2,4,6-Tribromophenol	89.48	5.0	100	0	89.5	42-124	83.83	6.53	20	
Surr: 2-Fluorobiphenyl	74.66	5.0	100	0	74.7	48-120	78.05	4.44	20	
Surr: 2-Fluorophenol	76.13	5.0	100	0	76.1	20-120	76.67	0.704	20	
Surr: 4-Terphenyl-d14	71.93	5.0	100	0	71.9	51-135	71.41	0.721	20	
Surr: Nitrobenzene-d5	76.37	5.0	100	0	76.4	41-120	77.88	1.97	20	
Surr: Phenol-d6	82.29	5.0	100	0	82.3	20-120	78.13	5.18	20	

The following samples were analyzed in this batch:

0705513-01D

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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: R50560 Instrument ID VOA1 Method: SW8260

MBLK Sample ID: VBLKW-060407 Units: µg/L Analysis Date: 06/04/07 12:19

Client ID: Run ID: VOA1\_070604A SeqNo: 1131715 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	49.37	5.0	50	0	98.7	70-125	0			
Surr: 4-Bromofluorobenzene	52.38	5.0	50	0	105	72-125	0			
Surr: Dibromofluoromethane	52.15	5.0	50	0	104	71-125	0			
Surr: Toluene-d8	52.92	5.0	50	0	106	75-125	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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: R50560 Instrument ID VOA1 Method: SW8260

LCS	Sample ID: VLCSW-060407	Units: µg/L					Analysis Date: 06/04/07 11:03			
Client ID:	Run ID: VOA1_070604A	SeqNo: 1131712	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	80-120	0			
1,1,2,2-Tetrachloroethane	49.27	5.0	50	0	98.5	72-120	0			
1,1,2-Trichloroethane	50.38	5.0	50	0	101	80-120	0			
1,1-Dichloroethane	52.04	5.0	50	0	104	76-120	0			
1,1-Dichloroethene	52.36	5.0	50	0	105	73-124	0			
1,2-Dichloroethane	50.24	5.0	50	0	100	78-120	0			
2-Butanone	98.54	10	100	0	98.5	58-132	0			
2-Chloroethyl vinyl ether	95.11	10	100	0	95.1	74-120	0			
2-Hexanone	105.1	10	100	0	105	61-130	0			
4-Methyl-2-pentanone	99.77	10	100	0	99.8	65-127	0			
Acetone	100.8	10	100	0	101	59-137	0			
Benzene	51.36	5.0	50	0	103	73-121	0			
Bromodichloromethane	48.16	5.0	50	0	96.3	80-120	0			
Bromoform	52.49	5.0	50	0	105	79-120	0			
Bromomethane	57.67	5.0	50	0	115	66-137	0			
Carbon disulfide	99.18	10	100	0	99.2	68-141	0			
Carbon tetrachloride	47.14	5.0	50	0	94.3	75-124	0			
Chlorobenzene	48.85	5.0	50	0	97.7	80-120	0			
Chloroethane	50.35	5.0	50	0	101	76-121	0			
Chloroform	51.17	5.0	50	0	102	80-120	0			
Chloromethane	47.82	5.0	50	0	95.6	67-123	0			
cis-1,3-Dichloropropene	51.19	5.0	50	0	102	80-120	0			
Dibromochloromethane	48.17	5.0	50	0	96.3	80-120	0			
Ethylbenzene	51.47	5.0	50	0	103	80-120	0			
m,p-Xylene	105.5	10	100	0	105	78-121	0			
Methylene chloride	50.62	10	50	0	101	65-133	0			
Styrene	55.81	5.0	50	0	112	80-120	0			
Tetrachloroethene	49.18	5.0	50	0	98.4	79-120	0			
Toluene	50.06	5.0	50	0	100	80-120	0			
trans-1,3-Dichloropropene	51.18	5.0	50	0	102	80-120	0			
Trichloroethene	50.04	5.0	50	0	100	80-120	0			
Vinyl acetate	97.43	10	100	0	97.4	67-139	0			
Vinyl chloride	52.81	2.0	50	0	106	74-122	0			
Xylenes, Total	159.2	15	150	0	106	80-120	0			
Surr: 1,2-Dichloroethane-d4	51.7	5.0	50	0	103	70-125	0			
Surr: 4-Bromofluorobenzene	52.18	5.0	50	0	104	72-125	0			
Surr: Dibromofluoromethane	51.9	5.0	50	0	104	71-125	0			
Surr: Toluene-d8	54.5	5.0	50	0	109	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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: R50560 Instrument ID VOA1 Method: SW8260

MS		Sample ID: 0706015-15AMS			Units: µg/L			Analysis Date: 06/04/07 17:50		
Client ID:		Run ID: VOA1_070604A			SeqNo: 1131727		Prep Date:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	213.1	25	250	0	85.3	80-120	0			
1,1,2,2-Tetrachloroethane	271.6	25	250	0	109	72-120	0			
1,1,2-Trichloroethane	271.4	25	250	0	109	80-120	0			
1,1-Dichloroethane	235.5	25	250	0	94.2	76-120	0			
1,1-Dichloroethene	165.1	25	250	0	66.1	73-124	0			S
1,2-Dichloroethane	237.3	25	250	0	94.9	78-120	0			
2-Butanone	562.5	50	500	0	112	58-132	0			
2-Chloroethyl vinyl ether	23.5	50	500	0	4.7	74-120	0			JS
2-Hexanone	605.6	50	500	0	121	61-130	0			
4-Methyl-2-pentanone	596.2	50	500	0	119	65-127	0			
Acetone	550.4	50	500	7.039	109	59-137	0			
Benzene	238.1	25	250	0	95.2	73-121	0			
Bromodichloromethane	240.7	25	250	0	96.3	80-120	0			
Bromoform	279.5	25	250	0	112	79-120	0			
Bromomethane	214.3	25	250	0	85.7	66-137	0			
Carbon disulfide	410.9	50	500	0	82.2	68-141	0			
Carbon tetrachloride	181.8	25	250	0	72.7	75-124	0			S
Chlorobenzene	245	25	250	0	98	80-120	0			
Chloroethane	217.2	25	250	0	86.9	76-121	0			
Chloroform	247.9	25	250	0	99.2	80-120	0			
Chloromethane	208.1	25	250	0	83.3	67-123	0			
cis-1,3-Dichloropropene	261.4	25	250	0	105	80-120	0			
Dibromochloromethane	257.8	25	250	0	103	80-120	0			
Ethylbenzene	242.7	25	250	0	97.1	80-120	0			
m,p-Xylene	477	50	500	0	95.4	78-121	0			
Methylene chloride	251	50	250	0	100	65-133	0			
Styrene	269	25	250	0	108	80-120	0			
Tetrachloroethene	416.5	25	250	198.9	87	79-120	0			
Toluene	236.7	25	250	0	94.7	80-120	0			
trans-1,3-Dichloropropene	260.3	25	250	0	104	80-120	0			
Trichloroethene	224	25	250	7.163	86.7	80-120	0			
Vinyl acetate	525.8	50	500	0	105	67-139	0			
Vinyl chloride	189.6	10	250	0	75.8	74-122	0			
Xylenes, Total	725.3	75	750	0	96.7	80-120	0			
Surr: 1,2-Dichloroethane-d4	267.4	25	250	0	107	70-125	0			
Surr: 4-Bromofluorobenzene	291.6	25	250	0	117	72-125	0			
Surr: Dibromofluoromethane	263.8	25	250	0	106	71-125	0			
Surr: Toluene-d8	279.8	25	250	0	112	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: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: R50560 Instrument ID VOA1 Method: SW8260

MSD Sample ID: 0706015-15AMSD Units: µg/L Analysis Date: 06/04/07 18:16

Client ID: Run ID: VOA1\_070604A SeqNo: 1131728 Prep Date: DF: 5

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	211.2	25	250	0	84.5	80-120	213.1	0.94	20	
1,1,2,2-Tetrachloroethane	279.7	25	250	0	112	72-120	271.6	2.96	20	
1,1,2-Trichloroethane	266.2	25	250	0	106	80-120	271.4	1.92	20	
1,1-Dichloroethane	240.6	25	250	0	96.2	76-120	235.5	2.13	20	
1,1-Dichloroethene	176	25	250	0	70.4	73-124	165.1	6.35	20	S
1,2-Dichloroethane	254.4	25	250	0	102	78-120	237.3	6.98	20	
2-Butanone	589.2	50	500	0	118	58-132	562.5	4.65	20	
2-Chloroethyl vinyl ether	ND	50	500	0	0	74-120	23.5	0	20	S
2-Hexanone	604.1	50	500	0	121	61-130	605.6	0.248	20	
4-Methyl-2-pentanone	562.4	50	500	0	112	65-127	596.2	5.84	20	
Acetone	526	50	500	7.039	104	59-137	550.4	4.54	20	
Benzene	257.5	25	250	0	103	73-121	238.1	7.82	20	
Bromodichloromethane	238.3	25	250	0	95.3	80-120	240.7	0.988	20	
Bromoform	269.7	25	250	0	108	79-120	279.5	3.55	20	
Bromomethane	208	25	250	0	83.2	66-137	214.3	2.98	20	
Carbon disulfide	423.7	50	500	0	84.7	68-141	410.9	3.08	20	
Carbon tetrachloride	189.3	25	250	0	75.7	75-124	181.8	4.08	20	
Chlorobenzene	231.2	25	250	0	92.5	80-120	245	5.77	20	
Chloroethane	209.6	25	250	0	83.8	76-121	217.2	3.54	20	
Chloroform	239.7	25	250	0	95.9	80-120	247.9	3.38	20	
Chloromethane	200.5	25	250	0	80.2	67-123	208.1	3.72	20	
cis-1,3-Dichloropropene	278	25	250	0	111	80-120	261.4	6.12	20	
Dibromochloromethane	244.7	25	250	0	97.9	80-120	257.8	5.23	20	
Ethylbenzene	230.5	25	250	0	92.2	80-120	242.7	5.16	20	
m,p-Xylene	490.6	50	500	0	98.1	78-121	477	2.8	20	
Methylene chloride	262.9	50	250	0	105	65-133	251	4.63	20	
Styrene	247.2	25	250	0	98.9	80-120	269	8.43	20	
Tetrachloroethene	396.7	25	250	198.9	79.1	79-120	416.5	4.88	20	
Toluene	241.7	25	250	0	96.7	80-120	236.7	2.1	20	
trans-1,3-Dichloropropene	254.7	25	250	0	102	80-120	260.3	2.19	20	
Trichloroethene	243.6	25	250	7.163	94.6	80-120	224	8.41	20	
Vinyl acetate	492.7	50	500	0	98.5	67-139	525.8	6.49	20	
Vinyl chloride	204	10	250	0	81.6	74-122	189.6	7.32	20	
Xylenes, Total	718.3	75	750	0	95.8	80-120	725.3	0.968	20	
Surr: 1,2-Dichloroethane-d4	262.4	25	250	0	105	70-125	267.4	1.88	20	
Surr: 4-Bromofluorobenzene	261.9	25	250	0	105	72-125	291.6	10.8	20	
Surr: Dibromofluoromethane	259.9	25	250	0	104	71-125	263.8	1.5	20	
Surr: Toluene-d8	280.6	25	250	0	112	75-125	279.8	0.287	20	

The following samples were analyzed in this batch:

0705513-01A 0705513-02A

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

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: **R50228**      Instrument ID **WetChem**      Method: **E150.1**

**LCS**      Sample ID: **WLCSW1-052407**      Units: **pH units**      Analysis Date: **05/24/07 0:00**

Client ID:      Run ID: **WETCHEM\_070524C**      SeqNo: **1124602**      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	90-110	0			

**DUP**      Sample ID: **0705513-01EDUP**      Units: **pH units**      Analysis Date: **05/24/07 0:00**

Client ID: **Inj. Well**      Run ID: **WETCHEM\_070524C**      SeqNo: **1124605**      Prep Date:      DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.91	0.10	0	0	0	0-0	6.89	0.29	20	H

The following samples were analyzed in this batch: 0705513-01E

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

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: **R50267**      Instrument ID **WetChem**      Method: **E120.1**

**MBLK**      Sample ID: **WBLKW1-052507**      Units: **µmhos/cm**      Analysis Date: **05/25/07 0:00**

Client ID:      Run ID: **WETCHEM\_070525F**      SeqNo: **1125777**      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: **WLCSW1-052507**      Units: **µmhos/cm**      Analysis Date: **05/25/07 0:00**

Client ID:      Run ID: **WETCHEM\_070525F**      SeqNo: **1125778**      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	1413	0	99.8	80-120	0			

**DUP**      Sample ID: **0705513-01CDUP**      Units: **µmhos/cm**      Analysis Date: **05/25/07 0:00**

Client ID: **Inj. Well**      Run ID: **WETCHEM\_070525F**      SeqNo: **1125782**      Prep Date:      DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductance	7263	1.0	0	0	0	0-0	7253	0.138	20	

The following samples were analyzed in this batch: 0705513-01C

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

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well

# QC BATCH REPORT

Batch ID: **R50283**      Instrument ID **ICS3000**      Method: **E300**

MBLK		Sample ID: <b>WBLKW1-052407</b>				Units: <b>mg/L</b>			Analysis Date: <b>05/24/07 21:09</b>		
Client ID:		Run ID: <b>ICS3000_070524A</b>			SeqNo: <b>1126024</b>	Prep Date:		DF: <b>1</b>			
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									
<i>Surr: Selenate (surr)</i>	4.71	0.10	5	0	94.2	85-115		0			

LCS		Sample ID: <b>WLCSW1-052407/</b>				Units: <b>mg/L</b>			Analysis Date: <b>05/24/07 21:33</b>		
Client ID:		Run ID: <b>ICS3000_070524A</b>			SeqNo: <b>1126025</b>	Prep Date:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	19.76	0.50	20	0	98.8	90-110		0			
Sulfate	20.02	1.0	20	0	100	90-110		0			
<i>Surr: Selenate (surr)</i>	4.945	0.10	5	0	98.9	85-115		0			

MS		Sample ID: <b>0705524-01CMS</b>				Units: <b>mg/L</b>			Analysis Date: <b>05/25/07 18:41</b>		
Client ID:		Run ID: <b>ICS3000_070524A</b>			SeqNo: <b>1126052</b>	Prep Date:		DF: <b>10</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	804.8	5.0	100	724.8	80	80-120		0		SEO	
Sulfate	141.4	10	100	44.3	97.1	80-120		0			
<i>Surr: Selenate (surr)</i>	46.63	1.0	50	0	93.3	85-115		0			

MS		Sample ID: <b>0705319-29CMS</b>				Units: <b>mg/L</b>			Analysis Date: <b>05/25/07 4:51</b>		
Client ID:		Run ID: <b>ICS3000_070524A</b>			SeqNo: <b>1126067</b>	Prep Date:		DF: <b>5</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	70.71	2.5	50	24.2	93	80-120		0			
Sulfate	657.5	5.0	50	665.7	-16.4	80-120		0		SEO	
<i>Surr: Selenate (surr)</i>	22.34	0.50	25	0	89.4	85-115		0			

MSD		Sample ID: <b>0705524-01CMSD</b>				Units: <b>mg/L</b>			Analysis Date: <b>05/25/07 19:06</b>		
Client ID:		Run ID: <b>ICS3000_070524A</b>			SeqNo: <b>1126053</b>	Prep Date:		DF: <b>10</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	804.1	5.0	100	724.8	79.3	80-120	804.8	0.0922	20	SEO	
Sulfate	141.4	10	100	44.3	97.1	80-120	141.4	0.00707	20		
<i>Surr: Selenate (surr)</i>	46.58	1.0	50	0	93.2	85-115	46.63	0.116	20		

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



CLIENT: Navajo Refining Company  
 Work Order: 0705513  
 Project: Inj. Well

# QC BATCH REPORT

Batch ID: R50283 Instrument ID ICS3000 Method: E300

MSD		Sample ID: 0705319-29CMSD				Units: mg/L			Analysis Date: 05/25/07 5:16		
Client ID:		Run ID: ICS3000_070524A			SeqNo: 1126068	Prep Date:		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	75.1	2.5	50	24.2	102	80-120	70.71	6.02	20		
Sulfate	698	5.0	50	665.7	64.6	80-120	657.5	5.98	20	SEO	
Surr: Selenate (surr)	23.77	0.50	25	0	95.1	85-115	22.34	6.2	20		

DUP		Sample ID: 0705524-01CDUP				Units: mg/L			Analysis Date: 05/25/07 18:17		
Client ID:		Run ID: ICS3000_070524A			SeqNo: 1126051	Prep Date:		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	724.3	5.0	0	0	0	0-0	724.8	0.0802	20	E	
Sulfate	44.35	10	0	0	0	0-0	44.3	0.113	20		
Surr: Selenate (surr)	46.35	1.0	50	0	92.7	85-115	46.4	0.0949	20		

DUP		Sample ID: 0705524-01CDUP				Units: mg/L			Analysis Date: 05/25/07 23:58		
Client ID:		Run ID: ICS3000_070524A			SeqNo: 1126063	Prep Date:		DF: 25			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	718.4	12	0	0	0	0-0	715.2	0.439	20		
Sulfate	44.24	25	0	0	0	0-0	43.92	0.743	20		
Surr: Selenate (surr)	119.4	2.5	125	0	95.6	85-115	118.7	0.621	20		

DUP		Sample ID: 0705319-29CDUP				Units: mg/L			Analysis Date: 05/25/07 4:27		
Client ID:		Run ID: ICS3000_070524A			SeqNo: 1126066	Prep Date:		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	24.18	2.5	0	0	0	0-0	24.2	0.0868	20		
Sulfate	665.7	5.0	0	0	0	0-0	665.7	0.00315	20	E	
Surr: Selenate (surr)	23.64	0.50	25	0	94.6	85-115	23.63	0.0677	20		

DUP		Sample ID: 0705319-29CDUP				Units: mg/L			Analysis Date: 05/25/07 6:05		
Client ID:		Run ID: ICS3000_070524A			SeqNo: 1126070	Prep Date:		DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	29.46	25	0	0	0	0-0	29.36	0.34	20		
Sulfate	653	50	0	0	0	0-0	651.6	0.203	20		
Surr: Selenate (surr)	236.1	5.0	250	0	94.4	85-115	235.8	0.112	20		

The following samples were analyzed in this batch:

0705513-01C

- 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

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: **R50312**      Instrument ID **Balance1**      Method: **E160.1**      **(Dissolve)**

**MBLK**      Sample ID: **BLANK**      Units: **mg/L**      Analysis Date: **05/25/07 0:00**  
 Client ID:      Run ID: **BALANCE1\_070525G**      SeqNo: **1126733**      Prep Date:      DF: **1**

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

**LCS**      Sample ID: **LCS**      Units: **mg/L**      Analysis Date: **05/25/07 0:00**  
 Client ID:      Run ID: **BALANCE1\_070525G**      SeqNo: **1126734**      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	957	10	1000	0	95.7	85-115	0			

**DUP**      Sample ID: **0705524-01EDUP**      Units: **mg/L**      Analysis Date: **05/25/07 0:00**  
 Client ID:      Run ID: **BALANCE1\_070525G**      SeqNo: **1126731**      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	1933	10	0	0	0	0-0	1970	1.9	20	

The following samples were analyzed in this batch: 0705513-01C

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

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: **R50391**      Instrument ID **WetChem**      Method: **E310.1**

MBLK		Sample ID: <b>WBLKW1-053007</b>				Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 0:00</b>		
Client ID:		Run ID: <b>WETCHEM_070530C</b>				SeqNo: <b>1128357</b>		Prep Date:		DF: <b>1</b>	
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: <b>WLCSW1-053007</b>				Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 0:00</b>		
Client ID:		Run ID: <b>WETCHEM_070530C</b>				SeqNo: <b>1128358</b>		Prep Date:		DF: <b>1</b>	
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: <b>0705513-01CDUP</b>				Units: <b>mg/L</b>			Analysis Date: <b>05/30/07 0:00</b>		
Client ID: <b>Inj. Well</b>		Run ID: <b>WETCHEM_070530C</b>				SeqNo: <b>1128361</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Alkalinity, Bicarbonate (As CaCO3)	182	5.0	0	0	0	0-0	183	0.548	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)	182	5.0	0	0	0	0-0	183	0.548	20		

The following samples were analyzed in this batch: 0705513-01C

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

**CLIENT:** Navajo Refining Company  
**Work Order:** 0705513  
**Project:** Inj. Well

## QC BATCH REPORT

Batch ID: **R50420**      Instrument ID **WetChem**      Method: **SW1010**

**LCS**      Sample ID: **WLCSW1-053107**      Units: °F      Analysis Date: **05/31/07 0:00**

Client ID:      Run ID: **WETCHEM\_070531A**      SeqNo: **1128851**      Prep Date:      DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	80	50	83	0	96.4	80-120	0			

**DUP**      Sample ID: **0705513-01EDUP**      Units: °F      Analysis Date: **05/31/07 0:00**

Client ID: **Inj. Well**      Run ID: **WETCHEM\_070531A**      SeqNo: **1128856**      Prep Date:      DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	ND	50	0	0	0	0-0	0	0	25	

The following samples were analyzed in this batch:

0705513-01E

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



Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 5/24/2007 8:45:00 AM

Work Order Number 0705513

Received by: RNG

Checklist completed by [Signature]  
Signature

5/24/07  
Date

Reviewed by [Signature] 5/28/07  
Initials Date

Matrix: Liquid

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Temperature(s)/Thermometer(s): 2.9c 002
- 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:

Client contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted: \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_

010515

**STANDARD OVERNIGHT** **TK**


FedEx FORM 47 (2009-01-04) 24MAY07

Deliver By **24MAY07**

TRK# **9046 7991 3531** FORM 0201 **IAH**

**77099 -TX-US** **XH JGQA**



 <b>e-Lab Analytical, Inc.</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. 281.530.6858 Fax: 281.530.5887 <small>QUALITY • INTEGRITY • SERVICE</small>	<b>CUSTOMER</b>
	Date: <u>5/23/07</u>
	Name: <u>ALCOA</u>
	Company: <u>ALCOA</u>

<b>BY SEAL</b>	Taken By: <b>AG</b> Date: <b>5/24/07</b>
Name: <u>Byrd</u> Title: <u>...</u>	

**e-Lab Analytical, Inc**

**Date:** June 05, 2007

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**CLIENT:** e-Lab Analytical, Inc  
**Project:** 0705513  
**Work Order:** 0705600

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0705600-01	0705513-01F	Water		5/23/2007 10:30	5/30/2007 10:00	<input type="checkbox"/>



**e-Lab Analytical, Inc**

**Date:** *June 05, 2007*

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**CLIENT:** e-Lab Analytical, Inc

**Project:** 0705513

**Work Order:** 0705600

**Case Narrative**

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Batch R49404 Reactive Cyanide RPD between the LCS and LCSD was above control limits. The individual recoveries were in control.

**e-Lab Analytical, Inc**

Date: June 05, 2007

**CLIENT:** e-Lab Analytical, Inc  
**Work Order:** 0705600  
**Project:** 0705513  
**Lab ID:** 0705600-01

**Client Sample ID:** 0705513-01F  
**Collection Date:** 5/23/2007 10:30:00 AM  
**Matrix:** WATER

Analyses	Result	Report Limit	Qual	Units	Dilution Factor	Date Analyzed
<b>CYANIDE, REACTIVE</b> Cyanide, Reactive	ND	40.0	EPA 7.3.3.2	mg/Kg	1	Analyst: CES 6/1/2007
<b>SULFIDE, REACTIVE</b> Sulfide, Reactive	ND	40.0	EPA 7.3.4.2	mg/Kg	1	Analyst: CES 6/1/2007

**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 Analytical, Inc

Date: Jun 05 2007

CLIENT: e-Lab Analytical, Inc  
 Work Order: 0705600  
 Project: 0705513

QC BATCH REPORT

Batch ID: R49404 Instrument ID WETCHEM Method: EPA 7.3.3.2

MBLK	Sample ID	WBLKW1-060107				Units: mg/Kg	Analysis Date: 06/01/07 0:00				
Client ID:	Run ID:	WETCHEM_070601L		SeqNo:	792697	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	40									

LCS	Sample ID	WLCSW1-060107				Units: mg/Kg	Analysis Date: 06/01/07 0:00				
Client ID:	Run ID:	WETCHEM_070601L		SeqNo:	792698	Prep Date:	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Cyanide, Reactive	334	40	620	0	53.9	2.8-70	0				

LCSD	Sample ID	WLCSDW1-06010				Units: mg/Kg	Analysis Date: 06/01/07 0:00				
Client ID:	Run ID:	WETCHEM_070601L		SeqNo:	792709	Prep Date:	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Cyanide, Reactive	227.5	40	620	0	36.7	2.8-70	334	37.9	35	R	

MS	Sample ID	0705600-01A MS				Units: mg/Kg	Analysis Date: 06/01/07 0:00				
Client ID: 0705513-01F	Run ID:	WETCHEM_070601L		SeqNo:	792705	Prep Date:	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Cyanide, Reactive	278.9	40	620	0	45	2.8-70	0				

MSD	Sample ID	0705600-01A MSD				Units: mg/Kg	Analysis Date: 06/01/07 0:00				
Client ID: 0705513-01F	Run ID:	WETCHEM_070601L		SeqNo:	792706	Prep Date:	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Cyanide, Reactive	242.2	40	620	0	39.1	2.8-70	278.9	14.1	35		

The following samples were analyzed in this batch: 0705600-01A

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 Analytical, Inc  
**Work Order:** 0705600  
**Project:** 0705513

## QC BATCH REPORT

Batch ID: **R49405**      Instrument ID **WETCHEM**      Method: **EPA 7.3.4.2**

**MBLK**      Sample ID **WBLKW1-060107**      Units: **mg/Kg**      Analysis Date: **06/01/07 0:00**  
 Client ID:      Run ID: **WETCHEM\_070601M**      SeqNo: **792710**      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: 0705600-01A

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

QC Page: 2 of 2



Sample Receipt Checklist

Client Name ELAB-HOU

Date/Time Received: 5/30/2007 10:00:00 AM

Work Order Number 0705600

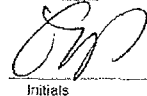
Received by: AJK

Checklist completed by

  
Signature

5/30/07  
Date

Reviewed by

 5/30/07  
Initials Date

Matrix: Water

Carrier name: UPS

- 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): 2.8 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:

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Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

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Corrective Action \_\_\_\_\_

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