

UIC- I - ____008__

MONITORING REPORTS

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Tuesday, August 25, 2009 3:57 PM
To: 'Strange, Aaron'
Subject: Navajo Refining Company (UICI-008) WDW-1 Pressure Transmitter Problem August 24, 2009 Letter

Aaron:

Hi. I am receipt of your letter with repairs made to WDW-1. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505
Office: (505) 476-3490
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/index.htm>
(Pollution Prevention Guidance is under "Publications")



REFINING COMPANY, LLC

RECEIVED

FAX

(575) 746-5283 DIV. ORDERS
(575) 746-5481 TRUCKING
(575) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88213-0159
TELEPHONE (575) 748-3311

FAX

(575) 746-5419 ACCOUNTING
(575) 746-5451 ENV/PURCH/MKTG
(575) 746-5421 ENGINEERING

August 24, 2009

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

**RE: Status Update of 2009 Second Quarterly Injection Report for Wells WDW-1, WDW-2 and WDW-3
Navajo Refining Company, L.L.C.**

Dear Mr. Chavez,

On behalf of Navajo Refining Company, LLC (Navajo), I am providing a status update for the 2009 Second Quarterly Injection Report. The injection pressure for the Mewbourne well (WDW-1) appeared to be reading low in June 2009. We have investigated the low reading. The conduit to the pressure transmitter had a crack in it that allowed rain water to collect in the transmitter, resulting in a false (low) pressure reading. The transmitter and conduit were replaced on August 8, 2009 and we have added low level alarms set at 150 psi. The low level alarms will help operations to identify transmitter problems to enable timely repair. The transmitter is now sending the correct pressure reading which is ~ 443 psi. We apologize for the inconvenience. No changes have been made to the 2009 Second Quarterly Injection Report.

If there are any questions, please call me at 575-748-3311.

Respectfully,
NAVAJO REFINING COMPANY

Aaron Strange
Sr. Environmental Technician

Encl.

Electronic cc: DGM, JEL
Environmental File: REF:ART: 4 A 02 D

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Last printed 8/24/2009 3:02:00 PM

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REFINING COMPANY, LLC

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(575) 746-5458 PERSONNEL

501 EAST MAIN STREET • P.O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (575) 748-3311

FAX

(575) 746-5419 ACCOUNTING
(575) 746-5451 ENV/PURCH/MKTG
(575) 746-5421 ENGINEERING

July 31, 2009

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

**RE: 2009 Second 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 second quarter of 2009 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 the fluid level for this well. A Mechanical Integrity Test (MIT) on all the wells was last done on August 5, 2009. All of the wells 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 Well Annulus Measurement System (WAMS) table. The next MIT for all the wells is scheduled for August 14, 2009.

This report covers the period from April 1, 2009 to June 30, 2009. We have disposed a total of 43,568,388 barrels of fluid into the three wells as of March 31, 2009. The volume per well is:

- 26,876,380 barrels into WDW-1
- 13,399,252 barrels into WDW-2
- 3,292,755 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

Michael Whatley
Vice-President, Navajo Refinery

Encl.

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

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Last printed 7/31/2009 1:12:00 PM

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2009 SECOND QUARTER MONTHLY INJECTION PRESSURES, RATES, AND VOLUMES

	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)
WDW-1														
Apr-09	195	202	177	87	95	83	148	169	127	2,985	3,264	2,837	89,552	26,592,570
May-09	155	216	1	85	87	84	99	162	64	2,927	2,982	2,876	90,739	26,682,122
Jun-09	14	74	1	101	113	83	132	224	59	3,451	3,864	2,861	103,520	26,772,861
WDW-2														
Apr-09	201	208	182	81	83	77	101	119	79	2,761	2,855	2,628	82,825	13,137,484
May-09	207	214	195	79	81	75	97	111	81	2,705	2,792	2,587	83,861	13,220,310
Jun-09	152	213	127	92	98	75	116	225	87	3,169	3,366	2,573	95,082	13,304,171
WDW-3														
Apr-09	749	771	721	189	199	176	446	485	420	6,475	6,828	6,040	194,242	2,705,498
May-09	764	788	694	191	198	175	449	508	388	6,556	6,802	6,017	203,231	2,899,740
Jun-09	504	797	378	185	206	105	286	559	206	6,326	7,074	3,615	189,784	3,102,972
													Total Injected fluids:	
													43,568,388	

2009 SECOND QUARTER WEEKLY WAMS LEVEL TABLE

	4/3/09	4/9/09	4/16/09	4/23/09	4/30/09	5/6/09	5/13/09	5/20/09	5/29/09	6/4/09	6/11/09	6/18/09	6/25/09
WDW -1'	135	135	135	135	135	135	135	135	135	130	130	130	130
WDW-2'	150	150	150	150	150	150	150	150	150	150	150	150	150
WDW-3 ²	56%	56%	56%	56%	56%	56%	56%	56%	56%	53%	39%	30%	64%
Comments: Added 110 gallons of antifreeze to WDW-3 on 6/25/09.													

¹ Graduated tank gauged weekly in the field.

² Reading measured directly, and reported as percentage capacity.

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

26-May-09

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

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

Re: Injection Well Quarterly

Work Order : 0905157

Dear Aaron,

ALS Laboratory Group received 1 sample on 5/8/2009 09:20 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 37.

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

Sincerely,

JayLynn F Thibault

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager



Certificate No: T104704231-08-TX

ALS Group USA, Corp.
Part of the **ALS Laboratory Group**
10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338
Phone: (281) 530-5656 Fax: (281) 530-5887
www.alsglobal.com www.elabi.com
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ALS Laboratory Group

Date: 26-May-09

Client: Navajo Refining Company
Project: Injection Well Quarterly
Work Order: 0905157

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>
0905157-01	Inj. Well	Water		5/7/2009 13:15	5/8/2009 09:20	☐

ALS Laboratory Group

Date: 26-May-09

Client: Navajo Refining Company

Project: Injection Well Quarterly

Work Order: 0905157

Case Narrative

Batch 36013 Metals (sample 0905184-07) MSD unrelated sample.

Batch R76865 Volatiles LCS recovery out of control limits for a few compounds. Considered sporadic marginal exceedance by SOP.

Batch R76865 Volatiles (sample 0905137-15) MS/MSD unrelated sample.

Batch R76679 Anions (sample 0904693-01)MS unrelated sample.

ALS Laboratory Group

Date: 26-May-09

Client: Navajo Refining Company

Project: Injection Well Quarterly

Sample ID: Inj. Well

Collection Date: 5/7/2009 01:15 PM

Work Order: 0905157

Lab ID: 0905157-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY			SW7470		Prep Date: 5/12/2009	Analyst: JCJ
Mercury	ND		0.000200	mg/L	1	5/12/2009 02:47 PM
METALS			SW6020		Prep Date: 5/13/2009	Analyst: ALR
Aluminum	0.484		0.0100	mg/L	1	5/15/2009 05:43 PM
Arsenic	0.140		0.00500	mg/L	1	5/15/2009 05:43 PM
Barium	0.0282		0.00500	mg/L	1	5/15/2009 05:43 PM
Beryllium	ND		0.00200	mg/L	1	5/15/2009 05:43 PM
Boron	0.152		0.0200	mg/L	1	5/15/2009 05:43 PM
Cadmium	ND		0.00200	mg/L	1	5/15/2009 05:43 PM
Calcium	126		0.500	mg/L	1	5/15/2009 05:43 PM
Chromium	ND		0.00500	mg/L	1	5/15/2009 05:43 PM
Cobalt	ND		0.00500	mg/L	1	5/15/2009 05:43 PM
Copper	ND		0.00500	mg/L	1	5/15/2009 05:43 PM
Iron	0.474		0.200	mg/L	1	5/15/2009 05:43 PM
Lead	ND		0.00500	mg/L	1	5/15/2009 05:43 PM
Magnesium	46.4		0.200	mg/L	1	5/15/2009 05:43 PM
Manganese	0.0900		0.00500	mg/L	1	5/15/2009 05:43 PM
Molybdenum	0.118		0.00500	mg/L	1	5/15/2009 05:43 PM
Nickel	0.0256		0.00500	mg/L	1	5/15/2009 05:43 PM
Potassium	108		0.200	mg/L	1	5/15/2009 05:43 PM
Selenium	0.653		0.00500	mg/L	1	5/15/2009 05:43 PM
Silver	ND		0.00500	mg/L	1	5/15/2009 05:43 PM
Sodium	462		20.0	mg/L	100	5/15/2009 05:30 PM
Vanadium	ND		0.00500	mg/L	1	5/15/2009 05:43 PM
Zinc	0.201		0.00500	mg/L	1	5/15/2009 05:43 PM
SEMIVOLATILES			SW8270		Prep Date: 5/14/2009	Analyst: ACN
1,2,4-Trichlorobenzene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
2-Methylnaphthalene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
2-Methylphenol	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
2-Nitroaniline	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
2-Nitrophenol	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
3&4-Methylphenol	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
3-Nitroaniline	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
4-Nitroaniline	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
4-Nitrophenol	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Acenaphthene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Acenaphthylene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM

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

ALS Laboratory Group

Date: 26-May-09

Client: Navajo Refining Company

Project: Injection Well Quarterly

Sample ID: Inj. Well

Collection Date: 5/7/2009 01:15 PM

Work Order: 0905157

Lab ID: 0905157-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Aniline	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Anthracene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Benz(a)anthracene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Benzidine	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Hexachloroethane	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Indeno(1,2,3-cd)pyrene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Isophorone	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
N-Nitrosodi-n-propylamine	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
N-Nitrosodimethylamine	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
N-Nitrosodiphenylamine	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Naphthalene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Nitrobenzene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Pentachlorophenol	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Phenanthrene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Phenol	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Pyrene	ND		0.0050	mg/L	1	5/14/2009 05:13 PM
Surr: 2,4,6-Tribromophenol	72.0		42-124	%REC	1	5/14/2009 05:13 PM
Surr: 2-Fluorobiphenyl	77.6		48-120	%REC	1	5/14/2009 05:13 PM
Surr: 2-Fluorophenol	61.0		20-120	%REC	1	5/14/2009 05:13 PM
Surr: 4-Terphenyl-d14	68.3		51-135	%REC	1	5/14/2009 05:13 PM
Surr: Nitrobenzene-d5	84.1		41-120	%REC	1	5/14/2009 05:13 PM
Surr: Phenol-d6	67.6		20-120	%REC	1	5/14/2009 05:13 PM
VOLATILES			SW8260		Analyst: PC	
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
2-Butanone	ND		0.010	mg/L	1	5/13/2009 05:20 PM
2-Chloroethyl vinyl ether	ND		0.010	mg/L	1	5/13/2009 05:20 PM
2-Hexanone	ND		0.010	mg/L	1	5/13/2009 05:20 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	5/13/2009 05:20 PM
Acetone	0.089		0.010	mg/L	1	5/13/2009 05:20 PM
Benzene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Bromodichloromethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Bromoform	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Bromomethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Carbon disulfide	ND		0.010	mg/L	1	5/13/2009 05:20 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	5/13/2009 05:20 PM

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

ALS Laboratory Group

Date: 26-May-09

Client: Navajo Refining Company

Project: Injection Well Quarterly

Sample ID: Inj. Well

Collection Date: 5/7/2009 01:15 PM

Work Order: 0905157

Lab ID: 0905157-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Chloroethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Chloroform	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Chloromethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Dibromochloromethane	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Ethylbenzene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
m,p-Xylene	ND		0.010	mg/L	1	5/13/2009 05:20 PM
Methylene chloride	ND		0.010	mg/L	1	5/13/2009 05:20 PM
Styrene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Tetrachloroethene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Toluene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Trichloroethene	ND		0.0050	mg/L	1	5/13/2009 05:20 PM
Vinyl acetate	ND		0.010	mg/L	1	5/13/2009 05:20 PM
Vinyl chloride	ND		0.0020	mg/L	1	5/13/2009 05:20 PM
Xylenes, Total	ND		0.015	mg/L	1	5/13/2009 05:20 PM
Surr: 1,2-Dichloroethane-d4	102		70-125	%REC	1	5/13/2009 05:20 PM
Surr: 4-Bromofluorobenzene	102		72-125	%REC	1	5/13/2009 05:20 PM
Surr: Dibromofluoromethane	112		71-125	%REC	1	5/13/2009 05:20 PM
Surr: Toluene-d8	105		75-125	%REC	1	5/13/2009 05:20 PM
REACTIVE CYANIDE			SW-846			Analyst: HN
Reactive Cyanide	ND		40.0	mg/Kg	1	5/13/2009
REACTIVE SULFIDE			SW-846			Analyst: HN
Reactive Sulfide	ND		40.0	mg/Kg	1	5/13/2009
ANIONS			E300			Analyst: IGF
Chloride	189		10.0	mg/L	20	5/8/2009 01:07 PM
Sulfate	1,340		25.0	mg/L	50	5/8/2009 04:13 PM
Surr: Selenate (surr)	100		85-115	%REC	20	5/8/2009 01:07 PM
Surr: Selenate (surr)	99.3		85-115	%REC	50	5/8/2009 04:13 PM
ALKALINITY			SM2320B			Analyst: TDW
Alkalinity, Bicarbonate (As CaCO3)	294		5.00	mg/L	1	5/14/2009 02:30 PM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	5/14/2009 02:30 PM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	5/14/2009 02:30 PM
Alkalinity, Total (As CaCO3)	294		5.00	mg/L	1	5/14/2009 02:30 PM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: TDW
Specific Conductivity	4,370		1.00	µmhos/cm	1	5/8/2009 04:30 PM

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

ALS Laboratory Group

Date: 26-May-09

Client: Navajo Refining Company

Project: Injection Well Quarterly

Sample ID: Inj. Well

Collection Date: 5/7/2009 01:15 PM

Work Order: 0905157

Lab ID: 0905157-01

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
IGNITIBILITY			SW1010			Analyst: KKP
Ignitability	> 160		50.0	°F	1	5/8/2009 06:30 PM
PH			SM4500H+ B			Analyst: TDW
pH	7.52	H	0.100	pH units	1	5/8/2009 03:00 PM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	2,740		10.0	mg/L	1	5/8/2009 03:00 PM

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

ALS Laboratory Group

Date: 26-May-09

Client: Navajo Refining Company
Work Order: 0905157
Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: **35986** Instrument ID: **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-051209-35986** Units: **mg/L** Analysis Date: **5/12/2009 02:02 PM**

Client ID: Run ID: **MERCURY_090512A** SeqNo: **1668505** Prep Date: **5/12/2009** DF: **1**

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

LCS Sample ID: **GLCSW2-051209-35986** Units: **mg/L** Analysis Date: **5/12/2009 02:04 PM**

Client ID: Run ID: **MERCURY_090512A** SeqNo: **1668506** Prep Date: **5/12/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00467	0.00020	0.005	0	93.4	85-115	0			

MS Sample ID: **0905170-01AMS** Units: **mg/L** Analysis Date: **5/12/2009 02:10 PM**

Client ID: Run ID: **MERCURY_090512A** SeqNo: **1668509** Prep Date: **5/12/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00495	0.00020	0.005	-0.000004	99.1	85-115	0			

MSD Sample ID: **0905170-01AMSD** Units: **mg/L** Analysis Date: **5/12/2009 02:12 PM**

Client ID: Run ID: **MERCURY_090512A** SeqNo: **1668510** Prep Date: **5/12/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0048	0.00020	0.005	-0.000004	96.1	85-115	0.00495	3.08	20	

DUP Sample ID: **0905170-01ADUP** Units: **mg/L** Analysis Date: **5/12/2009 02:08 PM**

Client ID: Run ID: **MERCURY_090512A** SeqNo: **1668508** Prep Date: **5/12/2009** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000004	0	20	

The following samples were analyzed in this batch:

0905157-01B

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 36013 Instrument ID ICPMS02 Method: SW6020

MBLK Sample ID: MBLKW2-051309-36013 Units: mg/L Analysis Date: 5/14/2009 07:36 AM

Client ID: Run ID: ICPMS02_090513A SeqNo: 1669926 Prep Date: 5/13/2009 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	0.0008148	0.0020								J
Boron	0.007242	0.050								J
Cadmium	ND	0.0020								
Calcium	ND	0.50								
Chromium	ND	0.0050								
Cobalt	ND	0.0050								
Copper	ND	0.0050								
Iron	ND	0.20								
Lead	ND	0.0050								
Magnesium	ND	0.20								
Manganese	ND	0.0050								
Molybdenum	0.0006075	0.0050								J
Nickel	ND	0.0050								
Potassium	ND	0.20								
Selenium	ND	0.0050								
Silver	ND	0.0050								
Sodium	ND	0.20								
Vanadium	ND	0.0050								
Zinc	ND	0.0050								

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 36013 Instrument ID ICPMS02 Method: SW6020

LCS Sample ID: MLCSW2-051309-36013 Units: mg/L Analysis Date: 5/14/2009 07:42 AM

Client ID: Run ID: ICPMS02_090513A SeqNo: 1669927 Prep Date: 5/13/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1075	0.010	0.1	0	108	80-120	0			
Arsenic	0.05274	0.0050	0.05	0	105	80-120	0			
Barium	0.05378	0.0050	0.05	0	108	80-120	0			
Beryllium	0.0505	0.0020	0.05	0	101	80-120	0			
Boron	0.5081	0.050	0.5	0	102	80-120	0			
Cadmium	0.05117	0.0020	0.05	0	102	80-120	0			
Calcium	5.19	0.50	5	0	104	80-120	0			
Chromium	0.05131	0.0050	0.05	0	103	80-120	0			
Cobalt	0.05223	0.0050	0.05	0	104	80-120	0			
Copper	0.0498	0.0050	0.05	0	99.6	80-120	0			
Iron	5.156	0.20	5	0	103	80-120	0			
Lead	0.0528	0.0050	0.05	0	106	80-120	0			
Magnesium	5.392	0.20	5	0	108	80-120	0			
Manganese	0.05228	0.0050	0.05	0	105	80-120	0			
Molybdenum	0.05219	0.0050	0.05	0	104	80-120	0			
Nickel	0.05266	0.0050	0.05	0	105	80-120	0			
Potassium	5.137	0.20	5	0	103	80-120	0			
Selenium	0.05117	0.0050	0.05	0	102	80-120	0			
Silver	0.0531	0.0050	0.05	0	106	80-120	0			
Sodium	5.408	0.20	5	0	108	80-120	0			
Vanadium	0.0512	0.0050	0.05	0	102	80-120	0			
Zinc	0.05255	0.0050	0.05	0	105	80-120	0			

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 36013 Instrument ID ICPMS02 Method: SW6020

MS Sample ID: 0905184-07BMS Units: mg/L Analysis Date: 5/14/2009 08:09 AM
 Client ID: Run ID: ICPMS02_090513A SeqNo: 1669931 Prep Date: 5/13/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1683	0.010	0.1	0.05087	117	80-120	0			
Arsenic	0.05273	0.0050	0.05	0.001438	103	80-120	0			
Barium	0.1103	0.0050	0.05	0.05829	104	80-120	0			
Beryllium	0.04997	0.0020	0.05	0.0007521	98.4	80-120	0			
Boron	0.5286	0.050	0.5	0.03266	99.2	80-120	0			
Cadmium	0.05084	0.0020	0.05	0.0006838	100	80-120	0			
Calcium	26.72	0.50	5	21.87	97	80-120	0			O
Chromium	0.04962	0.0050	0.05	0.0007125	97.8	80-120	0			
Cobalt	0.05152	0.0050	0.05	0.002272	98.5	80-120	0			
Copper	0.04595	0.0050	0.05	0.00003527	91.8	80-120	0			
Iron	5.881	0.20	5	1.14	94.8	80-120	0			
Lead	0.05222	0.0050	0.05	0.00093	103	80-120	0			
Magnesium	33.13	0.20	5	28.31	96.4	80-120	0			O
Manganese	0.2873	0.0050	0.05	0.2391	96.4	80-120	0			O
Molybdenum	0.05134	0.0050	0.05	0.002139	98.4	80-120	0			
Nickel	0.05058	0.0050	0.05	0.00182	97.5	80-120	0			
Potassium	5.573	0.20	5	0.7885	95.7	80-120	0			
Selenium	0.05315	0.0050	0.05	0.0004407	105	80-120	0			
Silver	0.05023	0.0050	0.05	0.0002125	100	80-120	0			
Sodium	13.72	0.20	5	8.823	97.9	80-120	0			
Vanadium	0.04971	0.0050	0.05	0.001408	96.6	80-120	0			
Zinc	0.05343	0.0050	0.05	0.01299	80.9	80-120	0			

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 36013 Instrument ID ICPMS02 Method: SW6020

MSD Sample ID: 0905184-07BMSD Units: mg/L Analysis Date: 5/14/2009 08:15 AM
 Client ID: Run ID: ICPMS02_090513A SeqNo: 1669932 Prep Date: 5/13/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1683	0.010	0.1	0.05087	117	80-120	0.1683	0	15	
Arsenic	0.05254	0.0050	0.05	0.001438	102	80-120	0.05273	0.361	15	
Barium	0.1123	0.0050	0.05	0.05829	108	80-120	0.1103	1.8	15	
Beryllium	0.04911	0.0020	0.05	0.0007521	96.7	80-120	0.04997	1.74	15	
Boron	0.5334	0.050	0.5	0.03266	100	80-120	0.5286	0.904	15	
Cadmium	0.05067	0.0020	0.05	0.0006838	100	80-120	0.05084	0.335	15	
Calcium	26.08	0.50	5	21.87	84.2	80-120	26.72	2.42	15	O
Chromium	0.04683	0.0050	0.05	0.0007125	92.2	80-120	0.04962	5.79	15	
Cobalt	0.04968	0.0050	0.05	0.002272	94.8	80-120	0.05152	3.64	15	
Copper	0.04492	0.0050	0.05	0.00003527	89.8	80-120	0.04595	2.27	15	
Iron	5.808	0.20	5	1.14	93.4	80-120	5.881	1.25	15	
Lead	0.05186	0.0050	0.05	0.00093	102	80-120	0.05222	0.692	15	
Magnesium	32.67	0.20	5	28.31	87.2	80-120	33.13	1.4	15	O
Manganese	0.2777	0.0050	0.05	0.2391	77.2	80-120	0.2873	3.4	15	SO
Molybdenum	0.05188	0.0050	0.05	0.002139	99.5	80-120	0.05134	1.05	15	
Nickel	0.05077	0.0050	0.05	0.00182	97.9	80-120	0.05058	0.375	15	
Potassium	5.56	0.20	5	0.7885	95.4	80-120	5.573	0.234	15	
Selenium	0.05368	0.0050	0.05	0.0004407	106	80-120	0.05315	0.992	15	
Silver	0.05074	0.0050	0.05	0.0002125	101	80-120	0.05023	1.01	15	
Sodium	13.63	0.20	5	8.823	96.1	80-120	13.72	0.658	15	
Vanadium	0.05062	0.0050	0.05	0.001408	98.4	80-120	0.04971	1.81	15	
Zinc	0.05169	0.0050	0.05	0.01299	77.4	80-120	0.05343	3.31	15	S

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 36013 Instrument ID ICPMS02 Method: SW6020

DUP Sample ID: 0905184-07BDUP Units: mg/L Analysis Date: 5/14/2009 07:55 AM
 Client ID: Run ID: ICPMS02_090513A SeqNo: 1669929 Prep Date: 5/13/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05037	0.010	0	0	0	0-0	0.05087	0.988	25	
Arsenic	0.001267	0.0050	0	0	0	0-0	0.001438	0	25	J
Barium	0.05839	0.0050	0	0	0	0-0	0.05829	0.171	25	
Beryllium	0.0005851	0.0020	0	0	0	0-0	0.0007521	0	25	J
Boron	0.02872	0.050	0	0	0	0-0	0.03266	0	25	J
Cadmium	ND	0.0020	0	0	0	0-0	0.0006838	0	25	
Calcium	22.19	0.50	0	0	0	0-0	21.87	1.45	25	
Chromium	ND	0.0050	0	0	0	0-0	0.0007125	0	25	
Cobalt	0.002257	0.0050	0	0	0	0-0	0.002272	0	25	J
Copper	ND	0.0050	0	0	0	0-0	0.00003527	0	25	
Iron	1.136	0.20	0	0	0	0-0	1.14	0.351	25	
Lead	0.0007921	0.0050	0	0	0	0-0	0.00093	0	25	J
Magnesium	28.98	0.20	0	0	0	0-0	28.31	2.34	25	
Manganese	0.241	0.0050	0	0	0	0-0	0.2391	0.792	25	
Molybdenum	0.001847	0.0050	0	0	0	0-0	0.002139	0	25	J
Nickel	0.001813	0.0050	0	0	0	0-0	0.00182	0	25	J
Potassium	0.8174	0.20	0	0	0	0-0	0.7885	3.6	25	
Selenium	ND	0.0050	0	0	0	0-0	0.0004407	0	25	
Silver	ND	0.0050	0	0	0	0-0	0.0002125	0	25	
Sodium	9.059	0.20	0	0	0	0-0	8.823	2.64	25	
Vanadium	0.001567	0.0050	0	0	0	0-0	0.001408	0	25	J
Zinc	0.003349	0.0050	0	0	0	0-0	0.01299	0	25	J

The following samples were analyzed in this batch:

0905157-01B

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 36032 Instrument ID SV-3 Method: SW8270

MBLK Sample ID: SBLKW2-090514-36032 Units: µg/L Analysis Date: 5/14/2009 12:11 PM
 Client ID: Run ID: SV-3_090514A SeqNo: 1671722 Prep Date: 5/14/2009 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								
Benzidine	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	75.25	5.0	100	0	75.3	42-124		0		
Surr: 2-Fluorobiphenyl	95.96	5.0	100	0	96	48-120		0		
Surr: 2-Fluorophenol	61.71	5.0	100	0	61.7	20-120		0		
Surr: 4-Terphenyl-d14	87.29	5.0	100	0	87.3	51-135		0		
Surr: Nitrobenzene-d5	96.94	5.0	100	0	96.9	41-120		0		
Surr: Phenol-d6	65.88	5.0	100	0	65.9	20-120		0		

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 36032 Instrument ID SV-3 Method: SW8270

LCS Sample ID: SLCSW2-090514-36032 Units: µg/L Analysis Date: 5/14/2009 12:35 PM
 Client ID: Run ID: SV-3_090514A SeqNo: 1671723 Prep Date: 5/14/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	39.77	5.0	50	0	79.5	50-120	0			
2,4,5-Trichlorophenol	81.4	5.0	100	0	81.4	50-120	0			
2,4,6-Trichlorophenol	82.54	5.0	100	0	82.5	50-120	0			
2-Methylnaphthalene	39.21	5.0	50	0	78.4	55-120	0			
2-Methylphenol	82.22	5.0	100	0	82.2	50-120	0			
2-Nitroaniline	47.29	5.0	50	0	94.6	55-120	0			
2-Nitrophenol	73.03	5.0	100	0	73	55-120	0			
3&4-Methylphenol	159.1	5.0	150	0	106	55-120	0			
3-Nitroaniline	39.22	5.0	50	0	78.4	40-120	0			
4-Nitroaniline	41.61	5.0	50	0	83.2	50-120	0			
4-Nitrophenol	94.77	5.0	100	0	94.8	45-120	0			
Acenaphthene	38.83	5.0	50	0	77.7	55-120	0			
Acenaphthylene	40.34	5.0	50	0	80.7	55-120	0			
Aniline	35.8	5.0	50	0	71.6	30-120	0			
Anthracene	42.52	5.0	50	0	85	55-120	0			
Benz(a)anthracene	40.21	5.0	50	0	80.4	55-120	0			
Benzidine	48.7	5.0	50	0	97.4	10-120	0			
Hexachloroethane	38.92	5.0	50	0	77.8	55-120	0			
Indeno(1,2,3-cd)pyrene	42.6	5.0	50	0	85.2	55-120	0			
Isophorone	46.37	5.0	50	0	92.7	55-120	0			
N-Nitrosodi-n-propylamine	42.34	5.0	50	0	84.7	50-120	0			
N-Nitrosodimethylamine	33.57	5.0	50	0	67.1	45-120	0			
N-Nitrosodiphenylamine	41.67	5.0	50	0	83.3	55-120	0			
Naphthalene	39.13	5.0	50	0	78.3	55-120	0			
Nitrobenzene	38.66	5.0	50	0	77.3	55-120	0			
Pentachlorophenol	94.2	5.0	100	0	94.2	55-120	0			
Phenanthrene	42.26	5.0	50	0	84.5	55-120	0			
Phenol	82.93	5.0	100	0	82.9	50-120	0			
Pyrene	39.99	5.0	50	0	80	55-120	0			
Surr: 2,4,6-Tribromophenol	80.74	5.0	100	0	80.7	42-124	0			
Surr: 2-Fluorobiphenyl	91.19	5.0	100	0	91.2	48-120	0			
Surr: 2-Fluorophenol	72.66	5.0	100	0	72.7	20-120	0			
Surr: 4-Terphenyl-d14	80.69	5.0	100	0	80.7	51-135	0			
Surr: Nitrobenzene-d5	95.6	5.0	100	0	95.6	41-120	0			
Surr: Phenol-d6	76.25	5.0	100	0	76.3	20-120	0			

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: 36032 Instrument ID SV-3 Method: SW8270

LCSD Sample ID: SLCSDW2-90514-36032 Units: µg/L Analysis Date: 5/14/2009 12:59 PM
 Client ID: Run ID: SV-3_090514A SeqNo: 1671725 Prep Date: 5/14/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	38.74	5.0	50	0	77.5	50-120	39.77	2.63	20	
2,4,5-Trichlorophenol	79.45	5.0	100	0	79.4	50-120	81.4	2.43	20	
2,4,6-Trichlorophenol	78.07	5.0	100	0	78.1	50-120	82.54	5.57	20	
2-Methylnaphthalene	36.6	5.0	50	0	73.2	55-120	39.21	6.89	20	
2-Methylphenol	78.32	5.0	100	0	78.3	50-120	82.22	4.85	20	
2-Nitroaniline	47.11	5.0	50	0	94.2	55-120	47.29	0.377	20	
2-Nitrophenol	77.19	5.0	100	0	77.2	55-120	73.03	5.53	20	
3&4-Methylphenol	150.8	5.0	150	0	101	55-120	159.1	5.37	20	
3-Nitroaniline	33.88	5.0	50	0	67.8	40-120	39.22	14.6	20	
4-Nitroaniline	37.67	5.0	50	0	75.3	50-120	41.61	9.95	20	
4-Nitrophenol	86.61	5.0	100	0	86.6	45-120	94.77	9	20	
Acenaphthene	36.76	5.0	50	0	73.5	55-120	38.83	5.5	20	
Acenaphthylene	38.11	5.0	50	0	76.2	55-120	40.34	5.69	20	
Aniline	32.78	5.0	50	0	65.6	30-120	35.8	8.81	20	
Anthracene	40.33	5.0	50	0	80.7	55-120	42.52	5.28	20	
Benz(a)anthracene	37.34	5.0	50	0	74.7	55-120	40.21	7.41	20	
Benzidine	45.43	5.0	50	0	90.9	10-120	48.7	6.95	20	
Hexachloroethane	37.19	5.0	50	0	74.4	55-120	38.92	4.56	20	
Indeno(1,2,3-cd)pyrene	39.21	5.0	50	0	78.4	55-120	42.6	8.29	20	
Isophorone	43.98	5.0	50	0	88	55-120	46.37	5.28	20	
N-Nitrosodi-n-propylamine	38.33	5.0	50	0	76.7	50-120	42.34	9.93	20	
N-Nitrosodimethylamine	30.83	5.0	50	0	61.7	45-120	33.57	8.51	20	
N-Nitrosodiphenylamine	40.17	5.0	50	0	80.3	55-120	41.67	3.66	20	
Naphthalene	38.35	5.0	50	0	76.7	55-120	39.13	2	20	
Nitrobenzene	38.62	5.0	50	0	77.2	55-120	38.66	0.1	20	
Pentachlorophenol	89.86	5.0	100	0	89.9	55-120	94.2	4.71	20	
Phenanthrene	39.26	5.0	50	0	78.5	55-120	42.26	7.36	20	
Phenol	80.58	5.0	100	0	80.6	50-120	82.93	2.88	20	
Pyrene	37.35	5.0	50	0	74.7	55-120	39.99	6.85	20	
Surr: 2,4,6-Tribromophenol	78.04	5.0	100	0	78	42-124	80.74	3.39	20	
Surr: 2-Fluorobiphenyl	93.65	5.0	100	0	93.6	48-120	91.19	2.66	20	
Surr: 2-Fluorophenol	73.55	5.0	100	0	73.6	20-120	72.66	1.23	20	
Surr: 4-Terphenyl-d14	76.93	5.0	100	0	76.9	51-135	80.69	4.76	20	
Surr: Nitrobenzene-d5	95.72	5.0	100	0	95.7	41-120	95.6	0.123	20	
Surr: Phenol-d6	76.29	5.0	100	0	76.3	20-120	76.25	0.0462	20	

The following samples were analyzed in this batch:

0905157-01E

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: R76865 Instrument ID VOA1 Method: SW8260

MBLK Sample ID: VBLKW-051309-R76865 Units: µg/L Analysis Date: 5/13/2009 12:40 PM
 Client ID: Run ID: VOA1_090513A SeqNo: 1670527 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	0.7763	10								J
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	49.19	5.0	50	0	98.4	70-125	0			
Surr: 4-Bromofluorobenzene	48.78	5.0	50	0	97.6	72-125	0			
Surr: Dibromofluoromethane	53.99	5.0	50	0	108	71-125	0			
Surr: Toluene-d8	52.4	5.0	50	0	105	75-125	0			

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: R76865 Instrument ID VOA1 Method: SW8260

LCS Sample ID: VLCSW-051309-R76865 Units: µg/L Analysis Date: 5/13/2009 11:50 AM

Client ID: Run ID: VOA1_090513A SeqNo: 1670526 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	54	5.0	50	0	108	80-120	0			
1,1,2,2-Tetrachloroethane	53.65	5.0	50	0	107	72-120	0			
1,1,2-Trichloroethane	50	5.0	50	0	100	80-120	0			
1,1-Dichloroethane	54.78	5.0	50	0	110	76-120	0			
1,1-Dichloroethene	54.95	5.0	50	0	110	73-124	0			
1,2-Dichloroethane	52.04	5.0	50	0	104	78-120	0			
2-Butanone	104.7	10	100	0	105	58-132	0			
2-Chloroethyl vinyl ether	103.2	10	100	0	103	74-120	0			
2-Hexanone	100.9	10	100	0	101	61-130	0			
4-Methyl-2-pentanone	103.7	10	100	0	104	65-127	0			
Acetone	105.6	10	100	0	106	59-137	0			
Benzene	48.52	5.0	50	0	97	73-121	0			
Bromodichloromethane	47.81	5.0	50	0	95.6	80-120	0			
Bromoform	45.84	5.0	50	0	91.7	79-120	0			
Bromomethane	67.56	5.0	50	0	135	66-137	0			
Carbon disulfide	101.7	10	100	0	102	68-141	0			
Carbon tetrachloride	48.23	5.0	50	0	96.5	75-124	0			
Chlorobenzene	51.3	5.0	50	0	103	80-120	0			
Chloroethane	61.43	5.0	50	0	123	76-121	0			S
Chloroform	52.71	5.0	50	0	105	80-120	0			
Chloromethane	57.17	5.0	50	0	114	67-123	0			
cis-1,3-Dichloropropene	45.87	5.0	50	0	91.7	80-120	0			
Dibromochloromethane	47.14	5.0	50	0	94.3	80-120	0			
Ethylbenzene	50.71	5.0	50	0	101	80-120	0			
m,p-Xylene	102	10	100	0	102	78-121	0			
Methylene chloride	51.5	10	50	0	103	65-133	0			
Styrene	52.25	5.0	50	0	105	80-120	0			
Tetrachloroethene	49	5.0	50	0	98	79-120	0			
Toluene	49.9	5.0	50	0	99.8	80-120	0			
trans-1,3-Dichloropropene	45.93	5.0	50	0	91.9	80-120	0			
Trichloroethene	46.36	5.0	50	0	92.7	80-120	0			
Vinyl acetate	102.9	10	100	0	103	67-139	0			
Vinyl chloride	64.44	2.0	50	0	129	70-127	0			S
Xylenes, Total	153.7	15	150	0	102	80-120	0			
Surr: 1,2-Dichloroethane-d4	51.59	5.0	50	0	103	70-125	0			
Surr: 4-Bromofluorobenzene	50.97	5.0	50	0	102	72-125	0			
Surr: Dibromofluoromethane	55.05	5.0	50	0	110	71-125	0			
Surr: Toluene-d8	50.97	5.0	50	0	102	75-125	0			

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: R76865 Instrument ID VOA1 Method: SW8260

MS Sample ID: 0905137-15AMS Units: µg/L Analysis Date: 5/13/2009 02:22 PM

Client ID: Run ID: VOA1_090513A SeqNo: 1670529 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	51.08	5.0	50	0	102	80-120	0			
1,1,2,2-Tetrachloroethane	52.45	5.0	50	0	105	72-120	0			
1,1,2-Trichloroethane	49.73	5.0	50	0	99.5	80-120	0			
1,1-Dichloroethane	54.01	5.0	50	0	108	76-120	0			
1,1-Dichloroethene	51.18	5.0	50	0	102	73-124	0			
1,2-Dichloroethane	51.26	5.0	50	0	103	78-120	0			
2-Butanone	111	10	100	0	111	58-132	0			
2-Chloroethyl vinyl ether	ND	10	100	0	0	74-120	0			S
2-Hexanone	101.6	10	100	0	102	61-130	0			
4-Methyl-2-pentanone	99.97	10	100	0	100	65-127	0			
Acetone	97.7	10	100	0	97.7	59-137	0			
Benzene	46.16	5.0	50	0	92.3	73-121	0			
Bromodichloromethane	48.28	5.0	50	0	96.6	80-120	0			
Bromoform	44.22	5.0	50	0	88.4	79-120	0			
Bromomethane	65.41	5.0	50	0	131	66-137	0			
Carbon disulfide	97.02	10	100	0	97	68-141	0			
Carbon tetrachloride	45.22	5.0	50	0	90.4	75-124	0			
Chlorobenzene	48.31	5.0	50	0	96.6	80-120	0			
Chloroethane	56.83	5.0	50	0	114	76-121	0			
Chloroform	52.25	5.0	50	0	105	80-120	0			
Chloromethane	54.85	5.0	50	0	110	67-123	0			
cis-1,3-Dichloropropene	46.69	5.0	50	0	93.4	80-120	0			
Dibromochloromethane	44.76	5.0	50	0	89.5	80-120	0			
Ethylbenzene	48.54	5.0	50	0	97.1	80-120	0			
m,p-Xylene	97.09	10	100	0	97.1	78-121	0			
Methylene chloride	51.12	10	50	0	102	65-133	0			
Styrene	52.09	5.0	50	0	104	80-120	0			
Tetrachloroethene	42.6	5.0	50	0	85.2	79-120	0			
Toluene	47.79	5.0	50	0	95.6	80-120	0			
trans-1,3-Dichloropropene	44.66	5.0	50	0	89.3	80-120	0			
Trichloroethene	51.7	5.0	50	0	103	80-120	0			
Vinyl acetate	111.2	10	100	0	111	67-139	0			
Vinyl chloride	57.64	2.0	50	0	115	70-127	0			
Xylenes, Total	147.5	15	150	0	98.3	80-120	0			
Surr: 1,2-Dichloroethane-d4	51.77	5.0	50	0	104	70-125	0			
Surr: 4-Bromofluorobenzene	48.43	5.0	50	0	96.9	72-125	0			
Surr: Dibromofluoromethane	55.5	5.0	50	0	111	71-125	0			
Surr: Toluene-d8	51.15	5.0	50	0	102	75-125	0			

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: R76865 Instrument ID VOA1 Method: SW8260

MSD Sample ID: 0905137-15AMSD Units: µg/L Analysis Date: 5/13/2009 02:47 PM

Client ID: Run ID: VOA1_090513A SeqNo: 1670530 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.36	5.0	50	0	98.7	80-120	51.08	3.41	20	
1,1,2,2-Tetrachloroethane	54.49	5.0	50	0	109	72-120	52.45	3.81	20	
1,1,2-Trichloroethane	49.8	5.0	50	0	99.6	80-120	49.73	0.135	20	
1,1-Dichloroethane	52.13	5.0	50	0	104	76-120	54.01	3.54	20	
1,1-Dichloroethene	46.64	5.0	50	0	93.3	73-124	51.18	9.28	20	
1,2-Dichloroethane	53.01	5.0	50	0	106	78-120	51.26	3.36	20	
2-Butanone	118.2	10	100	0	118	58-132	111	6.28	20	
2-Chloroethyl vinyl ether	ND	10	100	0	0	74-120	0	0	20	S
2-Hexanone	104	10	100	0	104	61-130	101.6	2.3	20	
4-Methyl-2-pentanone	111.6	10	100	0	112	65-127	99.97	11	20	
Acetone	102.7	10	100	0	103	59-137	97.7	5	20	
Benzene	48.53	5.0	50	0	97.1	73-121	46.16	5.01	20	
Bromodichloromethane	49.93	5.0	50	0	99.9	80-120	48.28	3.36	20	
Bromoform	46.42	5.0	50	0	92.8	79-120	44.22	4.86	20	
Bromomethane	64.1	5.0	50	0	128	66-137	65.41	2.01	20	
Carbon disulfide	97.16	10	100	0	97.2	68-141	97.02	0.149	20	
Carbon tetrachloride	42.87	5.0	50	0	85.7	75-124	45.22	5.35	20	
Chlorobenzene	49.24	5.0	50	0	98.5	80-120	48.31	1.91	20	
Chloroethane	54.63	5.0	50	0	109	76-121	56.83	3.95	20	
Chloroform	52.41	5.0	50	0	105	80-120	52.25	0.3	20	
Chloromethane	50.74	5.0	50	0	101	67-123	54.85	7.78	20	
cis-1,3-Dichloropropene	47.08	5.0	50	0	94.2	80-120	46.69	0.823	20	
Dibromochloromethane	46.82	5.0	50	0	93.6	80-120	44.76	4.49	20	
Ethylbenzene	45.59	5.0	50	0	91.2	80-120	48.54	6.25	20	
m,p-Xylene	91.43	10	100	0	91.4	78-121	97.09	6	20	
Methylene chloride	52.38	10	50	0	105	65-133	51.12	2.44	20	
Styrene	51.65	5.0	50	0	103	80-120	52.09	0.834	20	
Tetrachloroethene	40.95	5.0	50	0	81.9	79-120	42.6	3.94	20	
Toluene	46.16	5.0	50	0	92.3	80-120	47.79	3.49	20	
trans-1,3-Dichloropropene	46.68	5.0	50	0	93.4	80-120	44.66	4.43	20	
Trichloroethene	46.66	5.0	50	0	93.3	80-120	51.7	10.2	20	
Vinyl acetate	111.3	10	100	0	111	67-139	111.2	0.11	20	
Vinyl chloride	55.49	2.0	50	0	111	70-127	57.64	3.81	20	
Xylenes, Total	138.9	15	150	0	92.6	80-120	147.5	5.97	20	
Surr: 1,2-Dichloroethane-d4	51.39	5.0	50	0	103	70-125	51.77	0.731	20	
Surr: 4-Bromofluorobenzene	49.21	5.0	50	0	98.4	72-125	48.43	1.6	20	
Surr: Dibromofluoromethane	54.86	5.0	50	0	110	71-125	55.5	1.16	20	
Surr: Toluene-d8	50.88	5.0	50	0	102	75-125	51.15	0.539	20	

The following samples were analyzed in this batch:

0905157-01A

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

Client: Navajo Refining Company
Work Order: 0905157
Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: **R76667** Instrument ID **WetChem** Method: **SM4500H+ B**

LCS Sample ID: **WLCW1-050809-R76667** Units: **pH units** Analysis Date: **5/8/2009 03:00 PM**

Client ID: Run ID: **WETCHEM_090508D** SeqNo: **1666355** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	5.98	0.10	6	0	99.7	90-110	0			

DUP Sample ID: **0905165-01dDUP** Units: **pH units** Analysis Date: **5/8/2009 03:00 PM**

Client ID: Run ID: **WETCHEM_090508D** SeqNo: **1666359** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.35	0.10	0	0	0	0-0	7.33	0.272	20	H

The following samples were analyzed in this batch:

0905157-01D

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

Client: Navajo Refining Company
Work Order: 0905157
Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: R76674 Instrument ID WetChem Method: M2510 B

MBLK Sample ID: WBLKW1-050809-R76674 Units: μ mhos/cm Analysis Date: 5/8/2009 04:30 PM

Client ID: Run ID: WETCHEM_090508F SeqNo: 1666451 Prep Date: DF: 1

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

LCS Sample ID: WLCSW1-050809-R76674 Units: μ mhos/cm Analysis Date: 5/8/2009 04:30 PM

Client ID: Run ID: WETCHEM_090508F SeqNo: 1666452 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1440	1.0	1413	0	102	80-120	0			

DUP Sample ID: 0905157-01CDUP Units: μ mhos/cm Analysis Date: 5/8/2009 04:30 PM

Client ID: Inj. Well Run ID: WETCHEM_090508F SeqNo: 1666554 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	4380	1.0	0	0	0		4370	0.229	20	

The following samples were analyzed in this batch:

0905157-01C

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: R76679 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKW1-050809-R76679 Units: mg/L Analysis Date: 5/8/2009 10:48 AM

Client ID: Run ID: ICS3000_090508B SeqNo: 1666698 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)	4.938	0.10	5	0	98.8	85-115	0			

LCS Sample ID: WLCSW1-050809-R76679 Units: mg/L Analysis Date: 5/8/2009 11:11 AM

Client ID: Run ID: ICS3000_090508B SeqNo: 1666700 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.79	0.50	20	0	98.9	90-110	0			
Sulfate	19.54	0.50	20	0	97.7	90-110	0			
Surr: Selenate (surr)	4.902	0.10	5	0	98	85-115	0			

MS Sample ID: 0904693-01BMS Units: mg/L Analysis Date: 5/8/2009 12:21 PM

Client ID: Run ID: ICS3000_090508B SeqNo: 1666707 Prep Date: DF: 20

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1462	10	200	1294	84.3	80-120	0			EO
Sulfate	5696	10	200	5604	45.8	80-120	0			SEO
Surr: Selenate (surr)	96.9	2.0	100	0	96.9	85-115	0			

DUP Sample ID: 0904693-01BDUP Units: mg/L Analysis Date: 5/8/2009 11:58 AM

Client ID: Run ID: ICS3000_090508B SeqNo: 1666704 Prep Date: DF: 20

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1293	10	0	0	0	0-0	1294	0.081	20	E
Sulfate	5602	10	0	0	0	0-0	5604	0.0426	20	E
Surr: Selenate (surr)	96.16	2.0	100	0	96.2	85-115	95.81	0.358	20	

The following samples were analyzed in this batch: 0905157-01C

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

Client: Navajo Refining Company
Work Order: 0905157
Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: R76695 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R76695 Units: mg/L Analysis Date: 5/8/2009 03:00 PM

Client ID: Run ID: BALANCE1_090508C SeqNo: 1667081 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-R76695 Units: mg/L Analysis Date: 5/8/2009 03:00 PM

Client ID: Run ID: BALANCE1_090508C SeqNo: 1667084 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	892	10	1000	0	89.2	85-115	0			

DUP Sample ID: 0905157-01CDUP Units: mg/L Analysis Date: 5/8/2009 03:00 PM

Client ID: Inj. Well Run ID: BALANCE1_090508C SeqNo: 1667320 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	2826	10	0	0	0	0-0	2736	3.24	20	

The following samples were analyzed in this batch:

0905157-01C

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

Client: Navajo Refining Company
Work Order: 0905157
Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: **R76725** Instrument ID **WetChem** Method: **SW1010**

LCS Sample ID: **WLCSW1-050809-R76725** Units: °F Analysis Date: **5/8/2009 06:30 PM**

Client ID: Run ID: **WETCHEM_090508H** SeqNo: **1667783** 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: **0905165-01DDUP** Units: °F Analysis Date: **5/8/2009 06:30 PM**

Client ID: Run ID: **WETCHEM_090508H** SeqNo: **1667813** 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:

0905157-01D

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

Client: Navajo Refining Company
 Work Order: 0905157
 Project: Injection Well Quarterly

QC BATCH REPORT

Batch ID: **R76868** Instrument ID **WetChem** Method: **SM2320B**

MBLK Sample ID: **WBLKW1-051409-R76868** Units: **mg/L** Analysis Date: **5/14/2009 02:30 PM**

Client ID: Run ID: **WETCHEM_090514F** SeqNo: **1670562** 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: **WLCSW1-051409-R76868** Units: **mg/L** Analysis Date: **5/14/2009 02:30 PM**

Client ID: Run ID: **WETCHEM_090514F** SeqNo: **1670563** 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)	1051	5.0	1000	0	105	80-120	0			
Alkalinity, Total (As CaCO3)	1051	5.0	1000	0	105	80-120	0			

DUP Sample ID: **0905040-01bdup** Units: **mg/L** Analysis Date: **5/14/2009 02:30 PM**

Client ID: Run ID: **WETCHEM_090514F** SeqNo: **1670595** 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)	463	5.0	0	0	0	0-0	463	0	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0	0	0	0	0-0	0	0	20	
Alkalinity, Total (As CaCO3)	463	5.0	0	0	0	0-0	463	0	20	

The following samples were analyzed in this batch: 0905157-01C

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

ALS Laboratory Group

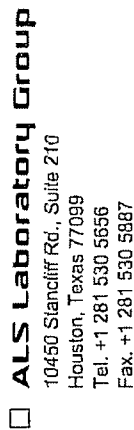
Date: 26-May-09

Client: Navajo Refining Company**Project:** Injection Well Quarterly**WorkOrder:** 0905157**QUALIFIERS,
ACRONYMS, UNITS**

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

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

<u>Units Reported</u>	<u>Description</u>
°F	Fahrenheit degrees
µmhos/cm	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH units	



Chain of Custody Form

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

Page 1 of 1

Customer Information				Project Information				Parameter/Method Request for Analysis											
Purchase Order	Project Name	Injection Well Quarterly	A	VOC (8280) Select															
Work Order	Project Number	Navajo Refining Company	B	SVOC (8270) Select															
Company Name	Bill to Company	Navajo Refining Company	C	Total Metals (6020/7000) Select															
Send Report to	Invoice Attn	Aaron Strange	D	RCI Profile															
Address	Address	P.O. Box 159	E	Anions (300) Cl, SO4															
City/State/Zip	City/State/Zip	Artesia, NM 88211	F	Alkalinity															
Phone	Phone	(505) 748-3311	G	pH															
Fax	Fax	(505) 746-5421	H	Conductivity															
e-Mail/Address	e-Mail/Address	dsgeyer@SES-NM.com	I	TDS															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	Inj. Well	5/7/09	1315	L	Y	9	X	X	X	X	X	X	X	X	X				
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

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

Results Due Date: _____

Notes: 10 Work Days TAT.

Shipments Method: Fed Ex

Received by: _____

Received by (Laboratory): _____

Checked by (Laboratory): _____

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-Na2CO3 6-NaHCO3 7-Other 8-4FC 9:5035

QC Package: (Check One Box Below)

☒ Level II Std QC ☐ TRAP CheckList

☐ Level III Std QC/Raw Data ☐ TRAP Level IV

☐ Level IV SW/846/CLP ☐ Other _____

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

1. Any changes must be made in writing. Once samples and COC form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

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ALS Laboratory Group

Sample Receipt Checklist

Client Name: NAVAJO REFINING

Date/Time Received: 08-May-09 09:20

Work Order: 0905157

Received by: RDH

Checklist completed by Robert D. Harris
eSignature

08-May-09
Date

Reviewed by: Jay Lynn F Thibault
eSignature

08-May-09
Date

Matrices: waters

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>1.8c</u> <u>002</u>		
Cooler(s)/Kit(s):	<u>2111</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:	<u></u>		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

0405157

ORIGIN ID: ROWA (505) 748-3311
 NAVAJO REFINING
 NAVAJO REFINING COMPANY
 501 E. MAIN STREET

ARTESIA, NM 88210
 UNITED STATES US

Ship Date: 07MAY09
 ActWgt: 48.0 LB MAN
 System#: 185697/CAFE2353
 Account: S 113684186

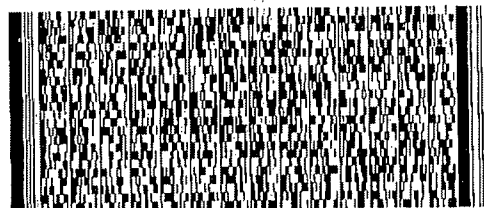
ELAB/ALS
 10450 STANCLIFF RD. SUITE 210

HOUSTON, TX 77099

FedEx
 Express



CL050107/22/23



Delivery Address
 Barcode

BILL RECIPIENT

FedEx
 TRACK
 0201 9391 8023 0702

AB JGQA

FRI - 08 MAY A2
PRIORITY OVERNIGHT

77099
 TX-US
 IAH

Print 270023 07MAY09 ROWA



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

CUST

Date: 5/7/09
 Name: Agroa
 Company: Navajo

BODY SEAL

Time: 1615
 Name: Etta Ag
 Company: Refining Co.

Seal Broken By:

5/8/09

ALS Laboratory Group

Date: 14-May-09

Client: ALS Laboratory Group
Project: 0905157
Work Order: 0905193

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>
0905193-01	0905157-01F	Water		5/7/2009 13:15	5/12/2009 09:00	☐

ALS Laboratory Group

Date: 14-May-09

Client: ALS Laboratory Group

Project: 0905157

Work Order: 0905193

Sample ID: 0905157-01F

Lab ID: 0905193-01

Collection Date: 5/7/2009 01:15 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			SW7.3.3.2		Prep Date: 5/13/2009	Analyst: DB
Cyanide, Reactive	ND		40.0	mg/Kg	1	5/13/2009
SULFIDE, REACTIVE			SW7.3.4.2		Prep Date: 5/13/2009	Analyst: DB
Sulfide, Reactive	ND		40.0	mg/Kg	1	5/13/2009

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

Client: ALS Laboratory Group
Work Order: 0905193
Project: 0905157

Date: 14-May-09

QC BATCH REPORT

Batch ID: R67874 Instrument ID WETCHEM Method: SW7.3.3.2

MBLK	Sample ID: WBLKS1-051109-R67874					Units: mg/Kg		Analysis Date: 5/11/2009		
Client ID:	Run ID: WETCHEM_090511F				SeqNo: 1145203		Prep Date: 5/11/2009		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: WLCSS1-051109-R67874					Units: mg/Kg		Analysis Date: 5/11/2009		
Client ID:	Run ID: WETCHEM_090511F					SeqNo: 1145204		Prep Date: 5/11/2009		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	234.9	40	250	0	94	75-125	0			

LCSD	Sample ID: WLCSDS1-051109-R67874					Units: mg/Kg		Analysis Date: 5/11/2009		
Client ID:	Run ID: WETCHEM_090511F				SeqNo: 1145209		Prep Date: 5/11/2009		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	234.9	40	250	0	94	75-125	234.9	0	35	

MS	Sample ID: 0905096-01A MS					Units: mg/Kg		Analysis Date: 5/11/2009		
Client ID:	Run ID: WETCHEM_090511F				SeqNo: 1145206		Prep Date: 5/11/2009		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	234.9	40	250	0	94	50-150	0			

MSD	Sample ID: 0905096-01A MSD					Units: mg/Kg		Analysis Date: 5/11/2009		
Client ID:	Run ID: WETCHEM_090511F				SeqNo: 1145207		Prep Date: 5/11/2009		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	234.9	40	250	0	94	50-150	234.9	0	35	

The following samples were analyzed in this batch:

0905193-01A

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: ALS Laboratory Group
Work Order: 0905193
Project: 0905157

QC BATCH REPORT

Batch ID: R67876 Instrument ID WETCHEM Method: SW7.3.4.2

MBLK Sample ID: WBLKS1-051109-R67876 Units: mg/Kg Analysis Date: 5/11/2009

Client ID: Run ID: WETCHEM_090511G SeqNo: 1145210 Prep Date: 5/11/2009 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:

0905193-01A

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

0905193



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

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

CHAIN-OF-CUSTODY RECORD

Date: 08-May-09
COC ID: 7661
Due Date: 20-May-09

Page 1 of 1

Customer Information		Project Information		Parameter/Method Request for Analysis													
Purchase Order	Project Name	Project Name	0905157														
Work Order	Project Number	Project Number															
Company Name	ALS Group USA, Corp.	Bill To Company	ALS Group USA, Corp.	A	Reactive Cyanide (SW-846)												
Send Report To	JayLynn F Thibault	Inv Attn	Accounts Payable	B	Reactive Sulfide (SW-846)												
Address	10450 Stanciliff Rd, Suite 210	Address	10450 Stanciliff Rd, Suite 210	C													
				D													
				E													
				F													
City/State/Zip	Houston, Texas 77099-4338	City/State/Zip	Houston, Texas 77099-4338	G													
Phone	(281) 530-5656	Phone	(281) 530-5656	H													
Fax	(281) 530-5887	Fax	(281) 530-5887	I													
eMail Address	jaylynn.thibault@alsenviro.com	eMail CC	glenda.ramos@alsenviro.com	J													
Sample ID	Matrix	Collection Date	Bottle	A	B	C	D	E	F	G	H	I	J				
0905157-01F (Inj. Well)	Water	5/7/2009 13:15	(1) 1LPNEAT	X									X				

Comments:

Please analyze for Reactive Cyanide & Reactive Sulfide.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	5/11/09	Kater-Bell	5/12/09 9:00		Std

ALS Laboratory Group

Sample Receipt Checklist

Client Name ELAB-HOU

Date/Time Received: 5/12/2009 09:00

Work Order Number 0905193

Received by: ARB

Checklist completed by

[Signature] 5/12/09
Signature Date

Reviewed by

[Signature] 5/12/09
Initials Date

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/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s):

3.2 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? [Signature]

Checked by [Signature]

Login Notes:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action



REFINING COMPANY, LLC

FAX

(575) 746-5283 DIV. ORDERS
(575) 746-5481 TRUCKING
(575) 746-5458 PERSONNEL

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159
TELEPHONE (575) 748-3311

FAX

(575) 746-5419 ACCOUNTING
(575) 746-5451 ENV/PURCH/MKTG
(575) 746-5421 ENGINEERING

April 28, 2009

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

**RE: 2009 First 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 first quarter of 2009 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 January 1, 2009 to March 31, 2009. We have disposed a total of 42,435,553 barrels of fluid into the three wells as of March 31, 2009. The volume per well is:

- 26,592,570 barrels into WDW-1
- 13,437,484 barrels into WDW-2
- 2,705,498 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

Aaron Strange
Sr. Environmental Technician

Encl.

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

RECEIVED
2009 APR 30 AM 11 59

2009 FIRST 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)
WDW-1														
Jan-09	187	195	130	88	92	69	81	90	61	3,019	3,157	2,360	93,601	26,333,018
Feb-09	155	185	92	76	86	54	101	165	54	2,599	2,962	1,862	72,761	26,426,619
Mar-09	188	199	169	88	94	83	151	166	132	3,006	3,223	2,862	93,190	26,499,380
WDW-2														
Jan-09	191	212	134	86	89	68	118	137	86	2,939	3,067	2,328	91,105	12,888,098
Feb-09	160	189	95	74	84	54	146	237	79	2,544	2,884	1,846	71,245	12,979,202
Mar-09	193	203	175	82	84	78	97	112	77	2,808	2,883	2,683	87,037	13,050,447
WDW-3														
Jan-09	689	750	380	190	204	163	446	503	347	6,501	6,979	5,579	201,539	13,137,484
Feb-09	528	670	213	142	185	89	374	594	236	4,866	6,354	3,067	136,238	2,174,313
Mar-09	686	748	594	182	204	149	428	499	369	6,239	6,986	5,105	193,408	2,375,852
Total Injected fluids:													42,435,553	2,512,090

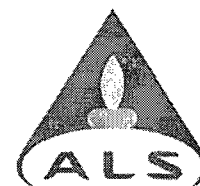
2009 FIRST QUARTER WEEKLY WAMS LEVEL TABLE

	1/2/09	1/8/09	1/15/09	1/22/09	1/29/09	2/5/09	2/12/09	2/17/09	2/23/09	3/4/09	3/13/09	3/20/09	3/27/09
WDW -1 ¹	150	150	150	150	150	150	145	140	135	135	135	135	135
WDW-2 ¹	175	175	175	175	175	175	165	155	150	150	150	150	150
WDW-3 ²	58%	58%	58%	58%	58%	58%	56%	56%	56%	56%	56%	56%	56%

¹ Graduated tank gauged weekly in the field.² Reading measured directly, and reported as percentage capacity.

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

26-Feb-09

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

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

Re: Injection Well Qrtly

Work Order : 0902372

Dear Aaron,

ALS Laboratory Group received 2 samples on 2/14/2009 09:45 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 37.

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

Sincerely,

JayLynn F Thibault

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager



Certificate No: T104704231-08-TX

ALS Group USA, Corp.

Part of the **ALS Laboratory Group**

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

Phone: (281) 530-5656 Fax: (281) 530-5887

www.alsglobal.com www.elabi.com

A Campbell Brothers Limited Company

ALS Laboratory Group*Date: 26-Feb-09***Client:** Navajo Refining Company**Project:** Injection Well Qrtly**Work Order:** 0902372**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>
0902372-01	Injection Well	Water		2/13/2009 13:45	2/14/2009 09:45	☐
0902372-02	Trip Blank	Water		2/13/2009 13:45	2/14/2009 09:45	☒

ALS Laboratory Group

Date: 26-Feb-09

Client: Navajo Refining Company
Project: Injection Well Qrtly
Work Order: 0902372

Case Narrative

Batch 34598 Metals (sample 0902285-19) MS/MSD unrelated sample.

Batch R73654 Volatiles (sample 0902433-09) MSD unrelated sample.

ALS Laboratory Group

Date: 26-Feb-09

Client: Navajo Refining Company

Project: Injection Well Qrtly

Work Order: 0902372

Sample ID: Injection Well

Lab ID: 0902372-01

Collection Date: 2/13/2009 01:45 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY						
Mercury	ND		SW7470 0.000200	mg/L	Prep Date: 2/20/2009 1	Analyst: JCJ 2/20/2009 05:30 PM
METALS						
Aluminum	0.150		SW6020 0.0100	mg/L	Prep Date: 2/20/2009 1	Analyst: ALR 2/21/2009 03:12 AM
Arsenic	0.119		0.00500	mg/L	1	2/21/2009 03:12 AM
Barium	0.00941		0.00500	mg/L	1	2/21/2009 03:12 AM
Beryllium	ND		0.00200	mg/L	1	2/21/2009 03:12 AM
Boron	0.142		0.0200	mg/L	1	2/21/2009 03:12 AM
Cadmium	ND		0.00200	mg/L	1	2/21/2009 03:12 AM
Calcium	46.3		0.500	mg/L	1	2/21/2009 03:12 AM
Chromium	ND		0.00500	mg/L	1	2/21/2009 03:12 AM
Cobalt	ND		0.00500	mg/L	1	2/21/2009 03:12 AM
Copper	ND		0.00500	mg/L	1	2/21/2009 03:12 AM
Iron	0.325		0.200	mg/L	1	2/21/2009 03:12 AM
Lead	ND		0.00500	mg/L	1	2/21/2009 03:12 AM
Magnesium	15.5		0.200	mg/L	1	2/21/2009 03:12 AM
Manganese	0.120		0.00500	mg/L	1	2/21/2009 03:12 AM
Molybdenum	0.278		0.00500	mg/L	1	2/21/2009 03:12 AM
Nickel	0.0198		0.00500	mg/L	1	2/21/2009 03:12 AM
Potassium	8.66		0.200	mg/L	1	2/21/2009 03:12 AM
Selenium	0.0443		0.00500	mg/L	1	2/21/2009 03:12 AM
Silver	ND		0.00500	mg/L	1	2/21/2009 03:12 AM
Sodium	385		20.0	mg/L	100	2/23/2009 01:09 PM
Vanadium	ND		0.00500	mg/L	1	2/21/2009 03:12 AM
Zinc	0.0208		0.00500	mg/L	1	2/21/2009 03:12 AM
SEMIVOLATILES						
1,2,4-Trichlorobenzene	ND		SW8270 0.0050	mg/L	Prep Date: 2/16/2009 1	Analyst: ACN 2/23/2009 12:58 PM
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
2-Methylnaphthalene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
2-Methylphenol	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
2-Nitroaniline	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
2-Nitrophenol	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
3&4-Methylphenol	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
3-Nitroaniline	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
4-Nitroaniline	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
4-Nitrophenol	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Acenaphthene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Acenaphthylene	ND		0.0050	mg/L	1	2/23/2009 12:58 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: 26-Feb-09

Client: Navajo Refining Company

Project: Injection Well Qrtly

Work Order: 0902372

Sample ID: Injection Well

Lab ID: 0902372-01

Collection Date: 2/13/2009 01:45 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Aniline	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Anthracene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Benz(a)anthracene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Benzidine	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Hexachloroethane	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Indeno(1,2,3-cd)pyrene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Isophorone	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
N-Nitrosodi-n-propylamine	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
N-Nitrosodimethylamine	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
N-Nitrosodiphenylamine	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Naphthalene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Nitrobenzene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Pentachlorophenol	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Phenanthrene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Phenol	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Pyrene	ND		0.0050	mg/L	1	2/23/2009 12:58 PM
Surr: 2,4,6-Tribromophenol	79.8		42-124	%REC	1	2/23/2009 12:58 PM
Surr: 2-Fluorobiphenyl	65.4		48-120	%REC	1	2/23/2009 12:58 PM
Surr: 2-Fluorophenol	58.2		20-120	%REC	1	2/23/2009 12:58 PM
Surr: 4-Terphenyl-d14	66.5		51-135	%REC	1	2/23/2009 12:58 PM
Surr: Nitrobenzene-d5	63.5		41-120	%REC	1	2/23/2009 12:58 PM
Surr: Phenol-d6	66.0		20-120	%REC	1	2/23/2009 12:58 PM
VOLATILES			SW8260		Analyst: PC	
1,1,1-Trichloroethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
1,1,2-Trichloroethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
1,1-Dichloroethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
1,1-Dichloroethene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
1,2-Dichloroethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
2-Butanone	ND		0.010	mg/L	1	2/19/2009 06:09 PM
2-Chloroethyl vinyl ether	ND		0.010	mg/L	1	2/19/2009 06:09 PM
2-Hexanone	ND		0.010	mg/L	1	2/19/2009 06:09 PM
4-Methyl-2-pentanone	ND		0.010	mg/L	1	2/19/2009 06:09 PM
Acetone	ND		0.010	mg/L	1	2/19/2009 06:09 PM
Benzene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Bromodichloromethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Bromoform	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Bromomethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Carbon disulfide	ND		0.010	mg/L	1	2/19/2009 06:09 PM
Carbon tetrachloride	ND		0.0050	mg/L	1	2/19/2009 06:09 PM

Qualifiers: ND - Not Detected at the Reporting Limit
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ALS Laboratory Group

Date: 26-Feb-09

Client: Navajo Refining Company

Project: Injection Well Qrtly

Work Order: 0902372

Sample ID: Injection Well

Lab ID: 0902372-01

Collection Date: 2/13/2009 01:45 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Chloroethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Chloroform	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Chloromethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Dibromochloromethane	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Ethylbenzene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
m,p-Xylene	ND		0.010	mg/L	1	2/19/2009 06:09 PM
Methylene chloride	ND		0.010	mg/L	1	2/19/2009 06:09 PM
Styrene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Tetrachloroethene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Toluene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Trichloroethene	ND		0.0050	mg/L	1	2/19/2009 06:09 PM
Vinyl acetate	ND		0.010	mg/L	1	2/19/2009 06:09 PM
Vinyl chloride	ND		0.0020	mg/L	1	2/19/2009 06:09 PM
Xylenes, Total	ND		0.015	mg/L	1	2/19/2009 06:09 PM
Surr: 1,2-Dichloroethane-d4	98.6		70-125	%REC	1	2/19/2009 06:09 PM
Surr: 4-Bromofluorobenzene	107		72-125	%REC	1	2/19/2009 06:09 PM
Surr: Dibromofluoromethane	99.7		71-125	%REC	1	2/19/2009 06:09 PM
Surr: Toluene-d8	106		75-125	%REC	1	2/19/2009 06:09 PM
REACTIVE CYANIDE			SW-846			Analyst: HN
Reactive Cyanide	ND		40.0	mg/Kg	1	2/19/2009
REACTIVE SULFIDE			SW-846			Analyst: HN
Reactive Sulfide	ND		40.0	mg/Kg	1	2/19/2009
ANIONS			E300			Analyst: RPM
Chloride	279		5.00	mg/L	10	2/21/2009 06:19 PM
Sulfate	360		5.00	mg/L	10	2/21/2009 06:19 PM
Surr: Selenate (surr)	102		85-115	%REC	10	2/21/2009 06:19 PM
ALKALINITY			SM2320B			Analyst: TDW
Alkalinity, Bicarbonate (As CaCO3)	515		5.00	mg/L	1	2/23/2009 11:00 AM
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	2/23/2009 11:00 AM
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	2/23/2009 11:00 AM
Alkalinity, Total (As CaCO3)	515		5.00	mg/L	1	2/23/2009 11:00 AM
SPECIFIC CONDUCTIVITY			M2510 B			Analyst: RPM
Specific Conductivity	2,270		1.00	µmhos/cm	1	2/14/2009 11:45 AM
IGNITIBILITY			SW1010			Analyst: JBA

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ALS Laboratory Group

Date: 26-Feb-09

Client: Navajo Refining Company

Project: Injection Well Qrtly

Work Order: 0902372

Sample ID: Injection Well

Lab ID: 0902372-01

Collection Date: 2/13/2009 01:45 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ignitability	> 160		50.0	°F	1	2/25/2009
PH			SM4500H+ B			Analyst: RPM
pH	7.74	H	0.100	pH units	1	2/14/2009 11:30 AM
TOTAL DISSOLVED SOLIDS			M2540C			Analyst: TDW
Total Dissolved Solids (Residue, Filterable)	1,410		10.0	mg/L	1	2/18/2009 02:00 PM

Qualifiers:

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ALS Laboratory Group

Date: 26-Feb-09

Client: Navajo Refining Company
Work Order: 0902372
Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: 34588 Instrument ID Mercury Method: SW7470

MBLK Sample ID: GBLKW2-022009-34588 Units: mg/L Analysis Date: 2/20/2009 04:59 PM

Client ID: Run ID: MERCURY_090219G SeqNo: 1607506 Prep Date: 2/20/2009 DF: 1

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

LCS Sample ID: GLCSW2-022009-34588 Units: mg/L Analysis Date: 2/20/2009 05:01 PM

Client ID: Run ID: MERCURY_090219G SeqNo: 1607508 Prep Date: 2/20/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00495	0.00020	0.005	0	99	85-115	0			

MS Sample ID: 0902343-01CMS Units: mg/L Analysis Date: 2/20/2009 05:07 PM

Client ID: Run ID: MERCURY_090219G SeqNo: 1607515 Prep Date: 2/20/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00497	0.00020	0.005	-0.000107	102	85-115	0			

MSD Sample ID: 0902343-01CMSD Units: mg/L Analysis Date: 2/20/2009 05:09 PM

Client ID: Run ID: MERCURY_090219G SeqNo: 1607517 Prep Date: 2/20/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00489	0.00020	0.005	-0.000107	99.9	85-115	0.00497	1.62	20	

DUP Sample ID: 0902343-01CDUP Units: mg/L Analysis Date: 2/20/2009 05:05 PM

Client ID: Run ID: MERCURY_090219G SeqNo: 1607512 Prep Date: 2/20/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000107	0	20	

The following samples were analyzed in this batch:

0902372-01B

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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: 34598 Instrument ID ICPMS02 Method: SW6020

MBLK Sample ID: MBLKW2-022009-34598 Units: mg/L Analysis Date: 2/20/2009 11:45 PM
 Client ID: Run ID: ICPMS02_090220A SeqNo: 1607270 Prep Date: 2/20/2009 DF: 1

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

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

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R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

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E - Value above quantitation range

Client: Navajo Refining Company
 Work Order: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: 34598 Instrument ID ICPMS02 Method: SW6020

LCS Sample ID: MLCSW2-022009-34598 Units: mg/L Analysis Date: 2/20/2009 11:51 PM
 Client ID: Run ID: ICPMS02_090220A SeqNo: 1607271 Prep Date: 2/20/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.05611	0.010	0.05	0	112	80-120	0			
Arsenic	0.0505	0.0050	0.05	0	101	80-120	0			
Barium	0.05321	0.0050	0.05	0	106	80-120	0			
Beryllium	0.05024	0.0020	0.05	0	100	80-120	0			
Boron	0.5143	0.050	0.5	0	103	80-120	0			
Cadmium	0.0547	0.0020	0.05	0	109	80-120	0			
Calcium	5.33	0.50	5	0	107	80-120	0			
Chromium	0.05111	0.0050	0.05	0	102	80-120	0			
Cobalt	0.05213	0.0050	0.05	0	104	80-120	0			
Copper	0.04933	0.0050	0.05	0	98.7	80-120	0			
Iron	5.32	0.20	5	0	106	80-120	0			
Lead	0.05332	0.0050	0.05	0	107	80-120	0			
Magnesium	5.558	0.20	5	0	111	80-120	0			
Manganese	0.05419	0.0050	0.05	0	108	80-120	0			
Molybdenum	0.05242	0.0050	0.05	0	105	80-120	0			
Nickel	0.05483	0.0050	0.05	0	110	80-120	0			
Potassium	5.523	0.20	5	0	110	80-120	0			
Selenium	0.05054	0.0050	0.05	0	101	80-120	0			
Silver	0.0523	0.0050	0.05	0	105	80-120	0			
Sodium	5.521	0.20	5	0	110	80-120	0			
Vanadium	0.05475	0.0050	0.05	0	110	80-120	0			
Zinc	0.05111	0.0050	0.05	0	102	80-120	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

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E - Value above quantitation range

Client: Navajo Refining Company
 Work Order: 0902372
 Project: Injection Well Qtrly

QC BATCH REPORT

Batch ID: 34598 Instrument ID ICPMS02 Method: SW6020

MS Sample ID: 0902285-19CMS Units: mg/L Analysis Date: 2/21/2009 12:43 AM
 Client ID: Run ID: ICPMS02_090220A SeqNo: 1607277 Prep Date: 2/20/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4693	0.010	0.05	0.4047	129	80-120	0			SO
Arsenic	0.06654	0.0050	0.05	0.002696	128	80-120	0			S
Barium	0.09604	0.0050	0.05	0.04181	108	80-120	0			
Beryllium	0.05162	0.0020	0.05	0.0001139	103	80-120	0			
Boron	1.373	0.050	0.5	0.7644	122	80-120	0			S
Cadmium	0.05475	0.0020	0.05	-0.00009921	110	80-120	0			
Calcium	235.7	0.50	5	235.4	6	80-120	0			SEO
Chromium	0.05528	0.0050	0.05	0.007026	96.5	80-120	0			
Cobalt	0.05247	0.0050	0.05	0.002362	100	80-120	0			
Copper	0.06196	0.0050	0.05	0.01679	90.3	80-120	0			
Iron	5.124	0.20	5	0.4033	94.4	80-120	0			
Lead	0.05202	0.0050	0.05	0.0003919	103	80-120	0			
Magnesium	84.76	0.20	5	82.91	37	80-120	0			SO
Manganese	0.06397	0.0050	0.05	0.01356	101	80-120	0			
Molybdenum	0.07285	0.0050	0.05	0.02037	105	80-120	0			
Nickel	0.09794	0.0050	0.05	0.04886	98.2	80-120	0			
Potassium	34.68	0.20	5	31.26	68.4	80-120	0			SO
Selenium	0.119	0.0050	0.05	0.05377	130	80-120	0			S
Silver	0.04949	0.0050	0.05	-0.0002054	99.4	80-120	0			
Sodium	677.7	0.20	5	705.6	-558	80-120	0			SEO
Vanadium	0.06417	0.0050	0.05	0.01183	105	80-120	0			
Zinc	0.05684	0.0050	0.05	0.004873	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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: 34598 Instrument ID ICPMS02 Method: SW6020

MSD Sample ID: 0902285-19CMSD Units: mg/L Analysis Date: 2/21/2009 01:22 AM

Client ID: Run ID: ICPMS02_090220A SeqNo: 1607281 Prep Date: 2/20/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.5046	0.010	0.05	0.4047	200	80-120	0.4693	7.25	15	SO
Cadmium	0.05548	0.0020	0.05	-0.00009921	111	80-120	0.05475	1.32	15	
Calcium	244.4	0.50	5	235.4	180	80-120	235.7	3.62	15	SEO
Chromium	0.056	0.0050	0.05	0.007026	97.9	80-120	0.05528	1.29	15	
Cobalt	0.05311	0.0050	0.05	0.002362	101	80-120	0.05247	1.21	15	
Copper	0.06363	0.0050	0.05	0.01679	93.7	80-120	0.06196	2.66	15	
Iron	5.292	0.20	5	0.4033	97.8	80-120	5.124	3.23	15	
Lead	0.05323	0.0050	0.05	0.0003919	106	80-120	0.05202	2.3	15	
Magnesium	89.68	0.20	5	82.91	135	80-120	84.76	5.64	15	SO
Manganese	0.06486	0.0050	0.05	0.01356	103	80-120	0.06397	1.38	15	
Molybdenum	0.07308	0.0050	0.05	0.02037	105	80-120	0.07285	0.315	15	
Nickel	0.1013	0.0050	0.05	0.04886	105	80-120	0.09794	3.37	15	
Potassium	37.42	0.20	5	31.26	123	80-120	34.68	7.6	15	SO
Selenium	0.1226	0.0050	0.05	0.05377	138	80-120	0.119	2.98	15	S
Silver	0.04832	0.0050	0.05	-0.0002054	97.1	80-120	0.04949	2.39	15	
Vanadium	0.06673	0.0050	0.05	0.01183	110	80-120	0.06417	3.91	15	
Zinc	0.0571	0.0050	0.05	0.004873	104	80-120	0.05684	0.456	15	

MSD Sample ID: 0902285-19CMSD Units: mg/L Analysis Date: 2/23/2009 01:35 PM

Client ID: Run ID: ICPMS02_090223A SeqNo: 1607930 Prep Date: 2/20/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05096	0.0050	0.05	0.002696	96.5	80-120	0.06654	26.5	15	R
Barium	0.08523	0.0050	0.05	0.04181	86.8	80-120	0.09604	11.9	15	
Beryllium	0.04372	0.0020	0.05	0	87.4	80-120	0.05162	16.6	15	R
Boron	1.153	0.050	0.5	0.7644	77.7	80-120	1.373	17.4	15	SR

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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: 34598 Instrument ID ICPMS02 Method: SW6020

DUP	Sample ID: 0902285-19CDUP					Units: mg/L		Analysis Date: 2/21/2009 12:30 AM		
Client ID:	Run ID: ICPMS02_090220A				SeqNo: 1607275		Prep Date: 2/20/2009		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4107	0.010	0	0	0	0-0	0.4047	1.47	25	
Arsenic	0.002805	0.0050	0	0	0	0-0	0.002696	0	25	J
Barium	0.0411	0.0050	0	0	0	0-0	0.04181	1.71	25	
Beryllium	ND	0.0020	0	0	0	0-0	0.0001139	0	25	
Boron	0.7516	0.050	0	0	0	0-0	0.7644	1.69	25	
Cadmium	ND	0.0020	0	0	0	0-0	-0.00009921	0	25	
Chromium	0.006745	0.0050	0	0	0	0-0	0.007026	4.08	25	
Cobalt	0.002184	0.0050	0	0	0	0-0	0.002362	0	25	J
Copper	0.01669	0.0050	0	0	0	0-0	0.01679	0.597	25	
Iron	0.4061	0.20	0	0	0	0-0	0.4033	0.692	25	
Lead	ND	0.0050	0	0	0	0-0	0.0003919	0	25	
Magnesium	82.51	0.20	0	0	0	0-0	82.91	0.484	25	
Manganese	0.0129	0.0050	0	0	0	0-0	0.01356	4.99	25	
Molybdenum	0.02048	0.0050	0	0	0	0-0	0.02037	0.539	25	
Nickel	0.04911	0.0050	0	0	0	0-0	0.04886	0.51	25	
Potassium	30.9	0.20	0	0	0	0-0	31.26	1.16	25	
Selenium	0.05542	0.0050	0	0	0	0-0	0.05377	3.02	25	
Silver	ND	0.0050	0	0	0	0-0	-0.0002054	0	25	
Vanadium	0.0117	0.0050	0	0	0	0-0	0.01183	1.1	25	
Zinc	0.004677	0.0050	0	0	0	0-0	0.004873	0	25	J

DUP	Sample ID: 0902285-19CDUP					Units: mg/L		Analysis Date: 2/23/2009 12:50 PM		
Client ID:	Run ID: ICPMS02_090223A				SeqNo: 1607902		Prep Date: 2/20/2009		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	201.8	50	0	0	0	0-0	225.6	11.1	25	
Sodium	599.3	20	0	0	0	0-0	669.3	11	25	

The following samples were analyzed in this batch:

0902372-01B

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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: 34504 Instrument ID SV-3 Method: SW8270

MBLK Sample ID: SBLKW1-090214-34504 Units: µg/L Analysis Date: 2/17/2009 02:06 PM
 Client ID: Run ID: SV-3_090217C SeqNo: 1604632 Prep Date: 2/16/2009 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								
Benzidine	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	69.69	5.0	100	0	69.7	42-124	0			
Surr: 2-Fluorobiphenyl	76.07	5.0	100	0	76.1	48-120	0			
Surr: 2-Fluorophenol	66.47	5.0	100	0	66.5	20-120	0			
Surr: 4-Terphenyl-d14	71.7	5.0	100	0	71.7	51-135	0			
Surr: Nitrobenzene-d5	68.58	5.0	100	0	68.6	41-120	0			
Surr: Phenol-d6	72.62	5.0	100	0	72.6	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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: 34504 Instrument ID SV-3 Method: SW8270

LCS Sample ID: SLCSW1-090214-34504 Units: µg/L Analysis Date: 2/18/2009 03:49 PM
 Client ID: Run ID: SV-3_090217C SeqNo: 1605075 Prep Date: 2/16/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	40.69	5.0	50	0	81.4	50-120	0			
2,4,5-Trichlorophenol	84.86	5.0	100	0	84.9	50-120	0			
2,4,6-Trichlorophenol	78.74	5.0	100	0	78.7	50-120	0			
2-Methylnaphthalene	38.51	5.0	50	0	77	55-120	0			
2-Methylphenol	74.98	5.0	100	0	75	50-120	0			
2-Nitroaniline	49.23	5.0	50	0	98.5	55-120	0			
2-Nitrophenol	74.53	5.0	100	0	74.5	55-120	0			
3&4-Methylphenol	107.7	5.0	150	0	71.8	55-120	0			
3-Nitroaniline	42.47	5.0	50	0	84.9	40-120	0			
4-Nitroaniline	45.02	5.0	50	0	90	50-120	0			
4-Nitrophenol	89.49	5.0	100	0	89.5	45-120	0			
Acenaphthene	41.59	5.0	50	0	83.2	55-120	0			
Acenaphthylene	43.94	5.0	50	0	87.9	55-120	0			
Aniline	33.88	5.0	50	0	67.8	30-120	0			
Anthracene	42.65	5.0	50	0	85.3	55-120	0			
Benz(a)anthracene	42.79	5.0	50	0	85.6	55-120	0			
Benzidine	40.37	5.0	50	0	80.7	10-120	0			
Hexachloroethane	37.67	5.0	50	0	75.3	55-120	0			
Indeno(1,2,3-cd)pyrene	44.94	5.0	50	0	89.9	55-120	0			
Isophorone	46.44	5.0	50	0	92.9	55-120	0			
N-Nitrosodi-n-propylamine	37.67	5.0	50	0	75.3	50-120	0			
N-Nitrosodimethylamine	30.98	5.0	50	0	62	45-120	0			
N-Nitrosodiphenylamine	40.21	5.0	50	0	80.4	55-120	0			
Naphthalene	40.96	5.0	50	0	81.9	55-120	0			
Nitrobenzene	39.8	5.0	50	0	79.6	55-120	0			
Pentachlorophenol	79.73	5.0	100	0	79.7	55-120	0			
Phenanthrene	42.47	5.0	50	0	84.9	55-120	0			
Phenol	73.5	5.0	100	0	73.5	50-120	0			
Pyrene	43.17	5.0	50	0	86.3	55-120	0			
Surr: 2,4,6-Tribromophenol	88.72	5.0	100	0	88.7	42-124	0			
Surr: 2-Fluorobiphenyl	79.35	5.0	100	0	79.3	48-120	0			
Surr: 2-Fluorophenol	72.9	5.0	100	0	72.9	20-120	0			
Surr: 4-Terphenyl-d14	71.82	5.0	100	0	71.8	51-135	0			
Surr: Nitrobenzene-d5	70.67	5.0	100	0	70.7	41-120	0			
Surr: Phenol-d6	75.23	5.0	100	0	75.2	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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: 34504 Instrument ID SV-3 Method: SW8270

LCSO Sample ID: SLCSDW1-090214-34504 Units: µg/L Analysis Date: 2/18/2009 04:14 PM
 Client ID: Run ID: SV-3_090217C SeqNo: 1605077 Prep Date: 2/16/2009 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	40.62	5.0	50	0	81.2	50-120	40.69	0.162	20	
2,4,5-Trichlorophenol	79.66	5.0	100	0	79.7	50-120	84.86	6.32	20	
2,4,6-Trichlorophenol	75.57	5.0	100	0	75.6	50-120	78.74	4.11	20	
2-Methylnaphthalene	38.62	5.0	50	0	77.2	55-120	38.51	0.269	20	
2-Methylphenol	78.12	5.0	100	0	78.1	50-120	74.98	4.11	20	
2-Nitroaniline	50.68	5.0	50	0	101	55-120	49.23	2.91	20	
2-Nitrophenol	74.42	5.0	100	0	74.4	55-120	74.53	0.144	20	
3&4-Methylphenol	118	5.0	150	0	78.7	55-120	107.7	9.19	20	
3-Nitroaniline	42.95	5.0	50	0	85.9	40-120	42.47	1.11	20	
4-Nitroaniline	45.9	5.0	50	0	91.8	50-120	45.02	1.94	20	
4-Nitrophenol	95.02	5.0	100	0	95	45-120	89.49	5.99	20	
Acenaphthene	41.08	5.0	50	0	82.2	55-120	41.59	1.22	20	
Acenaphthylene	42.37	5.0	50	0	84.7	55-120	43.94	3.63	20	
Aniline	33.76	5.0	50	0	67.5	30-120	33.88	0.351	20	
Anthracene	43.15	5.0	50	0	86.3	55-120	42.65	1.16	20	
Benz(a)anthracene	43.67	5.0	50	0	87.3	55-120	42.79	2.01	20	
Benzidine	41.42	5.0	50	0	82.8	10-120	40.37	2.57	20	
Hexachloroethane	36.03	5.0	50	0	72.1	55-120	37.67	4.46	20	
Indeno(1,2,3-cd)pyrene	44.71	5.0	50	0	89.4	55-120	44.94	0.513	20	
Isophorone	46.92	5.0	50	0	93.8	55-120	46.44	1.04	20	
N-Nitrosodi-n-propylamine	39.45	5.0	50	0	78.9	50-120	37.67	4.61	20	
N-Nitrosodimethylamine	29.65	5.0	50	0	59.3	45-120	30.98	4.38	20	
N-Nitrosodiphenylamine	37.75	5.0	50	0	75.5	55-120	40.21	6.32	20	
Naphthalene	40.99	5.0	50	0	82	55-120	40.96	0.0791	20	
Nitrobenzene	39.28	5.0	50	0	78.6	55-120	39.8	1.33	20	
Pentachlorophenol	77.96	5.0	100	0	78	55-120	79.73	2.25	20	
Phenanthrene	41.91	5.0	50	0	83.8	55-120	42.47	1.33	20	
Phenol	76.22	5.0	100	0	76.2	50-120	73.5	3.64	20	
Pyrene	42.45	5.0	50	0	84.9	55-120	43.17	1.69	20	
Surr: 2,4,6-Tribromophenol	87.69	5.0	100	0	87.7	42-124	88.72	1.17	20	
Surr: 2-Fluorobiphenyl	75.53	5.0	100	0	75.5	48-120	79.35	4.92	20	
Surr: 2-Fluorophenol	72.59	5.0	100	0	72.6	20-120	72.9	0.42	20	
Surr: 4-Terphenyl-d14	72.15	5.0	100	0	72.2	51-135	71.82	0.458	20	
Surr: Nitrobenzene-d5	69.43	5.0	100	0	69.4	41-120	70.67	1.78	20	
Surr: Phenol-d6	78.57	5.0	100	0	78.6	20-120	75.23	4.34	20	

The following samples were analyzed in this batch:

0902372-01D

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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73654 Instrument ID VOA1 Method: SW8260

MBLK Sample ID: VBLKW-021909-R73654 Units: µg/L Analysis Date: 2/19/2009 12:16 PM

Client ID: Run ID: VOA1_090219A SeqNo: 1607012 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	50.47	5.0	50	0	101	70-125	0			
Surr: 4-Bromofluorobenzene	54.49	5.0	50	0	109	72-125	0			
Surr: Dibromofluoromethane	50.89	5.0	50	0	102	71-125	0			
Surr: Toluene-d8	55.16	5.0	50	0	110	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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73654 Instrument ID VOA1 Method: SW8260

LCS Sample ID: VLCSW-021909-R73654 Units: µg/L Analysis Date: 2/19/2009 11:01 AM
 Client ID: Run ID: VOA1_090219A SeqNo: 1607010 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	49.36	5.0	50	0	98.7	80-120	0			
1,1,2,2-Tetrachloroethane	47.74	5.0	50	0	95.5	72-120	0			
1,1,2-Trichloroethane	50.96	5.0	50	0	102	80-120	0			
1,1-Dichloroethane	46.79	5.0	50	0	93.6	76-120	0			
1,1-Dichloroethene	49.42	5.0	50	0	98.8	73-124	0			
1,2-Dichloroethane	52.29	5.0	50	0	105	78-120	0			
2-Butanone	101.9	10	100	0	102	58-132	0			
2-Chloroethyl vinyl ether	107.1	10	100	0	107	74-120	0			
2-Hexanone	107.8	10	100	0	108	61-130	0			
4-Methyl-2-pentanone	110.1	10	100	0	110	65-127	0			
Acetone	109.7	10	100	0	110	59-137	0			
Benzene	50.63	5.0	50	0	101	73-121	0			
Bromodichloromethane	48.51	5.0	50	0	97	80-120	0			
Bromoform	53.42	5.0	50	0	107	79-120	0			
Bromomethane	48.97	5.0	50	0	97.9	66-137	0			
Carbon disulfide	97.67	10	100	0	97.7	68-141	0			
Carbon tetrachloride	51.34	5.0	50	0	103	75-124	0			
Chlorobenzene	52.17	5.0	50	0	104	80-120	0			
Chloroethane	48.02	5.0	50	0	96	76-121	0			
Chloroform	49.3	5.0	50	0	98.6	80-120	0			
Chloromethane	45.52	5.0	50	0	91	67-123	0			
cis-1,3-Dichloropropene	53.57	5.0	50	0	107	80-120	0			
Dibromochloromethane	54.11	5.0	50	0	108	80-120	0			
Ethylbenzene	53.94	5.0	50	0	108	80-120	0			
m,p-Xylene	101	10	100	0	101	78-121	0			
Methylene chloride	48.3	10	50	0	96.6	65-133	0			
Styrene	52.91	5.0	50	0	106	80-120	0			
Tetrachloroethene	52.5	5.0	50	0	105	79-120	0			
Toluene	49.63	5.0	50	0	99.3	80-120	0			
trans-1,3-Dichloropropene	54.75	5.0	50	0	110	80-120	0			
Trichloroethene	49.34	5.0	50	0	98.7	80-120	0			
Vinyl acetate	100.3	10	100	0	100	67-139	0			
Vinyl chloride	42.35	2.0	50	0	84.7	70-127	0			
Xylenes, Total	154.4	15	150	0	103	80-120	0			
Surr: 1,2-Dichloroethane-d4	49.72	5.0	50	0	99.4	70-125	0			
Surr: 4-Bromofluorobenzene	55.5	5.0	50	0	111	72-125	0			
Surr: Dibromofluoromethane	49.89	5.0	50	0	99.8	71-125	0			
Surr: Toluene-d8	56.67	5.0	50	0	113	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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73654 Instrument ID VOA1 Method: SW8260

MS Sample ID: 0902433-09AMS Units: µg/L Analysis Date: 2/19/2009 03:37 PM
 Client ID: Run ID: VOA1_090219A SeqNo: 1607016 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	482.3	50	500	0	96.5	80-120	0			
1,1,2,2-Tetrachloroethane	465.6	50	500	0	93.1	72-120	0			
1,1,2-Trichloroethane	490.4	50	500	0	98.1	80-120	0			
1,1-Dichloroethane	482.7	50	500	0	96.5	76-120	0			
1,1-Dichloroethene	455.7	50	500	0	91.1	73-124	0			
1,2-Dichloroethane	524.6	50	500	0	105	78-120	0			
2-Butanone	1030	100	1000	0	103	58-132	0			
2-Chloroethyl vinyl ether	877.8	100	1000	0	87.8	74-120	0			
2-Hexanone	969.7	100	1000	0	97	61-130	0			
4-Methyl-2-pentanone	972.3	100	1000	0	97.2	65-127	0			
Acetone	985.9	100	1000	0	98.6	59-137	0			
Benzene	495.5	50	500	8.334	97.4	73-121	0			
Bromodichloromethane	496.6	50	500	0	99.3	80-120	0			
Bromoform	487.5	50	500	0	97.5	79-120	0			
Bromomethane	540.5	50	500	0	108	66-137	0			
Carbon disulfide	875.3	100	1000	0	87.5	68-141	0			
Carbon tetrachloride	472.7	50	500	0	94.5	75-124	0			
Chlorobenzene	475	50	500	0	95	80-120	0			
Chloroethane	431.6	50	500	0	86.3	76-121	0			
Chloroform	496.8	50	500	0	99.4	80-120	0			
Chloromethane	459	50	500	0	91.8	67-123	0			
cis-1,3-Dichloropropene	520	50	500	0	104	80-120	0			
Dibromochloromethane	501.6	50	500	0	100	80-120	0			
Ethylbenzene	466.3	50	500	5.191	92.2	80-120	0			
m,p-Xylene	957.4	100	1000	16.92	94.1	78-121	0			
Methylene chloride	488.9	100	500	6.704	96.4	65-133	0			
Styrene	505.5	50	500	0	101	80-120	0			
Tetrachloroethene	457.7	50	500	0	91.5	79-120	0			
Toluene	478.3	50	500	27.01	90.3	80-120	0			
trans-1,3-Dichloropropene	541.5	50	500	0	108	80-120	0			
Trichloroethene	496.2	50	500	0	99.2	80-120	0			
Vinyl acetate	963.9	100	1000	0	96.4	67-139	0			
Vinyl chloride	416	20	500	0	83.2	70-127	0			
Xylenes, Total	1468	150	1500	27.11	96.1	80-120	0			
Surr: 1,2-Dichloroethane-d4	488.8	50	500	0	97.8	70-125	0			
Surr: 4-Bromofluorobenzene	540	50	500	0	108	72-125	0			
Surr: Dibromofluoromethane	518.7	50	500	0	104	71-125	0			
Surr: Toluene-d8	517.5	50	500	0	104	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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73654 Instrument ID VOA1 Method: SW8260

MSD Sample ID: 0902433-09AMSD Units: µg/L Analysis Date: 2/19/2009 04:02 PM

Client ID: Run ID: VOA1_090219A SeqNo: 1607018 Prep Date: DF: 10

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	449.8	50	500	0	90	80-120	482.3	6.96	20	
1,1,2,2-Tetrachloroethane	471.7	50	500	0	94.3	72-120	465.6	1.31	20	
1,1,2-Trichloroethane	492.1	50	500	0	98.4	80-120	490.4	0.349	20	
1,1-Dichloroethane	468.3	50	500	0	93.7	76-120	482.7	3.03	20	
1,1-Dichloroethene	450.2	50	500	0	90	73-124	455.7	1.2	20	
1,2-Dichloroethane	481.7	50	500	0	96.3	78-120	524.6	8.51	20	
2-Butanone	1038	100	1000	0	104	58-132	1030	0.825	20	
2-Chloroethyl vinyl ether	708.8	100	1000	0	70.9	74-120	877.8	21.3	20	SR
2-Hexanone	1058	100	1000	0	106	61-130	969.7	8.7	20	
4-Methyl-2-pentanone	1040	100	1000	0	104	65-127	972.3	6.75	20	
Acetone	1069	100	1000	0	107	59-137	985.9	8.09	20	
Benzene	460.2	50	500	8.334	90.4	73-121	495.5	7.38	20	
Bromodichloromethane	453.7	50	500	0	90.7	80-120	496.6	9.02	20	
Bromoform	491.8	50	500	0	98.4	79-120	487.5	0.88	20	
Bromomethane	511.1	50	500	0	102	66-137	540.5	5.6	20	
Carbon disulfide	881.2	100	1000	0	88.1	68-141	875.3	0.68	20	
Carbon tetrachloride	423.7	50	500	0	84.7	75-124	472.7	10.9	20	
Chlorobenzene	473.7	50	500	0	94.7	80-120	475	0.263	20	
Chloroethane	445	50	500	0	89	76-121	431.6	3.05	20	
Chloroform	479.7	50	500	0	95.9	80-120	496.8	3.52	20	
Chloromethane	446.2	50	500	0	89.2	67-123	459	2.84	20	
cis-1,3-Dichloropropene	473.6	50	500	0	94.7	80-120	520	9.34	20	
Dibromochloromethane	489.8	50	500	0	98	80-120	501.6	2.39	20	
Ethylbenzene	469.7	50	500	5.191	92.9	80-120	466.3	0.739	20	
m,p-Xylene	936.3	100	1000	16.92	91.9	78-121	957.4	2.23	20	
Methylene chloride	481.6	100	500	6.704	95	65-133	488.9	1.5	20	
Styrene	484.2	50	500	0	96.8	80-120	505.5	4.29	20	
Tetrachloroethene	440.9	50	500	0	88.2	79-120	457.7	3.73	20	
Toluene	482.8	50	500	27.01	91.1	80-120	478.3	0.917	20	
trans-1,3-Dichloropropene	517.1	50	500	0	103	80-120	541.5	4.62	20	
Trichloroethene	440.7	50	500	0	88.1	80-120	496.2	11.8	20	
Vinyl acetate	911.1	100	1000	0	91.1	67-139	963.9	5.63	20	
Vinyl chloride	418.7	20	500	0	83.7	70-127	416	0.649	20	
Xylenes, Total	1429	150	1500	27.11	93.4	80-120	1468	2.74	20	
Surr: 1,2-Dichloroethane-d4	511.5	50	500	0	102	70-125	488.8	4.53	20	
Surr: 4-Bromofluorobenzene	533.9	50	500	0	107	72-125	540	1.14	20	
Surr: Dibromofluoromethane	514	50	500	0	103	71-125	518.7	0.906	20	
Surr: Toluene-d8	549.4	50	500	0	110	75-125	517.5	5.99	20	

The following samples were analyzed in this batch:

0902372-01A

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

Client: Navajo Refining Company
 Work Order: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73398 Instrument ID WetChem Method: M2510 B

MBLK Sample ID: WBLKW1-021409-R73398 Units: μ mhos/cm Analysis Date: 2/14/2009 11:45 AM

Client ID: Run ID: WETCHEM_090214A SeqNo: 1602281 Prep Date: DF: 1

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

LCS Sample ID: WLCSW1-021409-R73398 Units: μ mhos/cm Analysis Date: 2/14/2009 11:45 AM

Client ID: Run ID: WETCHEM_090214A SeqNo: 1602282 Prep Date: DF: 1

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

DUP Sample ID: 0902372-01CDUP Units: μ mhos/cm Analysis Date: 2/14/2009 11:45 AM

Client ID: Injection Well Run ID: WETCHEM_090214A SeqNo: 1602284 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	2280	1.0	0	0	0		2270	0.44	20	

The following samples were analyzed in this batch:

0902372-01C

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: 0902372
Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: **R73400** Instrument ID **WetChem** Method: **SM4500H+ B**

LCS Sample ID: **WLCSW1-021409-R73400** Units: **pH units** Analysis Date: **2/14/2009 11:30 AM**

Client ID: Run ID: **WETCHEM_090214B** SeqNo: **1602313** Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.01	0.10	6	0	100	90-110	0			

DUP Sample ID: **0902372-01EDUP** Units: **pH units** Analysis Date: **2/14/2009 11:30 AM**

Client ID: **Injection Well** Run ID: **WETCHEM_090214B** SeqNo: **1602316** Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.76	0.10	0	0	0	0-0	7.74	0.258	20	H

The following samples were analyzed in this batch:

0902372-01E

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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73589 Instrument ID Balance1 Method: M2540C

MBLK Sample ID: BLANK-R73589 Units: mg/L Analysis Date: 2/18/2009 02:00 PM

Client ID: Run ID: BALANCE1_090218C SeqNo: 1605706 Prep Date: DF: 1

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

LCS Sample ID: LCS-R73589 Units: mg/L Analysis Date: 2/18/2009 02:00 PM

Client ID: Run ID: BALANCE1_090218C SeqNo: 1605707 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	966	10	1000	0	96.6	85-115	0			

DUP Sample ID: 0902372-01CDUP Units: mg/L Analysis Date: 2/18/2009 02:00 PM

Client ID: Injection Well Run ID: BALANCE1_090218C SeqNo: 1605702 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filt	1428	10	0	0	0	0-0	1408	1.41	20	

The following samples were analyzed in this batch:

0902372-01C

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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73723 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKW1-022109-R73723 Units: mg/L Analysis Date: 2/21/2009 01:24 PM

Client ID: Run ID: ICS3000_090221B SeqNo: 1608301 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)	5.019	0.10	5	0	100	85-115	0			

LCS Sample ID: WLC SW1-022109-R73723 Units: mg/L Analysis Date: 2/21/2009 01:48 PM

Client ID: Run ID: ICS3000_090221B SeqNo: 1608302 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.33	0.50	20	0	102	90-110	0			
Sulfate	19.9	0.50	20	0	99.5	90-110	0			
Surr: Selenate (surr)	5.022	0.10	5	0	100	85-115	0			

MS Sample ID: 0902428-01BMS Units: mg/L Analysis Date: 2/21/2009 05:33 PM

Client ID: Run ID: ICS3000_090221B SeqNo: 1608305 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	67.38	0.50	10	58.36	90.2	80-120	0			EO
Sulfate	17.79	0.50	10	7.974	98.1	80-120	0			
Surr: Selenate (surr)	5.044	0.10	5	0	101	85-115	0			

DUP Sample ID: 0902428-01BDUP Units: mg/L Analysis Date: 2/21/2009 05:09 PM

Client ID: Run ID: ICS3000_090221B SeqNo: 1608304 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	58.35	0.50	0	0	0	0-0	58.36	0.0137	20	E
Sulfate	7.985	0.50	0	0	0	0-0	7.974	0.138	20	
Surr: Selenate (surr)	5.004	0.10	5	0	100	85-115	5.006	0.04	20	

The following samples were analyzed in this batch:

0902372-01C

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: 0902372
 Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73733 Instrument ID WetChem Method: SM2320B

MBLK Sample ID: WBLKW22309-R73733 Units: mg/L Analysis Date: 2/23/2009 11:00 AM

Client ID: Run ID: WETCHEM_090223E SeqNo: 1608612 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: WLCSW22309-R73733 Units: mg/L Analysis Date: 2/23/2009 11:00 AM

Client ID: Run ID: WETCHEM_090223E SeqNo: 1608613 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)	902	5.0	1000	0	90.2	80-120	0			
Alkalinity, Total (As CaCO3)	902	5.0	1000	0	90.2	80-120	0			

DUP Sample ID: 0902285-22BDUP Units: mg/L Analysis Date: 2/23/2009 11:00 AM

Client ID: Run ID: WETCHEM_090223E SeqNo: 1608632 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)	590	5.0	0	0	0	0-0	609	3.17	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)	590	5.0	0	0	0	0-0	609	3.17	20	

DUP Sample ID: 0902285-04BDUP Units: mg/L Analysis Date: 2/23/2009 11:00 AM

Client ID: Run ID: WETCHEM_090223E SeqNo: 1608634 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)	362	5.0	0	0	0	0-0	377	4.06	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)	362	5.0	0	0	0	0-0	377	4.06	20	

The following samples were analyzed in this batch:

0902372-01C

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: 0902372
Project: Injection Well Qrtly

QC BATCH REPORT

Batch ID: R73816 Instrument ID WetChem Method: SW1010

LCS Sample ID: WLCSW1-022509-R73816 Units: °F Analysis Date: 2/25/2009
Client ID: Run ID: WETCHEM_090225F SeqNo: 1610036 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	79	50	83	0	95.2	80-120	0			

LCS Sample ID: WLCSD1-022509-R73816 Units: °F Analysis Date: 2/25/2009
Client ID: Run ID: WETCHEM_090225F SeqNo: 1610043 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	79	50	83	0	95.2	80-120	79	0		

DUP Sample ID: 0902372-01E Units: °F Analysis Date: 2/25/2009
Client ID: Injection Well Run ID: WETCHEM_090225F SeqNo: 1610048 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: 0902372-01E

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

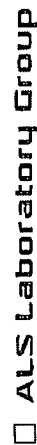
R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

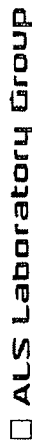
U - Analyzed for but not detected

E - Value above quantitation range



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

Chain of Custody Form



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

Page 1 of 1

Customer Information

Purchase Order	Work Order	Company Name	Send Report To	Address	City/State/Zip	Phone	Fax	e-Mail Address
----------------	------------	--------------	----------------	---------	----------------	-------	-----	----------------

Project Information

Project Name	Injection Well Qrty
Project Number	
Bill To Company	Navajo Refining Company
Invoice Attn	Aaron Strange
Address	P.O. Box 159
City/State/Zip	Artesia, NM 88211
Phone	(505) 748-3311
Fax	(505) 746-5421
e-Mail Address	

Project Information

Project Name	Injection Well Qrty
Project Number	
Bill To Company	Navajo Refining Company
Invoice Attn	Aaron Strange
Address	P.O. Box 159
City/State/Zip	Artesia, NM 88211
Phone	(505) 748-3311
Fax	(505) 746-5421
e-Mail Address	

Parameter/Method Request for Analysis	
A	• VOC (8260) Select
B	• SVOC (8270) Select
C	• Total Metals (5020/7000) Select
D	RCI Profile
E	• Anions (300) Cl, SO4
F	• Alkalinity
G	• pH
H	• Conductivity
I	• TDS
J	

[illegible]

Sample(s) Please Print & Sign		Shipment Method	Required Turnaround Time: (Check Box)		Results Due Date:	
Relinquished by:		Date:	Time:	1-2 Wk Days	3-4 Wk Days	Other: _____
Aaron Stange		2/13/09	16:15	☒	☐	24 Hour
Relinquished by:		Date:	Time:	1-2 Wk Days	3-4 Wk Days	Other: _____
Clayton Stange		2/19/09	09:45	☒	☐	24 Hour
Relinquished by:		Date:	Time:	1-2 Wk Days	3-4 Wk Days	Other: _____
Logged by (Laboratory):		Date:	Time:	1-2 Wk Days	3-4 Wk Days	Other: _____
JPMCL		2/19/09	09:45	☒	☐	24 Hour
Checked by (Laboratory):		Date:	Time:	1-2 Wk Days	3-4 Wk Days	Other: _____
JPMCL		2/19/09	09:45	☒	☐	24 Hour
Cooler ID#		Cooler Temp:	QC Package: (Check One Box Below)		TRRP Checklist	
JPMCL		2/19/09	09:45	☒ Level II Std QC	☐ Level III Std QC/Raw Data	☐ TRRP Level IV
JPMCL		2/19/09	09:45	☐ Level IV SW346/C LP	☐ Other	☐ TRRP
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other						

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

1. Any changes must be made in Writing Office samples and COC form have been submitted to ALS Laboratory Group.
2. Unless otherwise noted in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.

2. The Chain of Custody is a local document. All information must be correlated accurately.

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Sample Receipt Checklist

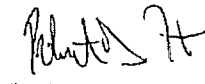
Client Name: NAVAJO REFINING

Date/Time Received: 2/14/2009 09:45

Work Order Number 0902372

Received by: JMC

Checklist completed by



2/14/09

Reviewed by

Initials

Date

Matrix: waters

Carrier name FedEx

Shipping container/cooler in good condition?	Yes ☒	No	Not Present
Custody seals intact on shipping container/cooler?	Yes ☒	No	Not Present
Custody seals intact on sample bottles?	Yes	No	Not Present ☒
Chain of custody present?	Yes ☒	No	
Chain of custody signed when relinquished and received?	Yes ☒	No	
Chain of custody agrees with sample labels?	Yes ☒	No	
Samples in proper container/bottle?	Yes ☒	No	
Sample containers intact?	Yes ☒	No	
Sufficient sample volume for indicated test?	Yes ☒	No	
All samples received within holding time?	Yes ☒	No	
Container/Temp Blank temperature in compliance?	Yes ☒	No	
Temperature(s)/Thermometer(s):	<u>2.6c, 2.9c</u>	<u>002</u>	
Cooler(s)/Kits:	<u>998, 1815</u>		
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

ORIGIN ID: ROMA (505) 748-3311
NAVAJO REFINING COMPANY
501 E. MAIN STREET
ARTESIA, NM 88210
UNITED STATES US

Ship Date: 13FEB09
ActWgt: 58.0 LB MRM
System#: 185697/CAFE2353

10450 STANCLIFF RD. SUITE 210

HOUSTON, TX 77099

TRK# 9391 8022 7717

PRIORITY SATURDAY

Express



(US)

10450 STANCLIFF RD. SUITE 210

PLACE THIS LABEL ON PACKAGE
NEXT TO THE SHIPPING LABEL

Part # 156148-434 NRT 9-05 ::

Color # 988

ORIGIN ID: ROMA (505) 748-3311
NAVAJO REFINING COMPANY
501 E. MAIN STREET
ARTESIA, NM 88210
UNITED STATES US

Ship Date: 13FEB09
ActWgt: 62.0 LB MRM
System#: 185697/CAFE2353

TO SAMPLE RECEIVING

ELAB/ALS

10450 STANCLIFF RD. SUITE 210

HOUSTON, TX 77099

TRK# 9391 8022 7728

PRIORITY SATURDAY

(281) 530-5656

FedEx
Express



(US)

10450 STANCLIFF RD. SUITE 210

PLACE THIS LABEL ON PACKAGE
NEXT TO THE SHIPPING LABEL

Part # 156148-434 NRT 9-05 ::

Color # 1815

1/5/09

0102512

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

CUSTODY SEAL		Seal Broken By:
Date: 2/13/09	Time: 1615	JME
Name: Aaron Stanger		Date: 2/14/09
Company: Navajo Refining Co		

988

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
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CUSTODY SEAL		Seal Broken By:
Date: 2/13/09	Time: 1615	JME
Name: Aaron Stanger		Date: 2/14/09
Company: Navajo Refining Co		

815

ALS Laboratory Group

Date: 23-Feb-09

Client: ALS Laboratory Group
Project: 0902372
Work Order: 0902323

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>
0902323-01	0902372-01F	Water		2/13/2009 13:45	2/17/2009 09:50	☐

ALS Laboratory Group

Date: 23-Feb-09

Client: ALS Laboratory Group

Project: 0902372

Work Order: 0902323

Sample ID: 0902372-01F

Lab ID: 0902323-01

Collection Date: 2/13/2009 01:45 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			SW7.3.3.2			Analyst: DB
Cyanide, Reactive	ND		40.0	mg/Kg	1	2/19/2009
SULFIDE, REACTIVE			SW7.3.4.2		Prep Date: 2/19/2009	Analyst: DB
Sulfide, Reactive	ND		40.0	mg/Kg	1	2/19/2009

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

Client: ALS Laboratory Group
Work Order: 0902323
Project: 0902372

Date: 23-Feb-09

QC BATCH REPORT

Batch ID: R65919 Instrument ID WETCHEM Method: SW7.3.3.2

MBLK	Sample ID: WBLKS1-021909-R65919				Units: mg/Kg		Analysis Date: 2/19/2009			
Client ID:	Run ID: WETCHEM_090219K				SeqNo: 1108755		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: WLCSS1-021909-R65919					Units: mg/Kg		Analysis Date: 2/19/2009		
Client ID:	Run ID: WETCHEM_090219K				SeqNo: 1108756		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	75-125	0			

LCSD	Sample ID: WLCSDS1-021909-R65919					Units: mg/Kg		Analysis Date: 2/19/2009		
Client ID:	Run ID: WETCHEM_090219K					SeqNo: 1108770		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	234.9	40	250	0	94	75-125	249.6	6.06	35	

MS	Sample ID: 0902323-01A MS				Units: mg/Kg		Analysis Date: 2/19/2009			
Client ID: 0902372-01F			Run ID: WETCHEM_090219K			SeqNo: 1108758		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	308.3	40	250	0	123	50-150	0			

MSD	Sample ID: 0902323-01A MSD				Units: mg/Kg		Analysis Date: 2/19/2009			
Client ID: 0902372-01F			Run ID: WETCHEM_090219K			SeqNo: 1108759		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	308.3	40	250	0	123	50-150	308.3	0	35	

The following samples were analyzed in this batch:

0902323-01A

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: ALS Laboratory Group
Work Order: 0902323
Project: 0902372

QC BATCH REPORT

Batch ID: R65921 Instrument ID WETCHEM Method: SW7.3.4.2

MBLK Sample ID: WBLKS1-021909-R65921 Units: mg/Kg Analysis Date: 2/19/2009

Client ID: Run ID: WETCHEM_090219L SeqNo: 1108776 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: 0902323-01A

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

0902323

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

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

Date: 14-Feb-09
COC ID: 7218
Due Date: 26-Feb-09

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

Parameter/Method Request for Analysis

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	0902372	Project Name	0902372	A	Reactive Cyanide (SW-846)
Work Order		Project Number		B	Reactive Sulfide (SW-846)
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp.	C	
Send Report To	Jay Lynn F. Hubbard	Inv Attn	Accounts Payable	D	
Address	10450 Shandliff Rd, Suite 210	Address	10450 Shandliff Rd, Suite 210	E	
				F	
City/State/Zip	Houston, Texas 77099-4338	City/State/Zip	Houston, Texas 77099-4338	G	
Phone	(281) 530-5656	Phone	(281) 530-5656	H	
Fax	(281) 530-5887	Fax	(281) 530-5887	I	
eMail Address	jaylynn.hubbard@alsenviro.com	eMail CC	alsenviro@alsenviro.com	J	
Sample ID		Matrix	Water	A	
0902372-01F (Injection Well)		Collection Date 24hr	2/13/2009 13:45	B	
		Bottle	(1) 1LPNEAT	C	
				D	
				E	
				F	
				G	
				H	
				I	
				J	

Comments:

Please analyze for Reactive Cyanide & Reactive Sulfide.

Revised by:

Revised by:

Date Time

Date Time

Revised by:

Revised by:

Date Time

Date Time

Page 1 of 1

Page 1 of 1

ALS Laboratory Group

Sample Receipt Checklist

Client Name ELAB-HOU

Date/Time Received: 2/17/2009 09:50

Work Order Number 0902323

Received by: AJK

Checklist completed by _____

Signature

2/17/09
Date

Reviewed by _____

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):	<u>2.4°C</u>		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒

Adjusted? _____ Checked by _____

Login Notes:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____



WEIGHT 4.9	DIMENSIONAL WEIGHT	LARGE PACKAGE
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SHIPPER RELEASE ☐	1P
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The shipper authorizes UPS to act as
insuring agent for express cargo and
customs purposes.
The shipper certifies that these
commodities, including any contents
were exported from the United States in
accordance with the Export
Administration Regulations. Violation
contrary to U.S. law is prohibited.

SHIPMENT FROM UPS ACCOUNT NO.	698174
--	--------

REFERENCE NUMBER
SUB CONTRACT

RICHARD SANCHEZ
TELEPHONE 281-530-5656

ALS LABORATORY GROUP
1450 STANCLIFF RD STE # 210

HOUSTON TX 77099

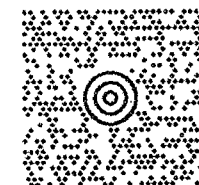
DELIVERY TO RECEIVING	TELEPHONE 616-399-6070
--------------------------	------------------------

ALS LABORATORY GROUP
3352 128TH AVE

HOLLAND MI 49424

(URC v.72.5A 10/2007)
0201952542609 1/07 S

United Parcel Service, Louisville, KY



MI 495 9-04



UPS Next Day Air EXTREMELY URGENT	Saver 1P
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1Z 698 174 23 1005 3358

SHIPMENT ID NUMBER	6981 7478 895
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1253949 SS2007 US 04559 Feb 17 09:12:02 2009 HIP 7.0.1 INT4420

1Z 698 174 23 1005 3358



DWS ID Label

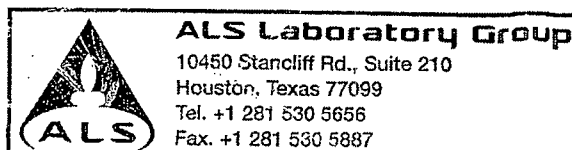


126981742310053358

3352 128TH AVE

HOLLAND MI 49424

P: M2 12698 LHC2H US 49424	I: 1500 08:20:28 2009
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CUSTODY SEAL		Seal Broken By:
Date: 2-16-09	Time: 6:00	
Name: SANCHEZ		
Company: ALS		
		Date: 2/17/09

0902323