GW - 028

WASTE

YEAR(S):
2010 - Present

Chavez, Carl J, EMNRD

From: Schultz, Michele <Michele.Schultz@hollyfrontier.com>
Sent: Friday, July 20, 2012 11:13 AM
To: Chavez, Carl J, EMNRD; kflowers@r360es.com
Cc: Strange, Aaron
Subject: Non-haz waste approval request
Attachments: west rack soil C-138 072012.doc; 1206374 West Rack Soil Final.pdf; 4288_001.pdf

Kim,

Please see the attached requests for waste approvals. There are 4 rolloff bins, but they are not full. They are ready to go once approved.

Micki Schultz, P.E., CHMM
Environmental Specialist, Water and Waste Programs
Navajo Refining Company
575-746-5281 (office)
575-308-2141 (cell)
micki.schultz@hollyfrontier.com

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CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	Soil
ESTIMATED VOLUME:	< 80 cu yds
GENERATING PROCESS:	Excavated soil from construction project - new containment for west rack
REMARKS:	See attached ALS report, work order# 1206374
NMOCD FACILITY:	R 360
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Micki Schultz
SIGNATURE

NAME: Micki Schultz
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 7/20/2012

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Navajo Refining Co.

2. Originating Site:
Artesia Plant

3. Location of Material (Street Address, City, State or ULSTR):
501 E. Main St., Artesia NM

4. Source and Description of Waste:

Excavated soil from concrete containment project at the west rack

Estimated Volume ≤80 cu. yds yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Micki Schultz, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

22-Jun-2012

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

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: West Rack Soil

Work Order: **1206374**

Dear Aaron,

ALS Environmental received 1 sample on 09-Jun-2012 09:15 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 27.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Kelsey N. Brown

Patricia L. Lynch
Project Manager

NELAP ACCREDITED TNI LABORATORY

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 22-Jun-12

Client: Navajo Refining Company
Project: West Rack Soil
Work Order: **1206374**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1206374-01	West Rack Soil	Soil		6/8/2012 14:59	6/9/2012 09:15	☐

Client:	Navajo Refining Company
Project:	West Rack Soil
Work Order:	1206374

Case Narrative

The analysis for Reactive Sulfide and Reactive Cyanide were performed at ALS Environmental in Holland, MI.

ALS Environmental

Date: *22-Jun-12*

Client: Navajo Refining Company
Project: West Rack Soil
Sample ID: West Rack Soil
Collection Date: 6/8/2012 02:59 PM

Work Order: 1206374
Lab ID: 1206374-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/14/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/14/2012 02:48 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/14/2012**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	6/18/2012 01:16 PM
Barium	**0.882**		**0.0500**	**mg/L**	10	6/18/2012 01:16 PM
Cadmium	ND		0.0200	mg/L	10	6/18/2012 01:16 PM
Chromium	ND		0.0500	mg/L	10	6/18/2012 01:16 PM
Lead	ND		0.0500	mg/L	10	6/18/2012 01:16 PM
Selenium	ND		0.0500	mg/L	10	6/18/2012 01:16 PM
Silver	ND		0.0500	mg/L	10	6/18/2012 01:16 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/14/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
Cresols, Total	ND		0.015	mg/L	1	6/14/2012 08:10 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
Hexachloroethane	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
Nitrobenzene	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
Pentachlorophenol	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
Pyridine	ND		0.0050	mg/L	1	6/14/2012 08:10 PM
Surr: 2,4,6-Tribromophenol	*79.9*		*36-126*	*%REC*	1	6/14/2012 08:10 PM
Surr: 2-Fluorobiphenyl	*78.7*		*43-125*	*%REC*	1	6/14/2012 08:10 PM
Surr: 2-Fluorophenol	*82.6*		*37-125*	*%REC*	1	6/14/2012 08:10 PM
Surr: 4-Terphenyl-d14	*89.0*		*32-125*	*%REC*	1	6/14/2012 08:10 PM
Surr: Nitrobenzene-d5	*89.5*		*37-125*	*%REC*	1	6/14/2012 08:10 PM
Surr: Phenol-d6	*78.6*		*40-125*	*%REC*	1	6/14/2012 08:10 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/14/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	6/14/2012 10:20 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	6/14/2012 10:20 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	6/14/2012 10:20 PM
2-Butanone	ND		0.20	mg/L	20	6/14/2012 10:20 PM
Benzene	ND		0.10	mg/L	20	6/14/2012 10:20 PM
Carbon tetrachloride	ND		0.10	mg/L	20	6/14/2012 10:20 PM
Chlorobenzene	ND		0.10	mg/L	20	6/14/2012 10:20 PM
Chloroform	ND		0.10	mg/L	20	6/14/2012 10:20 PM
Tetrachloroethene	ND		0.10	mg/L	20	6/14/2012 10:20 PM
Trichloroethene	ND		0.10	mg/L	20	6/14/2012 10:20 PM

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

ALS Environmental

Date: *22-Jun-12*

Client: Navajo Refining Company
Project: West Rack Soil
Sample ID: West Rack Soil
Collection Date: 6/8/2012 02:59 PM

Work Order: 1206374
Lab ID: 1206374-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	6/14/2012 10:20 PM
Surr: 1,2-Dichloroethane-d4	*106*		*70-125*	*%REC*	20	6/14/2012 10:20 PM
Surr: 4-Bromofluorobenzene	*96.0*		*72-125*	*%REC*	20	6/14/2012 10:20 PM
Surr: Dibromofluoromethane	*111*		*71-125*	*%REC*	20	6/14/2012 10:20 PM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	20	6/14/2012 10:20 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/19/2012 09:30 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/19/2012 09:30 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	6/19/2012 07:00 PM
PH			**SW9045B**			Analyst: **EDG**
pH	**7.97**		**0.100**	**pH Units**	1	6/12/2012 01:30 PM

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

ALS Environmental

Date: 22-Jun-12

Client: Navajo Refining Company

Work Order: 1206374

Project: West Rack Soil

QC BATCH REPORT

Batch ID: **61857** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-061412-61857** Units: **mg/L** Analysis Date: **6/14/2012 02:05 PM**

Client ID: Run ID: **MERCURY_120617A** SeqNo: **2820533** Prep Date: **6/14/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-061312-61857** Units: **mg/L** Analysis Date: **6/14/2012 02:25 PM**

Client ID: Run ID: **MERCURY_120617A** SeqNo: **2820551** Prep Date: **6/14/2012** DF: **1**

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

LCS Sample ID: **GLCSW1-061412-61857** Units: **mg/L** Analysis Date: **6/14/2012 02:07 PM**

Client ID: Run ID: **MERCURY_120617A** SeqNo: **2820535** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00486	0.00020	0.005	0	97.2	80-120	0			

MS Sample ID: **1206388-01CMS** Units: **mg/L** Analysis Date: **6/14/2012 02:17 PM**

Client ID: Run ID: **MERCURY_120617A** SeqNo: **2820542** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00492	0.00020	0.005	-0.00004	99.2	75-125	0			

MSD Sample ID: **1206388-01CMSD** Units: **mg/L** Analysis Date: **6/14/2012 02:19 PM**

Client ID: Run ID: **MERCURY_120617A** SeqNo: **2820545** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00491	0.00020	0.005	-0.00004	99	75-125	0.00492	0.203	20	

DUP Sample ID: **1206388-01CDUP** Units: **mg/L** Analysis Date: **6/14/2012 02:15 PM**

Client ID: Run ID: **MERCURY_120617A** SeqNo: **2820540** Prep Date: **6/14/2012** 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	-0.00004	0	20	

The following samples were analyzed in this batch: 1206374-01A

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **61876** Instrument ID **ICPMS05** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-061312-61876** Units: **mg/L** Analysis Date: **6/15/2012 02:16 AM**
Client ID: Run ID: **ICPMS05_120614A** SeqNo: **2821096** Prep Date: **6/14/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW4-061412-61876** Units: **mg/L** Analysis Date: **6/15/2012 02:19 AM**
Client ID: Run ID: **ICPMS05_120614A** SeqNo: **2821097** Prep Date: **6/14/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW4-061412-61876** Units: **mg/L** Analysis Date: **6/15/2012 02:22 AM**
Client ID: Run ID: **ICPMS05_120614A** SeqNo: **2821098** Prep Date: **6/14/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5457	0.050	0.5	0	109	80-120	0			
Barium	0.5546	0.050	0.5	0	111	80-120	0			
Cadmium	0.5337	0.020	0.5	0	107	80-120	0			
Chromium	0.5622	0.050	0.5	0	112	80-120	0			
Lead	0.556	0.050	0.5	0	111	80-120	0			
Selenium	0.5647	0.050	0.5	0	113	80-120	0			
Silver	0.5659	0.050	0.5	0	113	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **61876** Instrument ID **ICPMS05** Method: **SW1311/6020**

MS Sample ID: **1206365-02BMS** Units: **mg/L** Analysis Date: **6/15/2012 02:29 AM**
Client ID: Run ID: **ICPMS05_120614A** SeqNo: **2821101** Prep Date: **6/14/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5057	0.050	0.5	-0.000218	101	75-125	0			
Barium	1.586	0.050	0.5	1.175	82.2	75-125	0			
Cadmium	0.4968	0.020	0.5	0.001653	99	75-125	0			
Chromium	0.5056	0.050	0.5	-0.001919	102	75-125	0			
Lead	0.5163	0.050	0.5	0.01752	99.8	75-125	0			
Selenium	0.5248	0.050	0.5	-0.000629	105	75-125	0			
Silver	0.5038	0.050	0.5	0.000291	101	75-125	0			

MSD Sample ID: **1206365-02BMSD** Units: **mg/L** Analysis Date: **6/15/2012 02:32 AM**
Client ID: Run ID: **ICPMS05_120614A** SeqNo: **2821102** Prep Date: **6/14/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5363	0.050	0.5	-0.000218	107	75-125	0.5057	5.87	25	
Barium	1.636	0.050	0.5	1.175	92.3	75-125	1.586	3.14	25	
Cadmium	0.5177	0.020	0.5	0.001653	103	75-125	0.4968	4.12	25	
Chromium	0.5397	0.050	0.5	-0.001919	108	75-125	0.5056	6.52	25	
Lead	0.5442	0.050	0.5	0.01752	105	75-125	0.5163	5.27	25	
Selenium	0.5318	0.050	0.5	-0.000629	106	75-125	0.5248	1.33	25	
Silver	0.5238	0.050	0.5	0.000291	105	75-125	0.5038	3.9	25	

DUP Sample ID: **1206365-02BDUP** Units: **mg/L** Analysis Date: **6/15/2012 02:27 AM**
Client ID: Run ID: **ICPMS05_120614A** SeqNo: **2821100** Prep Date: **6/14/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	-0.000218	0	25	
Barium	1.123	0.050	0	0	0	0-0	1.175	4.53	25	
Cadmium	ND	0.020	0	0	0	0-0	0.001653	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.001919	0	25	
Lead	0.0161	0.050	0	0	0	0-0	0.01752	0	25	J
Selenium	ND	0.050	0	0	0	0-0	-0.000629	0	25	
Silver	ND	0.050	0	0	0	0-0	0.000291	0	25	

The following samples were analyzed in this batch: 1206374-01A

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **61860** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT2-120614-61860** Units: **µg/L** Analysis Date: **6/14/2012 04:50 PM**
Client ID: Run ID: **SV-3_120614C** SeqNo: **2822760** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*95.4*	5.0	*100*	0	*95.4*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*98.13*	5.0	*100*	0	*98.1*	*43-125*	0			
Surr: 2-Fluorophenol	*97.57*	5.0	*100*	0	*97.6*	*37-125*	0			
Surr: 4-Terphenyl-d14	*98.8*	5.0	*100*	0	*98.8*	*32-125*	0			
Surr: Nitrobenzene-d5	*107.2*	5.0	*100*	0	*107*	*37-125*	0			
Surr: Phenol-d6	*95.86*	5.0	*100*	0	*95.9*	*40-125*	0			

LCS Sample ID: **SLCST2-120614-61860** Units: **µg/L** Analysis Date: **6/14/2012 05:12 PM**
Client ID: Run ID: **SV-3_120614C** SeqNo: **2822761** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	92.03	5.0	100	0	92	55-120	0			
2,4,6-Trichlorophenol	77.84	5.0	100	0	77.8	55-120	0			
2,4-Dinitrotoluene	49.11	5.0	50	0	98.2	55-125	0			
Cresols, Total	200	15	250	0	80	40-120	0			
Hexachlorobenzene	49.41	5.0	50	0	98.8	55-120	0			
Hexachlorobutadiene	50.58	5.0	50	0	101	55-120	0			
Hexachloroethane	48.95	5.0	50	0	97.9	55-120	0			
Nitrobenzene	52.3	5.0	50	0	105	55-120	0			
Pentachlorophenol	90.46	5.0	100	0	90.5	50-135	0			
Pyridine	46.81	5.0	50	0	93.6	30-120	0			
Surr: 2,4,6-Tribromophenol	*94.3*	5.0	*100*	0	*94.3*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*94.81*	5.0	*100*	0	*94.8*	*43-125*	0			
Surr: 2-Fluorophenol	*111.6*	5.0	*100*	0	*112*	*37-125*	0			
Surr: 4-Terphenyl-d14	*94.81*	5.0	*100*	0	*94.8*	*32-125*	0			
Surr: Nitrobenzene-d5	*102.7*	5.0	*100*	0	*103*	*37-125*	0			
Surr: Phenol-d6	*93.21*	5.0	*100*	0	*93.2*	*40-125*	0			

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **61860** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT2-120614-61860** Units: **µg/L** Analysis Date: **6/14/2012 05:34 PM**
Client ID: Run ID: **SV-3_120614C** SeqNo: **2822762** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	86.44	5.0	100	0	86.4	55-120	92.03	6.26	25	
2,4,6-Trichlorophenol	75.8	5.0	100	0	75.8	55-120	77.84	2.66	25	
2,4-Dinitrotoluene	46.49	5.0	50	0	93	55-125	49.11	5.5	25	
Cresols, Total	190.1	15	250	0	76	40-120	200	5.05	25	
Hexachlorobenzene	47.37	5.0	50	0	94.7	55-120	49.41	4.23	25	
Hexachlorobutadiene	48.38	5.0	50	0	96.8	55-120	50.58	4.43	25	
Hexachloroethane	46.94	5.0	50	0	93.9	55-120	48.95	4.21	25	
Nitrobenzene	50.71	5.0	50	0	101	55-120	52.3	3.09	25	
Pentachlorophenol	86.47	5.0	100	0	86.5	50-135	90.46	4.5	25	
Pyridine	43.9	5.0	50	0	87.8	30-120	46.81	6.42	25	
Surr: 2,4,6-Tribromophenol	*90.6*	5.0	*100*	0	*90.6*	*36-126*	94.3	*4*	*25*	
Surr: 2-Fluorobiphenyl	*89.94*	5.0	*100*	0	*89.9*	*43-125*	94.81	*5.27*	*25*	
Surr: 2-Fluorophenol	*104.5*	5.0	*100*	0	*105*	*37-125*	111.6	*6.57*	*25*	
Surr: 4-Terphenyl-d14	*94.68*	5.0	*100*	0	*94.7*	*32-125*	94.81	*0.131*	*25*	
Surr: Nitrobenzene-d5	*97.05*	5.0	*100*	0	*97*	*37-125*	102.7	*5.64*	*25*	
Surr: Phenol-d6	*88.51*	5.0	*100*	0	*88.5*	*40-125*	93.21	*5.18*	*25*	

MS Sample ID: **1206376-01AMS** Units: **µg/L** Analysis Date: **6/14/2012 09:16 PM**
Client ID: Run ID: **SV-3_120614C** SeqNo: **2822768** Prep Date: **6/14/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	86.16	5.0	100	0	86.2	55-120	0			
2,4,6-Trichlorophenol	73.5	5.0	100	0	73.5	55-120	0			
2,4-Dinitrotoluene	49.33	5.0	50	0	98.7	55-125	0			
Cresols, Total	196.4	15	250	0	78.6	40-120	0			
Hexachlorobenzene	47.42	5.0	50	0	94.8	55-120	0			
Hexachlorobutadiene	44.52	5.0	50	0	89	55-120	0			
Hexachloroethane	44.18	5.0	50	0	88.4	55-120	0			
Nitrobenzene	47.87	5.0	50	0	95.7	55-120	0			
Pentachlorophenol	89.83	5.0	100	0	89.8	50-135	0			
Pyridine	44.9	5.0	50	0	89.8	30-120	0			
Surr: 2,4,6-Tribromophenol	*91.85*	5.0	*100*	0	*91.8*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*84.15*	5.0	*100*	0	*84.2*	*43-125*	0			
Surr: 2-Fluorophenol	*99.7*	5.0	*100*	0	*99.7*	*37-125*	0			
Surr: 4-Terphenyl-d14	*88.06*	5.0	*100*	0	*88.1*	*32-125*	0			
Surr: Nitrobenzene-d5	*92.57*	5.0	*100*	0	*92.6*	*37-125*	0			
Surr: Phenol-d6	*88.94*	5.0	*100*	0	*88.9*	*40-125*	0			

The following samples were analyzed in this batch: 1206374-01A

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **R129568** Instrument ID **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-061412-R129568** Units: **µg/L** Analysis Date: **6/14/2012 12:46 PM**
Client ID: Run ID: **VOA1_120614C** SeqNo: **2821534** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*52.94*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.86*	5.0	*50*	0	*97.7*	*72.4-125*	0			
Surr: Dibromofluoromethane	*52.57*	5.0	*50*	0	*105*	*71.2-125*	0			
Surr: Toluene-d8	*51.56*	5.0	*50*	0	*103*	*75-125*	0			

MBLK Sample ID: **MBLKV1-061312-R129568** Units: **µg/L** Analysis Date: **6/14/2012 08:34 PM**
Client ID: Run ID: **VOA1_120614C** SeqNo: **2821538** Prep Date: **6/14/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*1116*	100	*1000*	0	*112*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1030*	100	*1000*	0	*103*	*72.4-125*	0			
Surr: Dibromofluoromethane	*1087*	100	*1000*	0	*109*	*71.2-125*	0			
Surr: Toluene-d8	*1029*	100	*1000*	0	*103*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **R129568** Instrument ID **VOA1** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-061412-R129568** Units: **µg/L** Analysis Date: **6/14/2012 11:19 AM**
Client ID: Run ID: **VOA1_120614C** SeqNo: **2821533** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	48.99	5.0	50	0	98	73-124	0			
1,2-Dichloroethane	46.61	5.0	50	0	93.2	76-120	0			
1,4-Dichlorobenzene	44.64	5.0	50	0	89.3	70-130	0			
2-Butanone	120.8	10	100	0	121	70-130	0			
Benzene	48.19	5.0	50	0	96.4	70-128	0			
Carbon tetrachloride	44.11	5.0	50	0	88.2	70-130	0			
Chlorobenzene	46.7	5.0	50	0	93.4	72-127	0			
Chloroform	49.71	5.0	50	0	99.4	70-130	0			
Tetrachloroethene	51.39	5.0	50	0	103	70-130	0			
Trichloroethene	50.46	5.0	50	0	101	72-129	0			
Vinyl chloride	47.87	2.0	50	0	95.7	70-130	0			
Surr: 1,2-Dichloroethane-d4	*49.9*	5.0	*50*	0	*99.8*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*53.58*	5.0	*50*	0	*107*	*72-125*	0			
Surr: Dibromofluoromethane	*52.72*	5.0	*50*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*51.85*	5.0	*50*	0	*104*	*75-125*	0			

MS Sample ID: **1206472-06ZMS** Units: **µg/L** Analysis Date: **6/14/2012 01:43 PM**
Client ID: Run ID: **VOA1_120614C** SeqNo: **2821536** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	44.36	5.0	50	0	88.7	73-124	0			
1,2-Dichloroethane	49.49	5.0	50	0	99	76-120	0			
1,4-Dichlorobenzene	41.89	5.0	50	0	83.8	70-130	0			
2-Butanone	101.1	10	100	0	101	70-130	0			
Benzene	47.4	5.0	50	0	94.8	70-128	0			
Carbon tetrachloride	41.75	5.0	50	0	83.5	70-130	0			
Chlorobenzene	42.9	5.0	50	0	85.8	72-127	0			
Chloroform	48.01	5.0	50	0	96	70-130	0			
Tetrachloroethene	41.41	5.0	50	0	82.8	70-130	0			
Trichloroethene	46.55	5.0	50	0	93.1	72-129	0			
Vinyl chloride	38.3	2.0	50	0	76.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*51.25*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.27*	5.0	*50*	0	*105*	*72-125*	0			
Surr: Dibromofluoromethane	*51.56*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*50.47*	5.0	*50*	0	*101*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **R129568** Instrument ID **VOA1** Method: **SW1311/8260B**

MSD Sample ID: **1206472-06ZMSD** Units: **µg/L** Analysis Date: **6/14/2012 02:11 PM**

Client ID: Run ID: **VOA1_120614C** SeqNo: **2821537** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	40.38	5.0	50	0	80.8	73-124	44.36	9.41	20	
1,2-Dichloroethane	47.45	5.0	50	0	94.9	76-120	49.49	4.22	20	
1,4-Dichlorobenzene	38.72	5.0	50	0	77.4	70-130	41.89	7.86	20	
2-Butanone	104.6	10	100	0	105	70-130	101.1	3.45	20	
Benzene	44.84	5.0	50	0	89.7	70-128	47.4	5.54	20	
Carbon tetrachloride	39.08	5.0	50	0	78.2	70-130	41.75	6.58	20	
Chlorobenzene	42.65	5.0	50	0	85.3	72-127	42.9	0.576	20	
Chloroform	46.5	5.0	50	0	93	70-130	48.01	3.21	20	
Tetrachloroethene	38.38	5.0	50	0	76.8	70-130	41.41	7.59	20	
Trichloroethene	43.23	5.0	50	0	86.5	72-129	46.55	7.39	20	
Vinyl chloride	35.8	2.0	50	0	71.6	70-130	38.3	6.73	20	
Surr: 1,2-Dichloroethane-d4	*50.98*	5.0	*50*	0	*102*	*70-125*	51.25	*0.521*	*20*	
Surr: 4-Bromofluorobenzene	*51.9*	5.0	*50*	0	*104*	*72-125*	52.27	*0.706*	*20*	
Surr: Dibromofluoromethane	*51.94*	5.0	*50*	0	*104*	*71-125*	51.56	*0.735*	*20*	
Surr: Toluene-d8	*46.78*	5.0	*50*	0	*93.6*	*75-125*	50.47	*7.59*	*20*	

The following samples were analyzed in this batch: 1206374-01A

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **R129440** Instrument ID **WetChem** Method: **SW9045B** **(Dissolve)**

LCS Sample ID: **WLCS1-061212-R129440** Units: **pH Units** Analysis Date: **6/12/2012 01:30 PM**
Client ID: Run ID: **WETCHEM_120612L** SeqNo: **2818302** Prep Date: DF: **1**

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

LCS Sample ID: **WLCS2-061212-R129440** Units: **pH Units** Analysis Date: **6/12/2012 01:30 PM**
Client ID: Run ID: **WETCHEM_120612L** SeqNo: **2818316** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.02	0.10	6	0	100	90-110	0			

LCS Sample ID: **WLCS3-061212-R129440** Units: **pH Units** Analysis Date: **6/12/2012 01:30 PM**
Client ID: Run ID: **WETCHEM_120612L** SeqNo: **2818317** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.02	0.10	6	0	100	90-110	0			

LCS Sample ID: **WLCS4-061212-R129440** Units: **pH Units** Analysis Date: **6/12/2012 01:30 PM**
Client ID: Run ID: **WETCHEM_120612L** SeqNo: **2818318** 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: **1206376-01ADUP** Units: **pH Units** Analysis Date: **6/12/2012 01:30 PM**
Client ID: Run ID: **WETCHEM_120612L** SeqNo: **2818319** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.86	0.10	0	0	0	0-0	7.86	0	20	

The following samples were analyzed in this batch: 1206374-01A

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

Client: Navajo Refining Company
Work Order: 1206374
Project: West Rack Soil

QC BATCH REPORT

Batch ID: **R129767** Instrument ID **WetChem** Method: **SW1030** **(Dissolve)**

DUP Sample ID: **1206634-05ADUP** Units: **Burn Rate, mm/se** Analysis Date: **6/19/2012 07:00 PM**

Client ID: Run ID: **WETCHEM_120619J** SeqNo: **2826134** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0			0	0	

The following samples were analyzed in this batch: 1206374-01A

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

Client: Navajo Refining Company
Project: West Rack Soil
WorkOrder: 1206374

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **09-Jun-12 09:15**

Work Order: **1206374** Received by: **RDN**

Checklist completed by Rishel D. Naran (eSignature) 11-Jun-12 (Date) Reviewed by: Hector Coronado (eSignature) 12-Jun-12 (Date)

Matrices: soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.1	003	
Cooler(s)/Kit(s):	4053		
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: trip blank logged in with WO1206370

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1206374

NAVAJO REFINING: Navajo Refining Company

Project: West Rack Soil

ALS Project Manager: Chris Bryson

Customer Information		Project Information			
Purchase Order		Project Name	West Rack Soil	A	TCLP Volitiles
Work Order		Project Number		B	TCLP Semi-Volitiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	R.C.I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	Aaron.Strange@hollyfrontier.com	e-Mail Address	Aaron.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	West Rack Soil	6/8/12	14:59	soil	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

18 of 27

Sampler(s): Please Print & Sign: Aaron Strange

Shipment Method: FedEx

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
	6-8-2012	16:15		
Relinquished by:	Date: 6/9/12	Time: 09:15	Received by (Laboratory): Kw ALS	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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501 E MAIN

BILL RECIPIENT

TO CHRIS BRYSON
ALS LABORATORY GROUP
10450 STANCLIFF RD., SUITE 210

HOUSTON TX 77099
(281) 530-5656 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 4967 8856 6035

SATURDAY ### A2
PRIORITY OVERNIGHT

X0 SGRA

77099
TX-US IAH

1206574

ALS Environmental	CUSTODY SEAL	Seal Broken By:
10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: 6-8-2012 Time: 13:13 Name: Aaron Thomas Company: Navajo Refining Co.	RW Date: 6/9/12

ALS Group USA, Corp

Date: 21-Jun-12

Client: ALS Environmental
Project: 1206374
Work Order: **1206356**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1206356-01	1206374-01B	Soil		6/8/2012 14:59	6/12/2012 10:00	☐

Client: ALS Environmental
Project: 1206374
WorkOrder: 1206356

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *21-Jun-12*

Client: ALS Environmental
Project: 1206374
Work Order: 1206356
Sample ID: 1206374-01B
Lab ID: 1206356-01
Collection Date: 6/8/2012 02:59 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **NZ**
Cyanide, Reactive	ND		40.0	mg/Kg	1	6/19/2012 09:30 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **NZ**
Sulfide, Reactive	ND		40.0	mg/Kg	1	6/19/2012 09:30 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1206356
Project: 1206374

Date: 21-Jun-12

QC BATCH REPORT

Batch ID: **R106205** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK	Sample ID: **MB-R106205-R106205**				Units: **mg/Kg**			Analysis Date: **6/19/2012 09:30 AM**			
Client ID:		Run ID: **WETCHEM_120619F**			SeqNo: **2004443**		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: 1206356-01A

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

Client: ALS Environmental
Work Order: 1206356
Project: 1206374

QC BATCH REPORT

Batch ID: **R106206** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **MB-R106206-R106206** Units: **mg/Kg** Analysis Date: **6/19/2012 09:30 AM**
Client ID: Run ID: **WETCHEM_120619G** SeqNo: **2004459** 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: **LCS-R106206-R106206** Units: **mg/Kg** Analysis Date: **6/19/2012 09:30 AM**
Client ID: Run ID: **WETCHEM_120619G** SeqNo: **2004460** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	205.5	40	250	0	82.2	75-125		0		

MS Sample ID: **1206353-01A MS** Units: **mg/Kg** Analysis Date: **6/19/2012 09:30 AM**
Client ID: Run ID: **WETCHEM_120619G** SeqNo: **2004471** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	222	40	250	0	88.8	50-150		0		

MSD Sample ID: **1206353-01A MSD** Units: **mg/Kg** Analysis Date: **6/19/2012 09:30 AM**
Client ID: Run ID: **WETCHEM_120619G** SeqNo: **2004472** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	222	40	250	0	88.8	50-150	222	0	35	

The following samples were analyzed in this batch: 1206356-01A

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

1206356

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

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

Salesperson: Mala H. Belmonte

CHAIN-OF-CUSTODY RECORD

Date: 11-Jun-12
COC ID: 12041
Due Date 21-Jun-12

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1206374	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	Patricia L. Lynch	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	pat.lynch@alsglobal.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1206374-01B (West Rack Soil)	Soil	8/Jun/2012 14:59	(1) 2OZGNEAT	X	X								

25 of 27

Comments:

Please anaylsis for Reactive Sulfide and Reactive Cyanide. Please email results to pat.lynch@alsglobal.com and CC yvan.ty@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
			6/12/12 1000		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

3.4°c

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **12-Jun-12 10:00**

Work Order: **1206356** Received by: **DS**

Checklist completed by G bq#W kdz 12-Jun-12 Reviewed by: E bd#F dlh 12-Jun-12
eSignature Date eSignature Date

Matrices: Soil
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):	3.4 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

RT 829 1 B
FZ 822
3885
06.12

TO JEFF GLASER
ALS ENVIRONMENTAL
3352 128TH AVE.

HOLLAND MI 49424
(281) 530-5666
REF: SUB SAMPLES (RN)

FedEx

TUE - 12 J
PRIORITY OVERNIGH

TRK# 0201 4340 2170 3885

NA GRRA

4942
MI-US G

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

CUSTODY SEAL
Date:
Name:
Company:
Time:
Seal Broken By:

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

CUSTODY SEAL
Time:
Date:
Seal Broken By:

Chavez, Carl J, EMNRD

From: Strange, Aaron <Aaron.Strange@hollyfrontier.com>
Sent: Friday, July 20, 2012 8:17 AM
To: Schultz, Michele
Cc: Chavez, Carl J, EMNRD
Subject: FW: Requests for waste approvals
Attachments: Sandblast Coke and T-418 Sludge.pdf; H-1.pdf; Blank Certificate of Waste Status.xls; Blank C-138.doc

Micki,

Attached are two old profiles that were submitted, and a blank C-138 and a blank Certificate of Waste Status form. As in the email below, these will need to be sent to Kim Flowers (kflowers@r360es.com) and to Carl Chavez (CarlJ.Chavez@state.nm.us).

Thanks,
Aaron

Aaron Strange
Environmental Technician, Senior
Off: (575) 746-5468
Cell: (575) 703-5057

From: Strange, Aaron
Sent: Thursday, August 04, 2011 4:22 PM
To: 'Kim Flowers'; 'Chavez, Carl J, EMNRD'
Subject: Requests for waste approvals

Kim,

Please see the attached requests for waste approvals. There are a total of six requests. Three of them are on the same attachment because they share the same analytical report.

Thank you,
Aaron

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged, proprietary and/or confidential. If you
received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Sand blasting Media

ESTIMATED VOLUME: 50 yds

GENERATING PROCESS: Sand blasting Medid from the bone yard

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 8-4-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Bone yard sandblasting media

Estimated Volume 50 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Coke & Oily dirt

ESTIMATED VOLUME: 50 yds

GENERATING PROCESS: Coke & Oily dirt from the bone yard

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 8-4-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Coke and Oily Dirt form the bone yard.

Estimated Volume 50 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: T-418 Sludge

ESTIMATED VOLUME: 50 yds

GENERATING PROCESS: Sludge from the cleanout of Tank T-418 (raw kerosene tank).

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 8-4-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Navajo Refining Co.

2. Originating Site:
Artesia Plant

3. Location of Material (Street Address, City, State or ULSTR):
501 E Main Artesia NM

4. Source and Description of Waste:
Tank T-418 Sludge from the cleanout of T-418 (raw kerosene tank).

Estimated Volume 50 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

26-Jul-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Diposal

Work Order: **1107426**

Dear Aaron,

ALS Environmental received 3 samples on 14-Jul-2011 09:20 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 30.

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

Sincerely,

Chris Bryson

Electronically approved by: Makenzie L. Henderson

Chris Bryson
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 26-Jul-11

Client: Navajo Refining Company
Project: Diposal
Work Order: 1107426

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1107426-01	Sandblast Sand	Solid		7/13/2011 14:05	7/14/2011 09:20	☐
1107426-02	Coke & Oily Dirt	Solid		7/13/2011 14:12	7/14/2011 09:20	☐
1107426-03	TK-418 Sludge	Solid		7/13/2011 14:27	7/14/2011 09:20	☐

ALS Environmental *Date: 26-Jul-11*

Client:	Navajo Refining Company
Project:	Diposal
Work Order:	1107426

Case Narrative

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *26-Jul-11*

Client: Navajo Refining Company
Project: Diposal
Sample ID: Sandblast Sand
Collection Date: 7/13/2011 02:05 PM

Work Order: 1107426
Lab ID: 1107426-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **7/20/2011**	Analyst: **JCJ**
Mercury	ND		*0.000200*	mg/L	1	7/20/2011 03:08 PM
TCLP METALS			**SW1311/6020**		Prep Date: **7/20/2011**	Analyst: **SKS**
Arsenic	**0.0858**		**0.0500**	**mg/L**	10	7/20/2011 04:09 PM
Barium	**0.165**		**0.0500**	**mg/L**	10	7/20/2011 04:09 PM
Cadmium	ND		0.0200	mg/L	10	7/20/2011 04:09 PM
Chromium	**0.498**		**0.0500**	**mg/L**	10	7/20/2011 04:09 PM
Lead	ND		0.0500	mg/L	10	7/20/2011 04:09 PM
Selenium	**0.142**		**0.0500**	**mg/L**	10	7/20/2011 04:09 PM
Silver	ND		0.0500	mg/L	10	7/20/2011 04:09 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **7/20/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
Cresols, Total	ND		0.015	mg/L	1	7/20/2011 08:36 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
Hexachloroethane	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
Nitrobenzene	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
Pentachlorophenol	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
Pyridine	ND		0.0050	mg/L	1	7/20/2011 08:36 PM
Surr: 2,4,6-Tribromophenol	*67.8*		*42-124*	*%REC*	1	7/20/2011 08:36 PM
Surr: 2-Fluorobiphenyl	*56.3*		*48-120*	*%REC*	1	7/20/2011 08:36 PM
Surr: 2-Fluorophenol	*45.5*		*20-120*	*%REC*	1	7/20/2011 08:36 PM
Surr: 4-Terphenyl-d14	*66.2*		*51-135*	*%REC*	1	7/20/2011 08:36 PM
Surr: Nitrobenzene-d5	*54.0*		*41-120*	*%REC*	1	7/20/2011 08:36 PM
Surr: Phenol-d6	*48.6*		*20-120*	*%REC*	1	7/20/2011 08:36 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **7/20/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	7/21/2011 09:02 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	7/21/2011 09:02 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	7/21/2011 09:02 PM
2-Butanone	ND		0.20	mg/L	20	7/21/2011 09:02 PM
Benzene	ND		0.10	mg/L	20	7/21/2011 09:02 PM
Carbon tetrachloride	ND		0.10	mg/L	20	7/21/2011 09:02 PM
Chlorobenzene	ND		0.10	mg/L	20	7/21/2011 09:02 PM
Chloroform	ND		0.10	mg/L	20	7/21/2011 09:02 PM
Tetrachloroethene	ND		0.10	mg/L	20	7/21/2011 09:02 PM
Trichloroethene	ND		0.10	mg/L	20	7/21/2011 09:02 PM

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

ALS Environmental

Date: *26-Jul-11*

Client: Navajo Refining Company
Project: Diposal
Sample ID: Sandblast Sand
Collection Date: 7/13/2011 02:05 PM

Work Order: 1107426
Lab ID: 1107426-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	7/21/2011 09:02 PM
Surr: 1,2-Dichloroethane-d4	*91.8*		*70-125*	*%REC*	20	7/21/2011 09:02 PM
Surr: 4-Bromofluorobenzene	*99.4*		*72-125*	*%REC*	20	7/21/2011 09:02 PM
Surr: Dibromofluoromethane	*96.2*		*71-125*	*%REC*	20	7/21/2011 09:02 PM
Surr: Toluene-d8	*98.0*		*75-125*	*%REC*	20	7/21/2011 09:02 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	7/18/2011 02:00 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	7/19/2011 02:00 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	7/26/2011 05:00 PM
PH			**SW9045B**			Analyst: **DM**
pH	**7.40**		**0.100**	**pH Units**	1	7/17/2011 04:15 PM

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

ALS Environmental

Date: *26-Jul-11*

Client: Navajo Refining Company
Project: Diposal
Work Order: 1107426
Sample ID: Coke & Oily Dirt
Lab ID: 1107426-02
Collection Date: 7/13/2011 02:12 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **7/20/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/20/2011 03:10 PM
TCLP METALS			**SW1311/6020**		Prep Date: **7/20/2011**	Analyst: **SKS**
Arsenic	**0.0982**		**0.0500**	**mg/L**	10	7/20/2011 04:12 PM
Barium	**0.158**		**0.0500**	**mg/L**	10	7/20/2011 04:12 PM
Cadmium	ND		0.0200	mg/L	10	7/20/2011 04:12 PM
Chromium	**0.0589**		**0.0500**	**mg/L**	10	7/20/2011 04:12 PM
Lead	ND		0.0500	mg/L	10	7/20/2011 04:12 PM
Selenium	ND		0.0500	mg/L	10	7/20/2011 04:12 PM
Silver	ND		0.0500	mg/L	10	7/20/2011 04:12 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **7/20/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.025	mg/L	5	7/20/2011 08:59 PM
2,4,6-Trichlorophenol	ND		0.025	mg/L	5	7/20/2011 08:59 PM
2,4-Dinitrotoluene	ND		0.025	mg/L	5	7/20/2011 08:59 PM
Cresols, Total	ND		0.075	mg/L	5	7/20/2011 08:59 PM
Hexachlorobenzene	ND		0.025	mg/L	5	7/20/2011 08:59 PM
Hexachlorobutadiene	ND		0.025	mg/L	5	7/20/2011 08:59 PM
Hexachloroethane	ND		0.025	mg/L	5	7/20/2011 08:59 PM
Nitrobenzene	ND		0.025	mg/L	5	7/20/2011 08:59 PM
Pentachlorophenol	ND		0.025	mg/L	5	7/20/2011 08:59 PM
Pyridine	ND		0.025	mg/L	5	7/20/2011 08:59 PM
Surr: 2,4,6-Tribromophenol	*67.4*		*42-124*	*%REC*	5	7/20/2011 08:59 PM
Surr: 2-Fluorobiphenyl	*74.6*		*48-120*	*%REC*	5	7/20/2011 08:59 PM
Surr: 2-Fluorophenol	*51.1*		*20-120*	*%REC*	5	7/20/2011 08:59 PM
Surr: 4-Terphenyl-d14	*66.4*		*51-135*	*%REC*	5	7/20/2011 08:59 PM
Surr: Nitrobenzene-d5	*58.7*		*41-120*	*%REC*	5	7/20/2011 08:59 PM
Surr: Phenol-d6	*48.6*		*20-120*	*%REC*	5	7/20/2011 08:59 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **7/20/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	7/21/2011 09:28 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	7/21/2011 09:28 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	7/21/2011 09:28 PM
2-Butanone	ND		0.20	mg/L	20	7/21/2011 09:28 PM
Benzene	ND		0.10	mg/L	20	7/21/2011 09:28 PM
Carbon tetrachloride	ND		0.10	mg/L	20	7/21/2011 09:28 PM
Chlorobenzene	ND		0.10	mg/L	20	7/21/2011 09:28 PM
Chloroform	ND		0.10	mg/L	20	7/21/2011 09:28 PM
Tetrachloroethene	ND		0.10	mg/L	20	7/21/2011 09:28 PM
Trichloroethene	ND		0.10	mg/L	20	7/21/2011 09:28 PM

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

ALS Environmental

Date: *26-Jul-11*

Client: Navajo Refining Company
Project: Diposal
Work Order: 1107426
Sample ID: Coke & Oily Dirt
Lab ID: 1107426-02
Collection Date: 7/13/2011 02:12 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	7/21/2011 09:28 PM
Surr: 1,2-Dichloroethane-d4	*90.2*		*70-125*	*%REC*	20	7/21/2011 09:28 PM
Surr: 4-Bromofluorobenzene	*98.2*		*72-125*	*%REC*	20	7/21/2011 09:28 PM
Surr: Dibromofluoromethane	*94.4*		*71-125*	*%REC*	20	7/21/2011 09:28 PM
Surr: Toluene-d8	*95.9*		*75-125*	*%REC*	20	7/21/2011 09:28 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	7/18/2011 02:00 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	7/19/2011 02:00 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	7/26/2011 05:00 PM
PH			**SW9045B**			Analyst: **DM**
pH	**9.39**		**0.100**	**pH Units**	1	7/17/2011 04:15 PM

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

ALS Environmental

Date: *26-Jul-11*

Client: Navajo Refining Company
Project: Diposal
Work Order: 1107426
Sample ID: TK-418 Sludge
Lab ID: 1107426-03
Collection Date: 7/13/2011 02:27 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **7/20/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/20/2011 03:12 PM
TCLP METALS			**SW1311/6020**		Prep Date: **7/20/2011**	Analyst: **SKS**
Arsenic	**0.208**		**0.0500**	**mg/L**	10	7/20/2011 04:14 PM
Barium	**0.191**		**0.0500**	**mg/L**	10	7/20/2011 04:14 PM
Cadmium	ND		0.0200	mg/L	10	7/20/2011 04:14 PM
Chromium	ND		0.0500	mg/L	10	7/20/2011 04:14 PM
Lead	ND		0.0500	mg/L	10	7/20/2011 04:14 PM
Selenium	ND		0.0500	mg/L	10	7/20/2011 04:14 PM
Silver	ND		0.0500	mg/L	10	7/20/2011 04:14 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **7/20/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
Cresols, Total	**0.066**		**0.015**	**mg/L**	1	7/20/2011 09:22 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
Hexachloroethane	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
Nitrobenzene	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
Pentachlorophenol	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
Pyridine	ND		0.0050	mg/L	1	7/20/2011 09:22 PM
Surr: 2,4,6-Tribromophenol	*86.2*		*42-124*	*%REC*	1	7/20/2011 09:22 PM
Surr: 2-Fluorobiphenyl	*71.6*		*48-120*	*%REC*	1	7/20/2011 09:22 PM
Surr: 2-Fluorophenol	*47.9*		*20-120*	*%REC*	1	7/20/2011 09:22 PM
Surr: 4-Terphenyl-d14	*62.8*		*51-135*	*%REC*	1	7/20/2011 09:22 PM
Surr: Nitrobenzene-d5	*61.6*		*41-120*	*%REC*	1	7/20/2011 09:22 PM
Surr: Phenol-d6	*53.6*		*20-120*	*%REC*	1	7/20/2011 09:22 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **7/20/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	7/21/2011 09:53 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	7/21/2011 09:53 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	7/21/2011 09:53 PM
2-Butanone	ND		0.20	mg/L	20	7/21/2011 09:53 PM
Benzene	**0.25**		**0.10**	**mg/L**	20	7/21/2011 09:53 PM
Carbon tetrachloride	ND		0.10	mg/L	20	7/21/2011 09:53 PM
Chlorobenzene	ND		0.10	mg/L	20	7/21/2011 09:53 PM
Chloroform	ND		0.10	mg/L	20	7/21/2011 09:53 PM
Tetrachloroethene	ND		0.10	mg/L	20	7/21/2011 09:53 PM
Trichloroethene	ND		0.10	mg/L	20	7/21/2011 09:53 PM

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

Client: Navajo Refining Company
Project: Diposal **Work Order:** 1107426
Sample ID: TK-418 Sludge **Lab ID:** 1107426-03
Collection Date: 7/13/2011 02:27 PM **Matrix:** SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	7/21/2011 09:53 PM
Surr: 1,2-Dichloroethane-d4	*91.8*		*70-125*	*%REC*	20	7/21/2011 09:53 PM
Surr: 4-Bromofluorobenzene	*99.2*		*72-125*	*%REC*	20	7/21/2011 09:53 PM
Surr: Dibromofluoromethane	*96.0*		*71-125*	*%REC*	20	7/21/2011 09:53 PM
Surr: Toluene-d8	*98.3*		*75-125*	*%REC*	20	7/21/2011 09:53 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	7/18/2011 02:00 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	7/19/2011 02:00 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	7/26/2011 05:00 PM
PH			**SW9045B**			Analyst: **DM**
pH	**5.51**		**0.100**	**pH Units**	1	7/17/2011 04:15 PM

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

ALS Environmental

Date: 26-Jul-11

Client: Navajo Refining Company

Work Order: 1107426

Project: Diposal

QC BATCH REPORT

Batch ID: **54059** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-072011-54059** Units: **mg/L** Analysis Date: **7/20/2011 02:22 PM**

Client ID: Run ID: **MERCURY_110720A** SeqNo: **2465482** Prep Date: **7/20/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-071911-54059** Units: **mg/L** Analysis Date: **7/20/2011 02:50 PM**

Client ID: Run ID: **MERCURY_110720A** SeqNo: **2465490** Prep Date: **7/20/2011** DF: **1**

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

LCS Sample ID: **GLCSW1-072011-54059** Units: **mg/L** Analysis Date: **7/20/2011 02:24 PM**

Client ID: Run ID: **MERCURY_110720A** SeqNo: **2465483** Prep Date: **7/20/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00496	0.00020	0.005	0	99.2	80-120	0			

MS Sample ID: **1107542-01AMS** Units: **mg/L** Analysis Date: **7/20/2011 02:38 PM**

Client ID: Run ID: **MERCURY_110720A** SeqNo: **2465486** Prep Date: **7/20/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00513	0.00020	0.005	-0.000015	103	75-125	0			

MSD Sample ID: **1107542-01AMSD** Units: **mg/L** Analysis Date: **7/20/2011 02:40 PM**

Client ID: Run ID: **MERCURY_110720A** SeqNo: **2465487** Prep Date: **7/20/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00523	0.00020	0.005	-0.000015	105	75-125	0.00513	1.93	20	

DUP Sample ID: **1107542-01ADUP** Units: **mg/L** Analysis Date: **7/20/2011 02:34 PM**

Client ID: Run ID: **MERCURY_110720A** SeqNo: **2465485** Prep Date: **7/20/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000015	0	20	

The following samples were analyzed in this batch: 1107426-01A 1107426-02A 1107426-03A

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **54067** Instrument ID **ICPMS05** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-071911-54067** Units: **mg/L** Analysis Date: **7/20/2011 03:32 PM**
Client ID: Run ID: **ICPMS05_110720A** SeqNo: **2465712** Prep Date: **7/20/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW3-072011-54067** Units: **mg/L** Analysis Date: **7/20/2011 03:35 PM**
Client ID: Run ID: **ICPMS05_110720A** SeqNo: **2465713** Prep Date: **7/20/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW3-072011-54067** Units: **mg/L** Analysis Date: **7/20/2011 03:37 PM**
Client ID: Run ID: **ICPMS05_110720A** SeqNo: **2465714** Prep Date: **7/20/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4714	0.050	0.5	0	94.3	80-120	0			
Barium	0.468	0.050	0.5	0	93.6	80-120	0			
Cadmium	0.4887	0.020	0.5	0	97.7	80-120	0			
Chromium	0.4824	0.050	0.5	0	96.5	80-120	0			
Lead	0.4817	0.050	0.5	0	96.3	80-120	0			
Selenium	0.4944	0.050	0.5	0	98.9	80-120	0			
Silver	0.4631	0.050	0.5	0	92.6	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **54067** Instrument ID **ICPMS05** Method: **SW1311/6020**

MS Sample ID: **1107449-10AMS** Units: **mg/L** Analysis Date: **7/20/2011 03:52 PM**
Client ID: Run ID: **ICPMS05_110720A** SeqNo: **2465723** Prep Date: **7/20/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5517	0.050	0.5	0.001107	110	75-125	0			
Barium	0.7676	0.050	0.5	0.2421	105	75-125	0			
Cadmium	0.5456	0.020	0.5	0.000364	109	75-125	0			
Chromium	0.5614	0.050	0.5	0.008646	111	75-125	0			
Lead	0.5487	0.050	0.5	0.009051	108	75-125	0			
Selenium	0.5564	0.050	0.5	0.01207	109	75-125	0			
Silver	0.5048	0.050	0.5	0	101	75-125	0			

MSD Sample ID: **1107449-10AMSD** Units: **mg/L** Analysis Date: **7/20/2011 03:59 PM**
Client ID: Run ID: **ICPMS05_110720A** SeqNo: **2465726** Prep Date: **7/20/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5125	0.050	0.5	0.001107	102	75-125	0.5517	7.36	25	
Barium	0.711	0.050	0.5	0.2421	93.8	75-125	0.7676	7.66	25	
Cadmium	0.5057	0.020	0.5	0.000364	101	75-125	0.5456	7.6	25	
Chromium	0.5147	0.050	0.5	0.008646	101	75-125	0.5614	8.68	25	
Lead	0.5038	0.050	0.5	0.009051	98.9	75-125	0.5487	8.54	25	
Selenium	0.5266	0.050	0.5	0.01207	103	75-125	0.5564	5.52	25	
Silver	0.462	0.050	0.5	0	92.4	75-125	0.5048	8.86	25	

DUP Sample ID: **1107449-10ADUP** Units: **mg/L** Analysis Date: **7/20/2011 03:50 PM**
Client ID: Run ID: **ICPMS05_110720A** SeqNo: **2465722** Prep Date: **7/20/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.001107	0	25	
Barium	0.2401	0.050	0	0	0	0-0	0.2421	0.81	25	
Cadmium	ND	0.020	0	0	0	0-0	0.000364	0	25	
Chromium	ND	0.050	0	0	0	0-0	0.008646	0	25	
Lead	0.008201	0.050	0	0	0	0-0	0.009051	0	25	J
Selenium	ND	0.050	0	0	0	0-0	0.01207	0	25	
Silver	ND	0.050	0	0	0	0-0	0	0	25	

The following samples were analyzed in this batch: 1107426-01A 1107426-02A 1107426-03A

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **54068** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110720-54068** Units: **µg/L** Analysis Date: **7/20/2011 04:45 PM**

Client ID: Run ID: **SV-3_110720A** SeqNo: **2466082** Prep Date: **7/20/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*77.28*	5.0	*100*	0	*77.3*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*73.48*	5.0	*100*	0	*73.5*	*48-120*	0			
Surr: 2-Fluorophenol	*61.68*	5.0	*100*	0	*61.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*67.68*	5.0	*100*	0	*67.7*	*51-135*	0			
Surr: Nitrobenzene-d5	*75.81*	5.0	*100*	0	*75.8*	*41-120*	0			
Surr: Phenol-d6	*61.31*	5.0	*100*	0	*61.3*	*20-120*	0			

LCS Sample ID: **SLCST1-110720-54068** Units: **µg/L** Analysis Date: **7/20/2011 05:08 PM**

Client ID: Run ID: **SV-3_110720A** SeqNo: **2466084** Prep Date: **7/20/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	82.01	5.0	100	0	82	52-115	0			
2,4,6-Trichlorophenol	83.8	5.0	100	0	83.8	53-115	0			
2,4-Dinitrotoluene	44.96	5.0	50	0	89.9	56-115	0			
Cresols, Total	187.9	15	250	0	75.2	35-115	0			
Hexachlorobenzene	46.18	5.0	50	0	92.4	54-115	0			
Hexachlorobutadiene	46.84	5.0	50	0	93.7	51-115	0			
Hexachloroethane	38.6	5.0	50	0	77.2	54-115	0			
Nitrobenzene	44.26	5.0	50	0	88.5	40-124	0			
Pentachlorophenol	77.69	5.0	100	0	77.7	45-125	0			
Pyridine	30.77	5.0	50	0	61.5	34-115	0			
Surr: 2,4,6-Tribromophenol	*76.3*	5.0	*100*	0	*76.3*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*78.53*	5.0	*100*	0	*78.5*	*48-120*	0			
Surr: 2-Fluorophenol	*77.63*	5.0	*100*	0	*77.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*71.02*	5.0	*100*	0	*71*	*51-135*	0			
Surr: Nitrobenzene-d5	*77.2*	5.0	*100*	0	*77.2*	*41-120*	0			
Surr: Phenol-d6	*68.74*	5.0	*100*	0	*68.7*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **54068** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110720-54068** Units: **µg/L** Analysis Date: **7/20/2011 05:31 PM**

Client ID: Run ID: **SV-3_110720A** SeqNo: **2466086** Prep Date: **7/20/2011** DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	80.05	5.0	100	0	80.1	52-115	82.01	2.42	25	
2,4,6-Trichlorophenol	79.63	5.0	100	0	79.6	53-115	83.8	5.11	25	
2,4-Dinitrotoluene	44.13	5.0	50	0	88.3	56-115	44.96	1.86	25	
Cresols, Total	175	15	250	0	70	35-115	187.9	7.08	25	
Hexachlorobenzene	44.95	5.0	50	0	89.9	54-115	46.18	2.71	25	
Hexachlorobutadiene	44.32	5.0	50	0	88.6	51-115	46.84	5.53	25	
Hexachloroethane	37.96	5.0	50	0	75.9	54-115	38.6	1.67	25	
Nitrobenzene	42.01	5.0	50	0	84	40-124	44.26	5.2	25	
Pentachlorophenol	74.89	5.0	100	0	74.9	45-125	77.69	3.66	25	
Pyridine	30.65	5.0	50	0	61.3	34-115	30.77	0.393	25	
Surr: 2,4,6-Tribromophenol	*72.14*	5.0	*100*	0	*72.1*	*42-124*	76.3	*5.61*	*25*	
Surr: 2-Fluorobiphenyl	*75.41*	5.0	*100*	0	*75.4*	*48-120*	78.53	*4.04*	*25*	
Surr: 2-Fluorophenol	*72.96*	5.0	*100*	0	*73*	*20-120*	77.63	*6.21*	*25*	
Surr: 4-Terphenyl-d14	*68.12*	5.0	*100*	0	*68.1*	*51-135*	71.02	*4.17*	*25*	
Surr: Nitrobenzene-d5	*73.52*	5.0	*100*	0	*73.5*	*41-120*	77.2	*4.88*	*25*	
Surr: Phenol-d6	*65.17*	5.0	*100*	0	*65.2*	*20-120*	68.74	*5.33*	*25*	

The following samples were analyzed in this batch: 1107426-01A 1107426-02A 1107426-03A

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **R113364** Instrument ID **VOA7** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-072111-R113364** Units: µg/L Analysis Date: **7/21/2011 01:47 PM**

Client ID: Run ID: **VOA7_110721A** SeqNo: **2466924** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*45.15*	5.0	*50*	0	*90.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.13*	5.0	*50*	0	*98.3*	*72.4-125*	0			
Surr: Dibromofluoromethane	*47.29*	5.0	*50*	0	*94.6*	*71.2-125*	0			
Surr: Toluene-d8	*48.52*	5.0	*50*	0	*97*	*75-125*	0			

MBLK Sample ID: **MBLKV1-072011-R113364** Units: µg/L Analysis Date: **7/21/2011 02:38 PM**

Client ID: Run ID: **VOA7_110721A** SeqNo: **2466925** Prep Date: **7/21/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*915.4*	100	*1000*	0	*91.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*996.1*	100	*1000*	0	*99.6*	*72.4-125*	0			
Surr: Dibromofluoromethane	*938.1*	100	*1000*	0	*93.8*	*71.2-125*	0			
Surr: Toluene-d8	*972.5*	100	*1000*	0	*97.2*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **R113364** Instrument ID **VOA7** Method: **SW1311/8260B**

MBLK Sample ID: **MBLKV1-071911-R113364** Units: **µg/L** Analysis Date: **7/21/2011 06:54 PM**
Client ID: Run ID: **VOA7_110721A** SeqNo: **2468474** Prep Date: **7/20/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*909.4*	100	*1000*	0	*90.9*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*975.8*	100	*1000*	0	*97.6*	*72.4-125*	0			
Surr: Dibromofluoromethane	*966.6*	100	*1000*	0	*96.7*	*71.2-125*	0			
Surr: Toluene-d8	*981*	100	*1000*	0	*98.1*	*75-125*	0			

LCS Sample ID: **VLCSW-072111-R113364** Units: **µg/L** Analysis Date: **7/21/2011 12:56 PM**
Client ID: Run ID: **VOA7_110721A** SeqNo: **2466923** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	48.92	5.0	50	0	97.8	73-124	0			
1,2-Dichloroethane	48.4	5.0	50	0	96.8	76-120	0			
1,4-Dichlorobenzene	45.57	5.0	50	0	91.1	70-130	0			
2-Butanone	87.49	10	100	0	87.5	70-130	0			
Benzene	47.79	5.0	50	0	95.6	70-128	0			
Carbon tetrachloride	46.89	5.0	50	0	93.8	70-130	0			
Chlorobenzene	47.64	5.0	50	0	95.3	72-127	0			
Chloroform	43.97	5.0	50	0	87.9	70-130	0			
Tetrachloroethene	48.49	5.0	50	0	97	70-130	0			
Trichloroethene	48.02	5.0	50	0	96	72-129	0			
Vinyl chloride	48.06	2.0	50	0	96.1	70-130	0			
Surr: 1,2-Dichloroethane-d4	*45.26*	5.0	*50*	0	*90.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.34*	5.0	*50*	0	*98.7*	*72-125*	0			
Surr: Dibromofluoromethane	*48.17*	5.0	*50*	0	*96.3*	*71-125*	0			
Surr: Toluene-d8	*49.19*	5.0	*50*	0	*98.4*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **R113364** Instrument ID **VOA7** Method: **SW1311/8260B**

MS Sample ID: **1107582-01AMS** Units: **µg/L** Analysis Date: **7/21/2011 03:29 PM**

Client ID: Run ID: **VOA7_110721A** SeqNo: **2466927** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	925.5	100	1000	0	92.5	73-124	0			
1,2-Dichloroethane	1086	100	1000	0	109	76-120	0			
1,4-Dichlorobenzene	969.8	100	1000	0	97	70-130	0			
2-Butanone	1990	200	2000	0	99.5	70-130	0			
Benzene	1050	100	1000	0	105	70-128	0			
Carbon tetrachloride	882	100	1000	0	88.2	70-130	0			
Chlorobenzene	1035	100	1000	0	103	72-127	0			
Chloroform	1013	100	1000	0	101	70-130	0			
Tetrachloroethene	952.5	100	1000	0	95.2	70-130	0			
Trichloroethene	1025	100	1000	0	103	72-129	0			
Vinyl chloride	916.5	40	1000	0	91.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*898.8*	100	*1000*	0	*89.9*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*994.9*	100	*1000*	0	*99.5*	*72-125*	0			
Surr: Dibromofluoromethane	*943.8*	100	*1000*	0	*94.4*	*71-125*	0			
Surr: Toluene-d8	*985.9*	100	*1000*	0	*98.6*	*75-125*	0			

MSD Sample ID: **1107582-01AMSD** Units: **µg/L** Analysis Date: **7/21/2011 03:54 PM**

Client ID: Run ID: **VOA7_110721A** SeqNo: **2466928** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	915.1	100	1000	0	91.5	73-124	925.5	1.13	20	
1,2-Dichloroethane	1109	100	1000	0	111	76-120	1086	2.06	20	
1,4-Dichlorobenzene	990.2	100	1000	0	99	70-130	969.8	2.08	20	
2-Butanone	2045	200	2000	0	102	70-130	1990	2.72	20	
Benzene	1058	100	1000	0	106	70-128	1050	0.758	20	
Carbon tetrachloride	855.9	100	1000	0	85.6	70-130	882	3.01	20	
Chlorobenzene	1028	100	1000	0	103	72-127	1035	0.678	20	
Chloroform	990.5	100	1000	0	99	70-130	1013	2.22	20	
Tetrachloroethene	906.8	100	1000	0	90.7	70-130	952.5	4.91	20	
Trichloroethene	1014	100	1000	0	101	72-129	1025	1.09	20	
Vinyl chloride	876.8	40	1000	0	87.7	70-130	916.5	4.43	20	
Surr: 1,2-Dichloroethane-d4	*900.8*	100	*1000*	0	*90.1*	*70-125*	898.8	*0.215*	*20*	
Surr: 4-Bromofluorobenzene	*977.7*	100	*1000*	0	*97.8*	*72-125*	994.9	*1.75*	*20*	
Surr: Dibromofluoromethane	*933.8*	100	*1000*	0	*93.4*	*71-125*	943.8	*1.07*	*20*	
Surr: Toluene-d8	*974.9*	100	*1000*	0	*97.5*	*75-125*	985.9	*1.12*	*20*	

The following samples were analyzed in this batch: 1107426-01A 1107426-02A 1107426-03A

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **R113066** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-071711-R113066** Units: **pH Units** Analysis Date: **7/17/2011 04:15 PM**

Client ID: Run ID: **WETCHEM_110717E** SeqNo: **2460631** 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: **1107429-01ADUP** Units: **pH Units** Analysis Date: **7/17/2011 04:15 PM**

Client ID: Run ID: **WETCHEM_110717E** SeqNo: **2460641** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.31	0.10	0	0	0	0-0	7.25	0.824	20	

The following samples were analyzed in this batch: 1107426-01A 1107426-02A 1107426-03A

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

Client: Navajo Refining Company
Work Order: 1107426
Project: Diposal

QC BATCH REPORT

Batch ID: **R113600** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1107429-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **7/26/2011 05:00 PM**

Client ID: Run ID: **WETCHEM_110726H** SeqNo: **2472486** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1107426-01A 1107426-02A 1107426-03A

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

ALS Environmental

Date: 26-Jul-11

Client: Navajo Refining Company
Project: Diposal
WorkOrder: 1107426

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
;urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

1107426

Page 1 of 1

NAVAJO REFINING: Navajo Refining Company

Project: Diposal

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	DISPOSAL	A	TCLP VOLATILES
Work Order		Project Number		B	TCLP SEMI-VOLATILES
Company Name	Navajo Refining Co.	Bill To Company	Navajo Refining Co.	C	TCLP METALS
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	RCI
Address	P.O. Box 159	Address	501 E. MAIN	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SANDBLAST SAND	7/13/11	1405	SOLID	NONE	1	✓	✓	✓	✓							
2	COKE & OILY DIRT	7/13/11	1412	SOLID	NONE	1	✓	✓	✓	✓							
3	TK-418 SLUDGE	7/13/11	1427	SOLID	NONE	1	✓	✓	✓	✓							
4	Trip Blank																
5	Temp Blank																
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: Fed. Ex.

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

Results Due Date:

Relinquished by: Aaron Strange	Date: 7-13-11	Time: 1615	Received by:	Notes:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **14-Jul-11 09:20**

Work Order: **1107426** Received by: **RDH**

Checklist completed by Salvador A. Yanez 14-Jul-11 Reviewed by: Chris Bryan 14-Jul-11
eSignature Date eSignature Date

Matrices: Solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.7c	002	
Cooler(s)/Kit(s):	3253		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip Blank Login w/ work order 1107419.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

1107426

ORIGIN ID: ROWA
NAVAJO ARTESIA
501 E MAIN
ARTESIA , NM 882109440
UNITED STATES US

SHIP DATE: 13JUL11
ACTWGT: 55.0 LB MAN
CAD: 534483/CAFE2472

BILL RECIPIENT

TO

ALS LABORATORY GROUP
10450 STANCLIFF RD., SUITE 210

HOUSTON TX 77099
(281) 530-5656 REF:
INV:
PO: DEPT:

FedEx Express

THU - 14 JUL A2
PRIORITY OVERNIGHT

TRK# 0201 4347 1019 4782

AB SGRA

77099
TX-US
IAH

505C2/F556/DA47

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

Date: 7/13
Name:
Company: N

CUSTODY SEAL

Seal Broken By:

Date: 7/14/11

Time: 1530

Amaya Strange
Navajo Refining Co.

ALS Group USA, Corp

Date: 20-Jul-11

Client: ALS Environmental
Project: 1107426
Work Order: 1107356

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1107356-01	1107426-01B	Solid		7/13/2011 14:05	7/15/2011 09:30	☐
1107356-02	1107426-02B	Solid		7/13/2011 14:12	7/15/2011 09:30	☐
1107356-03	1107426-03B	Solid		7/13/2011 14:27	7/15/2011 09:30	☐

ALS Group USA, Corp

Date: 20-Jul-11

Client: ALS Environmental
Project: 1107426
WorkOrder: **1107356**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *20-Jul-11*

Client: ALS Environmental
Project: 1107426

Work Order: 1107356

Lab ID: 1107356-01A
Client Sample ID: 1107426-01B
Collection Date: 7/13/2011 2:05:00 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			SW7.3.3.2			Analyst: NZ
Cyanide, Reactive	ND		40.0	mg/Kg	1	7/18/2011 02:00 PM
SULFIDE, REACTIVE			SW7.3.4.2			Analyst: NZ
Sulfide, Reactive	ND		40.0	mg/Kg	1	7/19/2011 02:00 PM

Lab ID: 1107356-02A
Client Sample ID: 1107426-02B
Collection Date: 7/13/2011 2:12:00 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			SW7.3.3.2			Analyst: NZ
Cyanide, Reactive	ND		40.0	mg/Kg	1	7/18/2011 02:00 PM
SULFIDE, REACTIVE			SW7.3.4.2			Analyst: NZ
Sulfide, Reactive	ND		40.0	mg/Kg	1	7/19/2011 02:00 PM

Lab ID: 1107356-03A
Client Sample ID: 1107426-03B
Collection Date: 7/13/2011 2:27:00 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			SW7.3.3.2			Analyst: NZ
Cyanide, Reactive	ND		40.0	mg/Kg	1	7/18/2011 02:00 PM
SULFIDE, REACTIVE			SW7.3.4.2			Analyst: NZ
Sulfide, Reactive	ND		40.0	mg/Kg	1	7/19/2011 02:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Jul-11

Client: ALS Environmental

Work Order: 1107356

Project: 1107426

QC BATCH REPORT

Batch ID: **R92349** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-110719-R92349** Units: **mg/Kg** Analysis Date: **7/19/2011 02:00 PM**

Client ID: Run ID: **WETCHEM_110719B** SeqNo: **1679794** 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: 1107356-01A 1107356-02A 1107356-03A

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

Client: ALS Environmental
Work Order: 1107356
Project: 1107426

QC BATCH REPORT

Batch ID: **R92352** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-110718-R92352** Units: **mg/Kg** Analysis Date: **7/18/2011 02:00 PM**
Client ID: Run ID: **WETCHEM_110718I** SeqNo: **1679869** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-110718-R92352** Units: **mg/Kg** Analysis Date: **7/18/2011 02:00 PM**
Client ID: Run ID: **WETCHEM_110718I** SeqNo: **1679870** 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: **WLCSDW1-110718-R92352** Units: **mg/Kg** Analysis Date: **7/18/2011 02:00 PM**
Client ID: Run ID: **WETCHEM_110718I** SeqNo: **1679882** 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: **1107389-03A MS** Units: **mg/Kg** Analysis Date: **7/18/2011 02:00 PM**
Client ID: Run ID: **WETCHEM_110718I** SeqNo: **1679880** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD Sample ID: **1107389-03A MSD** Units: **mg/Kg** Analysis Date: **7/18/2011 02:00 PM**
Client ID: Run ID: **WETCHEM_110718I** SeqNo: **1679881** 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	50-150	249.6	6.06	35	

The following samples were analyzed in this batch: 1107356-01A 1107356-02A 1107356-03A

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

1107356

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 14-Jul-11
COC ID: 10722
Due Date 20-Jul-11

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	10-2121263	Project Name	1107426	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	Chris Bryson	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsglobal.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1107426-01B (Sanblast Sand)	Solid	13/Jul/2011 14:05	(1) 2OZGNEAT	X	X								
1107426-02B (Coke & Oily Dirt)	Solid	13/Jul/2011 14:12	(1) 2OZGNEAT	X	X								
1107426-03B (TK-418 Sludge)	Solid	13/Jul/2011 14:27	(1) 2OZGNEAT	X	X								

Comments:

Please analyze these samples for Reactive Sulfide & Reactive Cyanide CC:glenda.ramos@alsglobal.com & mary.knowles@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
			7/15/11 0930		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

3.2°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **15-Jul-11 09:30**

Work Order: **1107356** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 15-Jul-11 (Date) Reviewed by: Bill Carey (eSignature) 18-Jul-11 (Date)

Matrices: Solid
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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: PSA Adsorbent (PSA Adsorbent H-1)

ESTIMATED VOLUME: 45 yds

GENERATING PROCESS: Unused PSA Adsorbent

REMARKS: This unused material was exposed to the weather & some of it had spilled onto the ground.

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: [signature]
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 8-4-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Unused PSA Adsorbent H-1 (See attached MSDS). Through process knowledge we know that this material is unused. This unused material was exposed to the weather and some of it had spilled onto the ground.

Estimated Volume 45 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☒ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☒ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

uop
A Honeywell Company

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: **PSA Adsorbent H-1**

Product Use: PSA Adsorbent

UOP LLC
25 E. Algonquin Road
Des Plaines, IL 60017-5017
USA
Tel: +1-847-391-3189
Fax: +1-847-391-2953

UOP M.S. S.r.l.
Viale Milanofiori
Strada 1 - Palazzo E1
20090 Assago Mi, Italy
Tel : +39-02-892241
Fax : +39-02-57500145

Emergency Assistance - 24 hour Emergency Telephone Numbers:

Medical (PROSAR) : + 1-800-498-5701 or + 1-651-523-0309
Transportation or other emergencies (CHEMTREC) : + 1-800-424-9300 or + 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview:

Repeated or prolonged exposure may irritate eyes, skin and respiratory system. When first wetted, the product can heat up to the boiling point of water. Flood with water to cool material. Repeated and prolonged inhalation of crystalline silica in the form of quartz from occupational sources may cause cancer.

Form: Pellets
Color: Tan

Potential Health Effects:

Primary Routes of Exposure: Contact with skin and eyes. Exposure may also occur via inhalation or ingestion if product dust is generated.

Eye Contact: Dust and /or product may cause eye discomfort and/or irritation seen as tearing and reddening.

Skin Contact: May cause skin irritation. The product gets hot as it first adsorbs water.

Ingestion: The product gets hot as it first adsorbs water. Burns to moist body tissues can result if contact is prolonged.

Inhalation: Exposure to dust particles generated from this material may cause irritation of the respiratory tract. Repeated and prolonged inhalation of crystalline silica in the form of quartz from occupational sources may cause cancer.

Chronic Effects: Prolonged or repeated inhalation may cause lung injury/cancer.

Carcinogenicity Classification:

International Agency for Research on Cancer (IARC):
Silicon oxide (synthetic) - Unclassifiable as to carcinogenicity in humans (Group 3).
Inhaled crystalline silica in the form of quartz from occupational sources is carcinogenic to humans (Group 1).

U.S. National Toxicology Program (NTP):
Quartz - Known to be a Human Carcinogen.

U.S. Occupational Safety and Health Administration (OSHA):
Quartz - Known Carcinogen.

American Conference of Governmental Industrial Hygienists (ACGIH):
Aluminum oxide - Not Classifiable as a Human Carcinogen (A4).
Quartz - Suspected Human Carcinogen (A2)

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT & CAS NO.	% WEIGHT	ACGIH TLV-TWA	OSHA PEL-TWA	UNITS
Silicon oxide (synthetic) 7631-86-9	< 65	N.E.	15(TD) 5(R)	mg/m^3
Aluminum oxide (non-fibrous) 1344-28-1	< 40	1(R)	15(TD) 5(R)	mg/m^3
Calcium oxide 1305-78-8	< 20	2	5	mg/m^3
Sodium oxide 1313-59-3	< 20	N.E.	N.E.	N.A.
Quartz 14808-60-7	< 1	0.025(R)	TD: $30/(\%SiO_2+2)$ RD: $10/(\%SiO_2+2)$	mg/m^3

Note: The OSHA Permissible Exposure Limits (PEL) are determined from the percentage of quartz from airborne samples.

Abbreviations:

N.A.	- Not Applicable	RD	- Respirable Dust	Fu	- Fume	IS	- Insoluble
N.E.	- None Established	R	- Respirable Fraction	I	- Inhalable	FuD	- Fume and Dust
STEL	- Short Term Exposure Limit	F	- Respirable Fibers	TD	- Total Dust	SC	- Soluble Compounds

4. FIRST AID MEASURES

Eye contact: Flush immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a physician.

Skin contact: Wash off with soap and plenty of water. If skin irritation persists, call a physician.

After inhalation: Remove the victim into fresh air. If symptoms persist, call a physician.

After ingestion: Immediately give large volume of water to drink. If symptoms persist, call a physician.

Notes to physician: This product is a desiccant and generates heat as it adsorbs water. The used product can retain material of a hazardous nature. Identify that material and treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Non-combustible. Use extinguishing media for surrounding fire.

Unsuitable extinguishing media: N.A.

Fire and explosion hazards: The product itself does not burn. The used product can retain material of a hazardous nature. Identify that material and inform the fire fighters.

Special protective equipment: In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

Flash Point: N.A.

6. ACCIDENTAL RELEASE MEASURES

Personal protection: See Section 8.

Environmental precautions: No special environmental precautions required.

Clean-up: Sweep, shovel or vacuum spilled product into appropriate containers (do not use a vacuum if material has contacted a hydrocarbon material). Pick-up and arrange disposal without creating dust. Never use spilled product. Spilled product should be disposed of in accordance with all applicable government regulations.

7. HANDLING AND STORAGE

Handling: Handle and open container with care. Avoid formation of dust particles. Avoid contact with skin and eyes. Provide an electrical ground connection during loading and transfer operations to avoid static discharge in an explosive atmosphere and to prevent persons handling the product from receiving static shocks. A copy of UOP's booklet, "Precautions and Safe Practices for Handling Zeolite Molecular Sieve Adsorbents in Process Units", can be obtained from your UOP representative at no cost.

Storage: Store in original container. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal protection equipment: Handle in accordance with good industrial hygiene and safety practice.

Eye protection: Safety glasses or goggles.

Hand protection: Protective gloves.

Skin and body protection: Work uniform and gloves to prevent prolonged contact.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Air-purifying respirator with NIOSH classification N-100 filter or P-100 (or equivalent) if oil/liquid aerosols are present (42 CFR 84).

9. PHYSICAL AND CHEMICAL PROPERTIES

These data do not represent technical or sales specifications.

Form: Pellets

Color: Tan

Odor: None

pH: 8 - 11 (AS)

Boiling point/range: N.A.

Melting point/range: N.A.

Flash point: N.A.

Autoignition temperature: N.A.

Bulk density: N.D.

Explosion limits: N.A.

Vapor pressure: N.A.

Relative density/Specific Gravity: N.A.

Vapor density: N.A.

Viscosity: N.A.

Water solubility: N.D.

Solubility: N.D.

Abbreviations:

AS	- Aqueous slurry
N.D.	- Not Determined
N.A.	- Not Applicable

10. STABILITY

Stability: Stable.

Hazardous decomposition products: No decomposition if used as directed. Hydrocarbons and other materials that contact the product during normal use can be retained on the product. It is reasonable to expect that decomposition products will come from these retained materials of use.

Conditions/Materials to avoid: Sudden contact with high concentrations of chemicals having high heats of adsorption such as olefins, HCl, etc. When first wetted, the product can heat up to the boiling point of water. Flood with water to cool material.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

LD50/oral/rat: > 32 000 mg/kg *

LD50/dermal/rabbit: > 2 000 mg/kg *

LC50/inhalation/rat: No data available.

Chronic toxicity: Classification of Ingredients

EC Carcinogenic:
Not listed.

Carcinogenicity (ACGIH):
A4 (Aluminum oxide)
A2 (Quartz)

EC Mutagenic:
Not listed.

IARC classification:
Group 3 (Silicon oxide - synthetic)
Group 1 (Quartz)

EC Toxic for Reproduction:
Not listed.

Routes of exposure: Exposure may occur via inhalation, contact with skin and eyes.

Irritation:

Skin (rabbit): Not classified as a skin irritant in animal testing. *

Eye (rabbit): Not classified as an eye irritant in animal testing. *

Additional product information:
* The toxicological data has been taken from products of similar composition.

Additional component information:
No data available.

12. ECOLOGICAL INFORMATION

Mobility:
No data available.

Biodegradation:
No data available.

Bioaccumulation:
No data available.

Aquatic toxicity:
No data available.

Further Information:
No information available.

13. DISPOSAL CONSIDERATIONS

Provisions relating to waste: EPA - Resource Conservation and Recovery Act (RCRA) Hazardous and Solid Waste Management Regulations.

Disposal information: This product (in its fresh unused state) is not listed by generic name or trademark name in the U.S. EPA's RCRA regulations and does not possess any of the four identifying characteristics of hazardous waste (ignitability, corrosivity, reactivity or toxicity). Materials of a hazardous nature that contact the product during normal use may be retained on this product. The user of the product must identify the hazards associated with the retained material in order to assess the waste disposal options.

14. TRANSPORT INFORMATION

UN-No.:	Proper shipping name:	Packing group:
N.A.	Not applicable.	N.A.

Transport Mode	*Class*	*Additional Information*		*Remarks*
U.S. DOT:	Not regulated.	**Reportable Quantity:**	N.A.	N.A.
		Marine Pollutant DOT:	No	
ADR/RID:	Not regulated.	**Danger Code:**	N.A.	N.A.
IMDG:	Not regulated.	**Marine pollutant:**	No	N.A.
		EmS:	N.A.	
IATA:	Not regulated.	**Instr. Passenger:**	N.A.	N.A.
		Instr. Cargo:	N.A.	

15. REGULATORY INFORMATION

United States

Toxic Substances Control Act (TSCA): All the ingredients of this mixture are registered on the TSCA Chemical Substance Inventory.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) Reportable Quantity:
The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):
-- None --

SARA Title III (Superfund Amendments and Reauthorization Act of 1986):
Section 302 (Extremely Hazardous Substances):
The following component(s) of this product is/are subject to the emergency planning provisions of 40 CFR 355 when there are amounts equal to or greater than the Threshold Planning Quantity (TPQ):
-- None --

Section 313 (Toxic Chemicals):
The following component(s) have been specified as Toxic Chemicals under SARA Section 313 and may be subject to the Toxic Release Inventory (TRI) reporting requirements under 40 CFR 372:
-- None --

The following components are listed in U.S. State Regulations:

State Reg Reference:	State Reg Reference:
California - Proposition 65:	Silica, crystalline
Massachusetts Right-To-Know:	Amorphous silica Aluminum oxide Calcium oxide Quartz
New Jersey Right-To-Know:	Silica, amorphous Aluminum oxide Calcium oxide Silica, quartz
Pennsylvania Right-To-Know:	Silica Aluminum oxide Calcium oxide Quartz

Note: Other U.S. State Regulations may exist, check your local sources if available or contact the UOP Product Stewardship Manager (see Section 16).

Canada

Canadian Hazardous Products Act:
This product is classified as a material causing Other Toxic Effects, carcinogenicity - Class D, Division 2, Subdivision A.

The above classification(s) is/are in accordance with the regulations pursuant to the Federal Hazardous Products Act (e.g. WHMIS)

Canadian Environmental Protection Act: All the ingredients of this mixture are notified to CEPA and on the DSL (Domestic Substances List).

European Union (EU)

European Inventory of Existing Commercial Chemical Substances: All components of this product are included in EINECS/ELINCS.

Council of European Communities Directive on Classification, Packaging and Labelling of Dangerous Substances/Preparation (67/548/EEC & 1999/45/EC, as amended):
No Dangerous Goods Label Required.

Additional Governmental Inventories

Australia - Inventory of Chemical Substances (AICS): All the ingredients of this mixture appear on the AICS.

China: All the ingredients of this mixture appear on the China Inventory.

Japan - Existing and New Chemical Substances (ENCS): All the ingredients of this mixture appear on the ENCS.

Korea - Existing and Evaluated Chemical Substances (ECL): All the ingredients of this mixture appear on the ECL.

Philippines - Inventory of Chemicals and Chemical Substances (PICCS): All the ingredients of this mixture appear on the PICCS.

16. OTHER INFORMATION

Summary of changes: Section 3
Supersedes: June 2006
Prepared by: UOP Health, Safety & Environmental Department

HMIS™ - Hazardous Material Identification System:
HMIS™ Ratings: 0-minimal hazard, 1- slight hazard, 2- moderate hazard, 3- serious hazard, 4- severe hazard.

HEALTH :	**1***	**- * may cause cancer**
FLAMMABILITY :	**0**	
REACTIVITY :	**1**	

For additional information concerning this product, contact the following:

For health, safety and environmental information, please contact:

Product Stewardship Manager
UOP LLC
25 E. Algonquin Road
Des Plaines, IL 60017-5017
USA
Tel: +1-847-391-3189
Fax: +1-847-391-2953

Product Safety Steward Europe
UOP N.V.
Noorderlaan 147
B-2030 Antwerpen
Belgium
Tel: +32-3-5409-971
Fax: +32-3-5417-806

For technical or purchasing information, please contact:

Adsorbent Sales
UOP - Molsiv Dept.
13105 Northwest Freeway
Suite 600
Houston, TX 77040
USA
Tel: +1-713-744-2811
Fax: +1-713-744-2808

PRODUCT EMERGENCIES

If you have a product-related emergency, resulting in an incident such as a spill or release of product or human exposure and need assistance from UOP, please contact the following number:

24-Hour EMERGENCY NUMBER (CHEMTREC) : +1-800-424-9300 or +1-703-527-3887;
for MEDICAL EMERGENCY (PROSAR): +1-800-498-5701 or +1-651-523-0309

The data and recommendations presented in this data sheet concerning the use of our product and the materials contained therein are believed to be accurate and are based on information which is considered reliable as of the date hereof. However, the customer should determine the suitability of such materials for his purpose before adopting them on a commercial scale. Since the use of our products by others is beyond our control, no guarantee, express or implied, is made and no responsibility assumed for the use of this material or the results to be obtained therefrom. Information on this form is furnished for the purpose of compliance with Government Health and Safety Regulations and shall not be used for any other purposes. Moreover, the recommendations contained in this data sheet are not to be construed as a license to operate under, or a recommendation to infringe, any existing patents, nor should they be confused with state, municipal or insurance requirements, or with national safety codes.

Chavez, Carl J, EMNRD

From: Combs, Robert <Robert.Combs@hollyfrontier.com>
Sent: Monday, June 04, 2012 3:38 PM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Strange, Aaron; Schultz, Michele
Subject: Request for non-haz waste disposal--T-415 sludge
Attachments: C-138 and Profile Form--T-415 sludge 060412.pdf; 1204707 T-415 Sludge Final.pdf

Kim,
Please see the attached Profile form and C-138 for the sludge generated from tank maintenance activities. The analytical results are also attached (ALS sample ID 1204707-01).
Please let me know by email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	Sludge
ESTIMATED VOLUME:	5 cy
GENERATING PROCESS:	Tank cleanout--gasoline blendstock tank
REMARKS:	see attached ALS report, lab sample ID# 1204707-01
NMOCD FACILITY:	CRI/R360
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 6/4/2012

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Sludge/soil from a tank cleanout.
Please see the attached analytical data from ALS:
Work order: 1204707 Sample ID: 1204707-01

Estimated Volume 5 yds^3 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

07-May-2012

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: T-415 Sludge

Work Order: **1204707**

Dear Aaron,

ALS Environmental received 2 samples on 20-Apr-2012 08:40 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 25.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 07-May-12

Client: Navajo Refining Company
Project: T-415 Sludge
Work Order: **1204707**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1204707-01	T-415 Sludge	Sludge		4/19/2012 12:47	4/20/2012 08:40	☐
1204707-02	Trip Blank	Trip Blank		4/19/2012	4/20/2012 08:40	☐

Client:	Navajo Refining Company
Project:	T-415 Sludge
Work Order:	1204707

Case Narrative

Batch 60519, Semivolatile Organics, Sample T-415 Sludge : MS/MSD recoveries were above the control limits for Total Cresols due to high concentration to the background sample. Results are flagged with an O. The associated LCS recoveries and MS/MSD RPD were within the control limits.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group, Inc. in Holland, MI.

ALS Environmental

Date: *07-May-12*

Client: Navajo Refining Company
Project: T-415 Sludge
Sample ID: T-415 Sludge
Collection Date: 4/19/2012 12:47 PM

Work Order: 1204707
Lab ID: 1204707-01
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **4/26/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	4/26/2012 04:31 PM
TCLP METALS			**SW1311/6020**		Prep Date: **4/25/2012**	Analyst: **SKS**
Arsenic	**0.101**		**0.0500**	**mg/L**	10	4/27/2012 03:33 PM
Barium	ND		0.0500	mg/L	10	4/27/2012 03:33 PM
Cadmium	ND		0.0200	mg/L	10	4/27/2012 03:33 PM
Chromium	ND		0.0500	mg/L	10	4/27/2012 03:33 PM
Lead	ND		0.0500	mg/L	10	4/27/2012 03:33 PM
Selenium	ND		0.0500	mg/L	10	4/27/2012 03:33 PM
Silver	ND		0.0500	mg/L	10	4/27/2012 03:33 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **4/24/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
Cresols, Total	**3.0**		**0.15**	**mg/L**	10	4/25/2012 06:59 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
Hexachloroethane	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
Nitrobenzene	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
Pentachlorophenol	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
Pyridine	ND		0.0050	mg/L	1	4/26/2012 08:36 PM
Surr: 2,4,6-Tribromophenol	*67.2*		*36-126*	*%REC*	1	4/26/2012 08:36 PM
Surr: 2,4,6-Tribromophenol	*80.0*		*36-126*	*%REC*	10	4/25/2012 06:59 PM
Surr: 2-Fluorobiphenyl	*69.6*		*43-125*	*%REC*	1	4/26/2012 08:36 PM
Surr: 2-Fluorobiphenyl	*63.7*		*43-125*	*%REC*	10	4/25/2012 06:59 PM
Surr: 2-Fluorophenol	*52.2*		*37-125*	*%REC*	10	4/25/2012 06:59 PM
Surr: 2-Fluorophenol	*57.5*		*37-125*	*%REC*	1	4/26/2012 08:36 PM
Surr: 4-Terphenyl-d14	*87.7*		*32-125*	*%REC*	1	4/26/2012 08:36 PM
Surr: 4-Terphenyl-d14	*89.9*		*32-125*	*%REC*	10	4/25/2012 06:59 PM
Surr: Nitrobenzene-d5	*63.8*		*37-125*	*%REC*	1	4/26/2012 08:36 PM
Surr: Nitrobenzene-d5	*62.0*		*37-125*	*%REC*	10	4/25/2012 06:59 PM
Surr: Phenol-d6	*73.3*		*40-125*	*%REC*	1	4/26/2012 08:36 PM
Surr: Phenol-d6	*77.6*		*40-125*	*%REC*	10	4/25/2012 06:59 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **4/25/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	4/26/2012 09:15 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	4/26/2012 09:15 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	4/26/2012 09:15 AM
2-Butanone	ND		0.20	mg/L	20	4/26/2012 09:15 AM

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

ALS Environmental

Date: *07-May-12*

Client: Navajo Refining Company
Project: T-415 Sludge
Sample ID: T-415 Sludge
Collection Date: 4/19/2012 12:47 PM

Work Order: 1204707
Lab ID: 1204707-01
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	ND		0.10	mg/L	20	4/26/2012 09:15 AM
Carbon tetrachloride	ND		0.10	mg/L	20	4/26/2012 09:15 AM
Chlorobenzene	ND		0.10	mg/L	20	4/26/2012 09:15 AM
Chloroform	ND		0.10	mg/L	20	4/26/2012 09:15 AM
Tetrachloroethene	ND		0.10	mg/L	20	4/26/2012 09:15 AM
Trichloroethene	ND		0.10	mg/L	20	4/26/2012 09:15 AM
Vinyl chloride	ND		0.10	mg/L	20	4/26/2012 09:15 AM
Surr: 1,2-Dichloroethane-d4	*98.1*		*70-125*	*%REC*	20	4/26/2012 09:15 AM
Surr: 4-Bromofluorobenzene	*95.5*		*72-125*	*%REC*	20	4/26/2012 09:15 AM
Surr: Dibromofluoromethane	*95.3*		*71-125*	*%REC*	20	4/26/2012 09:15 AM
Surr: Toluene-d8	*88.3*		*75-125*	*%REC*	20	4/26/2012 09:15 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	4/30/2012 09:30 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	4/30/2012 09:30 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	4/27/2012 02:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**5.23**		**0.100**	**pH Units**	1	4/27/2012 04:00 PM

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

ALS Environmental

Date: 07-May-12

Client: Navajo Refining Company

Work Order: 1204707

Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **60568** Instrument ID **ICPMS05** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-042412-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:28 AM**

Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759077** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	0.01019	0.050								J
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW4-042512-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:31 AM**

Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759079** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW4-042512-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:38 AM**

Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759082** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5083	0.050	0.5	0	102	80-120	0			
Barium	0.504	0.050	0.5	0	101	80-120	0			
Cadmium	0.5216	0.020	0.5	0	104	80-120	0			
Chromium	0.5144	0.050	0.5	0	103	80-120	0			
Lead	0.5082	0.050	0.5	0	102	80-120	0			
Selenium	0.532	0.050	0.5	0	106	80-120	0			
Silver	0.5158	0.050	0.5	0	103	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1204707
Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **60568** Instrument ID **ICPMS05** Method: **SW1311/6020**

MS Sample ID: **1204754-01AMS** Units: **mg/L** Analysis Date: **4/27/2012 03:43 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761404** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5232	0.050	0.5	0.002025	104	75-125		0		
Barium	0.9576	0.050	0.5	0.4767	96.2	75-125		0		
Cadmium	0.5101	0.020	0.5	0.001277	102	75-125		0		
Chromium	0.5118	0.050	0.5	-0.000097	102	75-125		0		
Lead	0.5249	0.050	0.5	0.01697	102	75-125		0		
Selenium	0.5162	0.050	0.5	0.01757	99.7	75-125		0		
Silver	0.5171	0.050	0.5	0.000096	103	75-125		0		

MSD Sample ID: **1204754-01AMSD** Units: **mg/L** Analysis Date: **4/27/2012 03:45 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761407** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.512	0.050	0.5	0.002025	102	75-125	0.5232	2.15	25	
Barium	0.9799	0.050	0.5	0.4767	101	75-125	0.9576	2.3	25	
Cadmium	0.499	0.020	0.5	0.001277	99.5	75-125	0.5101	2.2	25	
Chromium	0.5041	0.050	0.5	-0.000097	101	75-125	0.5118	1.52	25	
Lead	0.5098	0.050	0.5	0.01697	98.6	75-125	0.5249	2.94	25	
Selenium	0.5193	0.050	0.5	0.01757	100	75-125	0.5162	0.59	25	
Silver	0.4985	0.050	0.5	0.000096	99.7	75-125	0.5171	3.67	25	

DUP Sample ID: **1204754-01ADUP** Units: **mg/L** Analysis Date: **4/27/2012 03:40 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761402** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.002025	0	25	
Barium	0.4956	0.050	0	0	0	0-0	0.4767	3.88	25	
Cadmium	ND	0.020	0	0	0	0-0	0.001277	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.000097	0	25	
Lead	0.01789	0.050	0	0	0	0-0	0.01697	0	25	J
Selenium	0.01678	0.050	0	0	0	0-0	0.01757	0	25	J
Silver	ND	0.050	0	0	0	0-0	0.000096	0	25	

The following samples were analyzed in this batch: 1204707-01A

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

Client: Navajo Refining Company
Work Order: 1204707
Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **60593** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-042612-60593** Units: **mg/L** Analysis Date: **4/26/2012 03:56 PM**
Client ID: Run ID: **MERCURY_120426A** SeqNo: **2759481** Prep Date: **4/26/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-042512-60593** Units: **mg/L** Analysis Date: **4/26/2012 04:00 PM**
Client ID: Run ID: **MERCURY_120426A** SeqNo: **2759483** Prep Date: **4/26/2012** 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: **GLCSW2-042612-60593** Units: **mg/L** Analysis Date: **4/26/2012 03:57 PM**
Client ID: Run ID: **MERCURY_120426A** SeqNo: **2759482** Prep Date: **4/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.00020	0.005	0	102	80-120	0			

MS Sample ID: **1204768-01AMS** Units: **mg/L** Analysis Date: **4/26/2012 04:06 PM**
Client ID: Run ID: **MERCURY_120426A** SeqNo: **2759486** Prep Date: **4/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00517	0.00020	0.005	-0.000017	104	75-125	0			

MSD Sample ID: **1204768-01AMSD** Units: **mg/L** Analysis Date: **4/26/2012 04:08 PM**
Client ID: Run ID: **MERCURY_120426A** SeqNo: **2759487** Prep Date: **4/26/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00506	0.00020	0.005	-0.000017	102	75-125	0.00517	2.15	20	

DUP Sample ID: **1204768-01ADUP** Units: **mg/L** Analysis Date: **4/26/2012 04:04 PM**
Client ID: Run ID: **MERCURY_120426A** SeqNo: **2759485** Prep Date: **4/26/2012** DF: **1**

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

The following samples were analyzed in this batch: 1204707-01A

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

Client: Navajo Refining Company
Work Order: 1204707
Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **60519** Instrument ID **SV-5** Method: **SW8270**

MBLK Sample ID: **SBLKT1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 10:05 AM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2759102** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*74.56*	5.0	*100*	0	*74.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*78.18*	5.0	*100*	0	*78.2*	*48-120*	0			
Surr: 2-Fluorophenol	*69.04*	5.0	*100*	0	*69*	*20-120*	0			
Surr: 4-Terphenyl-d14	*97.4*	5.0	*100*	0	*97.4*	*51-135*	0			
Surr: Nitrobenzene-d5	*80.82*	5.0	*100*	0	*80.8*	*41-120*	0			
Surr: Phenol-d6	*77.92*	5.0	*100*	0	*77.9*	*20-120*	0			

LCS Sample ID: **SLCST1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 10:28 AM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2759103** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	78.85	5.0	100	0	78.9	50-120	0			
2,4,6-Trichlorophenol	82.18	5.0	100	0	82.2	50-120	0			
2,4-Dinitrotoluene	43.24	5.0	50	0	86.5	50-120	0			
Cresols, Total	214.2	5.0	200	0	107	48-115	0			
Hexachlorobenzene	41.33	5.0	50	0	82.7	55-120	0			
Hexachlorobutadiene	37.51	5.0	50	0	75	55-120	0			
Hexachloroethane	42.05	5.0	50	0	84.1	55-120	0			
Nitrobenzene	43.15	5.0	50	0	86.3	55-120	0			
Pentachlorophenol	82.68	5.0	100	0	82.7	55-120	0			
Pyridine	33.6	5.0	50	0	67.2	35-120	0			
Surr: 2,4,6-Tribromophenol	*76.86*	5.0	*100*	0	*76.9*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*84.27*	5.0	*100*	0	*84.3*	*48-120*	0			
Surr: 2-Fluorophenol	*84.21*	5.0	*100*	0	*84.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*98.65*	5.0	*100*	0	*98.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*85.04*	5.0	*100*	0	*85*	*41-120*	0			
Surr: Phenol-d6	*87.59*	5.0	*100*	0	*87.6*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1204707
Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **60519** Instrument ID **SV-5** Method: **SW8270**

LCSD Sample ID: **SLCSDT1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 11:15 AM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2759104** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	79.56	5.0	100	0	79.6	50-120	78.85	0.897	20	
2,4,6-Trichlorophenol	78.82	5.0	100	0	78.8	50-120	82.18	4.17	20	
2,4-Dinitrotoluene	42.62	5.0	50	0	85.2	50-120	43.24	1.46	20	
Hexachlorobenzene	40.12	5.0	50	0	80.2	55-120	41.33	2.97	20	
Hexachlorobutadiene	35.01	5.0	50	0	70	55-120	37.51	6.89	20	
Hexachloroethane	40.29	5.0	50	0	80.6	55-120	42.05	4.29	20	
Nitrobenzene	41.37	5.0	50	0	82.7	55-120	43.15	4.22	20	
Pentachlorophenol	81.4	5.0	100	0	81.4	55-120	82.68	1.56	20	
Pyridine	29.92	5.0	50	0	59.8	35-120	33.6	11.6	20	
Surr: 2,4,6-Tribromophenol	*75.07*	5.0	*100*	0	*75.1*	*42-124*	76.86	*2.36*	*20*	
Surr: 2-Fluorobiphenyl	*78.2*	5.0	*100*	0	*78.2*	*48-120*	84.27	*7.48*	*20*	
Surr: 2-Fluorophenol	*84.82*	5.0	*100*	0	*84.8*	*20-120*	84.21	*0.728*	*20*	
Surr: 4-Terphenyl-d14	*95.39*	5.0	*100*	0	*95.4*	*51-135*	98.65	*3.36*	*20*	
Surr: Nitrobenzene-d5	*79.92*	5.0	*100*	0	*79.9*	*41-120*	85.04	*6.2*	*20*	
Surr: Phenol-d6	*91.67*	5.0	*100*	0	*91.7*	*20-120*	87.59	*4.55*	*20*	

MS Sample ID: **1204707-01AMS** Units: **µg/L** Analysis Date: **4/26/2012 08:59 PM**
Client ID: **T-415 Sludge** Run ID: **SV-5_120425A** SeqNo: **2760570** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	85.81	5.0	100	0	85.8	55-120	0			
2,4,6-Trichlorophenol	83.38	5.0	100	0	83.4	55-120	0			
2,4-Dinitrotoluene	44.87	5.0	50	0	89.7	55-125	0			
Cresols, Total	3042	15	250	2540	201	35-115	0			SEO
Hexachlorobenzene	41.66	5.0	50	0	83.3	55-120	0			
Hexachlorobutadiene	31.01	5.0	50	0	62	55-120	0			
Hexachloroethane	51.04	5.0	50	0	102	55-120	0			
Nitrobenzene	41.22	5.0	50	0	82.4	55-120	0			
Pentachlorophenol	53.51	5.0	100	0	53.5	50-135	0			
Pyridine	20.88	5.0	50	0	41.8	30-120	0			
Surr: 2,4,6-Tribromophenol	*74.65*	5.0	*100*	0	*74.7*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*79.38*	5.0	*100*	0	*79.4*	*43-125*	0			
Surr: 2-Fluorophenol	*77.39*	5.0	*100*	0	*77.4*	*37-125*	0			
Surr: 4-Terphenyl-d14	*93.81*	5.0	*100*	0	*93.8*	*32-125*	0			
Surr: Nitrobenzene-d5	*74.07*	5.0	*100*	0	*74.1*	*37-125*	0			
Surr: Phenol-d6	*85.98*	5.0	*100*	0	*86*	*40-125*	0			

The following samples were analyzed in this batch: 1204707-01A

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

Client: Navajo Refining Company
Work Order: 1204707
Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **R126801** Instrument ID **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-042512-R126801** Units: **µg/L** Analysis Date: **4/25/2012 11:20 PM**
Client ID: Run ID: **VOA1_120425C** SeqNo: **2758793** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*50.03*	5.0	*50*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.69*	5.0	*50*	0	*97.4*	*72.4-125*	0			
Surr: Dibromofluoromethane	*49.44*	5.0	*50*	0	*98.9*	*71.2-125*	0			
Surr: Toluene-d8	*44.58*	5.0	*50*	0	*89.2*	*75-125*	0			

LCS Sample ID: **VLCSW-042512-R126801** Units: **µg/L** Analysis Date: **4/25/2012 10:28 PM**
Client ID: Run ID: **VOA1_120425C** SeqNo: **2758792** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	48.4	5.0	50	0	96.8	73-124	0			
1,2-Dichloroethane	48.61	5.0	50	0	97.2	76-120	0			
1,4-Dichlorobenzene	47.04	5.0	50	0	94.1	70-130	0			
2-Butanone	82.84	10	100	0	82.8	70-130	0			
Benzene	49.85	5.0	50	0	99.7	70-128	0			
Carbon tetrachloride	49.47	5.0	50	0	98.9	70-130	0			
Chlorobenzene	46.59	5.0	50	0	93.2	72-127	0			
Chloroform	47.17	5.0	50	0	94.3	70-130	0			
Tetrachloroethene	45.21	5.0	50	0	90.4	70-130	0			
Trichloroethene	51.26	5.0	50	0	103	72-129	0			
Vinyl chloride	48.68	2.0	50	0	97.4	70-130	0			
Surr: 1,2-Dichloroethane-d4	*48.76*	5.0	*50*	0	*97.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.28*	5.0	*50*	0	*96.6*	*72-125*	0			
Surr: Dibromofluoromethane	*48.05*	5.0	*50*	0	*96.1*	*71-125*	0			
Surr: Toluene-d8	*42.85*	5.0	*50*	0	*85.7*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1204707
Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **R126801** Instrument ID **VOA1** Method: **SW1311/8260B**

MS Sample ID: **1204657-48ZMS** Units: **µg/L** Analysis Date: **4/26/2012 12:12 AM**

Client ID: Run ID: **VOA1_120425C** SeqNo: **2758795** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	439.7	50	500	0	87.9	73-124	0			
1,2-Dichloroethane	495.4	50	500	0	99.1	76-120	0			
1,4-Dichlorobenzene	440.1	50	500	0	88	70-130	0			
2-Butanone	872.7	100	1000	0	87.3	70-130	0			
Benzene	1975	50	500	1621	70.8	70-128	0			
Carbon tetrachloride	419.8	50	500	0	84	70-130	0			
Chlorobenzene	469.2	50	500	0	93.8	72-127	0			
Chloroform	602	50	500	144.1	91.6	70-130	0			
Tetrachloroethene	402.6	50	500	0	80.5	70-130	0			
Trichloroethene	465.2	50	500	0	93	72-129	0			
Vinyl chloride	412.8	20	500	0	82.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*475.9*	50	*500*	0	*95.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*509.3*	50	*500*	0	*102*	*72-125*	0			
Surr: Dibromofluoromethane	*487.1*	50	*500*	0	*97.4*	*71-125*	0			
Surr: Toluene-d8	*471.4*	50	*500*	0	*94.3*	*75-125*	0			

MSD Sample ID: **1204657-48ZMSD** Units: **µg/L** Analysis Date: **4/26/2012 12:38 AM**

Client ID: Run ID: **VOA1_120425C** SeqNo: **2758796** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	384	50	500	0	76.8	73-124	439.7	13.5	20	
1,2-Dichloroethane	503.6	50	500	0	101	76-120	495.4	1.64	20	
1,4-Dichlorobenzene	440.8	50	500	0	88.2	70-130	440.1	0.173	20	
2-Butanone	877.8	100	1000	0	87.8	70-130	872.7	0.592	20	
Benzene	1977	50	500	1621	71.1	70-128	1975	0.0705	20	
Carbon tetrachloride	369.4	50	500	0	73.9	70-130	419.8	12.8	20	
Chlorobenzene	436.1	50	500	0	87.2	72-127	469.2	7.32	20	
Chloroform	599.4	50	500	144.1	91.1	70-130	602	0.431	20	
Tetrachloroethene	385.8	50	500	0	77.2	70-130	402.6	4.28	20	
Trichloroethene	459	50	500	0	91.8	72-129	465.2	1.32	20	
Vinyl chloride	384.7	20	500	0	76.9	70-130	412.8	7.04	20	
Surr: 1,2-Dichloroethane-d4	*487.4*	50	*500*	0	*97.5*	*70-125*	475.9	*2.39*	*20*	
Surr: 4-Bromofluorobenzene	*479.4*	50	*500*	0	*95.9*	*72-125*	509.3	*6.04*	*20*	
Surr: Dibromofluoromethane	*487.5*	50	*500*	0	*97.5*	*71-125*	487.1	*0.0734*	*20*	
Surr: Toluene-d8	*450.2*	50	*500*	0	*90*	*75-125*	471.4	*4.61*	*20*	

The following samples were analyzed in this batch: 1204707-01A

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

Client: Navajo Refining Company
Work Order: 1204707
Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **R126904** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1204768-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **4/27/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120427D** SeqNo: **2761107** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

DUP Sample ID: **1204778-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **4/27/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120427D** SeqNo: **2761108** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1204707-01A

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

Client: Navajo Refining Company
Work Order: 1204707
Project: T-415 Sludge

QC BATCH REPORT

Batch ID: **R126916** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS3-120427-R126916** Units: **pH Units** Analysis Date: **4/27/2012 04:00 PM**

Client ID: Run ID: **WETCHEM_120427H** SeqNo: **2761340** 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: **1204649-02ADUP** Units: **pH Units** Analysis Date: **4/27/2012 04:00 PM**

Client ID: Run ID: **WETCHEM_120427H** SeqNo: **2761339** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.82	0.10	0	0	0	0-0	8.82	0	20	

The following samples were analyzed in this batch: 1204707-01A

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

Client: Navajo Refining Company
Project: T-415 Sludge
WorkOrder: 1204707

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
Burn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **20-Apr-12 08:40**

Work Order: **1204707** Received by: **RDH**

Checklist completed by Sarah M. Giza (eSignature) 20-Apr-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 24-Apr-12 (Date)

Matrices: Water
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.3	002	
Cooler(s)/Kit(s):	4063		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

☑ ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1204707

NAVAJO REFINING: Navajo Refining Company

Project: T-415 Sludge

ALS Project Manager: Chris Bryson

Customer Information		Project Information			
Purchase Order		Project Name	T-415 Sludge	A	TCLP Volitiles
Work Order		Project Number		B	TCLP Semi-Volitiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	R.C.I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	Aaron.Strange@hollyfrontier.com	e-Mail Address	Aaron.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	T- 415 Sludge	4/19/12	12:47	sludge	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign
Aaron Strange

Shipment Method: FedEx

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Aaron Strange	4-19-12	16:15		
Relinquished by:	Date:	Time:	Received by (Laboratory): 4/20/12 1540	Cooler Temp
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

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

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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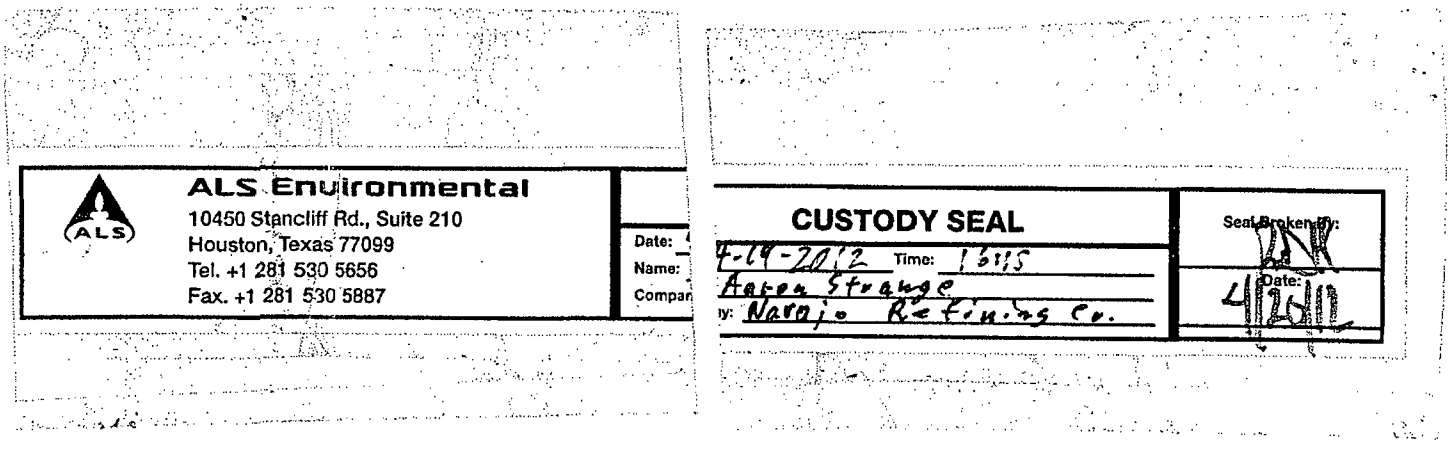
TRK# 0201 4967 8856 4878
43 SGRA
FRI - 20 APR A2
PRIORITY OVERNIGHT
77099
TX-US
IAH
848476 20Apr 00:32 AFWH 512C1/C44D/CF60


ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
Date:
Name:
Compan
CUSTODY SEAL
4-19-2012 Time: 1615
Aaron Strange
Navajo Refining Co.
Seal Broken By:
Date:
4/20/12

ALS Group USA, Corp

Date: 02-May-12

Client: ALS Environmental
Project: 1204707
Work Order: **1204703**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1204703-01	1204707-01B	Sludge		04/19/12 12:47	04/24/12 10:30	☐

Client: ALS Environmental
Project: 1204707
WorkOrder: **1204703**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *02-May-12*

Client: ALS Environmental
Project: 1204707
Work Order: 1204703
Sample ID: 1204707-01B
Lab ID: 1204703-01
Collection Date: 04/19/12 12:47 PM
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **NZ**
Cyanide, Reactive	ND		40	mg/Kg	1	04/30/12 09:30 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **NZ**
Sulfide, Reactive	ND		40	mg/Kg	1	04/30/12 09:30 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1204703
Project: 1204707

Date: 02-May-12

QC BATCH REPORT

Batch ID: **R104182** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **MB-R104182-R104182** Units: **mg/Kg** Analysis Date: **04/30/12 09:30 AM**

Client ID: Run ID: **WETCHEM_120430G** SeqNo: **1962229** 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: 1204703-01A

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

Client: ALS Environmental
Work Order: 1204703
Project: 1204707

QC BATCH REPORT

Batch ID: **R104186** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **MB-R104186-R104186** Units: **mg/Kg** Analysis Date: **04/30/12 09:30 AM**
Client ID: Run ID: **WETCHEM_120430H** SeqNo: **1962280** 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: **LCS-R104186-R104186** Units: **mg/Kg** Analysis Date: **04/30/12 09:30 AM**
Client ID: Run ID: **WETCHEM_120430H** SeqNo: **1962281** 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: **LCSD-R104186** Units: **mg/Kg** Analysis Date: **04/30/12 09:30 AM**
Client ID: Run ID: **WETCHEM_120430H** SeqNo: **1962298** 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	249.6	0	35	

MS Sample ID: **1204673-15C MS** Units: **mg/Kg** Analysis Date: **04/30/12 09:30 AM**
Client ID: Run ID: **WETCHEM_120430H** SeqNo: **1962283** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150		0		

MSD Sample ID: **1204673-15C MSD** Units: **mg/Kg** Analysis Date: **04/30/12 09:30 AM**
Client ID: Run ID: **WETCHEM_120430H** SeqNo: **1962284** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch: 1204703-01A

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

1204703

Subcontractor:		
ALS Laboratory Group		
3352 128th Ave.	TEL:	(616) 399-6070
	FAX:	(616) 399-6185
Holland, MI 49424	Acct #:	

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 23-Apr-12
COC ID: 11754
Due Date: 02-May-12

Salesperson	Mala H. Belmonte

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	10-2123229	Project Name	1204707	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	Patricia L. Lynch	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	pat.lynch@alsglobal.com	eMail CC	Yvan.ty@alsglobal.com	J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1204707-01B (T-415 Sludge)	Sludge	19/Apr/2012 12:47	(1) 4OZGNEAT	X	X								

Comments:

Please analyze for reactive cyanide & reactive sulfide. cc Mary.knowles & Yvan.ty@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	4/23/12				Std
Relinquished by:	Date/Time	Received by:	Date/Time		
			4/24/12 1030		

4.8 c

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **24-Apr-12 10:30**

Work Order: **1204703** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 24-Apr-12 (Date) Reviewed by: Bill Carey (eSignature) 24-Apr-12 (Date)

Matrices: Sludge
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.8 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

Chavez, Carl J, EMNRD

From: Combs, Robert <Robert.Combs@hollyfrontier.com>
Sent: Monday, May 21, 2012 9:47 AM
To: Chavez, Carl J, EMNRD
Subject: FW: Request for disposal
Attachments: image001.png; C-138 and profile form--Cat fines fm former API 051712.pdf; 1204709 Cat Fines from Old API Final.pdf

Carl,
FYI...please see below. I saw that you weren't copied on the approval.
Thanks,
Robert

-----Original Message-----
From: Clayton A. McDonald [mailto:cmcdonald@r360es.com]
Sent: Monday, May 21, 2012 10:31 AM Central Standard Time
To: Combs, Robert
Cc: Kim Flowers
Subject: FW: Request for disposal

Approved

Clayton A. McDonald

Vice President of Operations

Permian Basin Region

R360 Environmental Solutions

4507 W. Carlsbad Hwy, Hobbs, NM 88241

O: 575-393-1079 | F: 575-393-3615 | C: 432.631.2205

Email: cmcdonald@r360es.com

From: Kim Flowers
Sent: Monday, May 21, 2012 8:37 AM
To: Clayton A. McDonald
Subject: FW: Request for disposal

Kim Flowers

O: 575.393.1079 F: 575.393.3615

From: Combs, Robert [mailto:Robert.Combs@hollyfrontier.com]
Sent: Thursday, May 17, 2012 9:15 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Strange, Aaron; Schultz, Michele; Holder, Mike
Subject: Request for disposal

Kim,

Please see the attached Profile form and C-138 for the FCC cat fines removed from an old sump, formerly an API separator. This API separator was removed from service as an API several years ago, and was cleaned at that time. It has since been used to contain run-off FCC scrubber water that has entrained catalyst fines.

The analytical results are also attached (ALS sample ID 1204709-01).

Please let me know by email if this waste is approved for disposal.

Thanks,

Robert

Robert Combs

Environmental Specialist

The HollyFrontier Companies

P.O. Box 159

Artesia, NM 88211-0159

office: 575-746-5382

cell: 575-308-2718

fax: 575-746-5451

Robert.Combs@hollyfrontier.com <mailto:Robert.Combs@hollyfrontier.com>

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CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	wet solid--FCC catalyst fines
ESTIMATED VOLUME:	150 cy
GENERATING PROCESS:	FCC flue gas scrubber. This waste was vacuumed out of a sump formerly used as an API sep. that was decommissioned/cleaned yrs ago.
REMARKS:	see attached ALS report, lab sample ID# 1204709-01
NMOCD FACILITY:	CRI/R360
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 5/17/2012

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
FCC catalyst fines from decommissioned/cleaned API separator.
Please see the attached analytical data from ALS:
Work order: 1204709 Sample ID: 1204709-01

Estimated Volume 150 yd^3 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

08-May-2012

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Cat Fines from Old API Work Order: **1204709**

Dear Aaron,

ALS Environmental received 2 samples on 20-Apr-2012 08:40 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 18.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager

NELAP ACCREDITED TNI LABORATORY

Certificate No: T104704231-09A-TX

Client: Navajo Refining Company
Project: Cat Fines from Old API
Work Order: **1204709**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1204709-01	Cat Fines from Old API in WWT	Sludge		4/19/2012 13:30	4/20/2012 08:40	☐
1204709-02	Trip Blank - 120711-12	Water		4/19/2012	4/20/2012 08:40	☐

Client:	Navajo Refining Company
Project:	Cat Fines from Old API
Work Order:	1204709

Case Narrative

Batch 60519, TCLP Semivolatiles, Sample 1204707-01A: Matrix spike is for an unrelated sample.

The analyses for reactivity were performed at ALS Environmental in Holland, MI.

A trip blank was listed on the chain-of-custody, but no analyses were checked. The trip blank was logged in, but it was not analyzed.

ALS Environmental

Date: *08-May-12*

Client: Navajo Refining Company
Project: Cat Fines from Old API
Work Order: 1204709
Sample ID: Cat Fines from Old API in WWT
Lab ID: 1204709-01
Collection Date: 4/19/2012 01:30 PM
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **4/24/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	4/24/2012 05:08 PM
TCLP METALS			**SW1311/6020**		Prep Date: **4/25/2012**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	4/27/2012 03:35 PM
Barium	**0.0796**		**0.0500**	**mg/L**	10	4/27/2012 03:35 PM
Cadmium	ND		0.0200	mg/L	10	4/27/2012 03:35 PM
Chromium	ND		0.0500	mg/L	10	4/27/2012 03:35 PM
Lead	ND		0.0500	mg/L	10	4/27/2012 03:35 PM
Selenium	**0.299**		**0.0500**	**mg/L**	10	4/27/2012 03:35 PM
Silver	ND		0.0500	mg/L	10	4/27/2012 03:35 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **4/24/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Cresols, Total	**0.044**		**0.015**	**mg/L**	1	4/25/2012 05:54 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Hexachloroethane	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Nitrobenzene	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Pentachlorophenol	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Pyridine	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Surr: 2,4,6-Tribromophenol	*62.4*		*42-124*	*%REC*	1	4/25/2012 05:54 PM
Surr: 2-Fluorobiphenyl	*58.8*		*48-120*	*%REC*	1	4/25/2012 05:54 PM
Surr: 2-Fluorophenol	*51.2*		*20-120*	*%REC*	1	4/25/2012 05:54 PM
Surr: 4-Terphenyl-d14	*74.5*		*51-135*	*%REC*	1	4/25/2012 05:54 PM
Surr: Nitrobenzene-d5	*58.1*		*41-120*	*%REC*	1	4/25/2012 05:54 PM
Surr: Phenol-d6	*50.7*		*20-120*	*%REC*	1	4/25/2012 05:54 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **4/25/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	4/26/2012 09:52 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
2-Butanone	ND		0.20	mg/L	20	4/26/2012 09:52 PM
Benzene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Carbon tetrachloride	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Chlorobenzene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Chloroform	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Tetrachloroethene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Trichloroethene	ND		0.10	mg/L	20	4/26/2012 09:52 PM

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

ALS Environmental

Date: *08-May-12*

Client: Navajo Refining Company
Project: Cat Fines from Old API
Work Order: 1204709
Sample ID: Cat Fines from Old API in WWT
Lab ID: 1204709-01
Collection Date: 4/19/2012 01:30 PM
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Surr: 1,2-Dichloroethane-d4	*92.8*		*70-125*	*%REC*	20	4/26/2012 09:52 PM
Surr: 4-Bromofluorobenzene	*95.9*		*72-125*	*%REC*	20	4/26/2012 09:52 PM
Surr: Dibromofluoromethane	*95.0*		*71-125*	*%REC*	20	4/26/2012 09:52 PM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	20	4/26/2012 09:52 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	4/26/2012 10:15 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	4/26/2012 10:15 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	4/27/2012 02:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**7.98**		**0.100**	**pH Units**	1	4/27/2012 04:00 PM

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

ALS Environmental

Date: 08-May-12

Client: Navajo Refining Company

Work Order: 1204709

Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60531** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW7-042412-60531** Units: **mg/L** Analysis Date: **4/24/2012 04:42 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757039** Prep Date: **4/24/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-042312-60531** Units: **mg/L** Analysis Date: **4/24/2012 04:46 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757041** Prep Date: **4/24/2012** 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: **GLCSW7-042412-60531** Units: **mg/L** Analysis Date: **4/24/2012 04:44 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757040** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00557	0.00020	0.005	0	111	80-120	0			

MS Sample ID: **1204700-01BMS** Units: **mg/L** Analysis Date: **4/24/2012 04:52 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757044** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00537	0.00020	0.005	-0.000018	108	75-125	0			

MSD Sample ID: **1204700-01BMSD** Units: **mg/L** Analysis Date: **4/24/2012 04:54 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757045** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00548	0.00020	0.005	-0.000018	110	75-125	0.00537	2.03	20	

DUP Sample ID: **1204700-01BDUP** Units: **mg/L** Analysis Date: **4/24/2012 04:50 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757043** Prep Date: **4/24/2012** 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	-0.000018	0	20	

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60568** Instrument ID **ICPMS05** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-042412-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:28 AM**
Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759077** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	0.01019	0.050								J
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW4-042512-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:31 AM**
Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759079** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW4-042512-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:38 AM**
Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759082** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5083	0.050	0.5	0	102	80-120	0			
Barium	0.504	0.050	0.5	0	101	80-120	0			
Cadmium	0.5216	0.020	0.5	0	104	80-120	0			
Chromium	0.5144	0.050	0.5	0	103	80-120	0			
Lead	0.5082	0.050	0.5	0	102	80-120	0			
Selenium	0.532	0.050	0.5	0	106	80-120	0			
Silver	0.5158	0.050	0.5	0	103	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60568** Instrument ID **ICPMS05** Method: **SW1311/6020**

MS Sample ID: **1204754-01AMS** Units: **mg/L** Analysis Date: **4/27/2012 03:43 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761404** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5232	0.050	0.5	0.002025	104	75-125	0			
Barium	0.9576	0.050	0.5	0.4767	96.2	75-125	0			
Cadmium	0.5101	0.020	0.5	0.001277	102	75-125	0			
Chromium	0.5118	0.050	0.5	-0.000097	102	75-125	0			
Lead	0.5249	0.050	0.5	0.01697	102	75-125	0			
Selenium	0.5162	0.050	0.5	0.01757	99.7	75-125	0			
Silver	0.5171	0.050	0.5	0.000096	103	75-125	0			

MSD Sample ID: **1204754-01AMSD** Units: **mg/L** Analysis Date: **4/27/2012 03:45 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761407** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.512	0.050	0.5	0.002025	102	75-125	0.5232	2.15	25	
Barium	0.9799	0.050	0.5	0.4767	101	75-125	0.9576	2.3	25	
Cadmium	0.499	0.020	0.5	0.001277	99.5	75-125	0.5101	2.2	25	
Chromium	0.5041	0.050	0.5	-0.000097	101	75-125	0.5118	1.52	25	
Lead	0.5098	0.050	0.5	0.01697	98.6	75-125	0.5249	2.94	25	
Selenium	0.5193	0.050	0.5	0.01757	100	75-125	0.5162	0.59	25	
Silver	0.4985	0.050	0.5	0.000096	99.7	75-125	0.5171	3.67	25	

DUP Sample ID: **1204754-01ADUP** Units: **mg/L** Analysis Date: **4/27/2012 03:40 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761402** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.002025	0	25	
Barium	0.4956	0.050	0	0	0	0-0	0.4767	3.88	25	
Cadmium	ND	0.020	0	0	0	0-0	0.001277	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.000097	0	25	
Lead	0.01789	0.050	0	0	0	0-0	0.01697	0	25	J
Selenium	0.01678	0.050	0	0	0	0-0	0.01757	0	25	J
Silver	ND	0.050	0	0	0	0-0	0.000096	0	25	

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60519** Instrument ID **SV-5** Method: **SW8270**

MBLK Sample ID: **SBLKT1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 10:05 AM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2759102** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*74.56*	5.0	*100*	0	*74.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*78.18*	5.0	*100*	0	*78.2*	*48-120*	0			
Surr: 2-Fluorophenol	*69.04*	5.0	*100*	0	*69*	*20-120*	0			
Surr: 4-Terphenyl-d14	*97.4*	5.0	*100*	0	*97.4*	*51-135*	0			
Surr: Nitrobenzene-d5	*80.82*	5.0	*100*	0	*80.8*	*41-120*	0			
Surr: Phenol-d6	*77.92*	5.0	*100*	0	*77.9*	*20-120*	0			

LCS Sample ID: **SLCST1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 10:28 AM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2759103** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	78.85	5.0	100	0	78.9	50-120	0			
2,4,6-Trichlorophenol	82.18	5.0	100	0	82.2	50-120	0			
2,4-Dinitrotoluene	43.24	5.0	50	0	86.5	50-120	0			
Cresols, Total	214.2	5.0	200	0	107	48-115	0			
Hexachlorobenzene	41.33	5.0	50	0	82.7	55-120	0			
Hexachlorobutadiene	37.51	5.0	50	0	75	55-120	0			
Hexachloroethane	42.05	5.0	50	0	84.1	55-120	0			
Nitrobenzene	43.15	5.0	50	0	86.3	55-120	0			
Pentachlorophenol	82.68	5.0	100	0	82.7	55-120	0			
Pyridine	33.6	5.0	50	0	67.2	35-120	0			
Surr: 2,4,6-Tribromophenol	*76.86*	5.0	*100*	0	*76.9*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*84.27*	5.0	*100*	0	*84.3*	*48-120*	0			
Surr: 2-Fluorophenol	*84.21*	5.0	*100*	0	*84.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*98.65*	5.0	*100*	0	*98.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*85.04*	5.0	*100*	0	*85*	*41-120*	0			
Surr: Phenol-d6	*87.59*	5.0	*100*	0	*87.6*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60519** Instrument ID **SV-5** Method: **SW8270**

LCSD Sample ID: **SLCSDT1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 11:15 AM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2759104** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	79.56	5.0	100	0	79.6	50-120	78.85	0.897	20	
2,4,6-Trichlorophenol	78.82	5.0	100	0	78.8	50-120	82.18	4.17	20	
2,4-Dinitrotoluene	42.62	5.0	50	0	85.2	50-120	43.24	1.46	20	
Hexachlorobenzene	40.12	5.0	50	0	80.2	55-120	41.33	2.97	20	
Hexachlorobutadiene	35.01	5.0	50	0	70	55-120	37.51	6.89	20	
Hexachloroethane	40.29	5.0	50	0	80.6	55-120	42.05	4.29	20	
Nitrobenzene	41.37	5.0	50	0	82.7	55-120	43.15	4.22	20	
Pentachlorophenol	81.4	5.0	100	0	81.4	55-120	82.68	1.56	20	
Pyridine	29.92	5.0	50	0	59.8	35-120	33.6	11.6	20	
Surr: 2,4,6-Tribromophenol	*75.07*	5.0	*100*	0	*75.1*	*42-124*	76.86	*2.36*	*20*	
Surr: 2-Fluorobiphenyl	*78.2*	5.0	*100*	0	*78.2*	*48-120*	84.27	*7.48*	*20*	
Surr: 2-Fluorophenol	*84.82*	5.0	*100*	0	*84.8*	*20-120*	84.21	*0.728*	*20*	
Surr: 4-Terphenyl-d14	*95.39*	5.0	*100*	0	*95.4*	*51-135*	98.65	*3.36*	*20*	
Surr: Nitrobenzene-d5	*79.92*	5.0	*100*	0	*79.9*	*41-120*	85.04	*6.2*	*20*	
Surr: Phenol-d6	*91.67*	5.0	*100*	0	*91.7*	*20-120*	87.59	*4.55*	*20*	

MS Sample ID: **1204707-01AMS** Units: **µg/L** Analysis Date: **4/26/2012 08:59 PM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2760570** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	85.81	5.0	100	0	85.8	55-120	0			
2,4,6-Trichlorophenol	83.38	5.0	100	0	83.4	55-120	0			
2,4-Dinitrotoluene	44.87	5.0	50	0	89.7	55-125	0			
Cresols, Total	3042	15	250	2540	201	35-115	0			SEO
Hexachlorobenzene	41.66	5.0	50	0	83.3	55-120	0			
Hexachlorobutadiene	31.01	5.0	50	0	62	55-120	0			
Hexachloroethane	51.04	5.0	50	0	102	55-120	0			
Nitrobenzene	41.22	5.0	50	0	82.4	55-120	0			
Pentachlorophenol	53.51	5.0	100	0	53.5	50-135	0			
Pyridine	20.88	5.0	50	0	41.8	30-120	0			
Surr: 2,4,6-Tribromophenol	*74.65*	5.0	*100*	0	*74.7*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*79.38*	5.0	*100*	0	*79.4*	*43-125*	0			
Surr: 2-Fluorophenol	*77.39*	5.0	*100*	0	*77.4*	*37-125*	0			
Surr: 4-Terphenyl-d14	*93.81*	5.0	*100*	0	*93.8*	*32-125*	0			
Surr: Nitrobenzene-d5	*74.07*	5.0	*100*	0	*74.1*	*37-125*	0			
Surr: Phenol-d6	*85.98*	5.0	*100*	0	*86*	*40-125*	0			

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **R126877** Instrument ID **VOA6** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-042612-R126877** Units: **µg/L** Analysis Date: **4/26/2012 11:44 AM**
Client ID: Run ID: **VOA6_120426C** SeqNo: **2760525** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*42.23*	5.0	*50*	0	*84.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.57*	5.0	*50*	0	*95.1*	*72.4-125*	0			
Surr: Dibromofluoromethane	*47.25*	5.0	*50*	0	*94.5*	*71.2-125*	0			
Surr: Toluene-d8	*44.11*	5.0	*50*	0	*88.2*	*75-125*	0			

LCS Sample ID: **VLCSW-042612-R126877** Units: **µg/L** Analysis Date: **4/26/2012 10:51 AM**
Client ID: Run ID: **VOA6_120426C** SeqNo: **2760524** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	50.01	5.0	50	0	100	73-124	0			
1,2-Dichloroethane	40.88	5.0	50	0	81.8	76-120	0			
1,4-Dichlorobenzene	44.31	5.0	50	0	88.6	70-130	0			
2-Butanone	99.36	10	100	0	99.4	70-130	0			
Benzene	48.17	5.0	50	0	96.3	70-128	0			
Carbon tetrachloride	48.63	5.0	50	0	97.3	70-130	0			
Chlorobenzene	45.72	5.0	50	0	91.4	72-127	0			
Chloroform	47.43	5.0	50	0	94.9	70-130	0			
Tetrachloroethene	51.37	5.0	50	0	103	70-130	0			
Trichloroethene	52.27	5.0	50	0	105	72-129	0			
Vinyl chloride	45.6	2.0	50	0	91.2	70-130	0			
Surr: 1,2-Dichloroethane-d4	*39.99*	5.0	*50*	0	*80*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.45*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*47.97*	5.0	*50*	0	*95.9*	*71-125*	0			
Surr: Toluene-d8	*46.79*	5.0	*50*	0	*93.6*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **R126877** Instrument ID **VOA6** Method: **SW1311/8260B**

MS Sample ID: **1204826-01ZMS** Units: **µg/L** Analysis Date: **4/26/2012 01:56 PM**
Client ID: Run ID: **VOA6_120426C** SeqNo: **2760527** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	42.61	5.0	50	0	85.2	73-124	0			
1,2-Dichloroethane	40.04	5.0	50	0	80.1	76-120	0			
1,4-Dichlorobenzene	39.79	5.0	50	0	79.6	70-130	0			
2-Butanone	90.19	10	100	0	90.2	70-130	0			
Benzene	44.74	5.0	50	0	89.5	70-128	0			
Carbon tetrachloride	36.63	5.0	50	0	73.3	70-130	0			
Chlorobenzene	43.89	5.0	50	0	87.8	72-127	0			
Chloroform	47.09	5.0	50	0	94.2	70-130	0			
Tetrachloroethene	41.59	5.0	50	0	83.2	70-130	0			
Trichloroethene	46.61	5.0	50	0	93.2	72-129	0			
Vinyl chloride	41.02	2.0	50	0	82	70-130	0			
Surr: 1,2-Dichloroethane-d4	*42.58*	5.0	*50*	0	*85.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.52*	5.0	*50*	0	*95*	*72-125*	0			
Surr: Dibromofluoromethane	*48.66*	5.0	*50*	0	*97.3*	*71-125*	0			
Surr: Toluene-d8	*46.26*	5.0	*50*	0	*92.5*	*75-125*	0			

MSD Sample ID: **1204826-01ZMSD** Units: **µg/L** Analysis Date: **4/26/2012 02:23 PM**
Client ID: Run ID: **VOA6_120426C** SeqNo: **2760528** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	43.24	5.0	50	0	86.5	73-124	42.61	1.46	20	
1,2-Dichloroethane	42.47	5.0	50	0	84.9	76-120	40.04	5.89	20	
1,4-Dichlorobenzene	41.6	5.0	50	0	83.2	70-130	39.79	4.43	20	
2-Butanone	84.11	10	100	0	84.1	70-130	90.19	6.98	20	
Benzene	47.2	5.0	50	0	94.4	70-128	44.74	5.34	20	
Carbon tetrachloride	39.03	5.0	50	0	78.1	70-130	36.63	6.34	20	
Chlorobenzene	44.65	5.0	50	0	89.3	72-127	43.89	1.73	20	
Chloroform	48.11	5.0	50	0	96.2	70-130	47.09	2.14	20	
Tetrachloroethene	43.12	5.0	50	0	86.2	70-130	41.59	3.6	20	
Trichloroethene	48.05	5.0	50	0	96.1	72-129	46.61	3.04	20	
Vinyl chloride	42.02	2.0	50	0	84	70-130	41.02	2.42	20	
Surr: 1,2-Dichloroethane-d4	*42.93*	5.0	*50*	0	*85.9*	*70-125*	42.58	*0.811*	*20*	
Surr: 4-Bromofluorobenzene	*50.5*	5.0	*50*	0	*101*	*72-125*	47.52	*6.07*	*20*	
Surr: Dibromofluoromethane	*49.19*	5.0	*50*	0	*98.4*	*71-125*	48.66	*1.09*	*20*	
Surr: Toluene-d8	*46.78*	5.0	*50*	0	*93.6*	*75-125*	46.26	*1.1*	*20*	

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **R126904** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1204768-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **4/27/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120427D** SeqNo: **2761107** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

DUP Sample ID: **1204778-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **4/27/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120427D** SeqNo: **2761108** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **R126916** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS3-120427-R126916** Units: **pH Units** Analysis Date: **4/27/2012 04:00 PM**
Client ID: Run ID: **WETCHEM_120427H** SeqNo: **2761340** 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: **1204649-02ADUP** Units: **pH Units** Analysis Date: **4/27/2012 04:00 PM**
Client ID: Run ID: **WETCHEM_120427H** SeqNo: **2761339** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.82	0.10	0	0	0	0-0	8.82	0	20	

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Project: Cat Fines from Old API
WorkOrder: 1204709

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
Burn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **20-Apr-12 08:40**

Work Order: **1204709** Received by: **RDH**

Checklist completed by Paresh M. Giga (eSignature) 20-Apr-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 24-Apr-12 (Date)

Matrices: Sludge
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.3	002	
Cooler(s)/Kit(s):	4063		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

☑ ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1204709

NAVAJO REFINING: Navajo Refining Company

Project: Cat Fines from Old API

ALS Project Manager: Chris Bryson

Customer Information		Project Information			
Purchase Order		Project Name	Cat Fines form Old API	A	TCLP Volitiles
Work Order		Project Number		B	TCLP Semi-Volitiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn:	Aaron Strange	D	R.C.I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	Aaron.Strange@hollyfrontier.com	e-Mail Address	Aaron.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Cat Fines from Old API in WWT	4/19/12	13:30	sludge	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Aaron Strange

Shipment Method: FedEx

Required Turnaround Time: ☐ ~~STD 10 Wk Days~~ ☑ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
[signature]	4-19-12	16:15		
Relinquished by:	Date:	Time:	Received by (Laboratory): [signature] 4/20/12 0810	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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

Date:
Name:
Compar

CUSTODY SEAL

4-19-2012 Time: 16:15
Aaron Strange
by: Navajo Refining Co.

Seal Broken By:
Date: 4/26/12

Chavez, Carl J, EMNRD

From: Combs, Robert <Robert.Combs@hollyfrontier.com>
Sent: Thursday, May 17, 2012 9:15 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Strange, Aaron; Schultz, Michele; Holder, Mike
Subject: Request for disposal
Attachments: C-138 and profile form--Cat fines fm former API 051712.pdf; 1204709 Cat Fines from Old API Final.pdf

Kim,
Please see the attached Profile form and C-138 for the FCC cat fines removed from an old sump, formerly an API separator. This API separator was removed from service as an API several years ago, and was cleaned at that time. It has since been used to contain run-off FCC scrubber water that has entrained catalyst fines.
The analytical results are also attached (ALS sample ID 1204709-01).
Please let me know by email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	wet solid--FCC catalyst fines
ESTIMATED VOLUME:	150 cy
GENERATING PROCESS:	FCC flue gas scrubber. This waste was vacuumed out of a sump formerly used as an API sep. that was decommissioned/cleaned yrs ago.
REMARKS:	see attached ALS report, lab sample ID# 1204709-01
NMOCD FACILITY:	CRI/R360
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 5/17/2012

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
   Navajo Refining Co.

2. **Originating Site:**
   Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
   501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
   FCC catalyst fines from decommissioned/cleaned API separator.
   Please see the attached analytical data from ALS:
   Work order: 1204709 Sample ID: 1204709-01

Estimated Volume 150 yd^3 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
   S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

08-May-2012

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Cat Fines from Old API

Work Order: **1204709**

Dear Aaron,

ALS Environmental received 2 samples on 20-Apr-2012 08:40 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 18.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager

NELAP ACCREDITED TNI LABORATORY

Certificate No: T104704231-09A-TX

Client: Navajo Refining Company
Project: Cat Fines from Old API
Work Order: **1204709**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1204709-01	Cat Fines from Old API in WWT	Sludge		4/19/2012 13:30	4/20/2012 08:40	☐
1204709-02	Trip Blank - 120711-12	Water		4/19/2012	4/20/2012 08:40	☐

Client:	Navajo Refining Company
Project:	Cat Fines from Old API
Work Order:	1204709

Case Narrative

Batch 60519, TCLP Semivolatiles, Sample 1204707-01A: Matrix spike is for an unrelated sample.

The analyses for reactivity were performed at ALS Environmental in Holland, MI.

A trip blank was listed on the chain-of-custody, but no analyses were checked. The trip blank was logged in, but it was not analyzed.

ALS Environmental

Date: *08-May-12*

Client: Navajo Refining Company
Project: Cat Fines from Old API
Work Order: 1204709
Sample ID: Cat Fines from Old API in WWT
Lab ID: 1204709-01
Collection Date: 4/19/2012 01:30 PM
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **4/24/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	4/24/2012 05:08 PM
TCLP METALS			**SW1311/6020**		Prep Date: **4/25/2012**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	4/27/2012 03:35 PM
Barium	**0.0796**		**0.0500**	**mg/L**	10	4/27/2012 03:35 PM
Cadmium	ND		0.0200	mg/L	10	4/27/2012 03:35 PM
Chromium	ND		0.0500	mg/L	10	4/27/2012 03:35 PM
Lead	ND		0.0500	mg/L	10	4/27/2012 03:35 PM
Selenium	**0.299**		**0.0500**	**mg/L**	10	4/27/2012 03:35 PM
Silver	ND		0.0500	mg/L	10	4/27/2012 03:35 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **4/24/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Cresols, Total	**0.044**		**0.015**	**mg/L**	1	4/25/2012 05:54 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Hexachloroethane	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Nitrobenzene	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Pentachlorophenol	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Pyridine	ND		0.0050	mg/L	1	4/25/2012 05:54 PM
Surr: 2,4,6-Tribromophenol	*62.4*		*42-124*	*%REC*	1	4/25/2012 05:54 PM
Surr: 2-Fluorobiphenyl	*58.8*		*48-120*	*%REC*	1	4/25/2012 05:54 PM
Surr: 2-Fluorophenol	*51.2*		*20-120*	*%REC*	1	4/25/2012 05:54 PM
Surr: 4-Terphenyl-d14	*74.5*		*51-135*	*%REC*	1	4/25/2012 05:54 PM
Surr: Nitrobenzene-d5	*58.1*		*41-120*	*%REC*	1	4/25/2012 05:54 PM
Surr: Phenol-d6	*50.7*		*20-120*	*%REC*	1	4/25/2012 05:54 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **4/25/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	4/26/2012 09:52 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
2-Butanone	ND		0.20	mg/L	20	4/26/2012 09:52 PM
Benzene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Carbon tetrachloride	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Chlorobenzene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Chloroform	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Tetrachloroethene	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Trichloroethene	ND		0.10	mg/L	20	4/26/2012 09:52 PM

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

ALS Environmental

Date: *08-May-12*

Client: Navajo Refining Company
Project: Cat Fines from Old API
Work Order: 1204709
Sample ID: Cat Fines from Old API in WWT
Lab ID: 1204709-01
Collection Date: 4/19/2012 01:30 PM
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	4/26/2012 09:52 PM
Surr: 1,2-Dichloroethane-d4	*92.8*		*70-125*	*%REC*	20	4/26/2012 09:52 PM
Surr: 4-Bromofluorobenzene	*95.9*		*72-125*	*%REC*	20	4/26/2012 09:52 PM
Surr: Dibromofluoromethane	*95.0*		*71-125*	*%REC*	20	4/26/2012 09:52 PM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	20	4/26/2012 09:52 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	4/26/2012 10:15 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	4/26/2012 10:15 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	4/27/2012 02:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**7.98**		**0.100**	**pH Units**	1	4/27/2012 04:00 PM

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

ALS Environmental

Date: 08-May-12

Client: Navajo Refining Company

Work Order: 1204709

Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60531** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW7-042412-60531** Units: **mg/L** Analysis Date: **4/24/2012 04:42 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757039** Prep Date: **4/24/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-042312-60531** Units: **mg/L** Analysis Date: **4/24/2012 04:46 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757041** Prep Date: **4/24/2012** 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: **GLCSW7-042412-60531** Units: **mg/L** Analysis Date: **4/24/2012 04:44 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757040** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00557	0.00020	0.005	0	111	80-120	0			

MS Sample ID: **1204700-01BMS** Units: **mg/L** Analysis Date: **4/24/2012 04:52 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757044** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00537	0.00020	0.005	-0.000018	108	75-125	0			

MSD Sample ID: **1204700-01BMSD** Units: **mg/L** Analysis Date: **4/24/2012 04:54 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757045** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00548	0.00020	0.005	-0.000018	110	75-125	0.00537	2.03	20	

DUP Sample ID: **1204700-01BDUP** Units: **mg/L** Analysis Date: **4/24/2012 04:50 PM**

Client ID: Run ID: **MERCURY_120424A** SeqNo: **2757043** Prep Date: **4/24/2012** 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	-0.000018	0	20	

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60568** Instrument ID **ICPMS05** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-042412-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:28 AM**
Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759077** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	0.01019	0.050								J
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW4-042512-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:31 AM**
Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759079** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW4-042512-60568** Units: **mg/L** Analysis Date: **4/26/2012 11:38 AM**
Client ID: Run ID: **ICPMS05_120426A** SeqNo: **2759082** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5083	0.050	0.5	0	102	80-120	0			
Barium	0.504	0.050	0.5	0	101	80-120	0			
Cadmium	0.5216	0.020	0.5	0	104	80-120	0			
Chromium	0.5144	0.050	0.5	0	103	80-120	0			
Lead	0.5082	0.050	0.5	0	102	80-120	0			
Selenium	0.532	0.050	0.5	0	106	80-120	0			
Silver	0.5158	0.050	0.5	0	103	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60568** Instrument ID **ICPMS05** Method: **SW1311/6020**

MS Sample ID: **1204754-01AMS** Units: **mg/L** Analysis Date: **4/27/2012 03:43 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761404** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5232	0.050	0.5	0.002025	104	75-125	0			
Barium	0.9576	0.050	0.5	0.4767	96.2	75-125	0			
Cadmium	0.5101	0.020	0.5	0.001277	102	75-125	0			
Chromium	0.5118	0.050	0.5	-0.000097	102	75-125	0			
Lead	0.5249	0.050	0.5	0.01697	102	75-125	0			
Selenium	0.5162	0.050	0.5	0.01757	99.7	75-125	0			
Silver	0.5171	0.050	0.5	0.000096	103	75-125	0			

MSD Sample ID: **1204754-01AMSD** Units: **mg/L** Analysis Date: **4/27/2012 03:45 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761407** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.512	0.050	0.5	0.002025	102	75-125	0.5232	2.15	25	
Barium	0.9799	0.050	0.5	0.4767	101	75-125	0.9576	2.3	25	
Cadmium	0.499	0.020	0.5	0.001277	99.5	75-125	0.5101	2.2	25	
Chromium	0.5041	0.050	0.5	-0.000097	101	75-125	0.5118	1.52	25	
Lead	0.5098	0.050	0.5	0.01697	98.6	75-125	0.5249	2.94	25	
Selenium	0.5193	0.050	0.5	0.01757	100	75-125	0.5162	0.59	25	
Silver	0.4985	0.050	0.5	0.000096	99.7	75-125	0.5171	3.67	25	

DUP Sample ID: **1204754-01ADUP** Units: **mg/L** Analysis Date: **4/27/2012 03:40 PM**
Client ID: Run ID: **ICPMS05_120427A** SeqNo: **2761402** Prep Date: **4/25/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.002025	0	25	
Barium	0.4956	0.050	0	0	0	0-0	0.4767	3.88	25	
Cadmium	ND	0.020	0	0	0	0-0	0.001277	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.000097	0	25	
Lead	0.01789	0.050	0	0	0	0-0	0.01697	0	25	J
Selenium	0.01678	0.050	0	0	0	0-0	0.01757	0	25	J
Silver	ND	0.050	0	0	0	0-0	0.000096	0	25	

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60519** Instrument ID **SV-5** Method: **SW8270**

MBLK Sample ID: **SBLKT1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 10:05 AM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2759102** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*74.56*	5.0	*100*	0	*74.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*78.18*	5.0	*100*	0	*78.2*	*48-120*	0			
Surr: 2-Fluorophenol	*69.04*	5.0	*100*	0	*69*	*20-120*	0			
Surr: 4-Terphenyl-d14	*97.4*	5.0	*100*	0	*97.4*	*51-135*	0			
Surr: Nitrobenzene-d5	*80.82*	5.0	*100*	0	*80.8*	*41-120*	0			
Surr: Phenol-d6	*77.92*	5.0	*100*	0	*77.9*	*20-120*	0			

LCS Sample ID: **SLCST1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 10:28 AM**
Client ID: Run ID: **SV-5_120425A** SeqNo: **2759103** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	78.85	5.0	100	0	78.9	50-120	0			
2,4,6-Trichlorophenol	82.18	5.0	100	0	82.2	50-120	0			
2,4-Dinitrotoluene	43.24	5.0	50	0	86.5	50-120	0			
Cresols, Total	214.2	5.0	200	0	107	48-115	0			
Hexachlorobenzene	41.33	5.0	50	0	82.7	55-120	0			
Hexachlorobutadiene	37.51	5.0	50	0	75	55-120	0			
Hexachloroethane	42.05	5.0	50	0	84.1	55-120	0			
Nitrobenzene	43.15	5.0	50	0	86.3	55-120	0			
Pentachlorophenol	82.68	5.0	100	0	82.7	55-120	0			
Pyridine	33.6	5.0	50	0	67.2	35-120	0			
Surr: 2,4,6-Tribromophenol	*76.86*	5.0	*100*	0	*76.9*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*84.27*	5.0	*100*	0	*84.3*	*48-120*	0			
Surr: 2-Fluorophenol	*84.21*	5.0	*100*	0	*84.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*98.65*	5.0	*100*	0	*98.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*85.04*	5.0	*100*	0	*85*	*41-120*	0			
Surr: Phenol-d6	*87.59*	5.0	*100*	0	*87.6*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **60519** Instrument ID **SV-5** Method: **SW8270**

LCSD Sample ID: **SLCSDT1-120424-60519** Units: **µg/L** Analysis Date: **4/25/2012 11:15 AM**

Client ID: Run ID: **SV-5_120425A** SeqNo: **2759104** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	79.56	5.0	100	0	79.6	50-120	78.85	0.897	20	
2,4,6-Trichlorophenol	78.82	5.0	100	0	78.8	50-120	82.18	4.17	20	
2,4-Dinitrotoluene	42.62	5.0	50	0	85.2	50-120	43.24	1.46	20	
Hexachlorobenzene	40.12	5.0	50	0	80.2	55-120	41.33	2.97	20	
Hexachlorobutadiene	35.01	5.0	50	0	70	55-120	37.51	6.89	20	
Hexachloroethane	40.29	5.0	50	0	80.6	55-120	42.05	4.29	20	
Nitrobenzene	41.37	5.0	50	0	82.7	55-120	43.15	4.22	20	
Pentachlorophenol	81.4	5.0	100	0	81.4	55-120	82.68	1.56	20	
Pyridine	29.92	5.0	50	0	59.8	35-120	33.6	11.6	20	
Surr: 2,4,6-Tribromophenol	*75.07*	5.0	*100*	0	*75.1*	*42-124*	76.86	*2.36*	*20*	
Surr: 2-Fluorobiphenyl	*78.2*	5.0	*100*	0	*78.2*	*48-120*	84.27	*7.48*	*20*	
Surr: 2-Fluorophenol	*84.82*	5.0	*100*	0	*84.8*	*20-120*	84.21	*0.728*	*20*	
Surr: 4-Terphenyl-d14	*95.39*	5.0	*100*	0	*95.4*	*51-135*	98.65	*3.36*	*20*	
Surr: Nitrobenzene-d5	*79.92*	5.0	*100*	0	*79.9*	*41-120*	85.04	*6.2*	*20*	
Surr: Phenol-d6	*91.67*	5.0	*100*	0	*91.7*	*20-120*	87.59	*4.55*	*20*	

MS Sample ID: **1204707-01AMS** Units: **µg/L** Analysis Date: **4/26/2012 08:59 PM**

Client ID: Run ID: **SV-5_120425A** SeqNo: **2760570** Prep Date: **4/24/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	85.81	5.0	100	0	85.8	55-120	0			
2,4,6-Trichlorophenol	83.38	5.0	100	0	83.4	55-120	0			
2,4-Dinitrotoluene	44.87	5.0	50	0	89.7	55-125	0			
Cresols, Total	3042	15	250	2540	201	35-115	0			SEO
Hexachlorobenzene	41.66	5.0	50	0	83.3	55-120	0			
Hexachlorobutadiene	31.01	5.0	50	0	62	55-120	0			
Hexachloroethane	51.04	5.0	50	0	102	55-120	0			
Nitrobenzene	41.22	5.0	50	0	82.4	55-120	0			
Pentachlorophenol	53.51	5.0	100	0	53.5	50-135	0			
Pyridine	20.88	5.0	50	0	41.8	30-120	0			
Surr: 2,4,6-Tribromophenol	*74.65*	5.0	*100*	0	*74.7*	*36-126*	0			
Surr: 2-Fluorobiphenyl	*79.38*	5.0	*100*	0	*79.4*	*43-125*	0			
Surr: 2-Fluorophenol	*77.39*	5.0	*100*	0	*77.4*	*37-125*	0			
Surr: 4-Terphenyl-d14	*93.81*	5.0	*100*	0	*93.8*	*32-125*	0			
Surr: Nitrobenzene-d5	*74.07*	5.0	*100*	0	*74.1*	*37-125*	0			
Surr: Phenol-d6	*85.98*	5.0	*100*	0	*86*	*40-125*	0			

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **R126877** Instrument ID **VOA6** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-042612-R126877** Units: **µg/L** Analysis Date: **4/26/2012 11:44 AM**
Client ID: Run ID: **VOA6_120426C** SeqNo: **2760525** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*42.23*	5.0	*50*	0	*84.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.57*	5.0	*50*	0	*95.1*	*72.4-125*	0			
Surr: Dibromofluoromethane	*47.25*	5.0	*50*	0	*94.5*	*71.2-125*	0			
Surr: Toluene-d8	*44.11*	5.0	*50*	0	*88.2*	*75-125*	0			

LCS Sample ID: **VLCSW-042612-R126877** Units: **µg/L** Analysis Date: **4/26/2012 10:51 AM**
Client ID: Run ID: **VOA6_120426C** SeqNo: **2760524** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	50.01	5.0	50	0	100	73-124	0			
1,2-Dichloroethane	40.88	5.0	50	0	81.8	76-120	0			
1,4-Dichlorobenzene	44.31	5.0	50	0	88.6	70-130	0			
2-Butanone	99.36	10	100	0	99.4	70-130	0			
Benzene	48.17	5.0	50	0	96.3	70-128	0			
Carbon tetrachloride	48.63	5.0	50	0	97.3	70-130	0			
Chlorobenzene	45.72	5.0	50	0	91.4	72-127	0			
Chloroform	47.43	5.0	50	0	94.9	70-130	0			
Tetrachloroethene	51.37	5.0	50	0	103	70-130	0			
Trichloroethene	52.27	5.0	50	0	105	72-129	0			
Vinyl chloride	45.6	2.0	50	0	91.2	70-130	0			
Surr: 1,2-Dichloroethane-d4	*39.99*	5.0	*50*	0	*80*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.45*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*47.97*	5.0	*50*	0	*95.9*	*71-125*	0			
Surr: Toluene-d8	*46.79*	5.0	*50*	0	*93.6*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **R126877** Instrument ID **VOA6** Method: **SW1311/8260B**

MS Sample ID: **1204826-01ZMS** Units: **µg/L** Analysis Date: **4/26/2012 01:56 PM**
Client ID: Run ID: **VOA6_120426C** SeqNo: **2760527** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	42.61	5.0	50	0	85.2	73-124	0			
1,2-Dichloroethane	40.04	5.0	50	0	80.1	76-120	0			
1,4-Dichlorobenzene	39.79	5.0	50	0	79.6	70-130	0			
2-Butanone	90.19	10	100	0	90.2	70-130	0			
Benzene	44.74	5.0	50	0	89.5	70-128	0			
Carbon tetrachloride	36.63	5.0	50	0	73.3	70-130	0			
Chlorobenzene	43.89	5.0	50	0	87.8	72-127	0			
Chloroform	47.09	5.0	50	0	94.2	70-130	0			
Tetrachloroethene	41.59	5.0	50	0	83.2	70-130	0			
Trichloroethene	46.61	5.0	50	0	93.2	72-129	0			
Vinyl chloride	41.02	2.0	50	0	82	70-130	0			
Surr: 1,2-Dichloroethane-d4	*42.58*	5.0	*50*	0	*85.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.52*	5.0	*50*	0	*95*	*72-125*	0			
Surr: Dibromofluoromethane	*48.66*	5.0	*50*	0	*97.3*	*71-125*	0			
Surr: Toluene-d8	*46.26*	5.0	*50*	0	*92.5*	*75-125*	0			

MSD Sample ID: **1204826-01ZMSD** Units: **µg/L** Analysis Date: **4/26/2012 02:23 PM**
Client ID: Run ID: **VOA6_120426C** SeqNo: **2760528** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	43.24	5.0	50	0	86.5	73-124	42.61	1.46	20	
1,2-Dichloroethane	42.47	5.0	50	0	84.9	76-120	40.04	5.89	20	
1,4-Dichlorobenzene	41.6	5.0	50	0	83.2	70-130	39.79	4.43	20	
2-Butanone	84.11	10	100	0	84.1	70-130	90.19	6.98	20	
Benzene	47.2	5.0	50	0	94.4	70-128	44.74	5.34	20	
Carbon tetrachloride	39.03	5.0	50	0	78.1	70-130	36.63	6.34	20	
Chlorobenzene	44.65	5.0	50	0	89.3	72-127	43.89	1.73	20	
Chloroform	48.11	5.0	50	0	96.2	70-130	47.09	2.14	20	
Tetrachloroethene	43.12	5.0	50	0	86.2	70-130	41.59	3.6	20	
Trichloroethene	48.05	5.0	50	0	96.1	72-129	46.61	3.04	20	
Vinyl chloride	42.02	2.0	50	0	84	70-130	41.02	2.42	20	
Surr: 1,2-Dichloroethane-d4	*42.93*	5.0	*50*	0	*85.9*	*70-125*	42.58	*0.811*	*20*	
Surr: 4-Bromofluorobenzene	*50.5*	5.0	*50*	0	*101*	*72-125*	47.52	*6.07*	*20*	
Surr: Dibromofluoromethane	*49.19*	5.0	*50*	0	*98.4*	*71-125*	48.66	*1.09*	*20*	
Surr: Toluene-d8	*46.78*	5.0	*50*	0	*93.6*	*75-125*	46.26	*1.1*	*20*	

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **R126904** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1204768-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **4/27/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120427D** SeqNo: **2761107** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

DUP Sample ID: **1204778-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **4/27/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120427D** SeqNo: **2761108** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Work Order: 1204709
Project: Cat Fines from Old API

QC BATCH REPORT

Batch ID: **R126916** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS3-120427-R126916** Units: **pH Units** Analysis Date: **4/27/2012 04:00 PM**
Client ID: Run ID: **WETCHEM_120427H** SeqNo: **2761340** 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: **1204649-02ADUP** Units: **pH Units** Analysis Date: **4/27/2012 04:00 PM**
Client ID: Run ID: **WETCHEM_120427H** SeqNo: **2761339** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.82	0.10	0	0	0	0-0	8.82	0	20	

The following samples were analyzed in this batch: 1204709-01A

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

Client: Navajo Refining Company
Project: Cat Fines from Old API
WorkOrder: **1204709**

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
Burn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **20-Apr-12 08:40**

Work Order: **1204709** Received by: **RDH**

Checklist completed by Sarah M. Giga (eSignature) 20-Apr-12 (Date) Reviewed by: Patricia L. Lynch (eSignature) 24-Apr-12 (Date)

Matrices: Sludge
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.3	002	
Cooler(s)/Kit(s):	4063		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SRC Page 1 of 1

ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1204709

NAVAJO REFINING: Navajo Refining Company

Project: Cat Fines from Old API

ALS Project Manager: Chris Bryson

Customer Information		Project Information			
Purchase Order		Project Name	Cat Fines form Old API	A	TCLP Volitiles
Work Order		Project Number		B	TCLP Semi-Volitiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn:	Aaron Strange	D	R.C.I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	Aaron.Strange@hollyfrontier.com	e-Mail Address	Aaron.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Cat Fines from Old API in WWT	4/19/12	13:30	sludge	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Aaron Strange

Shipment Method: FedEx

Required Turnaround Time: ~~☐ STD 10 Wk Days~~ ☑ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
[signature]	4-19-12	16:15		
Relinquished by:	Date:	Time:	Received by (Laboratory): [signature] 4/20/12 0810	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

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

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

Date:
Name:
Compar

CUSTODY SEAL

4-19-2012 Time: 15:15
Aaron Strange
Navajo Refining Co.

Seal Broken By:
Date: 4/25/12

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Tuesday, March 27, 2012 10:01 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Les Elliott; Strange, Aaron; Schultz, Michele
Subject: Request for waste disposal--W-7 pall rings/Tower tech media
Attachments: C-138 and Profile Form--W-7 pall rings 032712.pdf; C-138 and Profile form--Tower tech media 032712.pdf; 1203325 Tower Tech Final.pdf; 1203323 Pall Rings Final.pdf

Kim,
Please see the attached profile forms, C-138s and analytical reports for W-7 pall rings and W-745 tower tech media. Please let us know via email if these wastes are approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Stainless steel pall rings from W-7 benzene stripper.
Please see the attached analytical data from ALS:
Work order: 1203323 Sample ID: 1203323-01

Estimated Volume 5 yd^3 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	stainless steel pall rings (support media)
ESTIMATED VOLUME:	5 cy
GENERATING PROCESS:	W-7 benzene stripper
REMARKS:	see attached ALS report, lab sample ID# 1203323-01
NMOCD FACILITY:	CRI/R360
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 3/27/2012

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
   Navajo Refining Co.

2. **Originating Site:**
   Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
   501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
   Tower tech media.
   Please see the attached analytical data from ALS:
   Work order: 1203325 Sample ID: 1203325-01

Estimated Volume 60 yd^3 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
   S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	cooling tower media
ESTIMATED VOLUME:	60 cy
GENERATING PROCESS:	W-745 amine stripper cooling tower
REMARKS:	see attached ALS report, lab sample ID# 1203325-01
NMOCD FACILITY:	CRI/R360
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 3/27/2012

ALS Environmental

16-Mar-2012

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Tower Tech

Work Order: **1203325**

Dear Aaron,

ALS Environmental received 1 sample on 10-Mar-2012 08:55 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 27.

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

Sincerely,

Chris Bryson

Electronically approved by: Yvan K. Ty

Chris Bryson
Project Manager

NELAP ACCREDITED TNI LABORATORY

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 16-Mar-12

Client: Navajo Refining Company
Project: Tower Tech
Work Order: **1203325**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1203325-01	Amine Tower Tech	Solid		3/7/2012 15:00	3/10/2012 08:55	☐

Client: Navajo Refining Company
Project: Tower Tech
Work Order: 1203325

Case Narrative

Batch 59514, TCLP Semivolatiles : Insufficient sample volume for MS/MSD. LCS/LCSD provided as batch quality control.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *16-Mar-12*

Client: Navajo Refining Company
Project: Tower Tech
Work Order: 1203325
Sample ID: Amine Tower Tech
Lab ID: 1203325-01
Collection Date: 3/7/2012 03:00 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **3/13/2012**	Analyst: **OFO**
Mercury	ND		0.000200	mg/L	1	3/13/2012 06:30 PM
TCLP METALS			**SW1311/6020**		Prep Date: **3/13/2012**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	3/13/2012 07:26 PM
Barium	**0.236**		**0.0500**	**mg/L**	10	3/13/2012 07:26 PM
Cadmium	ND		0.0200	mg/L	10	3/13/2012 07:26 PM
Chromium	ND		0.0500	mg/L	10	3/13/2012 07:26 PM
Lead	ND		0.0500	mg/L	10	3/13/2012 07:26 PM
Selenium	ND		0.0500	mg/L	10	3/13/2012 07:26 PM
Silver	ND		0.0500	mg/L	10	3/13/2012 07:26 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **3/13/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
Cresols, Total	ND		0.015	mg/L	1	3/13/2012 04:08 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
Hexachloroethane	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
Nitrobenzene	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
Pentachlorophenol	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
Pyridine	ND		0.0050	mg/L	1	3/13/2012 04:08 PM
Surr: 2,4,6-Tribromophenol	*80.0*		*42-124*	*%REC*	1	3/13/2012 04:08 PM
Surr: 2-Fluorobiphenyl	*76.3*		*48-120*	*%REC*	1	3/13/2012 04:08 PM
Surr: 2-Fluorophenol	*60.1*		*20-120*	*%REC*	1	3/13/2012 04:08 PM
Surr: 4-Terphenyl-d14	*83.5*		*51-135*	*%REC*	1	3/13/2012 04:08 PM
Surr: Nitrobenzene-d5	*77.7*		*41-120*	*%REC*	1	3/13/2012 04:08 PM
Surr: Phenol-d6	*77.6*		*20-120*	*%REC*	1	3/13/2012 04:08 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **3/14/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	3/15/2012 08:08 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	3/15/2012 08:08 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	3/15/2012 08:08 AM
2-Butanone	ND		0.20	mg/L	20	3/15/2012 08:08 AM
Benzene	ND		0.10	mg/L	20	3/15/2012 08:08 AM
Carbon tetrachloride	ND		0.10	mg/L	20	3/15/2012 08:08 AM
Chlorobenzene	ND		0.10	mg/L	20	3/15/2012 08:08 AM
Chloroform	ND		0.10	mg/L	20	3/15/2012 08:08 AM
Tetrachloroethene	ND		0.10	mg/L	20	3/15/2012 08:08 AM
Trichloroethene	ND		0.10	mg/L	20	3/15/2012 08:08 AM

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

ALS Environmental

Date: *16-Mar-12*

Client: Navajo Refining Company
Project: Tower Tech
Sample ID: Amine Tower Tech
Collection Date: 3/7/2012 03:00 PM

Work Order: 1203325
Lab ID: 1203325-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	3/15/2012 08:08 AM
Surr: 1,2-Dichloroethane-d4	*98.3*		*70-125*	*%REC*	20	3/15/2012 08:08 AM
Surr: 4-Bromofluorobenzene	*98.3*		*72-125*	*%REC*	20	3/15/2012 08:08 AM
Surr: Dibromofluoromethane	*98.6*		*71-125*	*%REC*	20	3/15/2012 08:08 AM
Surr: Toluene-d8	*98.3*		*75-125*	*%REC*	20	3/15/2012 08:08 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	3/14/2012 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	3/14/2012 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	3/16/2012 03:00 PM
PH			**SW9045B**			Analyst: **IAB**
pH	**7.12**		**0.100**	**pH Units**	1	3/13/2012 02:00 PM

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

ALS Environmental

Date: 16-Mar-12

Client: Navajo Refining Company

Work Order: 1203325

Project: Tower Tech

QC BATCH REPORT

Batch ID: **59524** Instrument ID **ICPMS03** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-031212-59524** Units: **mg/L** Analysis Date: **3/13/2012 06:30 PM**

Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717112** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW2-031312-59524** Units: **mg/L** Analysis Date: **3/13/2012 06:34 PM**

Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717113** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW2-031312-59524** Units: **mg/L** Analysis Date: **3/13/2012 06:38 PM**

Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717115** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4408	0.050	0.5	0	88.2	80-120	0			
Barium	0.5031	0.050	0.5	0	101	80-120	0			
Cadmium	0.5048	0.020	0.5	0	101	80-120	0			
Chromium	0.4515	0.050	0.5	0	90.3	80-120	0			
Lead	0.5006	0.050	0.5	0	100	80-120	0			
Selenium	0.4304	0.050	0.5	0	86.1	80-120	0			
Silver	0.5003	0.050	0.5	0	100	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **59524** Instrument ID **ICPMS03** Method: **SW1311/6020**

MS Sample ID: **1203303-02AMS** Units: **mg/L** Analysis Date: **3/13/2012 06:56 PM**
Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717120** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4667	0.050	0.5	-0.003869	94.1	75-125	0			
Barium	1.843	0.050	0.5	1.39	90.6	75-125	0			
Cadmium	0.5168	0.020	0.5	0.02682	98	75-125	0			
Chromium	0.4773	0.050	0.5	0.001133	95.2	75-125	0			
Lead	0.4944	0.050	0.5	0.007089	97.5	75-125	0			
Selenium	0.4798	0.050	0.5	-0.007952	97.6	75-125	0			
Silver	0.4655	0.050	0.5	-0.005009	94.1	75-125	0			

MSD Sample ID: **1203303-02AMSD** Units: **mg/L** Analysis Date: **3/13/2012 07:00 PM**
Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717121** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4869	0.050	0.5	-0.003869	98.2	75-125	0.4667	4.24	25	
Barium	1.899	0.050	0.5	1.39	102	75-125	1.843	2.99	25	
Cadmium	0.5388	0.020	0.5	0.02682	102	75-125	0.5168	4.17	25	
Chromium	0.4938	0.050	0.5	0.001133	98.5	75-125	0.4773	3.4	25	
Lead	0.507	0.050	0.5	0.007089	100	75-125	0.4944	2.52	25	
Selenium	0.4906	0.050	0.5	-0.007952	99.7	75-125	0.4798	2.23	25	
Silver	0.4851	0.050	0.5	-0.005009	98	75-125	0.4655	4.12	25	

DUP Sample ID: **1203303-02ADUP** Units: **mg/L** Analysis Date: **3/13/2012 06:47 PM**
Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717117** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	-0.003869	0	25	
Barium	1.299	0.050	0	0	0	0-0	1.39	6.77	25	
Cadmium	0.02424	0.020	0	0	0	0-0	0.02682	10.1	25	
Chromium	ND	0.050	0	0	0	0-0	0.001133	0	25	
Lead	ND	0.050	0	0	0	0-0	0.007089	0	25	
Selenium	ND	0.050	0	0	0	0-0	-0.007952	0	25	
Silver	ND	0.050	0	0	0	0-0	-0.005009	0	25	

The following samples were analyzed in this batch: 1203325-01A

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **59526** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-031312-59526** Units: **mg/L** Analysis Date: **3/13/2012 05:38 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717080** Prep Date: **3/13/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-031212-59526** Units: **mg/L** Analysis Date: **3/13/2012 05:51 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717085** Prep Date: **3/13/2012** 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			

LCS Sample ID: **GLCSW2-031312-59526** Units: **mg/L** Analysis Date: **3/13/2012 05:40 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717081** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00502	0.00020	0.005	0	100	80-120	0			

MS Sample ID: **1203265-01AMS** Units: **mg/L** Analysis Date: **3/13/2012 06:06 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717090** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0051	0.00020	0.005	0.000001	102	75-125	0			

MSD Sample ID: **1203265-01AMSD** Units: **mg/L** Analysis Date: **3/13/2012 06:08 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717095** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0051	0.00020	0.005	0.000001	102	75-125	0.0051	0	20	

DUP Sample ID: **1203265-01ADUP** Units: **mg/L** Analysis Date: **3/13/2012 06:04 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717087** Prep Date: **3/13/2012** 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	0.000001	0	20	

The following samples were analyzed in this batch: 1203325-01A

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **59514** Instrument ID **SV-5** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT2-120313-59514** Units: **µg/L** Analysis Date: **3/13/2012 03:22 PM**
Client ID: Run ID: **SV-5_120313A** SeqNo: **2717034** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*86.26*	5.0	*100*	0	*86.3*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*80.89*	5.0	*100*	0	*80.9*	*48-120*	0			
Surr: 2-Fluorophenol	*60.72*	5.0	*100*	0	*60.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*99.35*	5.0	*100*	0	*99.4*	*51-135*	0			
Surr: Nitrobenzene-d5	*81.04*	5.0	*100*	0	*81*	*41-120*	0			
Surr: Phenol-d6	*77.62*	5.0	*100*	0	*77.6*	*20-120*	0			

LCS Sample ID: **SLCST2-120313-59514** Units: **µg/L** Analysis Date: **3/13/2012 02:27 PM**
Client ID: Run ID: **SV-5_120313A** SeqNo: **2717032** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	91.27	5.0	100	0	91.3	52-115	0			
2,4,6-Trichlorophenol	85.06	5.0	100	0	85.1	53-115	0			
2,4-Dinitrotoluene	42.98	5.0	50	0	86	56-115	0			
Cresols, Total	238	15	250	0	95.2	35-115	0			
Hexachlorobenzene	42.72	5.0	50	0	85.4	54-115	0			
Hexachlorobutadiene	41.39	5.0	50	0	82.8	51-115	0			
Hexachloroethane	45.28	5.0	50	0	90.6	54-115	0			
Nitrobenzene	42.09	5.0	50	0	84.2	40-124	0			
Pentachlorophenol	78.82	5.0	100	0	78.8	45-125	0			
Pyridine	25.81	5.0	50	0	51.6	34-115	0			
Surr: 2,4,6-Tribromophenol	*89.72*	5.0	*100*	0	*89.7*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*89.68*	5.0	*100*	0	*89.7*	*48-120*	0			
Surr: 2-Fluorophenol	*81.49*	5.0	*100*	0	*81.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*97.19*	5.0	*100*	0	*97.2*	*51-135*	0			
Surr: Nitrobenzene-d5	*86.72*	5.0	*100*	0	*86.7*	*41-120*	0			
Surr: Phenol-d6	*92.5*	5.0	*100*	0	*92.5*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **59514** Instrument ID **SV-5** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT2-120313-59514** Units: **µg/L** Analysis Date: **3/13/2012 03:00 PM**

Client ID: Run ID: **SV-5_120313A** SeqNo: **2717033** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	87.4	5.0	100	0	87.4	52-115	91.27	4.33	25	
2,4,6-Trichlorophenol	81.6	5.0	100	0	81.6	53-115	85.06	4.16	25	
2,4-Dinitrotoluene	46.46	5.0	50	0	92.9	56-115	42.98	7.76	25	
Cresols, Total	238.7	15	250	0	95.5	35-115	238	0.278	25	
Hexachlorobenzene	42.8	5.0	50	0	85.6	54-115	42.72	0.19	25	
Hexachlorobutadiene	41.31	5.0	50	0	82.6	51-115	41.39	0.189	25	
Hexachloroethane	45.33	5.0	50	0	90.7	54-115	45.28	0.103	25	
Nitrobenzene	42.65	5.0	50	0	85.3	40-124	42.09	1.33	25	
Pentachlorophenol	82.29	5.0	100	0	82.3	45-125	78.82	4.3	25	
Pyridine	25.31	5.0	50	0	50.6	34-115	25.81	1.92	25	
Surr: 2,4,6-Tribromophenol	*88.14*	5.0	*100*	0	*88.1*	*42-124*	89.72	*1.78*	*25*	
Surr: 2-Fluorobiphenyl	*85.39*	5.0	*100*	0	*85.4*	*48-120*	89.68	*4.9*	*25*	
Surr: 2-Fluorophenol	*80.81*	5.0	*100*	0	*80.8*	*20-120*	81.49	*0.837*	*25*	
Surr: 4-Terphenyl-d14	*98.34*	5.0	*100*	0	*98.3*	*51-135*	97.19	*1.18*	*25*	
Surr: Nitrobenzene-d5	*86.85*	5.0	*100*	0	*86.9*	*41-120*	86.72	*0.155*	*25*	
Surr: Phenol-d6	*90.98*	5.0	*100*	0	*91*	*20-120*	92.5	*1.65*	*25*	

The following samples were analyzed in this batch: 1203325-01A

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **R124843** Instrument ID **VOA6** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-031412-R124843** Units: **µg/L** Analysis Date: **3/15/2012 04:37 AM**
Client ID: Run ID: **VOA6_120314F** SeqNo: **2719659** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*48.98*	5.0	*50*	0	*98*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.52*	5.0	*50*	0	*99*	*72.4-125*	0			
Surr: Dibromofluoromethane	*49.34*	5.0	*50*	0	*98.7*	*71.2-125*	0			
Surr: Toluene-d8	*50.6*	5.0	*50*	0	*101*	*75-125*	0			

MBLK Sample ID: **MBLKV1-031312-R124843** Units: **µg/L** Analysis Date: **3/15/2012 07:15 AM**
Client ID: Run ID: **VOA6_120314F** SeqNo: **2719663** Prep Date: **3/14/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*981.5*	100	*1000*	0	*98.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*995.8*	100	*1000*	0	*99.6*	*72.4-125*	0			
Surr: Dibromofluoromethane	*983.3*	100	*1000*	0	*98.3*	*71.2-125*	0			
Surr: Toluene-d8	*1000*	100	*1000*	0	*100*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **R124843** Instrument ID **VOA6** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-031412-R124843** Units: **µg/L** Analysis Date: **3/15/2012 03:44 AM**
Client ID: Run ID: **VOA6_120314F** SeqNo: **2719658** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	49.38	5.0	50	0	98.8	73-124	0			
1,2-Dichloroethane	44.94	5.0	50	0	89.9	76-120	0			
1,4-Dichlorobenzene	47.94	5.0	50	0	95.9	70-130	0			
2-Butanone	101.6	10	100	0	102	70-130	0			
Benzene	46.99	5.0	50	0	94	70-128	0			
Carbon tetrachloride	47.41	5.0	50	0	94.8	70-130	0			
Chlorobenzene	47.97	5.0	50	0	95.9	72-127	0			
Chloroform	46.78	5.0	50	0	93.6	70-130	0			
Tetrachloroethene	48.88	5.0	50	0	97.8	70-130	0			
Trichloroethene	48.47	5.0	50	0	96.9	72-129	0			
Vinyl chloride	46.37	2.0	50	0	92.7	70-130	0			
Surr: 1,2-Dichloroethane-d4	*46.36*	5.0	*50*	0	*92.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.7*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*48.78*	5.0	*50*	0	*97.6*	*71-125*	0			
Surr: Toluene-d8	*49.89*	5.0	*50*	0	*99.8*	*75-125*	0			

MS Sample ID: **1203297-08ZMS** Units: **µg/L** Analysis Date: **3/15/2012 05:56 AM**
Client ID: Run ID: **VOA6_120314F** SeqNo: **2719661** Prep Date: DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	21760	2,500	25000	0	87	73-124	0			
1,2-Dichloroethane	21270	2,500	25000	0	85.1	76-120	0			
1,4-Dichlorobenzene	21810	2,500	25000	0	87.2	70-130	0			
2-Butanone	50640	5,000	50000	0	101	70-130	0			
Benzene	29990	2,500	25000	8458	86.1	70-128	0			
Carbon tetrachloride	21090	2,500	25000	0	84.4	70-130	0			
Chlorobenzene	22190	2,500	25000	0	88.8	72-127	0			
Chloroform	21900	2,500	25000	0	87.6	70-130	0			
Tetrachloroethene	21210	2,500	25000	0	84.9	70-130	0			
Trichloroethene	22080	2,500	25000	0	88.3	72-129	0			
Vinyl chloride	20830	1,000	25000	0	83.3	70-130	0			
Surr: 1,2-Dichloroethane-d4	*23840*	2,500	*25000*	0	*95.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*25190*	2,500	*25000*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*24510*	2,500	*25000*	0	*98*	*71-125*	0			
Surr: Toluene-d8	*24880*	2,500	*25000*	0	*99.5*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **R124843** Instrument ID **VOA6** Method: **SW1311/8260B**

MSD Sample ID: **1203297-08ZMSD** Units: **µg/L** Analysis Date: **3/15/2012 06:22 AM**

Client ID: Run ID: **VOA6_120314F** SeqNo: **2719662** Prep Date: DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	21170	2,500	25000	0	84.7	73-124	21760	2.73	20	
1,2-Dichloroethane	20950	2,500	25000	0	83.8	76-120	21270	1.5	20	
1,4-Dichlorobenzene	22300	2,500	25000	0	89.2	70-130	21810	2.22	20	
2-Butanone	46390	5,000	50000	0	92.8	70-130	50640	8.75	20	
Benzene	29710	2,500	25000	8458	85	70-128	29990	0.958	20	
Carbon tetrachloride	20750	2,500	25000	0	83	70-130	21090	1.61	20	
Chlorobenzene	22440	2,500	25000	0	89.7	72-127	22190	1.08	20	
Chloroform	21440	2,500	25000	0	85.8	70-130	21900	2.12	20	
Tetrachloroethene	21460	2,500	25000	0	85.9	70-130	21210	1.17	20	
Trichloroethene	21960	2,500	25000	0	87.9	72-129	22080	0.527	20	
Vinyl chloride	20240	1,000	25000	0	81	70-130	20830	2.87	20	
Surr: 1,2-Dichloroethane-d4	*23130*	2,500	*25000*	0	*92.5*	*70-125*	23840	*3.03*	*20*	
Surr: 4-Bromofluorobenzene	*24930*	2,500	*25000*	0	*99.7*	*72-125*	25190	*1.02*	*20*	
Surr: Dibromofluoromethane	*23980*	2,500	*25000*	0	*95.9*	*71-125*	24510	*2.18*	*20*	
Surr: Toluene-d8	*24740*	2,500	*25000*	0	*99*	*75-125*	24880	*0.561*	*20*	

The following samples were analyzed in this batch: 1203325-01A

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **R124769** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCS-031312-R124769** Units: **pH Units** Analysis Date: **3/13/2012 02:00 PM**

Client ID: Run ID: **WETCHEM_120313K** SeqNo: **2718001** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.1	0.10	6	0	102	90-110	0			

DUP Sample ID: **1203331-01ADUP** Units: **pH Units** Analysis Date: **3/13/2012 02:00 PM**

Client ID: Run ID: **WETCHEM_120313K** SeqNo: **2718008** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.19	0.10	0	4.18	0	0-0	4.18	0.239	20	

The following samples were analyzed in this batch: 1203325-01A

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

Client: Navajo Refining Company
Work Order: 1203325
Project: Tower Tech

QC BATCH REPORT

Batch ID: **R124899** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1203389-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **3/16/2012 03:00 PM**

Client ID: Run ID: **WETCHEM_120316F** SeqNo: **2720723** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	10	0	0	0	0		10	0		

The following samples were analyzed in this batch: 1203325-01A

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

Client: Navajo Refining Company
Project: Tower Tech
WorkOrder: 1203325

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **10-Mar-12 08:55**

Work Order: **1203325** Received by: **RDH**

Checklist completed by Robert D. Harris (eSignature) 10-Mar-12 (Date) Reviewed by: Chris Bryson (eSignature) 12-Mar-12 (Date)

Matrices: solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4c	002	
Cooler(s)/Kit(s):	1502		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes: Trip blank logged into WO-1203329.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

☑ ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1203325

NAVAJO REFINING: Navajo Refining Company

Project: Tower Tech

ALS Project Manager: Chris Bryson

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Tower Tech	A	TCLP Volitiles
Work Order		Project Number		B	TCLP Semi-Volitiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	R.C.I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	Aaron.Strange@hollyfrontier.com	e-Mail Address	Aaron.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Amine Tower Tech	3/7/12	15:00	scale	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign
Aaron Strange

Shipment Method: FedEx

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Aaron Strange	3-8-12	16:15		
Relinquished by:	Date:	Time:	Received by (Laboratory): 3/10/12 0855	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: ____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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KW55LD

ORIGIN ID: ROWA (575) 748-3311
CARRIE GREENWOOD
NAVAJO REFINING
501 E. MAIN STREET

ARTESIA , NM 882109440
UNITED STATES US

SHIP DATE: 08MAR12
ACTWGT: 50.0 LB MAN
CAD: 634483/CAFE2511

BILL RECIPIENT

TO CHRIS BRYSON
ALS LABORATORY GROUP
10450 STANCLIFF RD., SUITE 210

HOUSTON TX 77099
(281) 530-5656 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 4967 8856 3117

FRI - 09 MAR A2
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

Form # 1569-10-12A RW12.05.rnd 4

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

CUST ODY SEAL

Date: 3-8-12
Name: Karen S
Company: Navajo

Time: 1615
Refining Co.

Seal Broken B

Date: 3/8/12

ALS Group USA, Corp

Date: 16-Mar-12

Client: ALS Environmental
Project: 1203325
Work Order: **1203367**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1203367-01	1203325-01B	Solid		3/7/2012 15:00	3/13/2012 11:30	☐

ALS Group USA, Corp

Date: 16-Mar-12

Client: ALS Environmental
Project: 1203325
WorkOrder: **1203367**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *16-Mar-12*

Client: ALS Environmental
Project: 1203325
Work Order: 1203367
Sample ID: 1203325-01B
Lab ID: 1203367-01
Collection Date: 3/7/2012 03:00 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **NZ**
Cyanide, Reactive	ND		40.0	mg/Kg	1	3/14/2012 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **NZ**
Sulfide, Reactive	ND		40.0	mg/Kg	1	3/14/2012 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 16-Mar-12

Client: ALS Environmental

Work Order: 1203367

Project: 1203325

QC BATCH REPORT

Batch ID: **R102360** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-120314-R102360** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**

Client ID: Run ID: **WETCHEM_120314H** SeqNo: **1923333** 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: 1203367-01A

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

Client: ALS Environmental
Work Order: 1203367
Project: 1203325

QC BATCH REPORT

Batch ID: **R102361** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-120314-R102361** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923335** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-120314-R102361** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923336** 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: **WLCSDW1-120314-R102361** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923340** 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: **1203322-01A MS** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923338** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD Sample ID: **1203322-01A MSD** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923339** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch: 1203367-01A

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

1203367

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 10-Mar-12
COC ID: 11595
Due Date: 16-Mar-12

Salesperson	Jeffrey L Croston

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1203325	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	Chris Bryson	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsglobal.com	eMail CC	mary.knowles@alsglobal.com	J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1203325-01B (Amine Tower Tech)	Solid	7/Mar/2012 15:00	(1) 4OZGNEAT	X	X								

MC

Comments:

Please analyze for Reactive Cyanide & Reactive Sulfide. Report is due on 3/16/12. Send report to Chris Bryson, chris.bryson@alsglobal.com, and CC: results to Mary Knowles, mary.knowles@alsglobal.com and Y-Van Ty, yvan.ty@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
				3.8°C	Std
Relinquished by:	Date/Time	Received by:	Date/Time		
	FEDEX	Jessica Bacon	3/13/12		

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **13-Mar-12 11:30**

Work Order: **1203367** Received by: **JB**

Checklist completed by *Jessica Bacon* 13-Mar-12 Reviewed by: *Bill Carey* 14-Mar-12
eSignature Date eSignature Date

Matrices: solid
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):	3.6 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 12MAR12
ACTWGT: 20.0 LB
CAD: 300130/CAFE2511

BILL SENDER

TO JEFF GLASER
ALS ENVIRONMENTAL
3352 128TH AVE.

HOLLAND MI 49424
(281) 530-5666
REF: SUBCONTRACT

FedEx Express

TRK# 0201 4340 2168 7110

TUE - 13 MAR A4
PRIORITY OVERNIGHT

NK GRRA

49424
MI-US GRR

Part # 158140-434 RIT2 08/11

ALS Environmental

16-Mar-2012

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Pall Rings

Work Order: **1203323**

Dear Aaron,

ALS Environmental received 1 sample on 10-Mar-2012 08:55 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 26.

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

Sincerely,

Chris Bryson

Electronically approved by: Yvan K. Ty

Chris Bryson
Project Manager

NELAP ACCREDITED TNI LABORATORY

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 16-Mar-12

Client: Navajo Refining Company
Project: Pall Rings
Work Order: **1203323**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1203323-01	W-7 Pall Rings	Solid		3/7/2012 14:40	3/10/2012 08:55	☐

Client:	Navajo Refining Company
Project:	Pall Rings
Work Order:	1203323

Case Narrative

Batch 59514, TCLP Semivolatiles : Insufficient sample volume for MS/MSD. LCS/LCSD provided as batch quality control.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *16-Mar-12*

Client: Navajo Refining Company
Project: Pall Rings
Sample ID: W-7 Pall Rings
Collection Date: 3/7/2012 02:40 PM

Work Order: 1203323
Lab ID: 1203323-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **3/13/2012**	Analyst: **OFO**
Mercury	ND		0.000800	mg/L	1	3/13/2012 06:28 PM
TCLP METALS			**SW1311/6020**		Prep Date: **3/13/2012**	Analyst: **ALR**
Arsenic	ND		0.250	mg/L	10	3/13/2012 07:22 PM
Barium	**0.428**		**0.250**	**mg/L**	10	3/13/2012 07:22 PM
Cadmium	ND		0.100	mg/L	10	3/13/2012 07:22 PM
Chromium	ND		0.250	mg/L	10	3/13/2012 07:22 PM
Lead	ND		0.250	mg/L	10	3/13/2012 07:22 PM
Selenium	**0.808**		**0.250**	**mg/L**	10	3/13/2012 07:22 PM
Silver	ND		0.250	mg/L	10	3/13/2012 07:22 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **3/13/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.20	mg/L	10	3/13/2012 07:08 PM
2,4,6-Trichlorophenol	ND		0.20	mg/L	10	3/13/2012 07:08 PM
2,4-Dinitrotoluene	ND		0.20	mg/L	10	3/13/2012 07:08 PM
Cresols, Total	ND		0.60	mg/L	10	3/13/2012 07:08 PM
Hexachlorobenzene	ND		0.20	mg/L	10	3/13/2012 07:08 PM
Hexachlorobutadiene	ND		0.20	mg/L	10	3/13/2012 07:08 PM
Hexachloroethane	ND		0.20	mg/L	10	3/13/2012 07:08 PM
Nitrobenzene	ND		0.20	mg/L	10	3/13/2012 07:08 PM
Pentachlorophenol	ND		0.20	mg/L	10	3/13/2012 07:08 PM
Pyridine	ND		0.20	mg/L	10	3/13/2012 07:08 PM
Surr: 2,4,6-Tribromophenol	*84.3*		*42-124*	*%REC*	10	3/13/2012 07:08 PM
Surr: 2-Fluorobiphenyl	*101*		*48-120*	*%REC*	10	3/13/2012 07:08 PM
Surr: 2-Fluorophenol	*71.4*		*20-120*	*%REC*	10	3/13/2012 07:08 PM
Surr: 4-Terphenyl-d14	*105*		*51-135*	*%REC*	10	3/13/2012 07:08 PM
Surr: Nitrobenzene-d5	*83.3*		*41-120*	*%REC*	10	3/13/2012 07:08 PM
Surr: Phenol-d6	*81.7*		*20-120*	*%REC*	10	3/13/2012 07:08 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **3/14/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	3/15/2012 07:41 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	3/15/2012 07:41 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	3/15/2012 07:41 AM
2-Butanone	ND		0.20	mg/L	20	3/15/2012 07:41 AM
Benzene	ND		0.10	mg/L	20	3/15/2012 07:41 AM
Carbon tetrachloride	ND		0.10	mg/L	20	3/15/2012 07:41 AM
Chlorobenzene	ND		0.10	mg/L	20	3/15/2012 07:41 AM
Chloroform	ND		0.10	mg/L	20	3/15/2012 07:41 AM
Tetrachloroethene	ND		0.10	mg/L	20	3/15/2012 07:41 AM
Trichloroethene	ND		0.10	mg/L	20	3/15/2012 07:41 AM

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

ALS Environmental

Date: *16-Mar-12*

Client: Navajo Refining Company
Project: Pall Rings
Sample ID: W-7 Pall Rings
Collection Date: 3/7/2012 02:40 PM

Work Order: 1203323
Lab ID: 1203323-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	3/15/2012 07:41 AM
Surr: 1,2-Dichloroethane-d4	*98.2*		*70-125*	*%REC*	20	3/15/2012 07:41 AM
Surr: 4-Bromofluorobenzene	*98.5*		*72-125*	*%REC*	20	3/15/2012 07:41 AM
Surr: Dibromofluoromethane	*98.5*		*71-125*	*%REC*	20	3/15/2012 07:41 AM
Surr: Toluene-d8	*99.5*		*75-125*	*%REC*	20	3/15/2012 07:41 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	3/14/2012 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	3/14/2012 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	3/16/2012 03:00 PM
PH			**SW9045B**			Analyst: **IAB**
pH	**7.44**		**0.100**	**pH Units**	1	3/13/2012 02:00 PM

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

ALS Environmental

Date: 16-Mar-12

Client: Navajo Refining Company

Work Order: 1203323

Project: Pall Rings

QC BATCH REPORT

Batch ID: **59524** Instrument ID **ICPMS03** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-031212-59524** Units: **mg/L** Analysis Date: **3/13/2012 06:30 PM**

Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717112** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW2-031312-59524** Units: **mg/L** Analysis Date: **3/13/2012 06:34 PM**

Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717113** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW2-031312-59524** Units: **mg/L** Analysis Date: **3/13/2012 06:38 PM**

Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717115** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4408	0.050	0.5	0	88.2	80-120	0			
Barium	0.5031	0.050	0.5	0	101	80-120	0			
Cadmium	0.5048	0.020	0.5	0	101	80-120	0			
Chromium	0.4515	0.050	0.5	0	90.3	80-120	0			
Lead	0.5006	0.050	0.5	0	100	80-120	0			
Selenium	0.4304	0.050	0.5	0	86.1	80-120	0			
Silver	0.5003	0.050	0.5	0	100	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **59524** Instrument ID **ICPMS03** Method: **SW1311/6020**

MS Sample ID: **1203303-02AMS** Units: **mg/L** Analysis Date: **3/13/2012 06:56 PM**
Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717120** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4667	0.050	0.5	-0.003869	94.1	75-125	0			
Barium	1.843	0.050	0.5	1.39	90.6	75-125	0			
Cadmium	0.5168	0.020	0.5	0.02682	98	75-125	0			
Chromium	0.4773	0.050	0.5	0.001133	95.2	75-125	0			
Lead	0.4944	0.050	0.5	0.007089	97.5	75-125	0			
Selenium	0.4798	0.050	0.5	-0.007952	97.6	75-125	0			
Silver	0.4655	0.050	0.5	-0.005009	94.1	75-125	0			

MSD Sample ID: **1203303-02AMSD** Units: **mg/L** Analysis Date: **3/13/2012 07:00 PM**
Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717121** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4869	0.050	0.5	-0.003869	98.2	75-125	0.4667	4.24	25	
Barium	1.899	0.050	0.5	1.39	102	75-125	1.843	2.99	25	
Cadmium	0.5388	0.020	0.5	0.02682	102	75-125	0.5168	4.17	25	
Chromium	0.4938	0.050	0.5	0.001133	98.5	75-125	0.4773	3.4	25	
Lead	0.507	0.050	0.5	0.007089	100	75-125	0.4944	2.52	25	
Selenium	0.4906	0.050	0.5	-0.007952	99.7	75-125	0.4798	2.23	25	
Silver	0.4851	0.050	0.5	-0.005009	98	75-125	0.4655	4.12	25	

DUP Sample ID: **1203303-02ADUP** Units: **mg/L** Analysis Date: **3/13/2012 06:47 PM**
Client ID: Run ID: **ICPMS03_120313A** SeqNo: **2717117** Prep Date: **3/13/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	-0.003869	0	25	
Barium	1.299	0.050	0	0	0	0-0	1.39	6.77	25	
Cadmium	0.02424	0.020	0	0	0	0-0	0.02682	10.1	25	
Chromium	ND	0.050	0	0	0	0-0	0.001133	0	25	
Lead	ND	0.050	0	0	0	0-0	0.007089	0	25	
Selenium	ND	0.050	0	0	0	0-0	-0.007952	0	25	
Silver	ND	0.050	0	0	0	0-0	-0.005009	0	25	

The following samples were analyzed in this batch: 1203323-01A

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **59526** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-031312-59526** Units: **mg/L** Analysis Date: **3/13/2012 05:38 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717080** Prep Date: **3/13/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-031212-59526** Units: **mg/L** Analysis Date: **3/13/2012 05:51 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717085** Prep Date: **3/13/2012** 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			

LCS Sample ID: **GLCSW2-031312-59526** Units: **mg/L** Analysis Date: **3/13/2012 05:40 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717081** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00502	0.00020	0.005	0	100	80-120	0			

MS Sample ID: **1203265-01AMS** Units: **mg/L** Analysis Date: **3/13/2012 06:06 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717090** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0051	0.00020	0.005	0.000001	102	75-125	0			

MSD Sample ID: **1203265-01AMSD** Units: **mg/L** Analysis Date: **3/13/2012 06:08 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717095** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0051	0.00020	0.005	0.000001	102	75-125	0.0051	0	20	

DUP Sample ID: **1203265-01ADUP** Units: **mg/L** Analysis Date: **3/13/2012 06:04 PM**
Client ID: Run ID: **MERCURY_120313A** SeqNo: **2717087** Prep Date: **3/13/2012** 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	0.000001	0	20	

The following samples were analyzed in this batch: 1203323-01A

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **59514** Instrument ID **SV-5** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT2-120313-59514** Units: **µg/L** Analysis Date: **3/13/2012 03:22 PM**
Client ID: Run ID: **SV-5_120313A** SeqNo: **2717034** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*86.26*	5.0	*100*	0	*86.3*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*80.89*	5.0	*100*	0	*80.9*	*48-120*	0			
Surr: 2-Fluorophenol	*60.72*	5.0	*100*	0	*60.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*99.35*	5.0	*100*	0	*99.4*	*51-135*	0			
Surr: Nitrobenzene-d5	*81.04*	5.0	*100*	0	*81*	*41-120*	0			
Surr: Phenol-d6	*77.62*	5.0	*100*	0	*77.6*	*20-120*	0			

LCS Sample ID: **SLCST2-120313-59514** Units: **µg/L** Analysis Date: **3/13/2012 02:27 PM**
Client ID: Run ID: **SV-5_120313A** SeqNo: **2717032** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	91.27	5.0	100	0	91.3	52-115	0			
2,4,6-Trichlorophenol	85.06	5.0	100	0	85.1	53-115	0			
2,4-Dinitrotoluene	42.98	5.0	50	0	86	56-115	0			
Cresols, Total	238	15	250	0	95.2	35-115	0			
Hexachlorobenzene	42.72	5.0	50	0	85.4	54-115	0			
Hexachlorobutadiene	41.39	5.0	50	0	82.8	51-115	0			
Hexachloroethane	45.28	5.0	50	0	90.6	54-115	0			
Nitrobenzene	42.09	5.0	50	0	84.2	40-124	0			
Pentachlorophenol	78.82	5.0	100	0	78.8	45-125	0			
Pyridine	25.81	5.0	50	0	51.6	34-115	0			
Surr: 2,4,6-Tribromophenol	*89.72*	5.0	*100*	0	*89.7*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*89.68*	5.0	*100*	0	*89.7*	*48-120*	0			
Surr: 2-Fluorophenol	*81.49*	5.0	*100*	0	*81.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*97.19*	5.0	*100*	0	*97.2*	*51-135*	0			
Surr: Nitrobenzene-d5	*86.72*	5.0	*100*	0	*86.7*	*41-120*	0			
Surr: Phenol-d6	*92.5*	5.0	*100*	0	*92.5*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **59514** Instrument ID **SV-5** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT2-120313-59514** Units: **µg/L** Analysis Date: **3/13/2012 03:00 PM**
Client ID: Run ID: **SV-5_120313A** SeqNo: **2717033** Prep Date: **3/13/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	87.4	5.0	100	0	87.4	52-115	91.27	4.33	25	
2,4,6-Trichlorophenol	81.6	5.0	100	0	81.6	53-115	85.06	4.16	25	
2,4-Dinitrotoluene	46.46	5.0	50	0	92.9	56-115	42.98	7.76	25	
Cresols, Total	238.7	15	250	0	95.5	35-115	238	0.278	25	
Hexachlorobenzene	42.8	5.0	50	0	85.6	54-115	42.72	0.19	25	
Hexachlorobutadiene	41.31	5.0	50	0	82.6	51-115	41.39	0.189	25	
Hexachloroethane	45.33	5.0	50	0	90.7	54-115	45.28	0.103	25	
Nitrobenzene	42.65	5.0	50	0	85.3	40-124	42.09	1.33	25	
Pentachlorophenol	82.29	5.0	100	0	82.3	45-125	78.82	4.3	25	
Pyridine	25.31	5.0	50	0	50.6	34-115	25.81	1.92	25	
Surr: 2,4,6-Tribromophenol	*88.14*	5.0	*100*	0	*88.1*	*42-124*	89.72	*1.78*	*25*	
Surr: 2-Fluorobiphenyl	*85.39*	5.0	*100*	0	*85.4*	*48-120*	89.68	*4.9*	*25*	
Surr: 2-Fluorophenol	*80.81*	5.0	*100*	0	*80.8*	*20-120*	81.49	*0.837*	*25*	
Surr: 4-Terphenyl-d14	*98.34*	5.0	*100*	0	*98.3*	*51-135*	97.19	*1.18*	*25*	
Surr: Nitrobenzene-d5	*86.85*	5.0	*100*	0	*86.9*	*41-120*	86.72	*0.155*	*25*	
Surr: Phenol-d6	*90.98*	5.0	*100*	0	*91*	*20-120*	92.5	*1.65*	*25*	

The following samples were analyzed in this batch: 1203323-01A

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **R124843** Instrument ID **VOA6** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-031412-R124843** Units: **µg/L** Analysis Date: **3/15/2012 04:37 AM**
Client ID: Run ID: **VOA6_120314F** SeqNo: **2719659** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*48.98*	5.0	*50*	0	*98*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.52*	5.0	*50*	0	*99*	*72.4-125*	0			
Surr: Dibromofluoromethane	*49.34*	5.0	*50*	0	*98.7*	*71.2-125*	0			
Surr: Toluene-d8	*50.6*	5.0	*50*	0	*101*	*75-125*	0			

MBLK Sample ID: **MBLKV1-031312-R124843** Units: **µg/L** Analysis Date: **3/15/2012 07:15 AM**
Client ID: Run ID: **VOA6_120314F** SeqNo: **2719663** Prep Date: **3/14/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*981.5*	100	*1000*	0	*98.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*995.8*	100	*1000*	0	*99.6*	*72.4-125*	0			
Surr: Dibromofluoromethane	*983.3*	100	*1000*	0	*98.3*	*71.2-125*	0			
Surr: Toluene-d8	*1000*	100	*1000*	0	*100*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **R124843** Instrument ID **VOA6** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-031412-R124843** Units: **µg/L** Analysis Date: **3/15/2012 03:44 AM**
Client ID: Run ID: **VOA6_120314F** SeqNo: **2719658** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	49.38	5.0	50	0	98.8	73-124	0			
1,2-Dichloroethane	44.94	5.0	50	0	89.9	76-120	0			
1,4-Dichlorobenzene	47.94	5.0	50	0	95.9	70-130	0			
2-Butanone	101.6	10	100	0	102	70-130	0			
Benzene	46.99	5.0	50	0	94	70-128	0			
Carbon tetrachloride	47.41	5.0	50	0	94.8	70-130	0			
Chlorobenzene	47.97	5.0	50	0	95.9	72-127	0			
Chloroform	46.78	5.0	50	0	93.6	70-130	0			
Tetrachloroethene	48.88	5.0	50	0	97.8	70-130	0			
Trichloroethene	48.47	5.0	50	0	96.9	72-129	0			
Vinyl chloride	46.37	2.0	50	0	92.7	70-130	0			
Surr: 1,2-Dichloroethane-d4	*46.36*	5.0	*50*	0	*92.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.7*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*48.78*	5.0	*50*	0	*97.6*	*71-125*	0			
Surr: Toluene-d8	*49.89*	5.0	*50*	0	*99.8*	*75-125*	0			

MS Sample ID: **1203297-08ZMS** Units: **µg/L** Analysis Date: **3/15/2012 05:56 AM**
Client ID: Run ID: **VOA6_120314F** SeqNo: **2719661** Prep Date: DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	21760	2,500	25000	0	87	73-124	0			
1,2-Dichloroethane	21270	2,500	25000	0	85.1	76-120	0			
1,4-Dichlorobenzene	21810	2,500	25000	0	87.2	70-130	0			
2-Butanone	50640	5,000	50000	0	101	70-130	0			
Benzene	29990	2,500	25000	8458	86.1	70-128	0			
Carbon tetrachloride	21090	2,500	25000	0	84.4	70-130	0			
Chlorobenzene	22190	2,500	25000	0	88.8	72-127	0			
Chloroform	21900	2,500	25000	0	87.6	70-130	0			
Tetrachloroethene	21210	2,500	25000	0	84.9	70-130	0			
Trichloroethene	22080	2,500	25000	0	88.3	72-129	0			
Vinyl chloride	20830	1,000	25000	0	83.3	70-130	0			
Surr: 1,2-Dichloroethane-d4	*23840*	2,500	*25000*	0	*95.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*25190*	2,500	*25000*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*24510*	2,500	*25000*	0	*98*	*71-125*	0			
Surr: Toluene-d8	*24880*	2,500	*25000*	0	*99.5*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **R124843** Instrument ID **VOA6** Method: **SW1311/8260B**

MSD Sample ID: **1203297-08ZMSD** Units: **µg/L** Analysis Date: **3/15/2012 06:22 AM**

Client ID: Run ID: **VOA6_120314F** SeqNo: **2719662** Prep Date: DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	21170	2,500	25000	0	84.7	73-124	21760	2.73	20	
1,2-Dichloroethane	20950	2,500	25000	0	83.8	76-120	21270	1.5	20	
1,4-Dichlorobenzene	22300	2,500	25000	0	89.2	70-130	21810	2.22	20	
2-Butanone	46390	5,000	50000	0	92.8	70-130	50640	8.75	20	
Benzene	29710	2,500	25000	8458	85	70-128	29990	0.958	20	
Carbon tetrachloride	20750	2,500	25000	0	83	70-130	21090	1.61	20	
Chlorobenzene	22440	2,500	25000	0	89.7	72-127	22190	1.08	20	
Chloroform	21440	2,500	25000	0	85.8	70-130	21900	2.12	20	
Tetrachloroethene	21460	2,500	25000	0	85.9	70-130	21210	1.17	20	
Trichloroethene	21960	2,500	25000	0	87.9	72-129	22080	0.527	20	
Vinyl chloride	20240	1,000	25000	0	81	70-130	20830	2.87	20	
Surr: 1,2-Dichloroethane-d4	*23130*	2,500	*25000*	0	*92.5*	*70-125*	23840	*3.03*	*20*	
Surr: 4-Bromofluorobenzene	*24930*	2,500	*25000*	0	*99.7*	*72-125*	25190	*1.02*	*20*	
Surr: Dibromofluoromethane	*23980*	2,500	*25000*	0	*95.9*	*71-125*	24510	*2.18*	*20*	
Surr: Toluene-d8	*24740*	2,500	*25000*	0	*99*	*75-125*	24880	*0.561*	*20*	

The following samples were analyzed in this batch: 1203323-01A

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **R124769** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCS-031312-R124769** Units: **pH Units** Analysis Date: **3/13/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120313K** SeqNo: **2718001** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.1	0.10	6	0	102	90-110	0			

DUP Sample ID: **1203331-01ADUP** Units: **pH Units** Analysis Date: **3/13/2012 02:00 PM**
Client ID: Run ID: **WETCHEM_120313K** SeqNo: **2718008** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	4.19	0.10	0	4.18	0	0-0	4.18	0.239	20	

The following samples were analyzed in this batch: 1203323-01A

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

Client: Navajo Refining Company
Work Order: 1203323
Project: Pall Rings

QC BATCH REPORT

Batch ID: **R124899** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1203389-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **3/16/2012 03:00 PM**

Client ID: Run ID: **WETCHEM_120316F** SeqNo: **2720723** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	10	0	0	0	0		10	0		

The following samples were analyzed in this batch: 1203323-01A

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

Client: Navajo Refining Company
Project: Pall Rings
WorkOrder: 1203323

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
;urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **10-Mar-12 08:55**

Work Order: **1203323** Received by: **RDH**

Checklist completed by Robert D. Harris (eSignature) 10-Mar-12 (Date) Reviewed by: Chris Bryson (eSignature) 12-Mar-12 (Date)

Matrices: solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4c	002	
Cooler(s)/Kit(s):	1502		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip blank logged into WO-1203329.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

☑ ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1203323

NAVAJO REFINING: Navajo Refining Company

Project: Pall Rings

ALS Project Manager: Chris Bryson

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Pall Rings	A	TCLP Volitiles
Work Order		Project Number		B	TCLP Semi-Volitiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	R.C.I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	Aaron.Strange@hollyfrontier.com	e-Mail Address	Aaron.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W-7 Pall Rings	3/7/12	14:40	scale	None	2	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign
Aaron Strange

Shipment Method: FedEx

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Aaron Strange	3-8-12	16:15		
Relinquished by:	Date:	Time:	Received by (Laboratory): 3/10/12	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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120552

ORIGIN ID: ROWA (575) 748-3311
CARRIE GREENWOOD
NAVAJO REFINING
501 E. MAIN STREET

ARTESIA , NM 882109440
UNITED STATES US

SHIP DATE: 08MAR12
ACTWGT: 50.0 LB MAN
CAD: 634483/CAFE2511

BILL RECIPIENT

TO CHRIS BRYSON
ALS LABORATORY GROUP
10450 STANCLIFF RD., SUITE 210

HOUSTON TX 77099
(281) 530-5656 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 4967 8856 3117

FRI - 09 MAR A2
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

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

CUST ODY SEAL

Date: 3-8-12
Time: 16:15
Name: Karen S.
Company: Navajo Refining Co.

Seal Broken
Date:

ALS Group USA, Corp

Date: 16-Mar-12

Client: ALS Environmental
Project: 1203323
Work Order: **1203368**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1203368-01	1203323-01B	Solid		3/7/2012 14:40	3/13/2012 11:30	☐

ALS Group USA, Corp

Date: 16-Mar-12

Client: ALS Environmental
Project: 1203323
WorkOrder: **1203368**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *16-Mar-12*

Client: ALS Environmental
Project: 1203323
Work Order: 1203368
Sample ID: 1203323-01B
Lab ID: 1203368-01
Collection Date: 3/7/2012 02:40 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **NZ**
Cyanide, Reactive	ND		40.0	mg/Kg	1	3/14/2012 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **NZ**
Sulfide, Reactive	ND		40.0	mg/Kg	1	3/14/2012 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 16-Mar-12

Client: ALS Environmental
Work Order: 1203368
Project: 1203323

QC BATCH REPORT

Batch ID: **R102360** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-120314-R102360** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**

Client ID: Run ID: **WETCHEM_120314H** SeqNo: **1923333** 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: 1203368-01A

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

Client: ALS Environmental
Work Order: 1203368
Project: 1203323

QC BATCH REPORT

Batch ID: **R102361** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-120314-R102361** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923335** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-120314-R102361** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923336** 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: **WLCSDW1-120314-R102361** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923340** 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: **1203322-01A MS** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923338** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD Sample ID: **1203322-01A MSD** Units: **mg/Kg** Analysis Date: **3/14/2012 12:30 PM**
Client ID: Run ID: **WETCHEM_120314I** SeqNo: **1923339** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch: 1203368-01A

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

1203368

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 10-Mar-12
COC ID: 11594
Due Date: 16-Mar-12

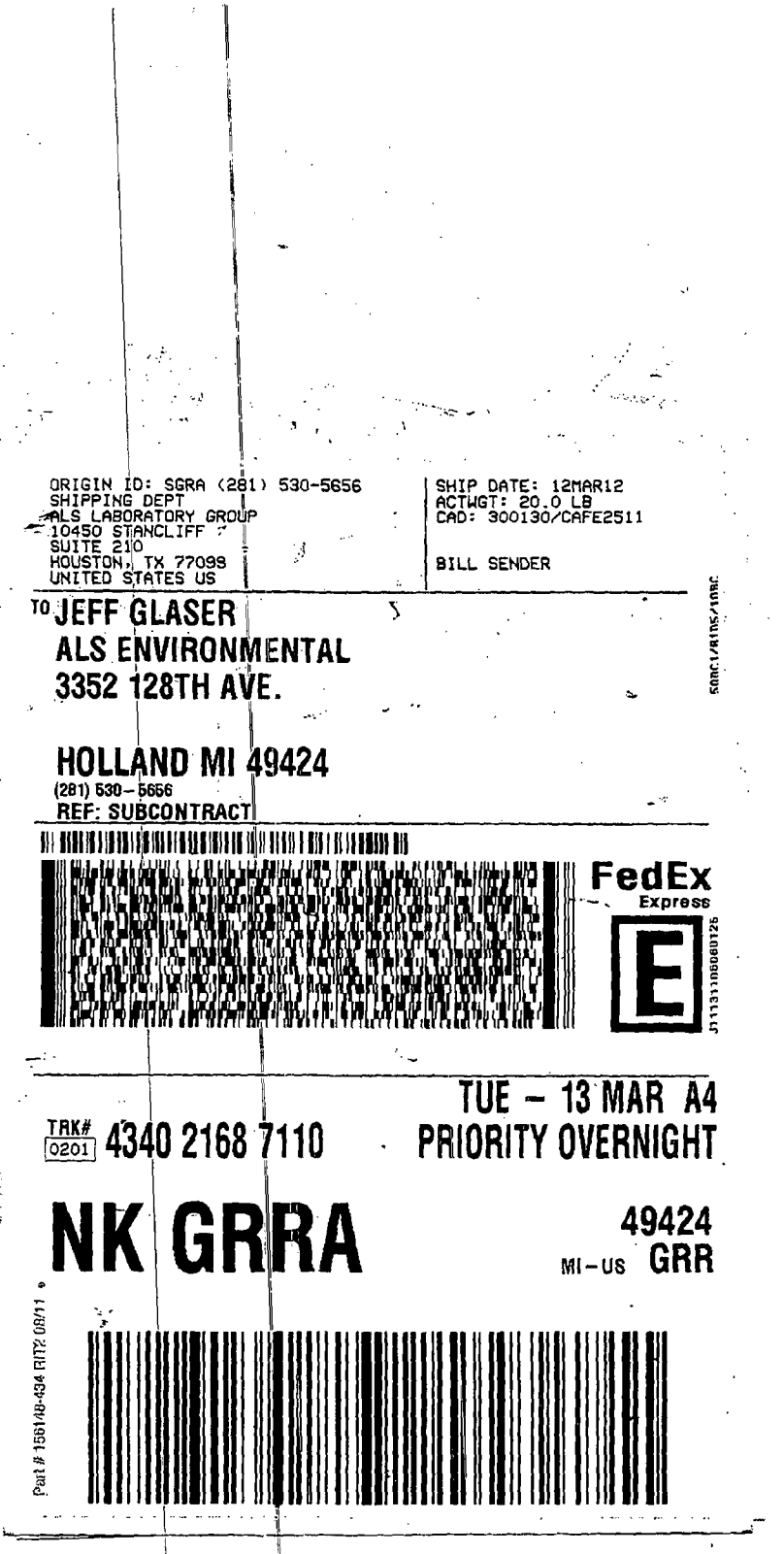
Salesperson: Jeffrey L Croston

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1203323	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	Chris Bryson	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsglobal.com	eMail CC	mary.knowles@alsglobal.com	J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1203323-01B (W-7 Pall Rings)	Solid	7/Mar/2012 14:40	(1) 4OZGNEAT	X	X								

Comments:
Please analyze for Reactive Cyanide & Reactive Sulfide. Report is due on 3/16/12. Send report to Chris Bryson, chris.bryson@alsglobal.com, and CC: results to Mary Knowles, mary.knowles@alsglobal.com and Y-Van Ty, yvan.ty@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
				3.8°C	Std
[signature]	[illegible]	[signature]	3/13/12 1130		



ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 12MAR12
ACTWGT: 20.0 LB
CAD: 300130/CAFE2511

BILL SENDER

TO JEFF GLASER
ALS ENVIRONMENTAL
3352 128TH AVE.

HOLLAND MI 49424
(281) 530-5656
REF: SUBCONTRACT

FedEx Express

TRK# 0201 4340 2168 7110

TUE - 13 MAR A4
PRIORITY OVERNIGHT

NK GRRA

49424
MI-US GRR

Part # 156148-434 RITE 08/11

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Friday, February 24, 2012 9:19 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Strange, Aaron; Les Elliott
Subject: FW: Request for non-haz waste disposal--FCC cat fines spill cleanup
Attachments: 3345_001.pdf; 1202180 FCC Scrubber Water Spill Final.pdf

Sorry; I forgot to attach the analyticals. Please see the attachment.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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From: Combs, Robert
Sent: Friday, February 24, 2012 8:24 AM
To: 'Kim Flowers'; 'Chavez, Carl J, EMNRD'
Cc: Strange, Aaron; 'Les Elliott'
Subject: Request for non-haz waste disposal--FCC cat fines spill cleanup

Kim,
Please see the attached Profile form and C-138 for the spill cleanup excavation of our FCC cat fines and scrubber water. The analytical results are also attached (ALS sample ID 1202180-01).
Please let me know by email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	excavation soil--FCC cat fines/scrubber water spill clean up
ESTIMATED VOLUME:	100 cy
GENERATING PROCESS:	FCC flue gas scrubber/cat fines collection bins
REMARKS:	see attached ALS report, lab sample ID# 1202180-01
NMOCD FACILITY:	CRI/R360
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 2/23/2012

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Excavation soil from FCC cat fines spill (scrubber water stream).
Please see the attached analytical data from ALS:
Work order: 1202180 Sample ID: 1202180-01

Estimated Volume 100 yds^3 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

14-Feb-2012

Robert Combs
Navajo Refining Company
PO Box 159
Artesia, NM 88211

Tel: (575) 748-6733
Fax: (575) 746-5421

Re: FCC Scrubber Water Spill Work Order: **1202180**

Dear Robert,

ALS Environmental received 2 samples on 04-Feb-2012 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 40.

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

Sincerely,

Chris Bryson

Electronically approved by: Yvan K. Ty

Chris Bryson
Project Manager

NELAP ACCREDITED TNI LABORATORY

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 14-Feb-12

Client: Navajo Refining Company
Project: FCC Scrubber Water Spill
Work Order: **1202180**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1202180-01	Disposal	Soil		2/3/2012 14:10	2/4/2012 09:30	☐
1202180-02	Bottom Hole	Soil		2/3/2012 14:15	2/4/2012 09:30	☐

ALS Environmental *Date: 14-Feb-12*

Client:	Navajo Refining Company
Project:	FCC Scrubber Water Spill
Work Order:	1202180

Case Narrative

Batch 58781, Mercury, Sample 1202166-06 : MS/MSD is for an unrelated sample.

Batch 58793, Metals, Sample 1202166-14 : MS/MSD is for an unrelated sample.

Batch 58768, TCL Semivolatile Organics, Insufficient sample to perform MS/MSD.

Batch 58872, Anions, Sample Bottom Hole : MSD recovery was below the control limits for Manganese due to high concentration to the background sample. Results are flagged with an O. The associated LCS recoveries and MS/MSD RPD were within the control limits.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group, Inc. in Holland, MI.

ALS Environmental

Date: *14-Feb-12*

Client: Navajo Refining Company
Project: FCC Scrubber Water Spill
Sample ID: Disposal
Collection Date: 2/3/2012 02:10 PM

Work Order: 1202180
Lab ID: 1202180-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **2/7/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	2/7/2012 08:58 PM
TCLP METALS			**SW1311/6020**		Prep Date: **2/7/2012**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	2/9/2012 03:12 AM
Barium	**0.136**		**0.0500**	**mg/L**	10	2/9/2012 03:12 AM
Cadmium	ND		0.0200	mg/L	10	2/9/2012 03:12 AM
Chromium	ND		0.0500	mg/L	10	2/9/2012 03:12 AM
Lead	ND		0.0500	mg/L	10	2/9/2012 03:12 AM
Selenium	**0.0502**		**0.0500**	**mg/L**	10	2/9/2012 03:12 AM
Silver	ND		0.0500	mg/L	10	2/9/2012 03:12 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **2/8/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
Cresols, Total	ND		0.015	mg/L	1	2/8/2012 09:39 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
Hexachloroethane	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
Nitrobenzene	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
Pentachlorophenol	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
Pyridine	ND		0.0050	mg/L	1	2/8/2012 09:39 PM
Surr: 2,4,6-Tribromophenol	*65.8*		*42-124*	*%REC*	1	2/8/2012 09:39 PM
Surr: 2-Fluorobiphenyl	*64.4*		*48-120*	*%REC*	1	2/8/2012 09:39 PM
Surr: 2-Fluorophenol	*55.8*		*20-120*	*%REC*	1	2/8/2012 09:39 PM
Surr: 4-Terphenyl-d14	*72.5*		*51-135*	*%REC*	1	2/8/2012 09:39 PM
Surr: Nitrobenzene-d5	*65.7*		*41-120*	*%REC*	1	2/8/2012 09:39 PM
Surr: Phenol-d6	*67.3*		*20-120*	*%REC*	1	2/8/2012 09:39 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **2/7/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	2/8/2012 04:26 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	2/8/2012 04:26 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	2/8/2012 04:26 AM
2-Butanone	ND		0.20	mg/L	20	2/8/2012 04:26 AM
Benzene	ND		0.10	mg/L	20	2/8/2012 04:26 AM
Carbon tetrachloride	ND		0.10	mg/L	20	2/8/2012 04:26 AM
Chlorobenzene	ND		0.10	mg/L	20	2/8/2012 04:26 AM
Chloroform	ND		0.10	mg/L	20	2/8/2012 04:26 AM
Tetrachloroethene	ND		0.10	mg/L	20	2/8/2012 04:26 AM
Trichloroethene	ND		0.10	mg/L	20	2/8/2012 04:26 AM

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

ALS Environmental

Date: *14-Feb-12*

Client: Navajo Refining Company
Project: FCC Scrubber Water Spill
Work Order: 1202180
Sample ID: Disposal
Lab ID: 1202180-01
Collection Date: 2/3/2012 02:10 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.040	mg/L	20	2/8/2012 04:26 AM
Surr: 1,2-Dichloroethane-d4	*91.6*		*70-125*	*%REC*	20	2/8/2012 04:26 AM
Surr: 4-Bromofluorobenzene	*90.7*		*72-125*	*%REC*	20	2/8/2012 04:26 AM
Surr: Dibromofluoromethane	*98.4*		*71-125*	*%REC*	20	2/8/2012 04:26 AM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	20	2/8/2012 04:26 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
ReactiveCyanide	ND		40.0	mg/Kg	1	2/9/2012 10:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	2/9/2012 10:00 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	2/9/2012 04:20 PM
PH			**SW9045B**			Analyst: **CMC**
pH	**7.87**		**0.100**	**pH Units**	1	2/9/2012 02:45 PM

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

ALS Environmental

Date: *14-Feb-12*

Client: Navajo Refining Company
Project: FCC Scrubber Water Spill
Sample ID: Bottom Hole
Collection Date: 2/3/2012 02:15 PM

Work Order: 1202180
Lab ID: 1202180-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	**0.0036**		**0.0010**	**mg/Kg**	1	2/6/2012 06:20 PM
Toluene	ND		0.0010	mg/Kg	1	2/6/2012 06:20 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	2/6/2012 06:20 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	2/6/2012 06:20 PM
Surr: 4-Bromofluorobenzene	*112*		*75-131*	*%REC*	1	2/6/2012 06:20 PM
Surr: Trifluorotoluene	*102*		*73-130*	*%REC*	1	2/6/2012 06:20 PM
MERCURY - SW7471B			**SW7471A**		Prep Date: **2/9/2012**	Analyst: **JCJ**
Mercury	**0.0103**		**0.00348**	**mg/Kg**	1	2/9/2012 03:57 PM
METALS			**SW6020**		Prep Date: **2/9/2012**	Analyst: **IGF**
Aluminum	**6,420**		**89.0**	**mg/Kg**	100	2/13/2012 03:06 PM
Arsenic	**3.16**	0.16 mg/L	**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Barium	**90.3**	4.5 mg/L	**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Beryllium	ND		0.445	mg/Kg	1	2/10/2012 04:58 AM
Boron	**6.03**	0.3 mg/L	**2.22**	**mg/Kg**	1	2/10/2012 04:58 AM
Cadmium	ND		0.445	mg/Kg	1	2/10/2012 04:58 AM
Calcium	**75,200**		**445**	**mg/Kg**	10	2/10/2012 04:15 PM
Chromium	**6.75**	0.34 mg/L	**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Cobalt	**2.90**	0.15 mg/L	**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Copper	**15.4**		**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Iron	**4,570**	229 mg/L	**44.5**	**mg/Kg**	1	2/10/2012 04:58 AM
Lead	**19.6**	0.98 mg/L	**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Magnesium	**7,870**	394 mg/L	**44.5**	**mg/Kg**	1	2/10/2012 04:58 AM
Manganese	**203**	10 mg/L	**4.45**	**mg/Kg**	10	2/10/2012 04:15 PM
Molybdenum	**1.48**		**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Nickel	**5.65**	0.28 mg/L	**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Potassium	**1,480**		**44.5**	**mg/Kg**	1	2/10/2012 04:58 AM
Selenium	**1.27**	0.6 mg/L	**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Silver	ND		0.445	mg/Kg	1	2/10/2012 04:58 AM
Sodium	**2,210**	0.65 mg/L	**44.5**	**mg/Kg**	1	2/10/2012 04:58 AM
Vanadium	**13.0**		**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
Zinc	**18.1**	0.9 mg/L	**0.445**	**mg/Kg**	1	2/10/2012 04:58 AM
ANIONS - EPA 300.0 (1993)			**E300**		Prep Date: **2/12/2012**	Analyst: **JKP**
Chloride	**106**		**4.79**	**mg/Kg**	1	2/12/2012 11:06 PM
Sulfate	**3,260**	163 mg/L	**47.9**	**mg/Kg**	10	2/13/2012 10:51 AM
Surr: Selenate (surr)	*108*		*85-115*	*%REC*	10	2/13/2012 10:51 AM
Surr: Selenate (surr)	*114*		*85-115*	*%REC*	1	2/12/2012 11:06 PM
PHENOLICS			**SW9065**		Prep Date: **2/10/2012**	Analyst: **IAB**

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

ALS Environmental

Date: *14-Feb-12*

Client: Navajo Refining Company
Project: FCC Scrubber Water Spill
Work Order: 1202180
Sample ID: Bottom Hole
Lab ID: 1202180-02
Collection Date: 2/3/2012 02:15 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Phenolics, Total Recoverable	ND		2.50	mg/Kg	1	2/10/2012 01:00 PM

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

ALS Environmental

Date: 14-Feb-12

Client: Navajo Refining Company

Work Order: 1202180

Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **R122926** Instrument ID: **BTEX3** Method: **SW8021B**

MBLK Sample ID: **BBLKS1-120206-R122926** Units: **µg/Kg** Analysis Date: **2/6/2012 01:43 PM**

Client ID: Run ID: **BTEX3_120206A** SeqNo: **2677708** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*31.92*	1.0	*30*	0	*106*	*75-131*	0			
Surr: Trifluorotoluene	*31.48*	1.0	*30*	0	*105*	*73-130*	0			

LCS Sample ID: **BLCSS1-120206-R122926** Units: **µg/Kg** Analysis Date: **2/6/2012 01:07 PM**

Client ID: Run ID: **BTEX3_120206A** SeqNo: **2677704** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.72	1.0	20	0	98.6	74-129	0			
Toluene	18.62	1.0	20	0	93.1	75-128	0			
Ethylbenzene	17.56	1.0	20	0	87.8	73-127	0			
Xylenes, Total	52.56	3.0	60	0	87.6	74-127	0			
Surr: 4-Bromofluorobenzene	*32.42*	1.0	*30*	0	*108*	*75-131*	0			
Surr: Trifluorotoluene	*31.57*	1.0	*30*	0	*105*	*73-130*	0			

LCSD Sample ID: **BLCSDS1-120206-R122926** Units: **µg/Kg** Analysis Date: **2/6/2012 01:25 PM**

Client ID: Run ID: **BTEX3_120206A** SeqNo: **2677706** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.64	1.0	20	0	98.2	74-129	19.72	0.414	30	
Toluene	18.82	1.0	20	0	94.1	75-128	18.62	1.08	30	
Ethylbenzene	17.91	1.0	20	0	89.5	73-127	17.56	1.94	30	
Xylenes, Total	53.73	3.0	60	0	89.5	74-127	52.56	2.2	30	
Surr: 4-Bromofluorobenzene	*30.5*	1.0	*30*	0	*102*	*75-131*	32.42	*6.09*	*30*	
Surr: Trifluorotoluene	*29.56*	1.0	*30*	0	*98.5*	*73-130*	31.57	*6.58*	*30*	

MS Sample ID: **1202172-03AMS** Units: **µg/Kg** Analysis Date: **2/6/2012 02:53 PM**

Client ID: Run ID: **BTEX3_120206A** SeqNo: **2677712** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.36	1.0	20	6.21	80.7	74-129	0			
Toluene	20.54	1.0	20	3.422	85.6	75-128	0			
Ethylbenzene	19.47	1.0	20	0.7269	93.7	73-127	0			
Xylenes, Total	59.06	3.0	60	5.19	89.8	74-127	0			
Surr: 4-Bromofluorobenzene	*33.31*	1.0	*30*	0	*111*	*75-131*	0			
Surr: Trifluorotoluene	*31.47*	1.0	*30*	0	*105*	*73-130*	0			

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **R122926** Instrument ID: **BTEX3** Method: **SW8021B**

MSD Sample ID: **1202172-03AMSD** Units: **µg/Kg** Analysis Date: **2/6/2012 02:36 PM**

Client ID: Run ID: **BTEX3_120206A** SeqNo: **2677711** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	25.35	1.0	20	6.21	95.7	74-129	22.36	12.6	30	
Toluene	21.21	1.0	20	3.422	88.9	75-128	20.54	3.23	30	
Ethylbenzene	17.79	1.0	20	0.7269	85.3	73-127	19.47	9.04	30	
Xylenes, Total	55.89	3.0	60	5.19	84.5	74-127	59.06	5.51	30	
Surr: 4-Bromofluorobenzene	*33.65*	1.0	*30*	0	*112*	*75-131*	33.31	*1.03*	*30*	
Surr: Trifluorotoluene	*31.83*	1.0	*30*	0	*106*	*73-130*	31.47	*1.13*	*30*	

The following samples were analyzed in this batch: 1202180-02A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58755** Instrument ID: **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW4-020712-58755** Units: **mg/L** Analysis Date: **2/7/2012 08:28 PM**
Client ID: Run ID: **MERCURY_120207A** SeqNo: **2680130** Prep Date: **2/7/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-020612-58755** Units: **mg/L** Analysis Date: **2/7/2012 08:40 PM**
Client ID: Run ID: **MERCURY_120207A** SeqNo: **2680136** Prep Date: **2/7/2012** 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			

LCS Sample ID: **GLCSW4-020712-58755** Units: **mg/L** Analysis Date: **2/7/2012 08:30 PM**
Client ID: Run ID: **MERCURY_120207A** SeqNo: **2680131** Prep Date: **2/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00496	0.00020	0.005	0	99.2	80-120	0			

MS Sample ID: **1202169-02AMS** Units: **mg/L** Analysis Date: **2/7/2012 08:36 PM**
Client ID: Run ID: **MERCURY_120207A** SeqNo: **2680134** Prep Date: **2/7/2012** 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	-0.000015	99.3	75-125	0	0	0	

MSD Sample ID: **1202169-02AMSD** Units: **mg/L** Analysis Date: **2/7/2012 08:38 PM**
Client ID: Run ID: **MERCURY_120207A** SeqNo: **2680135** Prep Date: **2/7/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00494	0.00020	0.005	-0.000015	99.1	75-125	0.00495	0.202	20	

DUP Sample ID: **1202169-02ADUP** Units: **mg/L** Analysis Date: **2/7/2012 08:34 PM**
Client ID: Run ID: **MERCURY_120207A** SeqNo: **2680133** Prep Date: **2/7/2012** 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	-0.000015	0	20	

The following samples were analyzed in this batch: 1202180-01A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58760** Instrument ID: **ICP7500** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-020612-58760** Units: **mg/L** Analysis Date: **2/8/2012 01:12 PM**
Client ID: Run ID: **ICP7500_120207A** SeqNo: **2680991** Prep Date: **2/7/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	0.02146	0.050								J
Silver	ND	0.050								

MBLK Sample ID: **MBLKW3-020712-58760** Units: **mg/L** Analysis Date: **2/8/2012 01:18 PM**
Client ID: Run ID: **ICP7500_120207A** SeqNo: **2680993** Prep Date: **2/7/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	0.01324	0.050								J
Silver	ND	0.050								

MBLK Sample ID: **MBLKT2-020612-58760** Units: **mg/L** Analysis Date: **2/9/2012 01:45 AM**
Client ID: Run ID: **ICP7500_120207A** SeqNo: **2682035** Prep Date: **2/7/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	0.01488	0.050								J
Silver	ND	0.050								

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58760** Instrument ID: **ICP7500** Method: **SW1311/6020**

LCS Sample ID: **MLCSW3-020712-58760** Units: **mg/L** Analysis Date: **2/8/2012 01:24 PM**
Client ID: Run ID: **ICP7500_120207A** SeqNo: **2680995** Prep Date: **2/7/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4302	0.050	0.5	0	86	80-120	0			
Barium	0.4412	0.050	0.5	0	88.2	80-120	0			
Cadmium	0.4628	0.020	0.5	0	92.6	80-120	0			
Chromium	0.4408	0.050	0.5	0	88.2	80-120	0			
Lead	0.4409	0.050	0.5	0	88.2	80-120	0			
Selenium	0.4546	0.050	0.5	0	90.9	80-120	0			
Silver	0.446	0.050	0.5	0	89.2	80-120	0			

MS Sample ID: **1202169-02AMS** Units: **mg/L** Analysis Date: **2/8/2012 05:03 PM**
Client ID: Run ID: **ICP7500_120207A** SeqNo: **2681226** Prep Date: **2/7/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5573	0.050	0.5	0.000504	111	75-125	0			
Barium	0.6735	0.050	0.5	0.1601	103	75-125	0			
Cadmium	0.5268	0.020	0.5	0.002317	105	75-125	0			
Chromium	0.5234	0.050	0.5	-0.007649	106	75-125	0			
Lead	0.5028	0.050	0.5	0.001722	100	75-125	0			
Selenium	0.5414	0.050	0.5	-0.01789	112	75-125	0			
Silver	0.4786	0.050	0.5	-0.002231	96.2	75-125	0			

MSD Sample ID: **1202169-02AMSD** Units: **mg/L** Analysis Date: **2/8/2012 05:28 PM**
Client ID: Run ID: **ICP7500_120207A** SeqNo: **2681229** Prep Date: **2/7/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5889	0.050	0.5	0.000504	118	75-125	0.5573	5.51	25	
Barium	0.7071	0.050	0.5	0.1601	109	75-125	0.6735	4.87	25	
Cadmium	0.5496	0.020	0.5	0.002317	109	75-125	0.5268	4.24	25	
Chromium	0.555	0.050	0.5	-0.007649	113	75-125	0.5234	5.86	25	
Lead	0.5232	0.050	0.5	0.001722	104	75-125	0.5028	3.98	25	
Selenium	0.5604	0.050	0.5	-0.01789	116	75-125	0.5414	3.45	25	
Silver	0.4904	0.050	0.5	-0.002231	98.5	75-125	0.4786	2.44	25	

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58760** Instrument ID: **ICP7500** Method: **SW1311/6020**

DUP Sample ID: **1202169-02ADUP** Units: **mg/L** Analysis Date: **2/8/2012 04:57 PM**

Client ID: Run ID: **ICP7500_120207A** SeqNo: **2681225** Prep Date: **2/7/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.000504	0	25	
Barium	0.1591	0.050	0	0	0	0-0	0.1601	0.627	25	
Cadmium	ND	0.020	0	0	0	0-0	0.002317	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.007649	0	25	
Lead	ND	0.050	0	0	0	0-0	0.001722	0	25	
Selenium	ND	0.050	0	0	0	0-0	-0.01789	0	25	
Silver	ND	0.050	0	0	0	0-0	-0.002231	0	25	

The following samples were analyzed in this batch: 1202180-01A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58781** Instrument ID: **HG02** Method: **SW7471A**

MBLK Sample ID: **GBLKS2-020912-58781** Units: **µg/Kg** Analysis Date: **2/9/2012 02:59 PM**
Client ID: Run ID: **HG02_120209A** SeqNo: **2682708** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	3.3								

LCS Sample ID: **GLCSS2-020912-58781** Units: **µg/Kg** Analysis Date: **2/9/2012 03:01 PM**
Client ID: Run ID: **HG02_120209A** SeqNo: **2682709** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	312.7	3.3	333.3	0	93.8	85-115	0			

MS Sample ID: **1202166-06BMS** Units: **µg/Kg** Analysis Date: **2/9/2012 03:10 PM**
Client ID: Run ID: **HG02_120209A** SeqNo: **2682712** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	297.7	3.6	360.4	0	82.6	85-115	0			S

MSD Sample ID: **1202166-06BMSD** Units: **µg/Kg** Analysis Date: **2/9/2012 03:12 PM**
Client ID: Run ID: **HG02_120209A** SeqNo: **2682713** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	297.5	3.6	358.4	0	83	85-115	297.7	0.056	20	S

DUP Sample ID: **1202166-06BDUP** Units: **µg/Kg** Analysis Date: **2/9/2012 03:08 PM**
Client ID: Run ID: **HG02_120209A** SeqNo: **2682711** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	3.6	0	0	0		0	0	20	

The following samples were analyzed in this batch: 1202180-02A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58793** Instrument ID: **ICPMS04** Method: **SW6020**

MBLK Sample ID: **MBLKS1-020912-58793** Units: **mg/Kg** Analysis Date: **2/10/2012 04:26 AM**

Client ID: Run ID: **ICPMS04_120209A** SeqNo: **2683257** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.4916	1.0								J
Arsenic	ND	0.50								
Barium	ND	0.50								
Beryllium	ND	0.50								
Boron	ND	2.5								
Cadmium	ND	0.50								
Calcium	ND	50								
Chromium	ND	0.50								
Cobalt	ND	0.50								
Copper	ND	0.50								
Iron	ND	50								
Lead	ND	0.50								
Magnesium	ND	50								
Manganese	ND	0.50								
Molybdenum	ND	0.50								
Nickel	ND	0.50								
Potassium	ND	50								
Selenium	ND	0.50								
Silver	ND	0.50								
Sodium	ND	50								
Vanadium	ND	0.50								
Zinc	ND	0.50								

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58793** Instrument ID: **ICPMS04** Method: **SW6020**

LCS Sample ID: **MLCSS1-020912-58793** Units: **mg/Kg** Analysis Date: **2/10/2012 04:33 AM**

Client ID: Run ID: **ICPMS04_120209A** SeqNo: **2683258** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	8.077	1.0	10	0	80.8	80-120	0			
Arsenic	9.042	0.50	10	0	90.4	80-120	0			
Barium	9.665	0.50	10	0	96.6	80-120	0			
Beryllium	9.984	0.50	10	0	99.8	80-120	0			
Boron	52.05	2.5	50	0	104	80-120	0			
Cadmium	9.793	0.50	10	0	97.9	80-120	0			
Calcium	892.8	50	1000	0	89.3	80-120	0			
Chromium	9.3	0.50	10	0	93	80-120	0			
Cobalt	9.321	0.50	10	0	93.2	80-120	0			
Copper	9.211	0.50	10	0	92.1	80-120	0			
Iron	935.1	50	1000	0	93.5	80-120	0			
Lead	9.769	0.50	10	0	97.7	80-120	0			
Magnesium	813.6	50	1000	0	81.4	80-120	0			
Manganese	8.974	0.50	10	0	89.7	80-120	0			
Molybdenum	8.928	0.50	10	0	89.3	80-120	0			
Nickel	8.898	0.50	10	0	89	80-120	0			
Potassium	829.7	50	1000	0	83	80-120	0			
Selenium	8.74	0.50	10	0	87.4	80-120	0			
Silver	8.635	0.50	10	0	86.3	80-120	0			
Sodium	810.4	50	1000	0	81	80-120	0			
Vanadium	9.157	0.50	10	0	91.6	80-120	0			
Zinc	9.018	0.50	10	0	90.2	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58793** Instrument ID: **ICPMS04** Method: **SW6020**

MS Sample ID: **1202166-14BMS** Units: **mg/Kg** Analysis Date: **2/10/2012 06:10 AM**
Client ID: Run ID: **ICPMS04_120209A** SeqNo: **2683273** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	3993	0.90	8.949	4045	-584	75-125	0			SEO
Arsenic	10.01	0.45	8.949	2.327	85.9	75-125	0			
Barium	17.69	0.45	8.949	9.504	91.5	75-125	0			
Beryllium	9.44	0.45	8.949	0.5666	99.2	75-125	0			
Boron	44.94	2.2	44.74	1.407	97.3	75-125	0			
Cadmium	8.169	0.45	8.949	0.006646	91.2	75-125	0			
Calcium	2030	45	894.9	1297	82	75-125	0			
Chromium	13.81	0.45	8.949	4.765	101	75-125	0			
Cobalt	10.9	0.45	8.949	3.043	87.8	75-125	0			
Copper	10.22	0.45	8.949	2.266	88.9	75-125	0			
Iron	6789	45	894.9	6070	80.4	75-125	0			O
Lead	13.39	0.45	8.949	5.095	92.7	75-125	0			
Magnesium	1507	45	894.9	815.8	77.2	75-125	0			
Manganese	36.58	0.45	8.949	28.56	89.6	75-125	0			
Molybdenum	8.018	0.45	8.949	0.203	87.3	75-125	0			
Nickel	11.99	0.45	8.949	4.418	84.6	75-125	0			
Potassium	979.5	45	894.9	233.9	83.3	75-125	0			
Selenium	8.471	0.45	8.949	0.7297	86.5	75-125	0			
Silver	7.619	0.45	8.949	0.001184	85.1	75-125	0			
Sodium	791	45	894.9	74.15	80.1	75-125	0			
Vanadium	25.65	0.45	8.949	16.23	105	75-125	0			
Zinc	11.98	0.45	8.949	4.362	85.2	75-125	0			

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58793** Instrument ID: **ICPMS04** Method: **SW6020**

MSD Sample ID: **1202166-14BMSD** Units: **mg/Kg** Analysis Date: **2/10/2012 06:17 AM**

Client ID: Run ID: **ICPMS04_120209A** SeqNo: **2683274** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	3464	0.89	8.92	4045	-6520	75-125	3993	14.2	25	SEO
Arsenic	9.915	0.45	8.92	2.327	85.1	75-125	10.01	0.97	25	
Barium	16.67	0.45	8.92	9.504	80.4	75-125	17.69	5.94	25	
Beryllium	8.98	0.45	8.92	0.5666	94.3	75-125	9.44	5	25	
Boron	42.86	2.2	44.6	1.407	92.9	75-125	44.94	4.73	25	
Cadmium	7.767	0.45	8.92	0.006646	87	75-125	8.169	5.04	25	
Calcium	1996	45	892	1297	78.4	75-125	2030	1.69	25	
Chromium	11.89	0.45	8.92	4.765	79.8	75-125	13.81	15	25	
Cobalt	10.64	0.45	8.92	3.043	85.2	75-125	10.9	2.44	25	
Copper	9.931	0.45	8.92	2.266	85.9	75-125	10.22	2.91	25	
Iron	6398	45	892	6070	36.8	75-125	6789	5.93	25	SO
Lead	12.68	0.45	8.92	5.095	85	75-125	13.39	5.47	25	
Magnesium	1403	45	892	815.8	65.9	75-125	1507	7.12	25	S
Manganese	39.85	0.45	8.92	28.56	127	75-125	36.58	8.57	25	S
Molybdenum	7.648	0.45	8.92	0.203	83.5	75-125	8.018	4.72	25	
Nickel	11.66	0.45	8.92	4.418	81.1	75-125	11.99	2.83	25	
Potassium	924.8	45	892	233.9	77.5	75-125	979.5	5.75	25	
Selenium	7.832	0.45	8.92	0.7297	79.6	75-125	8.471	7.84	25	
Silver	7.294	0.45	8.92	0.001184	81.8	75-125	7.619	4.37	25	
Sodium	758.1	45	892	74.15	76.7	75-125	791	4.25	25	
Vanadium	23.67	0.45	8.92	16.23	83.3	75-125	25.65	8.04	25	
Zinc	11.12	0.45	8.92	4.362	75.8	75-125	11.98	7.45	25	

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58793** Instrument ID: **ICPMS04** Method: **SW6020**

DUP Sample ID: **1202166-14BDUP** Units: **mg/Kg** Analysis Date: **2/10/2012 06:04 AM**
Client ID: Run ID: **ICPMS04_120209A** SeqNo: **2683272** Prep Date: **2/9/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	2.084	0.45	0	0	0	0-0	2.327	11	25	
Barium	9.335	0.45	0	0	0	0-0	9.504	1.8	25	
Beryllium	0.5316	0.45	0	0	0	0-0	0.5666	6.36	25	
Boron	ND	2.3	0	0	0	0-0	1.407	0	25	
Cadmium	ND	0.45	0	0	0	0-0	0.006646	0	25	
Calcium	1264	45	0	0	0	0-0	1297	2.6	25	
Chromium	5.039	0.45	0	0	0	0-0	4.765	5.57	25	
Cobalt	2.769	0.45	0	0	0	0-0	3.043	9.45	25	
Copper	2.295	0.45	0	0	0	0-0	2.266	1.24	25	
Iron	5912	45	0	0	0	0-0	6070	2.63	25	
Lead	5.128	0.45	0	0	0	0-0	5.095	0.644	25	
Magnesium	789	45	0	0	0	0-0	815.8	3.34	25	
Manganese	27	0.45	0	0	0	0-0	28.56	5.59	25	
Molybdenum	0.1582	0.45	0	0	0	0-0	0.203	0	25	J
Nickel	4.164	0.45	0	0	0	0-0	4.418	5.91	25	
Potassium	233.1	45	0	0	0	0-0	233.9	0.339	25	
Selenium	0.6003	0.45	0	0	0	0-0	0.7297	19.5	25	
Silver	ND	0.45	0	0	0	0-0	0.001184	0	25	
Sodium	70.23	45	0	0	0	0-0	74.15	5.43	25	
Vanadium	16.14	0.45	0	0	0	0-0	16.23	0.604	25	
Zinc	4.298	0.45	0	0	0	0-0	4.362	1.47	25	

DUP Sample ID: **1202166-14BDUP** Units: **mg/Kg** Analysis Date: **2/10/2012 05:03 PM**
Client ID: Run ID: **ICPMS04_120210A** SeqNo: **2684294** Prep Date: **2/9/2012** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	4185	90	0	0	0	0-0	4080	2.53	25	

The following samples were analyzed in this batch: 1202180-02A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58768** Instrument ID: **SV-5** Method: **SW8270**

MBLK Sample ID: **SBLKT1-120208-58768** Units: **µg/L** Analysis Date: **2/9/2012 07:23 PM**

Client ID: Run ID: **SV-5_120208A** SeqNo: **2683356** Prep Date: **2/8/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	5.0								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*71.62*	5.0	*100*	0	*71.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*85.2*	5.0	*100*	0	*85.2*	*48-120*	0			
Surr: 2-Fluorophenol	*70.99*	5.0	*100*	0	*71*	*20-120*	0			
Surr: 4-Terphenyl-d14	*98.61*	5.0	*100*	0	*98.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*85.61*	5.0	*100*	0	*85.6*	*41-120*	0			
Surr: Phenol-d6	*75.26*	5.0	*100*	0	*75.3*	*20-120*	0			

LCS Sample ID: **SLCST1-120208-58768** Units: **µg/L** Analysis Date: **2/9/2012 08:31 PM**

Client ID: Run ID: **SV-5_120208A** SeqNo: **2683357** Prep Date: **2/8/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	95.76	5.0	100	0	95.8	50-120	0			
2,4,6-Trichlorophenol	89.31	5.0	100	0	89.3	50-120	0			
2,4-Dinitrotoluene	47.26	5.0	50	0	94.5	50-120	0			
Cresols, Total	154	5.0	200	0	77	48-115	0			
Hexachlorobenzene	45.74	5.0	50	0	91.5	55-120	0			
Hexachlorobutadiene	45.4	5.0	50	0	90.8	55-120	0			
Hexachloroethane	47.82	5.0	50	0	95.6	55-120	0			
Nitrobenzene	48.27	5.0	50	0	96.5	55-120	0			
Pentachlorophenol	89.45	5.0	100	0	89.5	55-120	0			
Pyridine	38.01	5.0	50	0	76	35-120	0			
Surr: 2,4,6-Tribromophenol	*83.57*	5.0	*100*	0	*83.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*95.27*	5.0	*100*	0	*95.3*	*48-120*	0			
Surr: 2-Fluorophenol	*82.91*	5.0	*100*	0	*82.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*99.63*	5.0	*100*	0	*99.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*93.6*	5.0	*100*	0	*93.6*	*41-120*	0			
Surr: Phenol-d6	*84.55*	5.0	*100*	0	*84.6*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58768** Instrument ID: **SV-5** Method: **SW8270**

LCSD Sample ID: **SLCSDT1-120208-58768** Units: **µg/L** Analysis Date: **2/9/2012 09:16 PM**

Client ID: Run ID: **SV-5_120208A** SeqNo: **2683358** Prep Date: **2/8/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	97.47	5.0	100	0	97.5	50-120	95.76	1.77	20	
2,4,6-Trichlorophenol	92.16	5.0	100	0	92.2	50-120	89.31	3.14	20	
2,4-Dinitrotoluene	47.82	5.0	50	0	95.6	50-120	47.26	1.17	20	
Hexachlorobenzene	45.8	5.0	50	0	91.6	55-120	45.74	0.124	20	
Hexachlorobutadiene	45.03	5.0	50	0	90.1	55-120	45.4	0.818	20	
Hexachloroethane	47.4	5.0	50	0	94.8	55-120	47.82	0.878	20	
Nitrobenzene	46.64	5.0	50	0	93.3	55-120	48.27	3.42	20	
Pentachlorophenol	90.19	5.0	100	0	90.2	55-120	89.45	0.817	20	
Pyridine	37.56	5.0	50	0	75.1	35-120	38.01	1.19	20	
Surr: 2,4,6-Tribromophenol	*85.85*	5.0	*100*	0	*85.8*	*42-124*	83.57	*2.69*	*20*	
Surr: 2-Fluorobiphenyl	*95.3*	5.0	*100*	0	*95.3*	*48-120*	95.27	*0.0283*	*20*	
Surr: 2-Fluorophenol	*86.27*	5.0	*100*	0	*86.3*	*20-120*	82.91	*3.97*	*20*	
Surr: 4-Terphenyl-d14	*102.4*	5.0	*100*	0	*102*	*51-135*	99.63	*2.71*	*20*	
Surr: Nitrobenzene-d5	*91.84*	5.0	*100*	0	*91.8*	*41-120*	93.6	*1.9*	*20*	
Surr: Phenol-d6	*88.72*	5.0	*100*	0	*88.7*	*20-120*	84.55	*4.81*	*20*	

The following samples were analyzed in this batch: 1202180-01A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **R123045** Instrument ID: **VOA6** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-020712-R123045** Units: **µg/L** Analysis Date: **2/8/2012 12:04 AM**
Client ID: Run ID: **VOA6_120207B** SeqNo: **2680607** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*47.4*	5.0	*50*	0	*94.8*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*45.87*	5.0	*50*	0	*91.7*	*72.4-125*	0			
Surr: Dibromofluoromethane	*49.79*	5.0	*50*	0	*99.6*	*71.2-125*	0			
Surr: Toluene-d8	*50.56*	5.0	*50*	0	*101*	*75-125*	0			

MBLK Sample ID: **MBLKV1-020212-R123045** Units: **µg/L** Analysis Date: **2/8/2012 12:30 AM**
Client ID: Run ID: **VOA6_120207B** SeqNo: **2680608** Prep Date: **2/3/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*913.8*	100	*1000*	0	*91.4*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*900.3*	100	*1000*	0	*90*	*72.4-125*	0			
Surr: Dibromofluoromethane	*970.9*	100	*1000*	0	*97.1*	*71.2-125*	0			
Surr: Toluene-d8	*1013*	100	*1000*	0	*101*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **R123045** Instrument ID: **VOA6** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-020712-R123045** Units: **µg/L** Analysis Date: **2/7/2012 11:11 PM**
Client ID: Run ID: **VOA6_120207B** SeqNo: **2680606** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	47.86	5.0	50	0	95.7	73-124	0			
1,2-Dichloroethane	48.46	5.0	50	0	96.9	76-120	0			
1,4-Dichlorobenzene	49.11	5.0	50	0	98.2	70-130	0			
2-Butanone	90.46	10	100	0	90.5	70-130	0			
Benzene	47.71	5.0	50	0	95.4	70-128	0			
Carbon tetrachloride	50.39	5.0	50	0	101	70-130	0			
Chlorobenzene	48.5	5.0	50	0	97	72-127	0			
Chloroform	48.62	5.0	50	0	97.2	70-130	0			
Tetrachloroethene	54.46	5.0	50	0	109	70-130	0			
Trichloroethene	50.95	5.0	50	0	102	72-129	0			
Vinyl chloride	45.83	2.0	50	0	91.7	70-130	0			
Surr: 1,2-Dichloroethane-d4	*46.04*	5.0	*50*	0	*92.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.53*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*49.07*	5.0	*50*	0	*98.1*	*71-125*	0			
Surr: Toluene-d8	*48.26*	5.0	*50*	0	*96.5*	*75-125*	0			

MS Sample ID: **1202126-01BMS** Units: **µg/L** Analysis Date: **2/8/2012 01:49 AM**
Client ID: Run ID: **VOA6_120207B** SeqNo: **2680611** Prep Date: **2/4/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	820.2	100	1000	0	82	73-124	0			
1,2-Dichloroethane	928.8	100	1000	0	92.9	76-120	0			
1,4-Dichlorobenzene	854.5	100	1000	0	85.5	70-130	0			
2-Butanone	1672	200	2000	0	83.6	70-130	0			
Benzene	881.1	100	1000	0	88.1	70-128	0			
Carbon tetrachloride	807.8	100	1000	0	80.8	70-130	0			
Chlorobenzene	924.6	100	1000	0	92.5	72-127	0			
Chloroform	913.6	100	1000	0	91.4	70-130	0			
Tetrachloroethene	882.5	100	1000	0	88.3	70-130	0			
Trichloroethene	922.5	100	1000	0	92.2	72-129	0			
Vinyl chloride	806.9	40	1000	0	80.7	70-130	0			
Surr: 1,2-Dichloroethane-d4	*902.3*	100	*1000*	0	*90.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1001*	100	*1000*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*969.1*	100	*1000*	0	*96.9*	*71-125*	0			
Surr: Toluene-d8	*973.8*	100	*1000*	0	*97.4*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **R123045** Instrument ID: **VOA6** Method: **SW1311/8260B**

MSD Sample ID: **1202126-01BMSD** Units: **µg/L** Analysis Date: **2/8/2012 02:15 AM**

Client ID: Run ID: **VOA6_120207B** SeqNo: **2680612** Prep Date: **2/4/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	794.9	100	1000	0	79.5	73-124	820.2	3.13	20	
1,2-Dichloroethane	913.3	100	1000	0	91.3	76-120	928.8	1.68	20	
1,4-Dichlorobenzene	885.8	100	1000	0	88.6	70-130	854.5	3.6	20	
2-Butanone	1816	200	2000	0	90.8	70-130	1672	8.28	20	
Benzene	864.8	100	1000	0	86.5	70-128	881.1	1.87	20	
Carbon tetrachloride	792.5	100	1000	0	79.2	70-130	807.8	1.92	20	
Chlorobenzene	893.7	100	1000	0	89.4	72-127	924.6	3.4	20	
Chloroform	895.7	100	1000	0	89.6	70-130	913.6	1.98	20	
Tetrachloroethene	882.2	100	1000	0	88.2	70-130	882.5	0.0348	20	
Trichloroethene	916.8	100	1000	0	91.7	72-129	922.5	0.618	20	
Vinyl chloride	777	40	1000	0	77.7	70-130	806.9	3.77	20	
Surr: 1,2-Dichloroethane-d4	*916.8*	100	*1000*	0	*91.7*	*70-125*	902.3	*1.59*	*20*	
Surr: 4-Bromofluorobenzene	*1006*	100	*1000*	0	*101*	*72-125*	1001	*0.54*	*20*	
Surr: Dibromofluoromethane	*984.4*	100	*1000*	0	*98.4*	*71-125*	969.1	*1.57*	*20*	
Surr: Toluene-d8	*961.2*	100	*1000*	0	*96.1*	*75-125*	973.8	*1.3*	*20*	

The following samples were analyzed in this batch: 1202180-01A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58837** Instrument ID: **UV-2450** Method: **SW9065**

MBLK Sample ID: **WBLKS-021012-58837** Units: **mg/kg** Analysis Date: **2/10/2012 01:00 PM**
Client ID: Run ID: **UV-2450_120210A** SeqNo: **2683914** Prep Date: **2/10/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total Recoverable	ND	2.5								

LCS Sample ID: **WLCSS-021012-58837** Units: **mg/kg** Analysis Date: **2/10/2012 01:00 PM**
Client ID: Run ID: **UV-2450_120210A** SeqNo: **2683915** Prep Date: **2/10/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total Recoverable	25.25	2.5	25	0	101	80-120	0			

LCSD Sample ID: **WLCSDS-021012-58837** Units: **mg/kg** Analysis Date: **2/10/2012 01:00 PM**
Client ID: Run ID: **UV-2450_120210A** SeqNo: **2683919** Prep Date: **2/10/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total Recoverable	25.8	2.5	25	0	103	80-120	25.25	2.15	20	

MS Sample ID: **1202180-02AMS** Units: **mg/kg** Analysis Date: **2/10/2012 01:00 PM**
Client ID: **Bottom Hole** Run ID: **UV-2450_120210A** SeqNo: **2683918** Prep Date: **2/10/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phenolics, Total Recoverable	24.1	2.5	25	0	96.4	80-120	0			

The following samples were analyzed in this batch: 1202180-02A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **58872** Instrument ID: **ICS3000** Method: **E300**

MBLK Sample ID: **WBLKS1-021212-58872** Units: **mg/Kg** Analysis Date: **2/12/2012 10:03 PM**
Client ID: Run ID: **ICS3000_120212B** SeqNo: **2685817** Prep Date: **2/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	5.0								
Sulfate	ND	5.0								
Surr: Selenate (surr)	*47.42*	1.0	*50*	0	*94.8*	*85-115*	0			

LCS Sample ID: **WLCSS1-021212-58872** Units: **mg/Kg** Analysis Date: **2/12/2012 10:24 PM**
Client ID: Run ID: **ICS3000_120212B** SeqNo: **2685818** Prep Date: **2/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	218.2	5.0	199.6	0	109	90-110	0			
Sulfate	207.3	5.0	199.6	0	104	90-110	0			
Surr: Selenate (surr)	*50.97*	1.0	*49.9*	0	*102*	*85-115*	0			

LCSD Sample ID: **WLCSDS1-021212-58872** Units: **mg/Kg** Analysis Date: **2/12/2012 10:45 PM**
Client ID: Run ID: **ICS3000_120212B** SeqNo: **2685819** Prep Date: **2/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	219.9	5.0	200	0	110	90-110	218.2	0.765	20	
Sulfate	201.3	5.0	200	0	101	90-110	207.3	2.92	20	
Surr: Selenate (surr)	*52.18*	1.0	*50*	0	*104*	*85-115*	50.97	*2.35*	*20*	

MS Sample ID: **1202180-02AMS** Units: **mg/Kg** Analysis Date: **2/12/2012 11:27 PM**
Client ID: **Bottom Hole** Run ID: **ICS3000_120212B** SeqNo: **2685834** Prep Date: **2/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	214	4.5	89.45	106.4	120	75-125	0			
Sulfate	2216	4.5	89.45	2133	93.3	75-125	0			EO
Surr: Selenate (surr)	*50.39*	0.90	*44.73*	0	*113*	*80-120*	0			

MSD Sample ID: **1202180-02AMSD** Units: **mg/Kg** Analysis Date: **2/12/2012 11:48 PM**
Client ID: **Bottom Hole** Run ID: **ICS3000_120212B** SeqNo: **2685835** Prep Date: **2/12/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	211.2	4.4	89.09	106.4	118	75-125	214	1.33	20	
Sulfate	2184	4.4	89.09	2133	57.4	75-125	2216	1.47	20	SEO
Surr: Selenate (surr)	*50.46*	0.89	*44.55*	0	*113*	*80-120*	50.39	*0.144*	*20*	

The following samples were analyzed in this batch: 1202180-02A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **R123137** Instrument ID: **WetChem** Method: **SW1030**

DUP Sample ID: **1202180-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **2/9/2012 04:20 PM**

Client ID: **Disposal** Run ID: **WETCHEM_120209E** SeqNo: **2682658** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1202180-01A

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

Client: Navajo Refining Company
Work Order: 1202180
Project: FCC Scrubber Water Spill

QC BATCH REPORT

Batch ID: **R123145** Instrument ID: **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-020912-R123145** Units: **pH Units** Analysis Date: **2/9/2012 02:45 PM**

Client ID: Run ID: **WETCHEM_120209H** SeqNo: **2682816** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.05	0.10	6	0	101	90-110	0			

DUP Sample ID: **1202211-01ADUP** Units: **pH Units** Analysis Date: **2/9/2012 02:45 PM**

Client ID: Run ID: **WETCHEM_120209H** SeqNo: **2682826** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.9	0.10	0	0	0	0-0	7.88	0.253	20	

The following samples were analyzed in this batch: 1202180-01A

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

ALS Environmental

Date: 14-Feb-12

Client: Navajo Refining Company
Project: FCC Scrubber Water Spill
WorkOrder: 1202180

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/s	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **04-Feb-12 09:30**

Work Order: **1202180** Received by: **RDH**

Checklist completed by: Robert D. Harris (eSignature) 04-Feb-12 (Date) Reviewed by: Chris Bryson (eSignature) 06-Feb-12 (Date)

Matrices: soils
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.8c	002	
Cooler(s)/Kit(s):	3996		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Not sure now client wants BTEX ran by 8260 or 8021 nor about the metals list; logged in both per PM's request.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

☑ ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1202180

NAVAJO REFINING: Navajo Refining Company

Project: FCC Scrubber Water Spill

ALS Project Manager: Chris Bryson

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	FCC Scrubber Water Spill	A	BTEX
Work Order		Project Number		B	METALS (Total)
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	ANIONS (Chlorides & Sulfate)
Send Report To	Robert Combs	Invoice Attn.	Aaron Strange	D	PHENOLICS
Address	P. O. Box 159	Address	501 East Main	E	TCLP Volitiles
				F	TCLP Semi-Volitiles
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	TCLP Metals
Phone	(575) 748-3311	Phone	(575) 748-3311	H	R.C.I.
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	Robert.Combs@hollyfrontier.com	e-Mail Address	Robert.Combs@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Disposal	2/3/12	14:10	Soil	None	1					X	X	X	X			
2	Bottom hole	2/3/12	14:15	Soil	None	1	X	X	X	X							
3	Trip Blank					2											
4	Temperature Blank					1											
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Aaron Strange

Shipment Method: Federal Express

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date: 2-3-12	Time: 16:15	Received by:	Notes:	
Relinquished by:	Date:	Time:	Received by (Laboratory): 2/4/12 0930	Cooler Temp.	QC Package: (Check Box Below)
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		☐ Level II: Standard QC ☐ TRRP-Checklist ☐ Level III: Std QC + Raw Data ☐ TRRP Level IV ☐ Level IV: SW846 CLP-Like ☐ Other: _____

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

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

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120210

ORIGIN ID: ROWA

NAVAJO ARTESIA
501 E MAIN

ARTESIA , NM 882109440
UNITED STATES US

Ship Date: 03FEB12
ActWgt: 35.0 LB MAN
CAD: 634493/CAFE2509

TO CHRIS BRYSON
ALS LABORATORY GROUP
10450 STANCLIFF RD., SUITE 210

HOUSTON, TX 77099

(281) 530-5656

FedEx Express

(US)

Trk# 4967 8856 2165

PRIORITY OVERNIGHT

10450 STANCLIFF RD., SUITE 210

Part # 156148-434 RITZ 05/10

PLACE THIS LABEL ON PACKAGE
NEXT TO THE SHIPPING LABEL

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

CUSTODY SEAL

Date: 2-3-12 Time: 16:15
Name: Robert Stranger
Company: Navajo Refining Co

Seal Broken By:
Date:

ALS Group USA, Corp

Date: 10-Feb-12

Client: ALS Environmental
Project: 1202180
Work Order: **1202198**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1202198-01	1202180-01B	Soil		2/3/2012 14:10	2/7/2012 10:45	☐

ALS Group USA, Corp

Date: 10-Feb-12

Client: ALS Environmental
Project: 1202180
WorkOrder: **1202198**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *10-Feb-12*

Client: ALS Environmental
Project: 1202180
Work Order: 1202198
Sample ID: 1202180-01B
Lab ID: 1202198-01
Collection Date: 2/3/2012 02:10 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **NZ**
Cyanide, Reactive	ND		40.0	mg/Kg	1	2/9/2012 10:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **NZ**
Sulfide, Reactive	ND		40.0	mg/Kg	1	2/9/2012 10:00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1202198
Project: 1202180

Date: 10-Feb-12

QC BATCH REPORT

Batch ID: **R101015** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-120209-R101015** Units: **mg/Kg** Analysis Date: **2/9/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120209G** SeqNo: **1893931** 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: 1202198-01A

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

Client: ALS Environmental
Work Order: 1202198
Project: 1202180

QC BATCH REPORT

Batch ID: **R101019** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-120209-R101019** Units: **mg/Kg** Analysis Date: **2/9/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120209H** SeqNo: **1894005** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-120209-R101019** Units: **mg/Kg** Analysis Date: **2/9/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120209H** SeqNo: **1894006** 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: **WLCSDW1-120209-R101019** Units: **mg/Kg** Analysis Date: **2/9/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120209H** SeqNo: **1894016** 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	249.6	0	35	

MS Sample ID: **1202105-01A MS** Units: **mg/Kg** Analysis Date: **2/9/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120209H** SeqNo: **1894008** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD Sample ID: **1202105-01A MSD** Units: **mg/Kg** Analysis Date: **2/9/2012 10:00 AM**
Client ID: Run ID: **WETCHEM_120209H** SeqNo: **1894009** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch: 1202198-01A

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

1202198

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

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

CHAIN-OF-CUSTODY RECORD

Date: 04-Feb-12
COC ID: 11473
Due Date: 16-Feb-12

Salesperson: Jeffrey L Croston

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1202180	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	Chris Bryson	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsglobal.com	eMail CC	mary.knowles@alsglobal.com	J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1202180-01B (Disposal)	Soil	3/Feb/2012 14:10	(1) 4OZGNEAT	X	X								

Comments:
Please analyze for Reactive Cyanide & Reactive Sulfide. Report is due on 2/16/12. Send report to Chris Bryson, chris.bryson@alsglobal.com, and CC: results to Mary Knowles, mary.knowles@alsglobal.com and Y-Van Ty, yvan.ty@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	Fax 2/6/12.	Jessica Boeve	2/7/12 1045	5.0°C	Std
Relinquished by:	Date/Time	Received by:	Date/Time		

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **07-Feb-12 10:45**

Work Order: **1202198** Received by: **JB**

Checklist completed by Jessica Bacon (eSignature) 07-Feb-12 (Date) Reviewed by: Bill Carey (eSignature) 08-Feb-12 (Date)

Matrices: soil
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):	5.0 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

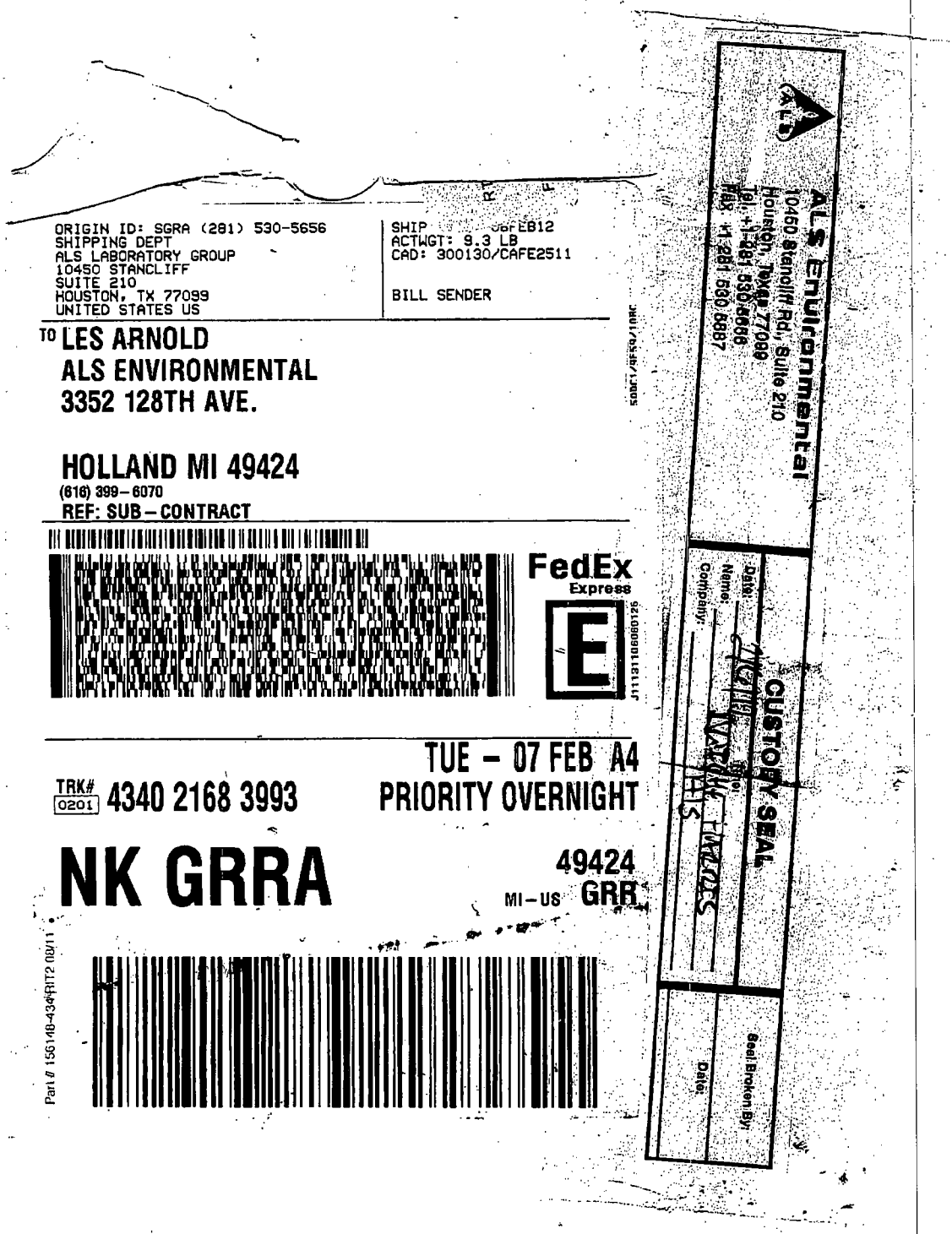
Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:



ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 06FEB12
ACTWGT: 9.3 LB
CAD: 300130/CAFE2511

BILL SENDER

TO LES ARNOLD
ALS ENVIRONMENTAL
3352 128TH AVE.

HOLLAND MI 49424
(616) 399-6070
REF: SUB-CONTRACT

FedEx Express

TUE - 07 FEB A4
PRIORITY OVERNIGHT

TRK# 0201 4340 2168 3993

NK GRRA

49424
MI-US GRR

Part # 156148-434 RIT2 08/11

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

CUSTODY SEAL

Date:
Name:
Company:

Seal Broken By:
Date:

Chavez, Carl J, EMNRD

From: Moore, Darrell [Darrell.Moore@hollyfrontier.com]
Sent: Tuesday, January 10, 2012 1:58 PM
To: Tsinnajinnie, Leona, NMENV; Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD
Subject: Qtrly DAF Analysis
Attachments: 1201035 DAF Quarterly Sampling Final.pdf

Attached, please find the analysis for the Quarterly DAF analysis that Navajo runs to insure the waste is non-hazardous. If there are any questions, please call me at 575-746-5281.

Darrell Moore
Environmental Manager for Water and Waste
The Holly Frontier Companies
Navajo Refining Company, LLC
501 E Main
PO Box 159
Artesia NM 88211-0159
Phone: 575-746-5281
Cell: 575-703-5058

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ALS Environmental

09-Jan-2012

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: DAF Quarterly Sampling

Work Order: **1201035**

Dear Aaron,

ALS Environmental received 2 samples on 04-Jan-2012 10:45 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 26.

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

Sincerely,

Chris Bryson

Electronically approved by: Mary K. Knowles

Chris Bryson
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 09-Jan-12

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
Work Order: **1201035**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1201035-01	DAF	Solid		1/3/2012 10:00	1/4/2012 10:45	☐
1201035-02	Trip Blank	Water		1/3/2012	1/4/2012 10:45	☑

ALS Environmental *Date: 09-Jan-12*

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
Work Order: 1201035

Case Narrative

The analyses for Reactive Sulfide and Reactive Cyanide were performed at ALS Environmental in Holland, MI.

Batch 57951, TCLP Mercury, Sample 1201025-01 : MS/MSD is an unrelated sample.

Batch 57973, TCLP Semi-Volatile, MS/MSD samples were not analyzed due to limited sample volume. A LCS and LCSD were analyzed and reported for this analytical batch.

ALS Environmental

Date: *09-Jan-12*

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
Work Order: 1201035
Sample ID: DAF
Lab ID: 1201035-01
Collection Date: 1/3/2012 10:00 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **1/5/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	1/5/2012 04:48 PM
TCLP METALS			**SW1311/6020**		Prep Date: **1/5/2012**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	1/5/2012 09:39 PM
Barium	**0.126**		**0.0500**	**mg/L**	10	1/5/2012 09:39 PM
Cadmium	ND		0.0200	mg/L	10	1/5/2012 09:39 PM
Chromium	ND		0.0500	mg/L	10	1/5/2012 09:39 PM
Lead	ND		0.0500	mg/L	10	1/5/2012 09:39 PM
Selenium	**0.0623**		**0.0500**	**mg/L**	10	1/5/2012 09:39 PM
Silver	ND		0.0500	mg/L	10	1/5/2012 09:39 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **1/5/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Cresols, Total	**0.052**		**0.015**	**mg/L**	1	1/6/2012 07:39 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Hexachloroethane	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Nitrobenzene	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Pentachlorophenol	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Pyridine	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Surr: 2,4,6-Tribromophenol	*90.9*		*42-124*	*%REC*	1	1/6/2012 07:39 PM
Surr: 2-Fluorobiphenyl	*48.3*		*48-120*	*%REC*	1	1/6/2012 07:39 PM
Surr: 2-Fluorophenol	*39.4*		*20-120*	*%REC*	1	1/6/2012 07:39 PM
Surr: 4-Terphenyl-d14	*82.3*		*51-135*	*%REC*	1	1/6/2012 07:39 PM
Surr: Nitrobenzene-d5	*43.2*		*41-120*	*%REC*	1	1/6/2012 07:39 PM
Surr: Phenol-d6	*45.0*		*20-120*	*%REC*	1	1/6/2012 07:39 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **1/5/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	1/5/2012 03:41 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
2-Butanone	ND		0.20	mg/L	20	1/5/2012 03:41 PM
Benzene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Carbon tetrachloride	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Chlorobenzene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Chloroform	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Tetrachloroethene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Trichloroethene	ND		0.10	mg/L	20	1/5/2012 03:41 PM

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

ALS Environmental

Date: *09-Jan-12*

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
Work Order: 1201035
Sample ID: DAF
Lab ID: 1201035-01
Collection Date: 1/3/2012 10:00 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	1/5/2012 03:41 PM
Surr: 4-Bromofluorobenzene	*95.4*		*72-125*	*%REC*	20	1/5/2012 03:41 PM
Surr: Dibromofluoromethane	*101*		*71-125*	*%REC*	20	1/5/2012 03:41 PM
Surr: Toluene-d8	*91.5*		*75-125*	*%REC*	20	1/5/2012 03:41 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	1/5/2012 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	1/5/2012 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	1/4/2012 12:10 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**6.52**		**0.100**	**pH Units**	1	1/6/2012 04:00 PM

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

ALS Environmental

Date: 09-Jan-12

Client: Navajo Refining Company

Work Order: 1201035

Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57951** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW3-010512-57951** Units: **mg/L** Analysis Date: **1/5/2012 04:25 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647744** Prep Date: **1/5/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-010412-57951** Units: **mg/L** Analysis Date: **1/5/2012 04:32 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647746** Prep Date: **1/5/2012** 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			

LCS Sample ID: **GLCSW3-010512-57951** Units: **mg/L** Analysis Date: **1/5/2012 04:27 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647745** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00482	0.00020	0.005	0	96.4	80-120	0			

MS Sample ID: **1201025-01AMS** Units: **mg/L** Analysis Date: **1/5/2012 04:41 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647749** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0121	0.00020	0.005	0.0122	-2	75-125	0			SE

MSD Sample ID: **1201025-01AMSD** Units: **mg/L** Analysis Date: **1/5/2012 04:44 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647750** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0121	0.00020	0.005	0.0122	-2	75-125	0.0121	0	20	SE

DUP Sample ID: **1201025-01ADUP** Units: **mg/L** Analysis Date: **1/5/2012 05:15 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647769** Prep Date: **1/5/2012** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1715	0.010	0	0	0	0-0	0.1705	0.585	20	

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57956** Instrument ID **ICPMS03** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-010412-57956** Units: **mg/L** Analysis Date: **1/5/2012 08:04 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648015** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	0.01726	0.050								J
Silver	ND	0.050								

MBLK Sample ID: **MBLKW2-010512-57956** Units: **mg/L** Analysis Date: **1/5/2012 08:11 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648019** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	0.01255	0.050								J
Silver	ND	0.050								

LCS Sample ID: **MLCSW2-010512-57956** Units: **mg/L** Analysis Date: **1/5/2012 08:17 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648025** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4963	0.050	0.5	0	99.3	80-120	0			
Barium	0.5269	0.050	0.5	0	105	80-120	0			
Cadmium	0.514	0.020	0.5	0	103	80-120	0			
Chromium	0.4854	0.050	0.5	0	97.1	80-120	0			
Lead	0.5224	0.050	0.5	0	104	80-120	0			
Selenium	0.5014	0.050	0.5	0	100	80-120	0			
Silver	0.5196	0.050	0.5	0	104	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57956** Instrument ID **ICPMS03** Method: **SW1311/6020**

MS Sample ID: **1201056-01CMS** Units: **mg/L** Analysis Date: **1/5/2012 08:42 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648044** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5056	0.050	0.5	0.00563	100	75-125	0			
Barium	0.7492	0.050	0.5	0.2233	105	75-125	0			
Cadmium	0.4976	0.020	0.5	0.003146	98.9	75-125	0			
Chromium	1.157	0.050	0.5	0.6466	102	75-125	0			
Lead	0.5147	0.050	0.5	0.003961	102	75-125	0			
Selenium	0.4896	0.050	0.5	0.006758	96.6	75-125	0			
Silver	0.5022	0.050	0.5	0.001131	100	75-125	0			

MSD Sample ID: **1201056-01CMSD** Units: **mg/L** Analysis Date: **1/5/2012 08:48 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648046** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5061	0.050	0.5	0.00563	100	75-125	0.5056	0.0988	25	
Barium	0.7558	0.050	0.5	0.2233	106	75-125	0.7492	0.877	25	
Cadmium	0.5141	0.020	0.5	0.003146	102	75-125	0.4976	3.26	25	
Chromium	1.175	0.050	0.5	0.6466	106	75-125	1.157	1.54	25	
Lead	0.5255	0.050	0.5	0.003961	104	75-125	0.5147	2.08	25	
Selenium	0.5101	0.050	0.5	0.006758	101	75-125	0.4896	4.1	25	
Silver	0.511	0.050	0.5	0.001131	102	75-125	0.5022	1.74	25	

DUP Sample ID: **1201056-01CDUP** Units: **mg/L** Analysis Date: **1/5/2012 08:30 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648032** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.00563	0	25	
Barium	0.2345	0.050	0	0	0	0-0	0.2233	4.89	25	
Cadmium	ND	0.020	0	0	0	0-0	0.003146	0	25	
Chromium	0.6429	0.050	0	0	0	0-0	0.6466	0.574	25	
Lead	ND	0.050	0	0	0	0-0	0.003961	0	25	
Selenium	0.01017	0.050	0	0	0	0-0	0.006758	0	25	J
Silver	ND	0.050	0	0	0	0-0	0.001131	0	25	

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57973** Instrument ID **SV-5** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-120105-57973** Units: **µg/L** Analysis Date: **1/6/2012 02:41 PM**
Client ID: Run ID: **SV-5_120106B** SeqNo: **2649854** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*117.4*	5.0	*100*	0	*117*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*87*	5.0	*100*	0	*87*	*48-120*	0			
Surr: 2-Fluorophenol	*63.83*	5.0	*100*	0	*63.8*	*20-120*	0			
Surr: 4-Terphenyl-d14	*100.2*	5.0	*100*	0	*100*	*51-135*	0			
Surr: Nitrobenzene-d5	*81.14*	5.0	*100*	0	*81.1*	*41-120*	0			
Surr: Phenol-d6	*63.95*	5.0	*100*	0	*64*	*20-120*	0			

LCS Sample ID: **SLCST1-120105-57973** Units: **µg/L** Analysis Date: **1/6/2012 03:49 PM**
Client ID: Run ID: **SV-5_120106B** SeqNo: **2649856** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	107.3	5.0	100	0	107	52-115	0			
2,4,6-Trichlorophenol	91.23	5.0	100	0	91.2	53-115	0			
2,4-Dinitrotoluene	52.87	5.0	50	0	106	56-115	0			
Cresols, Total	226	15	250	0	90.4	35-115	0			
Hexachlorobenzene	44.63	5.0	50	0	89.3	54-115	0			
Hexachlorobutadiene	50.8	5.0	50	0	102	51-115	0			
Hexachloroethane	41.96	5.0	50	0	83.9	54-115	0			
Nitrobenzene	41.74	5.0	50	0	83.5	40-124	0			
Pentachlorophenol	115.7	5.0	100	0	116	45-125	0			
Pyridine	25.39	5.0	50	0	50.8	34-115	0			
Surr: 2,4,6-Tribromophenol	*113.7*	5.0	*100*	0	*114*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*83.89*	5.0	*100*	0	*83.9*	*48-120*	0			
Surr: 2-Fluorophenol	*75.91*	5.0	*100*	0	*75.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*91.09*	5.0	*100*	0	*91.1*	*51-135*	0			
Surr: Nitrobenzene-d5	*74.22*	5.0	*100*	0	*74.2*	*41-120*	0			
Surr: Phenol-d6	*74.45*	5.0	*100*	0	*74.4*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57973** Instrument ID **SV-5** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-120105-57973** Units: **µg/L** Analysis Date: **1/6/2012 03:26 PM**
Client ID: Run ID: **SV-5_120106B** SeqNo: **2649855** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	97.93	5.0	100	0	97.9	52-115	107.3	9.11	25	
2,4,6-Trichlorophenol	94.45	5.0	100	0	94.5	53-115	91.23	3.47	25	
2,4-Dinitrotoluene	51.08	5.0	50	0	102	56-115	52.87	3.45	25	
Cresols, Total	258.7	15	250	0	103	35-115	226	13.5	25	
Hexachlorobenzene	44.93	5.0	50	0	89.9	54-115	44.63	0.671	25	
Hexachlorobutadiene	50.5	5.0	50	0	101	51-115	50.8	0.587	25	
Hexachloroethane	43.66	5.0	50	0	87.3	54-115	41.96	3.97	25	
Nitrobenzene	42.54	5.0	50	0	85.1	40-124	41.74	1.89	25	
Pentachlorophenol	109.5	5.0	100	0	109	45-125	115.7	5.51	25	
Pyridine	24.72	5.0	50	0	49.4	34-115	25.39	2.69	25	
Surr: 2,4,6-Tribromophenol	*107.6*	5.0	*100*	0	*108*	*42-124*	113.7	*5.44*	*25*	
Surr: 2-Fluorobiphenyl	*85.28*	5.0	*100*	0	*85.3*	*48-120*	83.89	*1.64*	*25*	
Surr: 2-Fluorophenol	*80.19*	5.0	*100*	0	*80.2*	*20-120*	75.91	*5.48*	*25*	
Surr: 4-Terphenyl-d14	*101.8*	5.0	*100*	0	*102*	*51-135*	91.09	*11.1*	*25*	
Surr: Nitrobenzene-d5	*76.07*	5.0	*100*	0	*76.1*	*41-120*	74.22	*2.46*	*25*	
Surr: Phenol-d6	*85.6*	5.0	*100*	0	*85.6*	*20-120*	74.45	*13.9*	*25*	

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121428** Instrument ID **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-010512-R121428** Units: **µg/L** Analysis Date: **1/5/2012 12:17 PM**
Client ID: Run ID: **VOA1_120105C** SeqNo: **2648331** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*53.06*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.59*	5.0	*50*	0	*97.2*	*72.4-125*	0			
Surr: Dibromofluoromethane	*50.5*	5.0	*50*	0	*101*	*71.2-125*	0			
Surr: Toluene-d8	*46.57*	5.0	*50*	0	*93.1*	*75-125*	0			

MBLK Sample ID: **MBLKV1-010412-R121428** Units: **µg/L** Analysis Date: **1/5/2012 02:50 PM**
Client ID: Run ID: **VOA1_120105C** SeqNo: **2648339** Prep Date: **1/5/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*992.2*	100	*1000*	0	*99.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*980.9*	100	*1000*	0	*98.1*	*72.4-125*	0			
Surr: Dibromofluoromethane	*985*	100	*1000*	0	*98.5*	*71.2-125*	0			
Surr: Toluene-d8	*837.1*	100	*1000*	0	*83.7*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121428** Instrument ID **VOA1** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-010512-R121428** Units: **µg/L** Analysis Date: **1/5/2012 10:36 AM**
Client ID: Run ID: **VOA1_120105C** SeqNo: **2648330** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	51.72	5.0	50	0	103	73-124	0			
1,2-Dichloroethane	49.41	5.0	50	0	98.8	76-120	0			
1,4-Dichlorobenzene	49.08	5.0	50	0	98.2	70-130	0			
2-Butanone	92.25	10	100	0	92.2	70-130	0			
Benzene	49.49	5.0	50	0	99	70-128	0			
Carbon tetrachloride	52.8	5.0	50	0	106	70-130	0			
Chlorobenzene	52.88	5.0	50	0	106	72-127	0			
Chloroform	51.32	5.0	50	0	103	70-130	0			
Tetrachloroethene	48.84	5.0	50	0	97.7	70-130	0			
Trichloroethene	51.44	5.0	50	0	103	72-129	0			
Vinyl chloride	51.31	2.0	50	0	103	70-130	0			
Surr: 1,2-Dichloroethane-d4	*47.76*	5.0	*50*	0	*95.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*46.66*	5.0	*50*	0	*93.3*	*72-125*	0			
Surr: Dibromofluoromethane	*50.54*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*47.15*	5.0	*50*	0	*94.3*	*75-125*	0			

MS Sample ID: **1201051-08ZMS** Units: **µg/L** Analysis Date: **1/5/2012 01:59 PM**
Client ID: Run ID: **VOA1_120105C** SeqNo: **2648335** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	44.65	5.0	50	0	89.3	73-124	0			
1,2-Dichloroethane	52.37	5.0	50	0	105	76-120	0			
1,4-Dichlorobenzene	47.93	5.0	50	0	95.9	70-130	0			
2-Butanone	91.8	10	100	0	91.8	70-130	0			
Benzene	48.91	5.0	50	0	97.8	70-128	0			
Carbon tetrachloride	48.46	5.0	50	0	96.9	70-130	0			
Chlorobenzene	51.38	5.0	50	0	103	72-127	0			
Chloroform	50.64	5.0	50	0	101	70-130	0			
Tetrachloroethene	47.3	5.0	50	0	94.6	70-130	0			
Trichloroethene	51	5.0	50	0	102	72-129	0			
Vinyl chloride	40.21	2.0	50	0	80.4	70-130	0			
Surr: 1,2-Dichloroethane-d4	*49.5*	5.0	*50*	0	*99*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.5*	5.0	*50*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*49.81*	5.0	*50*	0	*99.6*	*71-125*	0			
Surr: Toluene-d8	*46.85*	5.0	*50*	0	*93.7*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121428** Instrument ID **VOA1** Method: **SW1311/8260B**

MSD Sample ID: **1201051-08ZMSD** Units: **µg/L** Analysis Date: **1/5/2012 02:25 PM**

Client ID: Run ID: **VOA1_120105C** SeqNo: **2648337** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	45.38	5.0	50	0	90.8	73-124	44.65	1.64	20	
1,2-Dichloroethane	52.03	5.0	50	0	104	76-120	52.37	0.658	20	
1,4-Dichlorobenzene	47.45	5.0	50	0	94.9	70-130	47.93	1.01	20	
2-Butanone	100	10	100	0	100	70-130	91.8	8.6	20	
Benzene	52.41	5.0	50	0	105	70-128	48.91	6.91	20	
Carbon tetrachloride	50.12	5.0	50	0	100	70-130	48.46	3.35	20	
Chlorobenzene	50.6	5.0	50	0	101	72-127	51.38	1.54	20	
Chloroform	49.96	5.0	50	0	99.9	70-130	50.64	1.36	20	
Tetrachloroethene	47	5.0	50	0	94	70-130	47.3	0.636	20	
Trichloroethene	51.92	5.0	50	0	104	72-129	51	1.78	20	
Vinyl chloride	43.18	2.0	50	0	86.4	70-130	40.21	7.1	20	
Surr: 1,2-Dichloroethane-d4	*49.82*	5.0	*50*	0	*99.6*	*70-125*	49.5	*0.641*	*20*	
Surr: 4-Bromofluorobenzene	*50.05*	5.0	*50*	0	*100*	*72-125*	51.5	*2.84*	*20*	
Surr: Dibromofluoromethane	*49.5*	5.0	*50*	0	*99*	*71-125*	49.81	*0.625*	*20*	
Surr: Toluene-d8	*45.22*	5.0	*50*	0	*90.4*	*75-125*	46.85	*3.55*	*20*	

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121320** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1112911-02ADUP** Units: **Burn Rate, mm/se** Analysis Date: **1/4/2012 12:10 PM**

Client ID: Run ID: **WETCHEM_120104A** SeqNo: **2645895** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121470** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-010612-R121470** Units: **pH Units** Analysis Date: **1/6/2012 04:00 PM**
Client ID: Run ID: **WETCHEM_120106F** SeqNo: **2649035** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.02	0.10	6	0	100	90-110	0			

DUP Sample ID: **1201035-01ADUP** Units: **pH Units** Analysis Date: **1/6/2012 04:00 PM**
Client ID: **DAF** Run ID: **WETCHEM_120106F** SeqNo: **2649037** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.6	0.10	0	0	0	0-0	6.52	1.22	20	

The following samples were analyzed in this batch: 1201035-01A

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

ALS Environmental

Date: 09-Jan-12

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
WorkOrder: 1201035

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **04-Jan-12 10:45**

Work Order: **1201035** Received by: **PMG**

Checklist completed by Raymond N Gamboa (eSignature) 04-Jan-12 (Date) Reviewed by: Chris Bryson (eSignature) 04-Jan-12 (Date)

Matrices: Soil,, Water
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☑	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.1c	002	
Cooler(s)/Kit(s):	3788		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1201035

NAVAJO REFINING: Navajo Refining Company

Project: DAF Quarterly Sampling

ALS Project Manager: Chris Bryson

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	DAF Quarterly Sampling	A	TCLP Volatiles
Work Order		Project Number		B	TCLP Semi-Volatiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	R. C. I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	A.Strange@hollyfrontier.com	e-Mail Address	A.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	DAF	1/3/12	10:00	Solid	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Aaron Strange

Shipment Method: Federal Express

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☑ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Aaron Strange	1-3-2011	16:15	
Relinquished by:	Date:	Time:	Received by (Laboratory): 1-4-12. 1015
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: **Rush Turnaround - Two Days**

Cooler Temp.

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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Date: 05-Jan-12

Client: ALS Environmental
Project: 1201035
Work Order: **1201062**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1201062-01	1201035-01B	Solid		1/3/2012 10:00	1/5/2012 10:00	☐

ALS Group USA, Corp

Date: 05-Jan-12

Client: ALS Environmental
Project: 1201035
WorkOrder: **1201062**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *05-Jan-12*

Client: ALS Environmental
Project: 1201035
Work Order: 1201062
Sample ID: 1201035-01B
Lab ID: 1201062-01
Collection Date: 1/3/2012 10:00 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	1/5/2012 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	1/5/2012 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1201062
Project: 1201035

Date: 05-Jan-12

QC BATCH REPORT

Batch ID: **R99725** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-010412-R99725** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104B** SeqNo: **1868827** 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: 1201062-01A

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

Client: ALS Environmental
Work Order: 1201062
Project: 1201035

QC BATCH REPORT

Batch ID: **R99726** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-010412-R99726** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868829** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-010412-R99726** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868830** 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		0		

LCSD Sample ID: **WLCSDW1-010412-R99726** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868834** 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	234.9	6.06	35	

MS Sample ID: **1112842-02A MS** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868832** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	264.2	40	250	29.36	94	50-150		0		

MSD Sample ID: **1112842-02A MSD** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868833** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	264.2	40	250	29.36	94	50-150	264.2	0	35	

The following samples were analyzed in this batch: 1201062-01A

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

1201062

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

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

Salesperson: Jeffrey L Croston

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 04-Jan-12
COC ID: 11324
Due Date: 06-Jan-12

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	10-2122415	Project Name	1201035	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	Patricia L. Lynch	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsenviro.com	eMail CC	yvan.ty@alsglobal.com	J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1201035-01B (DAF)	Solid	3/Jan/2012 10:00	(1) 4OZGNEAT	X	X								

Comments:

Please analyze for Reactive Cyanide and Reactive Sulfide. Report is due on 1/6/11. Send report to Chris Bryson, chris.bryson@alsglobal.com, and CC: results to Mary Knowles, mary.knowles@alsglobal.com and Y-Van Ty, yvan.ty@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	1/4/12 - FedEx		1/5/12 1000		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

3.2°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **05-Jan-12 10:00**

Work Order: **1201062** Received by: **DS**

Checklist completed by G bbj#W kdz eSignature 05-Jan-12 Date Reviewed by: E bdF dlh eSignature 05-Jan-12 Date

Matrices: Solid
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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Seal Broken By:
Date:
CUSTODY SEAL
Time:
ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US
SHIP DATE: 04JAN12
ACTWGT: 21.7 LB
CAD: 300130/CAFE2509
BILL SENDER
TO JEFF GLASER
ALS ENVIRONMENTAL
3352 128TH AVE.
HOLLAND MI 49424
(281) 530-5656
REF: (SUBCONTRACT) PMG
FedEx
Express
THU - 05 JAN A4
PRIORITY OVERNIGHT
GRRA
49424
MI-US GRR

ALS Environmental

09-Jan-2012

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: DAF Quarterly Sampling Work Order: **1201035**

Dear Aaron,

ALS Environmental received 2 samples on 04-Jan-2012 10:45 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 26.

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

Sincerely,

Chris Bryson

Electronically approved by: Mary K. Knowles

Chris Bryson
Project Manager

Accredited in accordance with nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 09-Jan-12

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
Work Order: **1201035**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1201035-01	DAF	Solid		1/3/2012 10:00	1/4/2012 10:45	☐
1201035-02	Trip Blank	Water		1/3/2012	1/4/2012 10:45	☑

ALS Environmental *Date: 09-Jan-12*

Client:	Navajo Refining Company
Project:	DAF Quarterly Sampling
Work Order:	1201035

Case Narrative

The analyses for Reactive Sulfide and Reactive Cyanide were performed at ALS Environmental in Holland, MI.

Batch 57951, TCLP Mercury, Sample 1201025-01 : MS/MSD is an unrelated sample.

Batch 57973, TCLP Semi-Volatile, MS/MSD samples were not analyzed due to limited sample volume. A LCS and LCSD were analyzed and reported for this analytical batch.

ALS Environmental

Date: *09-Jan-12*

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
Work Order: 1201035
Sample ID: DAF
Lab ID: 1201035-01
Collection Date: 1/3/2012 10:00 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **1/5/2012**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	1/5/2012 04:48 PM
TCLP METALS			**SW1311/6020**		Prep Date: **1/5/2012**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	1/5/2012 09:39 PM
Barium	**0.126**		**0.0500**	**mg/L**	10	1/5/2012 09:39 PM
Cadmium	ND		0.0200	mg/L	10	1/5/2012 09:39 PM
Chromium	ND		0.0500	mg/L	10	1/5/2012 09:39 PM
Lead	ND		0.0500	mg/L	10	1/5/2012 09:39 PM
Selenium	**0.0623**		**0.0500**	**mg/L**	10	1/5/2012 09:39 PM
Silver	ND		0.0500	mg/L	10	1/5/2012 09:39 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **1/5/2012**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Cresols, Total	**0.052**		**0.015**	**mg/L**	1	1/6/2012 07:39 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Hexachloroethane	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Nitrobenzene	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Pentachlorophenol	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Pyridine	ND		0.0050	mg/L	1	1/6/2012 07:39 PM
Surr: 2,4,6-Tribromophenol	*90.9*		*42-124*	*%REC*	1	1/6/2012 07:39 PM
Surr: 2-Fluorobiphenyl	*48.3*		*48-120*	*%REC*	1	1/6/2012 07:39 PM
Surr: 2-Fluorophenol	*39.4*		*20-120*	*%REC*	1	1/6/2012 07:39 PM
Surr: 4-Terphenyl-d14	*82.3*		*51-135*	*%REC*	1	1/6/2012 07:39 PM
Surr: Nitrobenzene-d5	*43.2*		*41-120*	*%REC*	1	1/6/2012 07:39 PM
Surr: Phenol-d6	*45.0*		*20-120*	*%REC*	1	1/6/2012 07:39 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **1/5/2012**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	1/5/2012 03:41 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
2-Butanone	ND		0.20	mg/L	20	1/5/2012 03:41 PM
Benzene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Carbon tetrachloride	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Chlorobenzene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Chloroform	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Tetrachloroethene	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Trichloroethene	ND		0.10	mg/L	20	1/5/2012 03:41 PM

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

ALS Environmental

Date: *09-Jan-12*

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
Work Order: 1201035
Sample ID: DAF
Lab ID: 1201035-01
Collection Date: 1/3/2012 10:00 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	1/5/2012 03:41 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	1/5/2012 03:41 PM
Surr: 4-Bromofluorobenzene	*95.4*		*72-125*	*%REC*	20	1/5/2012 03:41 PM
Surr: Dibromofluoromethane	*101*		*71-125*	*%REC*	20	1/5/2012 03:41 PM
Surr: Toluene-d8	*91.5*		*75-125*	*%REC*	20	1/5/2012 03:41 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	1/5/2012 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	1/5/2012 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	1/4/2012 12:10 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**6.52**		**0.100**	**pH Units**	1	1/6/2012 04:00 PM

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

ALS Environmental

Date: 09-Jan-12

Client: Navajo Refining Company

Work Order: 1201035

Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57951** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW3-010512-57951** Units: **mg/L** Analysis Date: **1/5/2012 04:25 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647744** Prep Date: **1/5/2012** DF: **1**

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

MBLK Sample ID: **GBLKT1-010412-57951** Units: **mg/L** Analysis Date: **1/5/2012 04:32 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647746** Prep Date: **1/5/2012** 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			

LCS Sample ID: **GLCSW3-010512-57951** Units: **mg/L** Analysis Date: **1/5/2012 04:27 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647745** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00482	0.00020	0.005	0	96.4	80-120	0			

MS Sample ID: **1201025-01AMS** Units: **mg/L** Analysis Date: **1/5/2012 04:41 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647749** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0121	0.00020	0.005	0.0122	-2	75-125	0			SE

MSD Sample ID: **1201025-01AMSD** Units: **mg/L** Analysis Date: **1/5/2012 04:44 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647750** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0121	0.00020	0.005	0.0122	-2	75-125	0.0121	0	20	SE

DUP Sample ID: **1201025-01ADUP** Units: **mg/L** Analysis Date: **1/5/2012 05:15 PM**

Client ID: Run ID: **MERCURY_120105A** SeqNo: **2647769** Prep Date: **1/5/2012** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1715	0.010	0	0	0	0-0	0.1705	0.585	20	

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57956** Instrument ID **ICPMS03** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-010412-57956** Units: **mg/L** Analysis Date: **1/5/2012 08:04 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648015** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	0.01726	0.050								J
Silver	ND	0.050								

MBLK Sample ID: **MBLKW2-010512-57956** Units: **mg/L** Analysis Date: **1/5/2012 08:11 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648019** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	0.01255	0.050								J
Silver	ND	0.050								

LCS Sample ID: **MLCSW2-010512-57956** Units: **mg/L** Analysis Date: **1/5/2012 08:17 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648025** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4963	0.050	0.5	0	99.3	80-120	0			
Barium	0.5269	0.050	0.5	0	105	80-120	0			
Cadmium	0.514	0.020	0.5	0	103	80-120	0			
Chromium	0.4854	0.050	0.5	0	97.1	80-120	0			
Lead	0.5224	0.050	0.5	0	104	80-120	0			
Selenium	0.5014	0.050	0.5	0	100	80-120	0			
Silver	0.5196	0.050	0.5	0	104	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57956** Instrument ID **ICPMS03** Method: **SW1311/6020**

MS Sample ID: **1201056-01CMS** Units: **mg/L** Analysis Date: **1/5/2012 08:42 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648044** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5056	0.050	0.5	0.00563	100	75-125	0			
Barium	0.7492	0.050	0.5	0.2233	105	75-125	0			
Cadmium	0.4976	0.020	0.5	0.003146	98.9	75-125	0			
Chromium	1.157	0.050	0.5	0.6466	102	75-125	0			
Lead	0.5147	0.050	0.5	0.003961	102	75-125	0			
Selenium	0.4896	0.050	0.5	0.006758	96.6	75-125	0			
Silver	0.5022	0.050	0.5	0.001131	100	75-125	0			

MSD Sample ID: **1201056-01CMSD** Units: **mg/L** Analysis Date: **1/5/2012 08:48 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648046** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5061	0.050	0.5	0.00563	100	75-125	0.5056	0.0988	25	
Barium	0.7558	0.050	0.5	0.2233	106	75-125	0.7492	0.877	25	
Cadmium	0.5141	0.020	0.5	0.003146	102	75-125	0.4976	3.26	25	
Chromium	1.175	0.050	0.5	0.6466	106	75-125	1.157	1.54	25	
Lead	0.5255	0.050	0.5	0.003961	104	75-125	0.5147	2.08	25	
Selenium	0.5101	0.050	0.5	0.006758	101	75-125	0.4896	4.1	25	
Silver	0.511	0.050	0.5	0.001131	102	75-125	0.5022	1.74	25	

DUP Sample ID: **1201056-01CDUP** Units: **mg/L** Analysis Date: **1/5/2012 08:30 PM**
Client ID: Run ID: **ICPMS03_120105A** SeqNo: **2648032** Prep Date: **1/5/2012** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.00563	0	25	
Barium	0.2345	0.050	0	0	0	0-0	0.2233	4.89	25	
Cadmium	ND	0.020	0	0	0	0-0	0.003146	0	25	
Chromium	0.6429	0.050	0	0	0	0-0	0.6466	0.574	25	
Lead	ND	0.050	0	0	0	0-0	0.003961	0	25	
Selenium	0.01017	0.050	0	0	0	0-0	0.006758	0	25	J
Silver	ND	0.050	0	0	0	0-0	0.001131	0	25	

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57973** Instrument ID **SV-5** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-120105-57973** Units: **µg/L** Analysis Date: **1/6/2012 02:41 PM**
Client ID: Run ID: **SV-5_120106B** SeqNo: **2649854** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*117.4*	5.0	*100*	0	*117*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*87*	5.0	*100*	0	*87*	*48-120*	0			
Surr: 2-Fluorophenol	*63.83*	5.0	*100*	0	*63.8*	*20-120*	0			
Surr: 4-Terphenyl-d14	*100.2*	5.0	*100*	0	*100*	*51-135*	0			
Surr: Nitrobenzene-d5	*81.14*	5.0	*100*	0	*81.1*	*41-120*	0			
Surr: Phenol-d6	*63.95*	5.0	*100*	0	*64*	*20-120*	0			

LCS Sample ID: **SLCST1-120105-57973** Units: **µg/L** Analysis Date: **1/6/2012 03:49 PM**
Client ID: Run ID: **SV-5_120106B** SeqNo: **2649856** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	107.3	5.0	100	0	107	52-115	0			
2,4,6-Trichlorophenol	91.23	5.0	100	0	91.2	53-115	0			
2,4-Dinitrotoluene	52.87	5.0	50	0	106	56-115	0			
Cresols, Total	226	15	250	0	90.4	35-115	0			
Hexachlorobenzene	44.63	5.0	50	0	89.3	54-115	0			
Hexachlorobutadiene	50.8	5.0	50	0	102	51-115	0			
Hexachloroethane	41.96	5.0	50	0	83.9	54-115	0			
Nitrobenzene	41.74	5.0	50	0	83.5	40-124	0			
Pentachlorophenol	115.7	5.0	100	0	116	45-125	0			
Pyridine	25.39	5.0	50	0	50.8	34-115	0			
Surr: 2,4,6-Tribromophenol	*113.7*	5.0	*100*	0	*114*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*83.89*	5.0	*100*	0	*83.9*	*48-120*	0			
Surr: 2-Fluorophenol	*75.91*	5.0	*100*	0	*75.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*91.09*	5.0	*100*	0	*91.1*	*51-135*	0			
Surr: Nitrobenzene-d5	*74.22*	5.0	*100*	0	*74.2*	*41-120*	0			
Surr: Phenol-d6	*74.45*	5.0	*100*	0	*74.4*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **57973** Instrument ID **SV-5** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-120105-57973** Units: **µg/L** Analysis Date: **1/6/2012 03:26 PM**
Client ID: Run ID: **SV-5_120106B** SeqNo: **2649855** Prep Date: **1/5/2012** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	97.93	5.0	100	0	97.9	52-115	107.3	9.11	25	
2,4,6-Trichlorophenol	94.45	5.0	100	0	94.5	53-115	91.23	3.47	25	
2,4-Dinitrotoluene	51.08	5.0	50	0	102	56-115	52.87	3.45	25	
Cresols, Total	258.7	15	250	0	103	35-115	226	13.5	25	
Hexachlorobenzene	44.93	5.0	50	0	89.9	54-115	44.63	0.671	25	
Hexachlorobutadiene	50.5	5.0	50	0	101	51-115	50.8	0.587	25	
Hexachloroethane	43.66	5.0	50	0	87.3	54-115	41.96	3.97	25	
Nitrobenzene	42.54	5.0	50	0	85.1	40-124	41.74	1.89	25	
Pentachlorophenol	109.5	5.0	100	0	109	45-125	115.7	5.51	25	
Pyridine	24.72	5.0	50	0	49.4	34-115	25.39	2.69	25	
Surr: 2,4,6-Tribromophenol	*107.6*	5.0	*100*	0	*108*	*42-124*	113.7	*5.44*	*25*	
Surr: 2-Fluorobiphenyl	*85.28*	5.0	*100*	0	*85.3*	*48-120*	83.89	*1.64*	*25*	
Surr: 2-Fluorophenol	*80.19*	5.0	*100*	0	*80.2*	*20-120*	75.91	*5.48*	*25*	
Surr: 4-Terphenyl-d14	*101.8*	5.0	*100*	0	*102*	*51-135*	91.09	*11.1*	*25*	
Surr: Nitrobenzene-d5	*76.07*	5.0	*100*	0	*76.1*	*41-120*	74.22	*2.46*	*25*	
Surr: Phenol-d6	*85.6*	5.0	*100*	0	*85.6*	*20-120*	74.45	*13.9*	*25*	

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121428** Instrument ID **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-010512-R121428** Units: **µg/L** Analysis Date: **1/5/2012 12:17 PM**
Client ID: Run ID: **VOA1_120105C** SeqNo: **2648331** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*53.06*	5.0	*50*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.59*	5.0	*50*	0	*97.2*	*72.4-125*	0			
Surr: Dibromofluoromethane	*50.5*	5.0	*50*	0	*101*	*71.2-125*	0			
Surr: Toluene-d8	*46.57*	5.0	*50*	0	*93.1*	*75-125*	0			

MBLK Sample ID: **MBLKV1-010412-R121428** Units: **µg/L** Analysis Date: **1/5/2012 02:50 PM**
Client ID: Run ID: **VOA1_120105C** SeqNo: **2648339** Prep Date: **1/5/2012** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*992.2*	100	*1000*	0	*99.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*980.9*	100	*1000*	0	*98.1*	*72.4-125*	0			
Surr: Dibromofluoromethane	*985*	100	*1000*	0	*98.5*	*71.2-125*	0			
Surr: Toluene-d8	*837.1*	100	*1000*	0	*83.7*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121428** Instrument ID **VOA1** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-010512-R121428** Units: **µg/L** Analysis Date: **1/5/2012 10:36 AM**
Client ID: Run ID: **VOA1_120105C** SeqNo: **2648330** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	51.72	5.0	50	0	103	73-124	0			
1,2-Dichloroethane	49.41	5.0	50	0	98.8	76-120	0			
1,4-Dichlorobenzene	49.08	5.0	50	0	98.2	70-130	0			
2-Butanone	92.25	10	100	0	92.2	70-130	0			
Benzene	49.49	5.0	50	0	99	70-128	0			
Carbon tetrachloride	52.8	5.0	50	0	106	70-130	0			
Chlorobenzene	52.88	5.0	50	0	106	72-127	0			
Chloroform	51.32	5.0	50	0	103	70-130	0			
Tetrachloroethene	48.84	5.0	50	0	97.7	70-130	0			
Trichloroethene	51.44	5.0	50	0	103	72-129	0			
Vinyl chloride	51.31	2.0	50	0	103	70-130	0			
Surr: 1,2-Dichloroethane-d4	*47.76*	5.0	*50*	0	*95.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*46.66*	5.0	*50*	0	*93.3*	*72-125*	0			
Surr: Dibromofluoromethane	*50.54*	5.0	*50*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*47.15*	5.0	*50*	0	*94.3*	*75-125*	0			

MS Sample ID: **1201051-08ZMS** Units: **µg/L** Analysis Date: **1/5/2012 01:59 PM**
Client ID: Run ID: **VOA1_120105C** SeqNo: **2648335** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	44.65	5.0	50	0	89.3	73-124	0			
1,2-Dichloroethane	52.37	5.0	50	0	105	76-120	0			
1,4-Dichlorobenzene	47.93	5.0	50	0	95.9	70-130	0			
2-Butanone	91.8	10	100	0	91.8	70-130	0			
Benzene	48.91	5.0	50	0	97.8	70-128	0			
Carbon tetrachloride	48.46	5.0	50	0	96.9	70-130	0			
Chlorobenzene	51.38	5.0	50	0	103	72-127	0			
Chloroform	50.64	5.0	50	0	101	70-130	0			
Tetrachloroethene	47.3	5.0	50	0	94.6	70-130	0			
Trichloroethene	51	5.0	50	0	102	72-129	0			
Vinyl chloride	40.21	2.0	50	0	80.4	70-130	0			
Surr: 1,2-Dichloroethane-d4	*49.5*	5.0	*50*	0	*99*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.5*	5.0	*50*	0	*103*	*72-125*	0			
Surr: Dibromofluoromethane	*49.81*	5.0	*50*	0	*99.6*	*71-125*	0			
Surr: Toluene-d8	*46.85*	5.0	*50*	0	*93.7*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121428** Instrument ID **VOA1** Method: **SW1311/8260B**

MSD Sample ID: **1201051-08ZMSD** Units: **µg/L** Analysis Date: **1/5/2012 02:25 PM**

Client ID: Run ID: **VOA1_120105C** SeqNo: **2648337** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	45.38	5.0	50	0	90.8	73-124	44.65	1.64	20	
1,2-Dichloroethane	52.03	5.0	50	0	104	76-120	52.37	0.658	20	
1,4-Dichlorobenzene	47.45	5.0	50	0	94.9	70-130	47.93	1.01	20	
2-Butanone	100	10	100	0	100	70-130	91.8	8.6	20	
Benzene	52.41	5.0	50	0	105	70-128	48.91	6.91	20	
Carbon tetrachloride	50.12	5.0	50	0	100	70-130	48.46	3.35	20	
Chlorobenzene	50.6	5.0	50	0	101	72-127	51.38	1.54	20	
Chloroform	49.96	5.0	50	0	99.9	70-130	50.64	1.36	20	
Tetrachloroethene	47	5.0	50	0	94	70-130	47.3	0.636	20	
Trichloroethene	51.92	5.0	50	0	104	72-129	51	1.78	20	
Vinyl chloride	43.18	2.0	50	0	86.4	70-130	40.21	7.1	20	
Surr: 1,2-Dichloroethane-d4	*49.82*	5.0	*50*	0	*99.6*	*70-125*	49.5	*0.641*	*20*	
Surr: 4-Bromofluorobenzene	*50.05*	5.0	*50*	0	*100*	*72-125*	51.5	*2.84*	*20*	
Surr: Dibromofluoromethane	*49.5*	5.0	*50*	0	*99*	*71-125*	49.81	*0.625*	*20*	
Surr: Toluene-d8	*45.22*	5.0	*50*	0	*90.4*	*75-125*	46.85	*3.55*	*20*	

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121320** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1112911-02ADUP** Units: **Burn Rate, mm/se** Analysis Date: **1/4/2012 12:10 PM**

Client ID: Run ID: **WETCHEM_120104A** SeqNo: **2645895** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1201035-01A

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

Client: Navajo Refining Company
Work Order: 1201035
Project: DAF Quarterly Sampling

QC BATCH REPORT

Batch ID: **R121470** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-010612-R121470** Units: **pH Units** Analysis Date: **1/6/2012 04:00 PM**
Client ID: Run ID: **WETCHEM_120106F** SeqNo: **2649035** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.02	0.10	6	0	100	90-110	0			

DUP Sample ID: **1201035-01ADUP** Units: **pH Units** Analysis Date: **1/6/2012 04:00 PM**
Client ID: **DAF** Run ID: **WETCHEM_120106F** SeqNo: **2649037** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.6	0.10	0	0	0	0-0	6.52	1.22	20	

The following samples were analyzed in this batch: 1201035-01A

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

ALS Environmental

Date: 09-Jan-12

Client: Navajo Refining Company
Project: DAF Quarterly Sampling
WorkOrder: 1201035

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **04-Jan-12 10:45**

Work Order: **1201035** Received by: **PMG**

Checklist completed by Raymond N Gamboa (eSignature) 04-Jan-12 (Date) Reviewed by: Chris Bryson (eSignature) 04-Jan-12 (Date)

Matrices: Soil,, Water
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☑	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.1c	002	
Cooler(s)/Kit(s):	3788		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1201035

NAVAJO REFINING: Navajo Refining Company

Project: DAF Quarterly Sampling

ALS Project Manager: Chris Bryson

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	DAF Quarterly Sampling	A	TCLP Volatiles
Work Order		Project Number		B	TCLP Semi-Volatiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	R. C. I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	A.Strange@hollyfrontier.com	e-Mail Address	A.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	DAF	1/3/12	10:00	Solid	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Aaron Strange

Shipment Method: Federal Express

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☑ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Aaron Strange	1-3-2011	16:15	
Relinquished by:	Date:	Time:	Received by (Laboratory): 1-4-12. 1015.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: **Rush Turnaround - Two Days**

Cooler Temp.

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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Date: 05-Jan-12

Client: ALS Environmental
Project: 1201035
Work Order: **1201062**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1201062-01	1201035-01B	Solid		1/3/2012 10:00	1/5/2012 10:00	☐

ALS Group USA, Corp

Date: 05-Jan-12

Client: ALS Environmental
Project: 1201035
WorkOrder: **1201062**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *05-Jan-12*

Client: ALS Environmental
Project: 1201035
Sample ID: 1201035-01B
Collection Date: 1/3/2012 10:00 AM

Work Order: 1201062
Lab ID: 1201062-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	1/5/2012 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	1/5/2012 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1201062
Project: 1201035

Date: 05-Jan-12

QC BATCH REPORT

Batch ID: **R99725** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK	Sample ID: **WBLKW1-010412-R99725**			Units: **mg/Kg**			Analysis Date: **1/4/2012 09:00 AM**			
Client ID:	Run ID: **WETCHEM_120104B**			SeqNo: **1868827**		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: 1201062-01A

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

Client: ALS Environmental
Work Order: 1201062
Project: 1201035

QC BATCH REPORT

Batch ID: **R99726** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-010412-R99726** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868829** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-010412-R99726** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868830** 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	0			

LCSD Sample ID: **WLCSDW1-010412-R99726** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868834** 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	234.9	6.06	35	

MS Sample ID: **1112842-02A MS** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868832** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	264.2	40	250	29.36	94	50-150	0			

MSD Sample ID: **1112842-02A MSD** Units: **mg/Kg** Analysis Date: **1/4/2012 09:00 AM**
Client ID: Run ID: **WETCHEM_120104C** SeqNo: **1868833** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	264.2	40	250	29.36	94	50-150	264.2	0	35	

The following samples were analyzed in this batch: 1201062-01A

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

1201062

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

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

Salesperson: Jeffrey L Croston

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 04-Jan-12
COC ID: 11324
Due Date: 06-Jan-12

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	10-2122415	Project Name	1201035	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	Patricia L. Lynch	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsenviro.com	eMail CC	yvan.ty@alsglobal.com	J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1201035-01B (DAF)	Solid	3/Jan/2012 10:00	(1) 4OZGNEAT	X	X								

Comments:

Please analyze for Reactive Cyanide and Reactive Sulfide. Report is due on 1/6/11. Send report to Chris Bryson, chris.bryson@alsglobal.com, and CC: results to Mary Knowles, mary.knowles@alsglobal.com and Y-Van Ty, yvan.ty@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	1/4/12 - Fed Ex		1/5/12 1000		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

3.2°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **05-Jan-12 10:00**

Work Order: **1201062** Received by: **DS**

Checklist completed by G bqt#V kdz eSignature 05-Jan-12 Date Reviewed by: E bo#F dh eSignature 05-Jan-12 Date

Matrices: Solid
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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Seal Broken By:
Date:
Time:
CUSTODY SEAL
Seal Broken By:
Date:
Time:
CUSTODY SEAL
ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US
SHIP DATE: 04JAN12
ACTWGT: 21.7 LB
CAD: 300130/CAFE2509
BILL SENDER
TO JEFF GLASER
ALS ENVIRONMENTAL
3352 128TH AVE.
HOLLAND MI 49424
281 530-5656
REF (SUBCONTRACT) PMG
FedEx
Express
THU - 05 JAN A4
PRIORITY OVERNIGHT
GRRA
49424
MI-US GRR

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Monday, December 19, 2011 9:14 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Moore, Darrell; Strange, Aaron; Rhodes, Glen; Dave Small
Subject: request for waste disposal
Attachments: 1111653 Resin from Water Softener Final.pdf; Profile form and C-138--Water softener resin.pdf

Kim,
Please see the attached profile form, C-138 and analytical results for the water softener resin waste. Please let us know via email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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ALS Environmental

29-Nov-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Resin from Water Softener

Work Order: **1111653**

Dear Aaron,

ALS Environmental received 2 samples on 18-Nov-2011 09:00 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 27.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac
Certificate No: T104704231-09A-TX

ALS Environmental

Date: 29-Nov-11

Client: Navajo Refining Company
Project: Resin from Water Softener
Work Order: **1111653**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1111653-01	Water Softener Resin	Solid		11/17/2011 09:15	11/18/2011 09:00	☐
1111653-02	Trip Blank - 101811-05	Water		11/17/2011	11/18/2011 09:00	☑

Client:	Navajo Refining Company
Project:	Resin from Water Softener
Work Order:	1111653

Case Narrative

Batch 57126, Metals, Sample 1111689-01 : MS/MSD is for an unrelated sample.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *29-Nov-11*

Client: Navajo Refining Company
Project: Resin from Water Softener
Sample ID: Water Softener Resin
Collection Date: 11/17/2011 09:15 AM

Work Order: 1111653
Lab ID: 1111653-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **11/23/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	11/23/2011 03:03 PM
TCLP METALS			**SW1311/6020**		Prep Date: **11/22/2011**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	11/22/2011 09:30 PM
Barium	ND		0.0500	mg/L	10	11/22/2011 09:30 PM
Cadmium	ND		0.0200	mg/L	10	11/22/2011 09:30 PM
Chromium	ND		0.0500	mg/L	10	11/22/2011 09:30 PM
Lead	ND		0.0500	mg/L	10	11/22/2011 09:30 PM
Selenium	ND		0.0500	mg/L	10	11/22/2011 09:30 PM
Silver	ND		0.0500	mg/L	10	11/22/2011 09:30 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **11/22/2011**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
Cresols, Total	ND		0.015	mg/L	1	11/26/2011 03:53 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
Hexachloroethane	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
Nitrobenzene	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
Pentachlorophenol	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
Pyridine	ND		0.0050	mg/L	1	11/26/2011 03:53 PM
Surr: 2,4,6-Tribromophenol	*63.4*		*42-124*	*%REC*	1	11/26/2011 03:53 PM
Surr: 2-Fluorobiphenyl	*49.1*		*48-120*	*%REC*	1	11/26/2011 03:53 PM
Surr: 2-Fluorophenol	*44.1*		*20-120*	*%REC*	1	11/26/2011 03:53 PM
Surr: 4-Terphenyl-d14	*64.5*		*51-135*	*%REC*	1	11/26/2011 03:53 PM
Surr: Nitrobenzene-d5	*52.1*		*41-120*	*%REC*	1	11/26/2011 03:53 PM
Surr: Phenol-d6	*51.7*		*20-120*	*%REC*	1	11/26/2011 03:53 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **11/22/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	11/22/2011 07:34 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	11/22/2011 07:34 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	11/22/2011 07:34 PM
2-Butanone	ND		0.20	mg/L	20	11/22/2011 07:34 PM
Benzene	ND		0.10	mg/L	20	11/22/2011 07:34 PM
Carbon tetrachloride	ND		0.10	mg/L	20	11/22/2011 07:34 PM
Chlorobenzene	ND		0.10	mg/L	20	11/22/2011 07:34 PM
Chloroform	ND		0.10	mg/L	20	11/22/2011 07:34 PM
Tetrachloroethene	ND		0.10	mg/L	20	11/22/2011 07:34 PM
Trichloroethene	ND		0.10	mg/L	20	11/22/2011 07:34 PM

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

ALS Environmental

Date: *29-Nov-11*

Client: Navajo Refining Company
Project: Resin from Water Softener
Sample ID: Water Softener Resin
Collection Date: 11/17/2011 09:15 AM

Work Order: 1111653
Lab ID: 1111653-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	11/22/2011 07:34 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	11/22/2011 07:34 PM
Surr: 4-Bromofluorobenzene	*100*		*72-125*	*%REC*	20	11/22/2011 07:34 PM
Surr: Dibromofluoromethane	*99.2*		*71-125*	*%REC*	20	11/22/2011 07:34 PM
Surr: Toluene-d8	*99.9*		*75-125*	*%REC*	20	11/22/2011 07:34 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
ReactiveCyanide	ND		40.0	mg/Kg	1	11/23/2011 11:45 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
ReactiveSulfide	ND		40.0	mg/Kg	1	11/23/2011 11:45 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	11/21/2011 05:45 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**2.33**		**0.100**	**pH Units**	1	11/21/2011 11:00 AM

SOLID
OK
CSL

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

ALS Environmental

Date: 29-Nov-11

Client: Navajo Refining Company

Work Order: 1111653

Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **57126** Instrument ID: **ICPMS05** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-112111-57126** Units: **mg/L** Analysis Date: **11/22/2011 09:23 PM**

Client ID: Run ID: **ICPMS05_111122A** SeqNo: **2607392** Prep Date: **11/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	0.01802	0.050								J
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW3-112211-57126** Units: **mg/L** Analysis Date: **11/22/2011 09:26 PM**

Client ID: Run ID: **ICPMS05_111122A** SeqNo: **2607394** Prep Date: **11/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW3-112211-57126** Units: **mg/L** Analysis Date: **11/22/2011 09:28 PM**

Client ID: Run ID: **ICPMS05_111122A** SeqNo: **2607396** Prep Date: **11/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5153	0.050	0.5	0	103	80-120	0			
Barium	0.5015	0.050	0.5	0	100	80-120	0			
Cadmium	0.5015	0.020	0.5	0	100	80-120	0			
Chromium	0.4909	0.050	0.5	0	98.2	80-120	0			
Lead	0.5061	0.050	0.5	0	101	80-120	0			
Selenium	0.5028	0.050	0.5	0	101	80-120	0			
Silver	0.4659	0.050	0.5	0	93.2	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **57126** Instrument ID: **ICPMS05** Method: **SW1311/6020**

MS Sample ID: **1111689-01BMS** Units: **mg/L** Analysis Date: **11/22/2011 09:54 PM**
Client ID: Run ID: **ICPMS05_111122A** SeqNo: **2607414** Prep Date: **11/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05129	0.050	0.05	0.000512	102	75-125	0			
Barium	0.1731	0.050	0.05	0.1321	81.9	75-125	0			
Cadmium	0.05149	0.020	0.05	0.000557	102	75-125	0			
Chromium	0.06646	0.050	0.05	0.01932	94.3	75-125	0			
Lead	0.06223	0.050	0.05	0.01142	102	75-125	0			
Selenium	0.05948	0.050	0.05	-0.003462	126	75-125	0			S
Silver	0.04785	0.020	0.05	0.000234	95.2	75-125	0			

MSD Sample ID: **1111689-01BMSD** Units: **mg/L** Analysis Date: **11/22/2011 09:57 PM**
Client ID: Run ID: **ICPMS05_111122A** SeqNo: **2607416** Prep Date: **11/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.05086	0.050	0.05	0.000512	101	75-125	0.05129	0.836	25	
Barium	0.1693	0.050	0.05	0.1321	74.3	75-125	0.1731	2.22	25	S
Cadmium	0.04927	0.020	0.05	0.000557	97.4	75-125	0.05149	4.41	25	
Chromium	0.0643	0.050	0.05	0.01932	90	75-125	0.06646	3.3	25	
Lead	0.05917	0.050	0.05	0.01142	95.5	75-125	0.06223	5.03	25	
Selenium	0.06046	0.050	0.05	-0.003462	128	75-125	0.05948	1.63	25	S
Silver	0.04797	0.020	0.05	0.000234	95.5	75-125	0.04785	0.257	25	

DUP Sample ID: **1111689-01BDUP** Units: **mg/L** Analysis Date: **11/22/2011 09:52 PM**
Client ID: Run ID: **ICPMS05_111122A** SeqNo: **2607412** Prep Date: **11/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.000512	0	25	
Barium	0.1267	0.050	0	0	0	0-0	0.1321	4.18	25	
Cadmium	ND	0.020	0	0	0	0-0	0.000557	0	25	
Chromium	0.01887	0.050	0	0	0	0-0	0.01932	0	25	J
Lead	0.01088	0.050	0	0	0	0-0	0.01142	0	25	J
Selenium	ND	0.050	0	0	0	0-0	-0.003462	0	25	
Silver	ND	0.050	0	0	0	0-0	0.000234	0	25	

The following samples were analyzed in this batch: 1111653-01A

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **57158** Instrument ID: **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-112311-57158** Units: **mg/L** Analysis Date: **11/23/2011 02:28 PM**
Client ID: Run ID: **MERCURY_111123A** SeqNo: **2608121** Prep Date: **11/23/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-112211-57158** Units: **mg/L** Analysis Date: **11/23/2011 02:32 PM**
Client ID: Run ID: **MERCURY_111123A** SeqNo: **2608124** Prep Date: **11/23/2011** DF: **1**

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

LCS Sample ID: **GLCSW2-112311-57158** Units: **mg/L** Analysis Date: **11/23/2011 02:30 PM**
Client ID: Run ID: **MERCURY_111123A** SeqNo: **2608123** Prep Date: **11/23/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00482	0.00020	0.005	0	96.4	80-120	0			

MS Sample ID: **1111671-01CMS** Units: **mg/L** Analysis Date: **11/23/2011 02:45 PM**
Client ID: Run ID: **MERCURY_111123A** SeqNo: **2608128** Prep Date: **11/23/2011** 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	96	75-125	0			

MSD Sample ID: **1111671-01CMSD** Units: **mg/L** Analysis Date: **11/23/2011 02:47 PM**
Client ID: Run ID: **MERCURY_111123A** SeqNo: **2608130** Prep Date: **11/23/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00484	0.00020	0.005	0	96.8	75-125	0.0048	0.83	20	

DUP Sample ID: **1111671-01CDUP** Units: **mg/L** Analysis Date: **11/23/2011 02:43 PM**
Client ID: Run ID: **MERCURY_111123A** SeqNo: **2608127** Prep Date: **11/23/2011** DF: **1**

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

The following samples were analyzed in this batch: 1111653-01A

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **57140** Instrument ID: **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-111122-57140** Units: **µg/L** Analysis Date: **11/23/2011 12:13 PM**
Client ID: Run ID: **SV-3_111123A** SeqNo: **2607923** Prep Date: **11/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*80.05*	5.0	*100*	0	*80.1*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*75.39*	5.0	*100*	0	*75.4*	*48-120*	0			
Surr: 2-Fluorophenol	*71.56*	5.0	*100*	0	*71.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*77.24*	5.0	*100*	0	*77.2*	*51-135*	0			
Surr: Nitrobenzene-d5	*90.01*	5.0	*100*	0	*90*	*41-120*	0			
Surr: Phenol-d6	*74.43*	5.0	*100*	0	*74.4*	*20-120*	0			

LCS Sample ID: **SLCST1-111122-57140** Units: **µg/L** Analysis Date: **11/23/2011 12:37 PM**
Client ID: Run ID: **SV-3_111123A** SeqNo: **2607924** Prep Date: **11/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	79.01	5.0	100	0	79	52-115	0			
2,4,6-Trichlorophenol	66.26	5.0	100	0	66.3	53-115	0			
2,4-Dinitrotoluene	45.02	5.0	50	0	90	56-115	0			
Cresols, Total	227	15	250	0	90.8	35-115	0			
Hexachlorobenzene	44.22	5.0	50	0	88.4	54-115	0			
Hexachlorobutadiene	41.49	5.0	50	0	83	51-115	0			
Hexachloroethane	47.83	5.0	50	0	95.7	54-115	0			
Nitrobenzene	49.13	5.0	50	0	98.3	40-124	0			
Pentachlorophenol	77.97	5.0	100	0	78	45-125	0			
Pyridine	31.19	5.0	50	0	62.4	34-115	0			
Surr: 2,4,6-Tribromophenol	*68.72*	5.0	*100*	0	*68.7*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*72.18*	5.0	*100*	0	*72.2*	*48-120*	0			
Surr: 2-Fluorophenol	*85.07*	5.0	*100*	0	*85.1*	*20-120*	0			
Surr: 4-Terphenyl-d14	*77.16*	5.0	*100*	0	*77.2*	*51-135*	0			
Surr: Nitrobenzene-d5	*83.86*	5.0	*100*	0	*83.9*	*41-120*	0			
Surr: Phenol-d6	*84.75*	5.0	*100*	0	*84.8*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **57140** Instrument ID: **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-111122-57140** Units: **µg/L** Analysis Date: **11/23/2011 01:00 PM**

Client ID: Run ID: **SV-3_111123A** SeqNo: **2607925** Prep Date: **11/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	74.45	5.0	100	0	74.4	52-115	79.01	5.95	25	
2,4,6-Trichlorophenol	69.59	5.0	100	0	69.6	53-115	66.26	4.91	25	
2,4-Dinitrotoluene	44.29	5.0	50	0	88.6	56-115	45.02	1.62	25	
Cresols, Total	221.1	15	250	0	88.5	35-115	227	2.59	25	
Hexachlorobenzene	45.96	5.0	50	0	91.9	54-115	44.22	3.86	25	
Hexachlorobutadiene	43.53	5.0	50	0	87.1	51-115	41.49	4.79	25	
Hexachloroethane	48.5	5.0	50	0	97	54-115	47.83	1.39	25	
Nitrobenzene	50.61	5.0	50	0	101	40-124	49.13	2.98	25	
Pentachlorophenol	78.53	5.0	100	0	78.5	45-125	77.97	0.708	25	
Pyridine	32.46	5.0	50	0	64.9	34-115	31.19	3.99	25	
Surr: 2,4,6-Tribromophenol	*67.11*	5.0	*100*	0	*67.1*	*42-124*	68.72	*2.37*	*25*	
Surr: 2-Fluorobiphenyl	*74.78*	5.0	*100*	0	*74.8*	*48-120*	72.18	*3.54*	*25*	
Surr: 2-Fluorophenol	*85.54*	5.0	*100*	0	*85.5*	*20-120*	85.07	*0.547*	*25*	
Surr: 4-Terphenyl-d14	*82.16*	5.0	*100*	0	*82.2*	*51-135*	77.16	*6.28*	*25*	
Surr: Nitrobenzene-d5	*87.33*	5.0	*100*	0	*87.3*	*41-120*	83.86	*4.05*	*25*	
Surr: Phenol-d6	*82.42*	5.0	*100*	0	*82.4*	*20-120*	84.75	*2.79*	*25*	

The following samples were analyzed in this batch: 1111653-01A

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **R119753** Instrument ID: **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-112211-R119753** Units: **µg/L** Analysis Date: **11/22/2011 11:53 AM**
Client ID: Run ID: **VOA1_111122B** SeqNo: **2608040** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*51.33*	5.0	*50*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.95*	5.0	*50*	0	*95.9*	*72.4-125*	0			
Surr: Dibromofluoromethane	*49.36*	5.0	*50*	0	*98.7*	*71.2-125*	0			
Surr: Toluene-d8	*49.8*	5.0	*50*	0	*99.6*	*75-125*	0			

MBLK Sample ID: **MBLKV1-111811-R119753** Units: **µg/L** Analysis Date: **11/22/2011 12:18 PM**
Client ID: Run ID: **VOA1_111122B** SeqNo: **2608041** Prep Date: **11/19/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*1002*	100	*1000*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1041*	100	*1000*	0	*104*	*72.4-125*	0			
Surr: Dibromofluoromethane	*964.1*	100	*1000*	0	*96.4*	*71.2-125*	0			
Surr: Toluene-d8	*1020*	100	*1000*	0	*102*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **R119753** Instrument ID: **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **MBLKV1-112111-R119753** Units: **µg/L** Analysis Date: **11/22/2011 02:52 PM**

Client ID: Run ID: **VOA1_111122B** SeqNo: **2608046** Prep Date: **11/22/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	48.75	200								J
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*1008*	100	*1000*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1006*	100	*1000*	0	*101*	*72.4-125*	0			
Surr: Dibromofluoromethane	*975.9*	100	*1000*	0	*97.6*	*71.2-125*	0			
Surr: Toluene-d8	*1079*	100	*1000*	0	*108*	*75-125*	0			

LCS Sample ID: **VLCSW-112211-R119753** Units: **µg/L** Analysis Date: **11/22/2011 10:30 AM**

Client ID: Run ID: **VOA1_111122B** SeqNo: **2608039** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	52.34	5.0	50	0	105	73-124	0			
1,2-Dichloroethane	49.6	5.0	50	0	99.2	76-120	0			
1,4-Dichlorobenzene	48.01	5.0	50	0	96	70-130	0			
2-Butanone	96.53	10	100	0	96.5	70-130	0			
Benzene	49.02	5.0	50	0	98	70-128	0			
Carbon tetrachloride	50.92	5.0	50	0	102	70-130	0			
Chlorobenzene	49.28	5.0	50	0	98.6	72-127	0			
Chloroform	52.78	5.0	50	0	106	70-130	0			
Tetrachloroethene	50.75	5.0	50	0	101	70-130	0			
Trichloroethene	49.2	5.0	50	0	98.4	72-129	0			
Vinyl chloride	55	2.0	50	0	110	70-130	0			
Surr: 1,2-Dichloroethane-d4	*50.42*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.57*	5.0	*50*	0	*95.1*	*72-125*	0			
Surr: Dibromofluoromethane	*51.19*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*46.52*	5.0	*50*	0	*93*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **R119753** Instrument ID: **VOA1** Method: **SW1311/8260B**

MS Sample ID: **1111609-01AMS** Units: **µg/L** Analysis Date: **11/22/2011 02:01 PM**
Client ID: Run ID: **VOA1_111122B** SeqNo: **2608088** Prep Date: **11/19/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	892.2	100	1000	0	89.2	73-124	0			
1,2-Dichloroethane	1019	100	1000	0	102	76-120	0			
1,4-Dichlorobenzene	931.3	100	1000	0	93.1	70-130	0			
2-Butanone	2045	200	2000	0	102	70-130	0			
Benzene	974.8	100	1000	0	97.5	70-128	0			
Carbon tetrachloride	839.2	100	1000	0	83.9	70-130	0			
Chlorobenzene	950.2	100	1000	0	95	72-127	0			
Chloroform	995.5	100	1000	0	99.5	70-130	0			
Tetrachloroethene	843.2	100	1000	0	84.3	70-130	0			
Trichloroethene	933	100	1000	0	93.3	72-129	0			
Vinyl chloride	908.1	40	1000	0	90.8	70-130	0			
Surr: 1,2-Dichloroethane-d4	*980.6*	100	*1000*	0	*98.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1013*	100	*1000*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*995.9*	100	*1000*	0	*99.6*	*71-125*	0			
Surr: Toluene-d8	*1011*	100	*1000*	0	*101*	*75-125*	0			

MSD Sample ID: **1111609-01AMSD** Units: **µg/L** Analysis Date: **11/22/2011 02:26 PM**
Client ID: Run ID: **VOA1_111122B** SeqNo: **2608089** Prep Date: **11/19/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	932.7	100	1000	0	93.3	73-124	892.2	4.44	20	
1,2-Dichloroethane	964.1	100	1000	0	96.4	76-120	1019	5.49	20	
1,4-Dichlorobenzene	914.3	100	1000	0	91.4	70-130	931.3	1.84	20	
2-Butanone	2065	200	2000	0	103	70-130	2045	0.992	20	
Benzene	920.1	100	1000	0	92	70-128	974.8	5.77	20	
Carbon tetrachloride	857.9	100	1000	0	85.8	70-130	839.2	2.21	20	
Chlorobenzene	945.4	100	1000	0	94.5	72-127	950.2	0.51	20	
Chloroform	1005	100	1000	0	100	70-130	995.5	0.934	20	
Tetrachloroethene	837.1	100	1000	0	83.7	70-130	843.2	0.72	20	
Trichloroethene	963.1	100	1000	0	96.3	72-129	933	3.17	20	
Vinyl chloride	922.4	40	1000	0	92.2	70-130	908.1	1.56	20	
Surr: 1,2-Dichloroethane-d4	*1035*	100	*1000*	0	*103*	*70-125*	980.6	*5.37*	*20*	
Surr: 4-Bromofluorobenzene	*998.1*	100	*1000*	0	*99.8*	*72-125*	1013	*1.51*	*20*	
Surr: Dibromofluoromethane	*1032*	100	*1000*	0	*103*	*71-125*	995.9	*3.57*	*20*	
Surr: Toluene-d8	*965.2*	100	*1000*	0	*96.5*	*75-125*	1011	*4.65*	*20*	

The following samples were analyzed in this batch: 1111653-01A

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **R119571** Instrument ID: **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-112111-R119571** Units: **pH Units** Analysis Date: **11/21/2011 11:00 AM**
Client ID: Run ID: **WETCHEM_111121D** SeqNo: **2604460** 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: **1111511-02ADUP** Units: **pH Units** Analysis Date: **11/21/2011 11:00 AM**
Client ID: Run ID: **WETCHEM_111121D** SeqNo: **2604476** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	9.25	0.10	0	0	0	0-0	9.17	0.869	20	

The following samples were analyzed in this batch: 1111653-01A

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

Client: Navajo Refining Company
Work Order: 1111653
Project: Resin from Water Softener

QC BATCH REPORT

Batch ID: **R119595** Instrument ID: **WetChem** Method: **SW1030**

DUP Sample ID: **1111620-02ADUP** Units: **Burn Rate, mm/se** Analysis Date: **11/21/2011 05:45 PM**

Client ID: Run ID: **WETCHEM_111121G** SeqNo: **2605048** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1111653-01A

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

ALS Environmental

Date: 29-Nov-11

Client: Navajo Refining Company
Project: Resin from Water Softener
WorkOrder: 1111653

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/s	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

☑ ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1111653

NAVAJO REFINING: Navajo Refining Company

Project: Resin from Water Softener

ALS Project Manager: Chris Bryson

Customer Information		Project Information			
Purchase Order		Project Name	Resin from Water Softener	A	TCLP Volatiles
Work Order		Project Number		B	TCLP Semi-Volatiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	R. C. I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	A.Strange@hollyfrontier.com	e-Mail Address	A.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Water Softener Resin	11/17/11	9:15	Solid	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Aaron Strange

Shipment Method: Federal Express

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Aaron Strange	11-17-11	1615		
Relinquished by:	Date:	Time:	Received by (Laboratory): 11/18/11 0700	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV; SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **18-Nov-11 09:00**

Work Order: **1111653** Received by: **RNG**

Checklist completed by: Paresh M. Gjga (eSignature) 18-Nov-11 (Date) Reviewed by: Chris Bryson (eSignature) 21-Nov-11 (Date)

Matrices: Solid
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):	3.3c	002	
Cooler(s)/Kit(s):	4588		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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

Date
Name
Company

CUSTODY SEAL

Date: 11-17-11 Time: 1620
Name: Glen Rhodes for A. Strange
Company: NAVAJO REFINING CO.

Seal Broken By:
Date:

ALS Group USA, Corp

Date: 29-Nov-11

Client: ALS Environmental
Project: 1111653
Work Order: **1111719**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1111719-01	1111653-01B	Solid		11/17/2011 09:15	11/19/2011 11:40	☐

ALS Group USA, Corp

Date: 29-Nov-11

Client: ALS Environmental
Project: 1111653
WorkOrder: **1111719**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *29-Nov-11*

Client: ALS Environmental
Project: 1111653
Work Order: 1111719
Sample ID: 1111653-01B
Lab ID: 1111719-01
Collection Date: 11/17/2011 09:15 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	11/23/2011 11:45 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	11/23/2011 11:45 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 29-Nov-11

Client: ALS Environmental

Work Order: 1111719

Project: 1111653

QC BATCH REPORT

Batch ID: **R98034** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-112111-R98034** Units: **mg/Kg** Analysis Date: **11/21/2011 11:45 PM**

Client ID: Run ID: **WETCHEM_111121E** SeqNo: **1828564** 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: 1111719-01A

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

Client: ALS Environmental
Work Order: 1111719
Project: 1111653

QC BATCH REPORT

Batch ID: **R98035** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-112111-R98035** Units: **mg/Kg** Analysis Date: **11/21/2011 11:45 AM**
Client ID: Run ID: **WETCHEM_111121F** SeqNo: **1828578** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-112111-R98035** Units: **mg/Kg** Analysis Date: **11/21/2011 11:45 AM**
Client ID: Run ID: **WETCHEM_111121F** SeqNo: **1828579** 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	0			

LCSD Sample ID: **WLCSDW1-112111-R98035** Units: **mg/Kg** Analysis Date: **11/21/2011 11:45 AM**
Client ID: Run ID: **WETCHEM_111121F** SeqNo: **1828587** 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	234.9	0	35	

MS Sample ID: **1111618-01A MS** Units: **mg/Kg** Analysis Date: **11/21/2011 11:45 AM**
Client ID: Run ID: **WETCHEM_111121F** SeqNo: **1828582** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD Sample ID: **1111618-01A MSD** Units: **mg/Kg** Analysis Date: **11/21/2011 11:45 AM**
Client ID: Run ID: **WETCHEM_111121F** SeqNo: **1828583** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch: 1111719-01A

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

1111719

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 18-Nov-11
COC ID: 11214
Due Date: 29-Dec-11

Subcontractor:
ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424
TEL: (616) 399-6070
FAX: (616) 399-6185
Acct #:

Salesperson: Jeffrey L Croston

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1111653	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	Patricia L. Lynch	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	pat.lynch@alsenviro.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1111653-01B (Water Softener Resin)	Solid	17/Nov/2011 9:15	(1) 4OZGNEAT	X	X								

Comments:

Please analyze for reactive cyanide & reactive sulfide. cc Mary.knowles & Yvan.ty@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	Fedex 11/18/11				Std
Relinquished by:	Date/Time	Received by:	Date/Time	3.0°C	
			11/19/11 1140		

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **19-Nov-11 11:40**

Work Order: **1111719** Received by: **AC**

Checklist completed by Alex Casasar (eSignature) 19-Nov-11 (Date) Reviewed by: Bill Carey (eSignature) 20-Nov-11 (Date)

Matrices: Solid
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):	3.0 degrees 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

3.8C

ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US
SHIP DATE: 18NOV11
ACTWGT: 13.4 LB
CAD: 300130/CAFE2509
BILL SENDER
TO LES ARNOLD
ALS ENVIRONMENTAL
3352 128TH AVE.
HOLLAND MI 49424
(281) 530-5666
REF: (SUBCONTRACT) PMG
FedEx
769
TRK# 0201 4340 2167 4602
SATURDAY ### A4
PRIORITY OVERNIGHT
49424
MI-US
GRR
XO GRRA
ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887
CUSTODY SEAL
Date
Time
Name
Company
DR

CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	water softening resin waste
ESTIMATED VOLUME:	
GENERATING PROCESS:	water softening
REMARKS:	see attached ALS report, lab sample ID# 1111653-01
NMOCD FACILITY:	CRI
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: SIGNATURE

NAME: Robert Combs PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 12/19/2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Waste resin from water softening unit.
Please see the attached analytical data from ALS:
Work order: 1111653 Sample ID: 1111653-01

Estimated Volume 20 yds yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

Chavez, Carl J, EMNRD

From: Dave Small [dsmall@r360es.com]
Sent: Thursday, November 03, 2011 1:46 PM
To: Combs, Robert; Kim Flowers; Chavez, Carl J, EMNRD
Cc: Les Elliott; Strange, Aaron; Rhodes, Glen; Moore, Darrell
Subject: RE: Request for waste disposal--spent shift converter catalyst (D-8803)

Approved

Dave Small

Vice President of Operations – Permian Basin Region
R360 Environmental Solutions Inc.
4507 W. Carlsbad Hwy, PO Box 388
Hobbs, NM 88240
C: 575.605.9702 | O: 575.393.1079 | F: 575.393.3615

CRI an R360 company | R360

From: Combs, Robert [mailto:Robert.Combs@hollyfrontier.com]
Sent: Wednesday, November 02, 2011 3:26 PM
To: Kim Flowers; Carl Chavez (CarlJ.Chavez@state.nm.us)
Cc: Les Elliott; Dave Small; Strange, Aaron; Rhodes, Glen; Moore, Darrell
Subject: Request for waste disposal--spent shift converter catalyst (D-8803)

Kim,
Please see the attached profile form, C-138 and analytical results for spent shift converter catalyst used in our hydrogen unit. Please let us know via email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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or electronic copies of this message or any
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Wednesday, November 02, 2011 3:26 PM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Les Elliott; Dave Small; Strange, Aaron; Rhodes, Glen; Moore, Darrell
Subject: Request for waste disposal--spent shift converter catalyst (D-8803)
Attachments: Profile form and C-138.pdf; 1105829 Disposal Final.pdf

Kim,
Please see the attached profile form, C-138 and analytical results for spent shift converter catalyst used in our hydrogen unit. Please let us know via email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	spent iron catalyst--non-hydrotreating
ESTIMATED VOLUME:	8 yds
GENERATING PROCESS:	Unit 63 Hydrogen unit; Shift converter
REMARKS:	see attached ALS report, work order# 1105829
NMOCD FACILITY:	CRI
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 11/2/2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Spent iron catalyst from SMR Hydrogen Unit (shift reactor). This catalyst was NOT used for hydrotreating processes.
Please see the attached analytical data from ALS:
Work order: 1105829 Sample ID: 1105829-02

Estimated Volume 8 yds yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

06-Jun-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Disposal

Work Order: **1105829**

Dear Aaron,

ALS Environmental received 2 samples on 25-May-2011 09:15 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 27.

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

Sincerely,

Chris Bryson

Electronically approved by: Makenzie L. Henderson

Chris Bryson
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 06-Jun-11

Client: Navajo Refining Company
Project: Disposal
Work Order: **1105829**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1105829-01	T-431 Exc Soil	Solid		5/24/2011 14:08	5/25/2011 09:15	☐
1105829-02	D-8803	Solid		5/24/2011 14:20	5/25/2011 09:15	☐

Client:	Navajo Refining Company
Project:	Disposal
Work Order:	1105829

Case Narrative

Batch R110621, TCLP Volatile Organics, Sample T-431 Exc Soil : MS/MSD recoveries were below the control limits for 1,1-Dichloroethene, Carbon tetrachloride, Tetrachloroethene, and Vinyl chloride. The associated RPD was within the control limits.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *06-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1105829
Sample ID: T-431 Exc Soil
Lab ID: 1105829-01
Collection Date: 5/24/2011 02:08 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/2/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/2/2011 03:40 PM
TCLP METALS			**SW1311/6020**		Prep Date: **5/31/2011**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	5/31/2011 06:53 PM
Barium	**0.712**		**0.0500**	**mg/L**	10	5/31/2011 06:53 PM
Cadmium	ND		0.0500	mg/L	10	5/31/2011 06:53 PM
Chromium	ND		0.0500	mg/L	10	5/31/2011 06:53 PM
Lead	ND		0.0500	mg/L	10	5/31/2011 06:53 PM
Selenium	ND		0.0500	mg/L	10	5/31/2011 06:53 PM
Silver	ND		0.0500	mg/L	10	5/31/2011 06:53 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **5/31/2011**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/1/2011 01:05 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/1/2011 01:05 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/1/2011 01:05 PM
Cresols, Total	ND		15	µg/L	1	6/1/2011 01:05 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/1/2011 01:05 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/1/2011 01:05 PM
Hexachloroethane	ND		5.0	µg/L	1	6/1/2011 01:05 PM
Nitrobenzene	ND		5.0	µg/L	1	6/1/2011 01:05 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/1/2011 01:05 PM
Pyridine	ND		5.0	µg/L	1	6/1/2011 01:05 PM
Surr: 2,4,6-Tribromophenol	*64.7*		*42-124*	*%REC*	1	6/1/2011 01:05 PM
Surr: 2-Fluorobiphenyl	*52.6*		*48-120*	*%REC*	1	6/1/2011 01:05 PM
Surr: 2-Fluorophenol	*44.7*		*20-120*	*%REC*	1	6/1/2011 01:05 PM
Surr: 4-Terphenyl-d14	*65.6*		*51-135*	*%REC*	1	6/1/2011 01:05 PM
Surr: Nitrobenzene-d5	*57.1*		*41-120*	*%REC*	1	6/1/2011 01:05 PM
Surr: Phenol-d6	*51.0*		*20-120*	*%REC*	1	6/1/2011 01:05 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **5/27/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	5/28/2011 01:09 AM
1,2-Dichloroethane	ND		100	µg/L	20	5/28/2011 01:09 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	5/28/2011 01:09 AM
2-Butanone	ND		200	µg/L	20	5/28/2011 01:09 AM
Benzene	ND		100	µg/L	20	5/28/2011 01:09 AM
Carbon tetrachloride	ND		100	µg/L	20	5/28/2011 01:09 AM
Chlorobenzene	ND		100	µg/L	20	5/28/2011 01:09 AM
Chloroform	ND		100	µg/L	20	5/28/2011 01:09 AM
Tetrachloroethene	ND		100	µg/L	20	5/28/2011 01:09 AM
Trichloroethene	ND		100	µg/L	20	5/28/2011 01:09 AM

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

ALS Environmental

Date: *06-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1105829
Sample ID: T-431 Exc Soil
Lab ID: 1105829-01
Collection Date: 5/24/2011 02:08 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	5/28/2011 01:09 AM
Surr: 1,2-Dichloroethane-d4	*95.6*		*70-125*	*%REC*	20	5/28/2011 01:09 AM
Surr: 4-Bromofluorobenzene	*98.7*		*72-125*	*%REC*	20	5/28/2011 01:09 AM
Surr: Dibromofluoromethane	*95.1*		*71-125*	*%REC*	20	5/28/2011 01:09 AM
Surr: Toluene-d8	*98.2*		*75-125*	*%REC*	20	5/28/2011 01:09 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	5/27/2011 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	5/27/2011 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	6/3/2011 01:00 PM
PH			**SW9045B**			Analyst: **DM**
pH	**7.38**		**0.100**	**pH Units**	1	6/3/2011 12:00 PM

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

ALS Environmental

Date: *06-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1105829
Sample ID: D-8803
Lab ID: 1105829-02
Collection Date: 5/24/2011 02:20 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/2/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/2/2011 03:42 PM
TCLP METALS			**SW1311/6020**		Prep Date: **5/31/2011**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	5/31/2011 06:59 PM
Barium	**0.0832**		**0.0500**	**mg/L**	10	5/31/2011 06:59 PM
Cadmium	ND		0.0500	mg/L	10	5/31/2011 06:59 PM
Chromium	ND		0.0500	mg/L	10	5/31/2011 06:59 PM
Lead	ND		0.0500	mg/L	10	5/31/2011 06:59 PM
Selenium	ND		0.0500	mg/L	10	5/31/2011 06:59 PM
Silver	ND		0.0500	mg/L	10	5/31/2011 06:59 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **5/31/2011**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/1/2011 01:28 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/1/2011 01:28 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/1/2011 01:28 PM
Cresols, Total	ND		15	µg/L	1	6/1/2011 01:28 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/1/2011 01:28 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/1/2011 01:28 PM
Hexachloroethane	ND		5.0	µg/L	1	6/1/2011 01:28 PM
Nitrobenzene	ND		5.0	µg/L	1	6/1/2011 01:28 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/1/2011 01:28 PM
Pyridine	ND		5.0	µg/L	1	6/1/2011 01:28 PM
Surr: 2,4,6-Tribromophenol	*61.6*		*42-124*	*%REC*	1	6/1/2011 01:28 PM
Surr: 2-Fluorobiphenyl	*48.7*		*48-120*	*%REC*	1	6/1/2011 01:28 PM
Surr: 2-Fluorophenol	*44.9*		*20-120*	*%REC*	1	6/1/2011 01:28 PM
Surr: 4-Terphenyl-d14	*65.4*		*51-135*	*%REC*	1	6/1/2011 01:28 PM
Surr: Nitrobenzene-d5	*55.3*		*41-120*	*%REC*	1	6/1/2011 01:28 PM
Surr: Phenol-d6	*52.7*		*20-120*	*%REC*	1	6/1/2011 01:28 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **5/27/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	5/28/2011 02:18 AM
1,2-Dichloroethane	ND		100	µg/L	20	5/28/2011 02:18 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	5/28/2011 02:18 AM
2-Butanone	ND		200	µg/L	20	5/28/2011 02:18 AM
Benzene	ND		100	µg/L	20	5/28/2011 02:18 AM
Carbon tetrachloride	ND		100	µg/L	20	5/28/2011 02:18 AM
Chlorobenzene	ND		100	µg/L	20	5/28/2011 02:18 AM
Chloroform	ND		100	µg/L	20	5/28/2011 02:18 AM
Tetrachloroethene	ND		100	µg/L	20	5/28/2011 02:18 AM
Trichloroethene	ND		100	µg/L	20	5/28/2011 02:18 AM

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

ALS Environmental

Date: *06-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: D-8803
Collection Date: 5/24/2011 02:20 PM

Work Order: 1105829
Lab ID: 1105829-02
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	5/28/2011 02:18 AM
Surr: 1,2-Dichloroethane-d4	*94.3*		*70-125*	*%REC*	20	5/28/2011 02:18 AM
Surr: 4-Bromofluorobenzene	*98.5*		*72-125*	*%REC*	20	5/28/2011 02:18 AM
Surr: Dibromofluoromethane	*96.8*		*71-125*	*%REC*	20	5/28/2011 02:18 AM
Surr: Toluene-d8	*99.5*		*75-125*	*%REC*	20	5/28/2011 02:18 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	5/27/2011 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	5/27/2011 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	6/3/2011 01:00 PM
PH			**SW9045B**			Analyst: **DM**
pH	**9.03**		**0.100**	**pH Units**	1	6/3/2011 12:00 PM

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

ALS Environmental

Date: 06-Jun-11

Client: Navajo Refining Company

Work Order: 1105829

Project: Disposal

QC BATCH REPORT

Batch ID: **52817** Instrument ID **ICP7500** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-053011-52817** Units: **mg/L** Analysis Date: **5/31/2011 06:36 PM**

Client ID: Run ID: **ICP7500_110531A** SeqNo: **2407579** Prep Date: **5/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW1-053111-52817** Units: **mg/L** Analysis Date: **5/31/2011 06:42 PM**

Client ID: Run ID: **ICP7500_110531A** SeqNo: **2407582** Prep Date: **5/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW1-053111-52817** Units: **mg/L** Analysis Date: **5/31/2011 06:47 PM**

Client ID: Run ID: **ICP7500_110531A** SeqNo: **2407584** Prep Date: **5/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4665	0.050	0.5	0	93.3	80-120	0			
Barium	0.4742	0.050	0.5	0	94.8	80-120	0			
Cadmium	0.4653	0.050	0.5	0	93.1	80-120	0			
Chromium	0.4888	0.050	0.5	0	97.8	80-120	0			
Lead	0.4719	0.050	0.5	0	94.4	80-120	0			
Selenium	0.4384	0.050	0.5	0	87.7	80-120	0			
Silver	0.477	0.050	0.5	0	95.4	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1105829
Project: Disposal

QC BATCH REPORT

Batch ID: **52817** Instrument ID **ICP7500** Method: **SW1311/6020**

MS Sample ID: **1105870-05AMS** Units: **mg/L** Analysis Date: **5/31/2011 07:56 PM**
Client ID: Run ID: **ICP7500_110531A** SeqNo: **2407597** Prep Date: **5/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5139	0.050	0.5	0.005159	102	75-125	0			
Barium	1.678	0.050	0.5	1.27	81.6	75-125	0			
Cadmium	0.4731	0.050	0.5	-0.001543	94.9	75-125	0			
Chromium	0.4998	0.050	0.5	0.005848	98.8	75-125	0			
Lead	0.48	0.050	0.5	-0.003609	96.7	75-125	0			
Selenium	0.5276	0.050	0.5	0.004727	105	75-125	0			
Silver	0.4701	0.050	0.5	-0.004843	95	75-125	0			

MSD Sample ID: **1105870-05AMSD** Units: **mg/L** Analysis Date: **5/31/2011 08:02 PM**
Client ID: Run ID: **ICP7500_110531A** SeqNo: **2407598** Prep Date: **5/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5463	0.050	0.5	0.005159	108	75-125	0.5139	6.11	25	
Barium	1.78	0.050	0.5	1.27	102	75-125	1.678	5.9	25	
Cadmium	0.4969	0.050	0.5	-0.001543	99.7	75-125	0.4731	4.91	25	
Chromium	0.5216	0.050	0.5	0.005848	103	75-125	0.4998	4.27	25	
Lead	0.5043	0.050	0.5	-0.003609	102	75-125	0.48	4.94	25	
Selenium	0.5472	0.050	0.5	0.004727	108	75-125	0.5276	3.65	25	
Silver	0.484	0.050	0.5	-0.004843	97.8	75-125	0.4701	2.91	25	

DUP Sample ID: **1105870-05ADUP** Units: **mg/L** Analysis Date: **5/31/2011 07:50 PM**
Client ID: Run ID: **ICP7500_110531A** SeqNo: **2407596** Prep Date: **5/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.005159	0	25	
Barium	1.211	0.050	0	0	0	0-0	1.27	4.76	25	
Cadmium	ND	0.050	0	0	0	0-0	-0.001543	0	25	
Chromium	ND	0.050	0	0	0	0-0	0.005848	0	25	
Lead	ND	0.050	0	0	0	0-0	-0.003609	0	25	
Selenium	ND	0.050	0	0	0	0-0	0.004727	0	25	
Silver	ND	0.050	0	0	0	0-0	-0.004843	0	25	

The following samples were analyzed in this batch: 1105829-01A 1105829-02A

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

Client: Navajo Refining Company
Work Order: 1105829
Project: Disposal

QC BATCH REPORT

Batch ID: **52872** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-060211-52872** Units: **mg/L** Analysis Date: **6/2/2011 03:13 PM**
Client ID: Run ID: **MERCURY_110602A** SeqNo: **2410296** Prep Date: **6/2/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-060111-52872** Units: **mg/L** Analysis Date: **6/2/2011 03:17 PM**
Client ID: Run ID: **MERCURY_110602A** SeqNo: **2410298** Prep Date: **6/2/2011** DF: **1**

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

LCS Sample ID: **GLCSW2-060211-52872** Units: **mg/L** Analysis Date: **6/2/2011 03:15 PM**
Client ID: Run ID: **MERCURY_110602A** SeqNo: **2410297** Prep Date: **6/2/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00513	0.00020	0.005	0	103	80-120	0			

MS Sample ID: **1105887-14CMS** Units: **mg/L** Analysis Date: **6/2/2011 03:26 PM**
Client ID: Run ID: **MERCURY_110602A** SeqNo: **2410301** Prep Date: **6/2/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00524	0.00020	0.005	0	105	75-125	0			

MSD Sample ID: **1105887-14CMSD** Units: **mg/L** Analysis Date: **6/2/2011 03:28 PM**
Client ID: Run ID: **MERCURY_110602A** SeqNo: **2410302** Prep Date: **6/2/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00519	0.00020	0.005	0	104	75-125	0.00524	0.959	20	

DUP Sample ID: **1105887-14CDUP** Units: **mg/L** Analysis Date: **6/2/2011 03:24 PM**
Client ID: Run ID: **MERCURY_110602A** SeqNo: **2410300** Prep Date: **6/2/2011** DF: **1**

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

The following samples were analyzed in this batch: 1105829-01A 1105829-02A

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

Client: Navajo Refining Company
Work Order: 1105829
Project: Disposal

QC BATCH REPORT

Batch ID: **52833** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110531-52833** Units: **µg/L** Analysis Date: **6/1/2011 11:56 AM**
Client ID: Run ID: **SV-3_110601A** SeqNo: **2408596** Prep Date: **5/31/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*68.79*	5.0	*100*	0	*68.8*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*73.92*	5.0	*100*	0	*73.9*	*48-120*	0			
Surr: 2-Fluorophenol	*69.1*	5.0	*100*	0	*69.1*	*20-120*	0			
Surr: 4-Terphenyl-d14	*77.29*	5.0	*100*	0	*77.3*	*51-135*	0			
Surr: Nitrobenzene-d5	*82.74*	5.0	*100*	0	*82.7*	*41-120*	0			
Surr: Phenol-d6	*71.86*	5.0	*100*	0	*71.9*	*20-120*	0			

LCS Sample ID: **SLCST1-110531-52833** Units: **µg/L** Analysis Date: **6/1/2011 12:19 PM**
Client ID: Run ID: **SV-3_110601A** SeqNo: **2408597** Prep Date: **5/31/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	86.45	5.0	100	0	86.5	52-115	0			
2,4,6-Trichlorophenol	77.62	5.0	100	0	77.6	53-115	0			
2,4-Dinitrotoluene	42.89	5.0	50	0	85.8	56-115	0			
Cresols, Total	187	15	250	0	74.8	35-115	0			
Hexachlorobenzene	44.56	5.0	50	0	89.1	54-115	0			
Hexachlorobutadiene	43.55	5.0	50	0	87.1	51-115	0			
Hexachloroethane	42.62	5.0	50	0	85.2	54-115	0			
Nitrobenzene	44.7	5.0	50	0	89.4	40-124	0			
Pentachlorophenol	76.01	5.0	100	0	76	45-125	0			
Pyridine	40.28	5.0	50	0	80.6	34-115	0			
Surr: 2,4,6-Tribromophenol	*70.56*	5.0	*100*	0	*70.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*77.5*	5.0	*100*	0	*77.5*	*48-120*	0			
Surr: 2-Fluorophenol	*75.41*	5.0	*100*	0	*75.4*	*20-120*	0			
Surr: 4-Terphenyl-d14	*73.23*	5.0	*100*	0	*73.2*	*51-135*	0			
Surr: Nitrobenzene-d5	*81.26*	5.0	*100*	0	*81.3*	*41-120*	0			
Surr: Phenol-d6	*69.56*	5.0	*100*	0	*69.6*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1105829
Project: Disposal

QC BATCH REPORT

Batch ID: **52833** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110531-52833** Units: **µg/L** Analysis Date: **6/1/2011 12:42 PM**

Client ID: Run ID: **SV-3_110601A** SeqNo: **2408598** Prep Date: **5/31/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	76.6	5.0	100	0	76.6	52-115	86.45	12.1	25	
2,4,6-Trichlorophenol	73.28	5.0	100	0	73.3	53-115	77.62	5.75	25	
2,4-Dinitrotoluene	41.24	5.0	50	0	82.5	56-115	42.89	3.92	25	
Cresols, Total	182.9	15	250	0	73.2	35-115	187	2.21	25	
Hexachlorobenzene	42.45	5.0	50	0	84.9	54-115	44.56	4.85	25	
Hexachlorobutadiene	40.36	5.0	50	0	80.7	51-115	43.55	7.6	25	
Hexachloroethane	40.5	5.0	50	0	81	54-115	42.62	5.11	25	
Nitrobenzene	42.11	5.0	50	0	84.2	40-124	44.7	5.97	25	
Pentachlorophenol	72.63	5.0	100	0	72.6	45-125	76.01	4.55	25	
Pyridine	36.22	5.0	50	0	72.4	34-115	40.28	10.6	25	
Surr: 2,4,6-Tribromophenol	*66.87*	5.0	*100*	0	*66.9*	*42-124*	70.56	*5.38*	*25*	
Surr: 2-Fluorobiphenyl	*72.6*	5.0	*100*	0	*72.6*	*48-120*	77.5	*6.53*	*25*	
Surr: 2-Fluorophenol	*72.68*	5.0	*100*	0	*72.7*	*20-120*	75.41	*3.7*	*25*	
Surr: 4-Terphenyl-d14	*69.24*	5.0	*100*	0	*69.2*	*51-135*	73.23	*5.6*	*25*	
Surr: Nitrobenzene-d5	*77.03*	5.0	*100*	0	*77*	*41-120*	81.26	*5.34*	*25*	
Surr: Phenol-d6	*67.53*	5.0	*100*	0	*67.5*	*20-120*	69.56	*2.97*	*25*	

The following samples were analyzed in this batch: 1105829-01A 1105829-02A

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

Client: Navajo Refining Company
Work Order: 1105829
Project: Disposal

QC BATCH REPORT

Batch ID: **R110621** Instrument ID **VOA8** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-052711-R110621** Units: **µg/L** Analysis Date: **5/28/2011 12:23 AM**
Client ID: Run ID: **VOA8_110528A** SeqNo: **2405417** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*47.81*	5.0	*50*	0	*95.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.81*	5.0	*50*	0	*99.6*	*72.4-125*	0			
Surr: Dibromofluoromethane	*48.32*	5.0	*50*	0	*96.6*	*71.2-125*	0			
Surr: Toluene-d8	*49.07*	5.0	*50*	0	*98.1*	*75-125*	0			

LCS Sample ID: **VLCSW-052711-R110621** Units: **µg/L** Analysis Date: **5/27/2011 11:38 PM**
Client ID: Run ID: **VOA8_110528A** SeqNo: **2405416** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	47.02	5.0	50	0	94	73-124	0			
1,2-Dichloroethane	47.07	5.0	50	0	94.1	76-120	0			
1,4-Dichlorobenzene	47.73	5.0	50	0	95.5	70-130	0			
2-Butanone	88.41	10	100	0	88.4	70-130	0			
Benzene	47.33	5.0	50	0	94.7	70-128	0			
Carbon tetrachloride	47.32	5.0	50	0	94.6	70-130	0			
Chlorobenzene	48.42	5.0	50	0	96.8	72-127	0			
Chloroform	45.62	5.0	50	0	91.2	70-130	0			
Tetrachloroethene	47.94	5.0	50	0	95.9	70-130	0			
Trichloroethene	48.99	5.0	50	0	98	72-129	0			
Vinyl chloride	47.1	5.0	50	0	94.2	70-130	0			
Surr: 1,2-Dichloroethane-d4	*47.24*	5.0	*50*	0	*94.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.58*	5.0	*50*	0	*99.2*	*72-125*	0			
Surr: Dibromofluoromethane	*48.8*	5.0	*50*	0	*97.6*	*71-125*	0			
Surr: Toluene-d8	*48.77*	5.0	*50*	0	*97.5*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1105829
Project: Disposal

QC BATCH REPORT

Batch ID: **R110621** Instrument ID **VOA8** Method: **SW1311/8260B**

MS Sample ID: **1105829-01AMS** Units: **µg/L** Analysis Date: **5/28/2011 01:32 AM**
Client ID: **T-431 Exc Soil** Run ID: **VOA8_110528A** SeqNo: **2405420** Prep Date: **5/27/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	669.7	100	1000	0	67	73-124	0			S
1,2-Dichloroethane	839.3	100	1000	0	83.9	76-120	0			
1,4-Dichlorobenzene	752.4	100	1000	0	75.2	70-130	0			
2-Butanone	1510	200	2000	0	75.5	70-130	0			
Benzene	777	100	1000	0	77.7	70-128	0			
Carbon tetrachloride	655.8	100	1000	0	65.6	70-130	0			S
Chlorobenzene	805.3	100	1000	0	80.5	72-127	0			
Chloroform	785.8	100	1000	0	78.6	70-130	0			
Tetrachloroethene	670	100	1000	0	67	70-130	0			S
Trichloroethene	732.1	100	1000	0	73.2	72-129	0			
Vinyl chloride	671.4	100	1000	0	67.1	70-130	0			S
Surr: 1,2-Dichloroethane-d4	*948.9*	100	*1000*	0	*94.9*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*989.9*	100	*1000*	0	*99*	*72-125*	0			
Surr: Dibromofluoromethane	*968.6*	100	*1000*	0	*96.9*	*71-125*	0			
Surr: Toluene-d8	*985*	100	*1000*	0	*98.5*	*75-125*	0			

MSD Sample ID: **1105829-01AMSD** Units: **µg/L** Analysis Date: **5/28/2011 01:55 AM**
Client ID: **T-431 Exc Soil** Run ID: **VOA8_110528A** SeqNo: **2405421** Prep Date: **5/27/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	659.4	100	1000	0	65.9	73-124	669.7	1.54	20	S
1,2-Dichloroethane	827.4	100	1000	0	82.7	76-120	839.3	1.43	20	
1,4-Dichlorobenzene	771.9	100	1000	0	77.2	70-130	752.4	2.57	20	
2-Butanone	1544	200	2000	0	77.2	70-130	1510	2.2	20	
Benzene	774.8	100	1000	0	77.5	70-128	777	0.292	20	
Carbon tetrachloride	654.9	100	1000	0	65.5	70-130	655.8	0.144	20	S
Chlorobenzene	807.9	100	1000	0	80.8	72-127	805.3	0.321	20	
Chloroform	785.8	100	1000	0	78.6	70-130	785.8	0.00272	20	
Tetrachloroethene	672	100	1000	0	67.2	70-130	670	0.296	20	S
Trichloroethene	734.4	100	1000	0	73.4	72-129	732.1	0.322	20	
Vinyl chloride	675.6	100	1000	0	67.6	70-130	671.4	0.62	20	S
Surr: 1,2-Dichloroethane-d4	*951.2*	100	*1000*	0	*95.1*	*70-125*	948.9	*0.251*	*20*	
Surr: 4-Bromofluorobenzene	*1005*	100	*1000*	0	*100*	*72-125*	989.9	*1.48*	*20*	
Surr: Dibromofluoromethane	*973.4*	100	*1000*	0	*97.3*	*71-125*	968.6	*0.501*	*20*	
Surr: Toluene-d8	*987.7*	100	*1000*	0	*98.8*	*75-125*	985	*0.266*	*20*	

The following samples were analyzed in this batch: 1105829-01A 1105829-02A

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

Client: Navajo Refining Company
Work Order: 1105829
Project: Disposal

QC BATCH REPORT

Batch ID: **R110848** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-060311-R110848** Units: **pH Units** Analysis Date: **6/3/2011 12:00 PM**
Client ID: Run ID: **WETCHEM_110603C** SeqNo: **2411492** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.05	0.10	6	0	101	90-110	0			

DUP Sample ID: **1106090-09CDUP** Units: **pH Units** Analysis Date: **6/3/2011 12:00 PM**
Client ID: Run ID: **WETCHEM_110603C** SeqNo: **2411497** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.19	0.10	0	0	0	0-0	8.12	0.858	20	

The following samples were analyzed in this batch: 1105829-01A 1105829-02A

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

Client: Navajo Refining Company
Work Order: 1105829
Project: Disposal

QC BATCH REPORT

Batch ID: **R110871** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1105969-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **6/3/2011 01:00 PM**

Client ID: Run ID: **WETCHEM_110603G** SeqNo: **2411768** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1105829-01A 1105829-02A

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

ALS Environmental

Date: 06-Jun-11

Client: Navajo Refining Company
Project: Disposal
WorkOrder: 1105829

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
µg/L	Micrograms per Liter
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

1105829

Page 1 of 1

NAVAJO REFINING: Navajo Refining Company

Project: Disposal

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP semi VOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCI
Address	PO Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	T-431 Exc Soil	5-24-11	14:09	S	NO	1	X	X	X	X							
2	D-6803	5-24-11	14:20	S	NO	1	X	X	X	X							
3	Temp blank																
4	Trip blank																
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Notes:

Relinquished by:	Date: 5-24-11	Time: 16:15	Received by:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	5/25/11 0915
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **25-May-11 09:15**

Work Order: **1105829** Received by: **DWH**

Checklist completed by David Hightower (eSignature) 25-May-11 (Date) Reviewed by: Chris Bryson (eSignature) 29-May-11 (Date)

Matrices: soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.0c	002	
Cooler(s)/Kit(s):	3401		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

1105829

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

Dat	**CUSTODY SEAL**	Seal Broken By:
Nar	:5-24-2011 Time: 1615	
Co	ne: Aaron Strang.e	Date:
	mpany: Navajo Refining Co	5/25/11

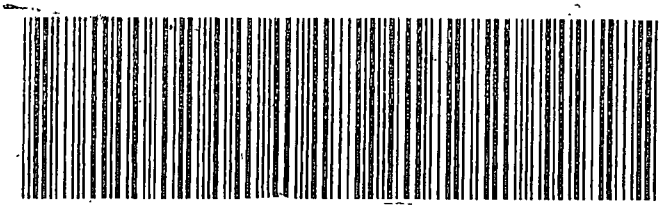
PRIORITY OVERNIGHT WED

Emp# 347544 00:00 25MAY11

TRK# 4347 1019 3341 FORM 0201 IAH

Deliver By: 25MAY11

77099 -TX-US 43 SGRA



ALS Group USA, Corp

Date: 27-May-11

Client: ALS Environmental
Project: 1105829
Work Order: **1105676**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1105676-01	1105829-01B	Solid		5/24/2011 14:08	5/27/2011 09:45	☐
1105676-02	1105829-02B	Solid		5/24/2011 14:20	5/27/2011 09:45	☐

ALS Group USA, Corp

Date: 27-May-11

Client: ALS Environmental
Project: 1105829
WorkOrder: **1105676**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *27-May-11*

Client: ALS Environmental
Project: 1105829

Work Order: 1105676

Lab ID: 1105676-01A
Client Sample ID: 1105829-01B

Collection Date: 5/24/2011 2:08:00 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	5/27/2011 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	5/27/2011 12:30 PM

Lab ID: 1105676-02A
Client Sample ID: 1105829-02B

Collection Date: 5/24/2011 2:20:00 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	5/27/2011 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	5/27/2011 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1105676
Project: 1105829

Date: 27-May-11

QC BATCH REPORT

Batch ID: **R90393** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-110524-R90393** Units: **mg/Kg** Analysis Date: **5/24/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110524C** SeqNo: **1633537** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-110524-R90393** Units: **mg/Kg** Analysis Date: **5/24/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110524C** SeqNo: **1633538** 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: **WLCSDW1-110524-R90393** Units: **mg/Kg** Analysis Date: **5/24/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110524C** SeqNo: **1633542** 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	249.6	0	35	

MS Sample ID: **1105504-02A MS** Units: **mg/Kg** Analysis Date: **5/25/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_110524C** SeqNo: **1634710** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	278.9	40	250	0	112	50-150	0			

MSD Sample ID: **1105504-02A MSD** Units: **mg/Kg** Analysis Date: **5/25/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_110524C** SeqNo: **1634711** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	278.9	11.1	35	

The following samples were analyzed in this batch: 1105676-01A 1105676-02A

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

Client: ALS Environmental
Work Order: 1105676
Project: 1105829

QC BATCH REPORT

Batch ID: **R90528** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-110527-R90528** Units: **mg/Kg** Analysis Date: **5/27/2011 12:30 PM**

Client ID: Run ID: **WETCHEM_110527D** SeqNo: **1636809** 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: 1105676-01A 1105676-02A

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

1105676

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 25-May-11
COC ID: 10517
Due Date: 07-Jun-11

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1105829	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	Chris Bryson	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsglobal.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1105829-01B (T-431 Exc Soil)	Solid	24/May/2011 14:08	(1) 4OZGNEAT	X	X								
1105829-02B (D-8803)	Solid	24/May/2011 14:20	(1) 4OZGNEAT	X	X								

Comments:

Plesae analyze for Reactive Cyanide & Sulfide cc:glenda.ramos@alsglobal.com mary.knowles@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
					Std
Relinquished by:	Date/Time	Received by:	Date/Time		
			5/27/11 0945		

4.0 °C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **27-May-11 09:45**

Work Order: **1105676** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 27-May-11 (Date) Reviewed by: Bill Carey (eSignature) 27-May-11 (Date)

Matrices: Solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.0 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Thursday, October 20, 2011 8:58 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Moore, Darrell; Strange, Aaron; Rhodes, Glen
Subject: Request for waste disposal--North Plant carbon and D-759 carbon
Attachments: Profile form and C-138--spent carbon media.pdf; 1106470 Disposal Final.pdf; 1109916 Profile for Disposal Final.pdf

Kim,
Please see the attached profile form, C-138 and analytical results for spent carbon media used in our amine units. Please let us know via email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	spent carbon
ESTIMATED VOLUME:	15-20 yds
GENERATING PROCESS:	North plant amine units
REMARKS:	see attached ALS reports, work order# 1106470, 1109916
NMOCD FACILITY:	CRI
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 10/6/2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Spent carbon media from North Plant Amine Units.
Please see the attached analytical data from ALS:
Work order: 1106470 Sample ID: 1106470-02 Est. waste vol: 15 yds
Work order: 1109916 Sample ID: 1109916-01 Est. waste vol: 2 yds

Estimated Volume 17 yds yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

27-Jun-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Disposal

Work Order: **1106470**

Dear Aaron,

ALS Environmental received 2 samples on 15-Jun-2011 09:00 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 27.

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

Sincerely,

Chris Bryson

Electronically approved by: Glenda H. Ramos

Chris Bryson
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 27-Jun-11

Client: Navajo Refining Company
Project: Disposal
Work Order: **1106470**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1106470-01	North WWTank Exc Soil	Soil		6/14/2011 09:22	6/15/2011 09:00	☐
1106470-02	North Plant Carbon	Soil		6/14/2011 15:46	6/15/2011 09:00	☐

Client:	Navajo Refining Company
Project:	Disposal
Work Order:	1106470

Case Narrative

Batch R111559, Ignitability, Sample 1106221-03 : Duplicate results, which are flagged with an H qualifier, are for an unrelated sample.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *27-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North WWTank Exc Soil
Collection Date: 6/14/2011 09:22 AM

Work Order: 1106470
Lab ID: 1106470-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/21/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/21/2011 03:28 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/17/2011**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
Barium	**0.274**		**0.0500**	**mg/L**	10	6/17/2011 09:27 PM
Cadmium	ND		0.0200	mg/L	10	6/17/2011 09:27 PM
Chromium	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
Lead	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
Selenium	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
Silver	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/18/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Cresols, Total	ND		0.015	mg/L	1	6/21/2011 08:03 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Hexachloroethane	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Nitrobenzene	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Pentachlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Pyridine	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Surr: 2,4,6-Tribromophenol	*62.0*		*42-124*	*%REC*	1	6/21/2011 08:03 PM
Surr: 2-Fluorobiphenyl	*56.7*		*48-120*	*%REC*	1	6/21/2011 08:03 PM
Surr: 2-Fluorophenol	*48.2*		*20-120*	*%REC*	1	6/21/2011 08:03 PM
Surr: 4-Terphenyl-d14	*54.0*		*51-135*	*%REC*	1	6/21/2011 08:03 PM
Surr: Nitrobenzene-d5	*58.5*		*41-120*	*%REC*	1	6/21/2011 08:03 PM
Surr: Phenol-d6	*48.9*		*20-120*	*%REC*	1	6/21/2011 08:03 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/17/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	6/18/2011 03:42 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
2-Butanone	ND		0.20	mg/L	20	6/18/2011 03:42 AM
Benzene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Carbon tetrachloride	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Chlorobenzene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Chloroform	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Tetrachloroethene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Trichloroethene	ND		0.10	mg/L	20	6/18/2011 03:42 AM

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

ALS Environmental

Date: *27-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North WWTank Exc Soil
Collection Date: 6/14/2011 09:22 AM

Work Order: 1106470
Lab ID: 1106470-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Surr: 1,2-Dichloroethane-d4	*92.2*		*70-125*	*%REC*	20	6/18/2011 03:42 AM
Surr: 4-Bromofluorobenzene	*99.3*		*72-125*	*%REC*	20	6/18/2011 03:42 AM
Surr: Dibromofluoromethane	*90.2*		*71-125*	*%REC*	20	6/18/2011 03:42 AM
Surr: Toluene-d8	*99.2*		*75-125*	*%REC*	20	6/18/2011 03:42 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	6/17/2011 09:30 AM
PH			**SW9045B**			Analyst: **DM**
pH	**7.88**		**0.100**	**pH Units**	1	6/21/2011 02:40 PM

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

ALS Environmental

Date: *27-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North Plant Carbon
Collection Date: 6/14/2011 03:46 PM

Work Order: 1106470
Lab ID: 1106470-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/21/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/21/2011 03:30 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/17/2011**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	6/17/2011 09:32 PM
Barium	**0.0860**		**0.0500**	**mg/L**	10	6/17/2011 09:32 PM
Cadmium	ND		0.0200	mg/L	10	6/17/2011 09:32 PM
Chromium	ND		0.0500	mg/L	10	6/17/2011 09:32 PM
Lead	ND		0.0500	mg/L	10	6/17/2011 09:32 PM
Selenium	**0.166**		**0.0500**	**mg/L**	10	6/17/2011 09:32 PM
Silver	ND		0.0500	mg/L	10	6/17/2011 09:32 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/18/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Cresols, Total	ND		0.015	mg/L	1	6/21/2011 08:27 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Hexachloroethane	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Nitrobenzene	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Pentachlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Pyridine	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Surr: 2,4,6-Tribromophenol	*64.9*		*42-124*	*%REC*	1	6/21/2011 08:27 PM
Surr: 2-Fluorobiphenyl	*60.8*		*48-120*	*%REC*	1	6/21/2011 08:27 PM
Surr: 2-Fluorophenol	*50.3*		*20-120*	*%REC*	1	6/21/2011 08:27 PM
Surr: 4-Terphenyl-d14	*58.3*		*51-135*	*%REC*	1	6/21/2011 08:27 PM
Surr: Nitrobenzene-d5	*58.3*		*41-120*	*%REC*	1	6/21/2011 08:27 PM
Surr: Phenol-d6	*50.1*		*20-120*	*%REC*	1	6/21/2011 08:27 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/17/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	6/18/2011 02:00 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
2-Butanone	ND		0.20	mg/L	20	6/18/2011 02:00 AM
Benzene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Carbon tetrachloride	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Chlorobenzene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Chloroform	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Tetrachloroethene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Trichloroethene	ND		0.10	mg/L	20	6/18/2011 02:00 AM

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

ALS Environmental

Date: *27-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North Plant Carbon
Collection Date: 6/14/2011 03:46 PM

Work Order: 1106470
Lab ID: 1106470-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Surr: 1,2-Dichloroethane-d4	*88.7*		*70-125*	*%REC*	20	6/18/2011 02:00 AM
Surr: 4-Bromofluorobenzene	*98.5*		*72-125*	*%REC*	20	6/18/2011 02:00 AM
Surr: Dibromofluoromethane	*87.3*		*71-125*	*%REC*	20	6/18/2011 02:00 AM
Surr: Toluene-d8	*98.1*		*75-125*	*%REC*	20	6/18/2011 02:00 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	6/17/2011 09:30 AM
PH			**SW9045B**			Analyst: **DM**
pH	**6.80**		**0.100**	**pH Units**	1	6/21/2011 02:40 PM

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

ALS Environmental

Date: 27-Jun-11

Client: Navajo Refining Company

Work Order: 1106470

Project: Disposal

QC BATCH REPORT

Batch ID: **53280** Instrument ID **ICPMS03** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-061611-53280** Units: **mg/L** Analysis Date: **6/17/2011 06:34 PM**

Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428532** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW4-061711-53280** Units: **mg/L** Analysis Date: **6/17/2011 06:39 PM**

Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428534** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW4-061711-53280** Units: **mg/L** Analysis Date: **6/20/2011 02:28 PM**

Client ID: Run ID: **ICPMS04_110620A** SeqNo: **2429237** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4811	0.050	0.5	0	96.2	80-120	0			
Barium	0.4817	0.050	0.5	0	96.3	80-120	0			
Cadmium	0.4865	0.020	0.5	0	97.3	80-120	0			
Chromium	0.498	0.050	0.5	0	99.6	80-120	0			
Lead	0.5025	0.050	0.5	0	101	80-120	0			
Selenium	0.4703	0.050	0.5	0	94.1	80-120	0			
Silver	0.4558	0.050	0.5	0	91.2	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **53280** Instrument ID **ICPMS03** Method: **SW1311/6020**

MS Sample ID: **1106501-04BMS** Units: **mg/L** Analysis Date: **6/17/2011 07:08 PM**
Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428549** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4929	0.050	0.5	0.004773	97.6	75-125	0			
Barium	1.607	0.050	0.5	1.145	92.4	75-125	0			
Cadmium	0.5027	0.020	0.5	0.002893	100	75-125	0			
Chromium	0.4957	0.050	0.5	0.002935	98.6	75-125	0			
Lead	0.5209	0.050	0.5	0.03247	97.7	75-125	0			
Selenium	0.4732	0.050	0.5	0.009273	92.8	75-125	0			
Silver	0.4913	0.050	0.5	0.0006439	98.1	75-125	0			

MSD Sample ID: **1106501-04BMSD** Units: **mg/L** Analysis Date: **6/17/2011 07:14 PM**
Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428552** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4982	0.050	0.5	0.004773	98.7	75-125	0.4929	1.07	25	
Barium	1.589	0.050	0.5	1.145	88.8	75-125	1.607	1.13	25	
Cadmium	0.4957	0.020	0.5	0.002893	98.6	75-125	0.5027	1.4	25	
Chromium	0.4985	0.050	0.5	0.002935	99.1	75-125	0.4957	0.563	25	
Lead	0.5215	0.050	0.5	0.03247	97.8	75-125	0.5209	0.115	25	
Selenium	0.4881	0.050	0.5	0.009273	95.8	75-125	0.4732	3.1	25	
Silver	0.4961	0.050	0.5	0.0006439	99.1	75-125	0.4913	0.972	25	

DUP Sample ID: **1106501-04BDUP** Units: **mg/L** Analysis Date: **6/17/2011 06:57 PM**
Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428543** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.004773	0	25	
Barium	1.163	0.050	0	0	0	0-0	1.145	1.56	25	
Cadmium	ND	0.020	0	0	0	0-0	0.002893	0	25	
Chromium	ND	0.050	0	0	0	0-0	0.002935	0	25	
Lead	0.03234	0.050	0	0	0	0-0	0.03247	0	25	J
Selenium	ND	0.050	0	0	0	0-0	0.009273	0	25	
Silver	ND	0.050	0	0	0	0-0	0.0006439	0	25	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **53344** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW3-062111-53344** Units: **mg/L** Analysis Date: **6/21/2011 02:36 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430787** Prep Date: **6/21/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-062011-53344** Units: **mg/L** Analysis Date: **6/21/2011 02:44 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430789** Prep Date: **6/21/2011** DF: **1**

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

LCS Sample ID: **GLCSW3-062111-53344** Units: **mg/L** Analysis Date: **6/21/2011 02:38 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430788** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00534	0.00020	0.005	0	107	80-120	0			

MS Sample ID: **1106521-01CMS** Units: **mg/L** Analysis Date: **6/21/2011 02:50 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430792** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00537	0.00020	0.005	0.00002	107	75-125	0			

MSD Sample ID: **1106521-01CMSD** Units: **mg/L** Analysis Date: **6/21/2011 02:52 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430793** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00539	0.00020	0.005	0.00002	107	75-125	0.00537	0.372	20	

DUP Sample ID: **1106521-01CDUP** Units: **mg/L** Analysis Date: **6/21/2011 02:48 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430791** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	0.00002	0	20	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **53308** Instrument ID **SV-5** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110618-53308** Units: **µg/L** Analysis Date: **6/20/2011 04:10 PM**
Client ID: Run ID: **SV-5_110620B** SeqNo: **2431303** Prep Date: **6/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*64.65*	5.0	*100*	0	*64.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*68.69*	5.0	*100*	0	*68.7*	*48-120*	0			
Surr: 2-Fluorophenol	*58.01*	5.0	*100*	0	*58*	*20-120*	0			
Surr: 4-Terphenyl-d14	*68.77*	5.0	*100*	0	*68.8*	*51-135*	0			
Surr: Nitrobenzene-d5	*69.78*	5.0	*100*	0	*69.8*	*41-120*	0			
Surr: Phenol-d6	*59.17*	5.0	*100*	0	*59.2*	*20-120*	0			

LCS Sample ID: **SLCST1-110618-53308** Units: **µg/L** Analysis Date: **6/20/2011 03:24 PM**
Client ID: Run ID: **SV-5_110620B** SeqNo: **2431301** Prep Date: **6/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	81.45	5.0	100	0	81.5	52-115	0			
2,4,6-Trichlorophenol	83.42	5.0	100	0	83.4	53-115	0			
2,4-Dinitrotoluene	41.33	5.0	50	0	82.7	56-115	0			
Cresols, Total	169.9	15	250	0	68	35-115	0			
Hexachlorobenzene	44.14	5.0	50	0	88.3	54-115	0			
Hexachlorobutadiene	45	5.0	50	0	90	51-115	0			
Hexachloroethane	38.42	5.0	50	0	76.8	54-115	0			
Nitrobenzene	40.47	5.0	50	0	80.9	40-124	0			
Pentachlorophenol	71.71	5.0	100	0	71.7	45-125	0			
Pyridine	32.23	5.0	50	0	64.5	34-115	0			
Surr: 2,4,6-Tribromophenol	*73.71*	5.0	*100*	0	*73.7*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*77.33*	5.0	*100*	0	*77.3*	*48-120*	0			
Surr: 2-Fluorophenol	*70.83*	5.0	*100*	0	*70.8*	*20-120*	0			
Surr: 4-Terphenyl-d14	*73.63*	5.0	*100*	0	*73.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*75.81*	5.0	*100*	0	*75.8*	*41-120*	0			
Surr: Phenol-d6	*66.91*	5.0	*100*	0	*66.9*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **53308** Instrument ID **SV-5** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110618-53308** Units: **µg/L** Analysis Date: **6/20/2011 03:47 PM**

Client ID: Run ID: **SV-5_110620B** SeqNo: **2431302** Prep Date: **6/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	81.79	5.0	100	0	81.8	52-115	81.45	0.406	25	
2,4,6-Trichlorophenol	83.12	5.0	100	0	83.1	53-115	83.42	0.369	25	
2,4-Dinitrotoluene	41.97	5.0	50	0	83.9	56-115	41.33	1.54	25	
Cresols, Total	164.3	15	250	0	65.7	35-115	169.9	3.38	25	
Hexachlorobenzene	43.23	5.0	50	0	86.5	54-115	44.14	2.08	25	
Hexachlorobutadiene	45.02	5.0	50	0	90	51-115	45	0.0473	25	
Hexachloroethane	38.25	5.0	50	0	76.5	54-115	38.42	0.443	25	
Nitrobenzene	40.4	5.0	50	0	80.8	40-124	40.47	0.173	25	
Pentachlorophenol	70.52	5.0	100	0	70.5	45-125	71.71	1.67	25	
Pyridine	31.83	5.0	50	0	63.7	34-115	32.23	1.23	25	
Surr: 2,4,6-Tribromophenol	*75.42*	5.0	*100*	0	*75.4*	*42-124*	73.71	*2.28*	*25*	
Surr: 2-Fluorobiphenyl	*77.81*	5.0	*100*	0	*77.8*	*48-120*	77.33	*0.624*	*25*	
Surr: 2-Fluorophenol	*69.28*	5.0	*100*	0	*69.3*	*20-120*	70.83	*2.21*	*25*	
Surr: 4-Terphenyl-d14	*71.26*	5.0	*100*	0	*71.3*	*51-135*	73.63	*3.26*	*25*	
Surr: Nitrobenzene-d5	*75.7*	5.0	*100*	0	*75.7*	*41-120*	75.81	*0.141*	*25*	
Surr: Phenol-d6	*68.37*	5.0	*100*	0	*68.4*	*20-120*	66.91	*2.16*	*25*	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **R111605** Instrument ID **VOA7** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-061711-R111605** Units: **µg/L** Analysis Date: **6/18/2011 01:34 AM**

Client ID: Run ID: **VOA7_110617D** SeqNo: **2428374** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*45.65*	5.0	*50*	0	*91.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.27*	5.0	*50*	0	*101*	*72.4-125*	0			
Surr: Dibromofluoromethane	*45.13*	5.0	*50*	0	*90.3*	*71.2-125*	0			
Surr: Toluene-d8	*50.19*	5.0	*50*	0	*100*	*75-125*	0			

LCS Sample ID: **VLCSW-061711-R111605** Units: **µg/L** Analysis Date: **6/18/2011 12:43 AM**

Client ID: Run ID: **VOA7_110617D** SeqNo: **2428373** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	44.28	5.0	50	0	88.6	73-124	0			
1,2-Dichloroethane	48.05	5.0	50	0	96.1	76-120	0			
1,4-Dichlorobenzene	49.12	5.0	50	0	98.2	70-130	0			
2-Butanone	90.26	10	100	0	90.3	70-130	0			
Benzene	46.62	5.0	50	0	93.2	70-128	0			
Carbon tetrachloride	46.48	5.0	50	0	93	70-130	0			
Chlorobenzene	48.63	5.0	50	0	97.3	72-127	0			
Chloroform	42.64	5.0	50	0	85.3	70-130	0			
Tetrachloroethene	48.09	5.0	50	0	96.2	70-130	0			
Trichloroethene	47.02	5.0	50	0	94	72-129	0			
Vinyl chloride	43.39	2.0	50	0	86.8	70-130	0			
Surr: 1,2-Dichloroethane-d4	*45.76*	5.0	*50*	0	*91.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.56*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*44.63*	5.0	*50*	0	*89.3*	*71-125*	0			
Surr: Toluene-d8	*50.9*	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: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **R111605** Instrument ID **VOA7** Method: **SW1311/8260B**

MS Sample ID: **1106470-02AMS** Units: **µg/L** Analysis Date: **6/18/2011 02:51 AM**

Client ID: **North Plant Carbon** Run ID: **VOA7_110617D** SeqNo: **2428376** Prep Date: **6/17/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	752.1	100	1000	0	75.2	73-124	0			
1,2-Dichloroethane	1035	100	1000	0	104	76-120	0			
1,4-Dichlorobenzene	964.2	100	1000	0	96.4	70-130	0			
2-Butanone	1951	200	2000	0	97.6	70-130	0			
Benzene	959.9	100	1000	0	96	70-128	0			
Carbon tetrachloride	759	100	1000	0	75.9	70-130	0			
Chlorobenzene	1005	100	1000	0	100	72-127	0			
Chloroform	900.8	100	1000	0	90.1	70-130	0			
Tetrachloroethene	800.7	100	1000	0	80.1	70-130	0			
Trichloroethene	840.6	100	1000	0	84.1	72-129	0			
Vinyl chloride	749.5	40	1000	0	74.9	70-130	0			
Surr: 1,2-Dichloroethane-d4	*877.4*	100	*1000*	0	*87.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1005*	100	*1000*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*869.7*	100	*1000*	0	*87*	*71-125*	0			
Surr: Toluene-d8	*1019*	100	*1000*	0	*102*	*75-125*	0			

MSD Sample ID: **1106470-02AMSD** Units: **µg/L** Analysis Date: **6/18/2011 03:16 AM**

Client ID: **North Plant Carbon** Run ID: **VOA7_110617D** SeqNo: **2428377** Prep Date: **6/17/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	755.7	100	1000	0	75.6	73-124	752.1	0.488	20	
1,2-Dichloroethane	1016	100	1000	0	102	76-120	1035	1.84	20	
1,4-Dichlorobenzene	934.7	100	1000	0	93.5	70-130	964.2	3.11	20	
2-Butanone	1933	200	2000	0	96.7	70-130	1951	0.932	20	
Benzene	954.3	100	1000	0	95.4	70-128	959.9	0.581	20	
Carbon tetrachloride	763.1	100	1000	0	76.3	70-130	759	0.548	20	
Chlorobenzene	979.3	100	1000	0	97.9	72-127	1005	2.58	20	
Chloroform	913	100	1000	0	91.3	70-130	900.8	1.35	20	
Tetrachloroethene	801.2	100	1000	0	80.1	70-130	800.7	0.0697	20	
Trichloroethene	860.7	100	1000	0	86.1	72-129	840.6	2.36	20	
Vinyl chloride	743.9	40	1000	0	74.4	70-130	749.5	0.741	20	
Surr: 1,2-Dichloroethane-d4	*898.7*	100	*1000*	0	*89.9*	*70-125*	877.4	*2.4*	*20*	
Surr: 4-Bromofluorobenzene	*1000*	100	*1000*	0	*100*	*72-125*	1005	*0.485*	*20*	
Surr: Dibromofluoromethane	*890.9*	100	*1000*	0	*89.1*	*71-125*	869.7	*2.4*	*20*	
Surr: Toluene-d8	*1019*	100	*1000*	0	*102*	*75-125*	1019	*0.00016*	*20*	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **R111559** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1106221-03ADUP** Units: **Burn Rate, mm/se** Analysis Date: **6/17/2011 09:30 AM**

Client ID: Run ID: **WETCHEM_110617A** SeqNo: **2427401** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		H

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **R111712** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-062111-R111712** Units: **pH Units** Analysis Date: **6/21/2011 02:40 PM**

Client ID: Run ID: **WETCHEM_110621K** SeqNo: **2430816** 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: **1106537-01Adup** Units: **pH Units** Analysis Date: **6/21/2011 02:40 PM**

Client ID: Run ID: **WETCHEM_110621K** SeqNo: **2430832** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	2.6	0.10	0	0	0	0-0	2.54	2.33	20	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

ALS Environmental

Date: 27-Jun-11

Client: Navajo Refining Company
Project: Disposal
WorkOrder: 1106470

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

1106470

NAVAJO REFINING: Navajo Refining Company

Project: Disposal

Page 1 of 1

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP SpmiVOAS
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	RCI
Address	P.O. Box 159	Address	P.O. Box 159	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	~~(505)~~ 575 748-3311	Phone	~~(505)~~ 575 748-3311	H	
Fax	~~(505) 746-5421~~ 575 5451	Fax	~~(505) 746-5421~~ 575 5451	I	
e-Mail Address	~~dgboyer@SESI-NM.com~~	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	North WW Tank Exc Soil	6-14-11	0922	S	NO	1	X	X	X	X							
2	North Plant Carbon	6-14-11	1546	S	No	1	X	X	X	X							
3	Temp Blank																
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

	Date:	Time:	Received by:
Relinquished by:	6-14-11	1615	
Relinquished by:	Date:	Time:	Received by (Laboratory): 6/15/11 09:00
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp.

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **15-Jun-11 09:00**

Work Order: **1106470** Received by: **RNG**

Checklist completed by Salvador A. Yanez (eSignature) 15-Jun-11 (Date) Reviewed by: Chris Bryson (eSignature) 16-Jun-11 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.7c	002	
Cooler(s)/Kit(s):	3540		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip Blank where Login w/ the other NAVAJO COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

1106470

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

CUSTOD

Date: 6-14-11 Tim

Name: Navajo Ref

Company: Agua Sta

Y SEAL

ie: 1615

Sing Co.

Angle

Seal Broken By:

EHO

Date:

6/15/11

ALS Group USA, Corp

Date: 22-Jun-11

Client: ALS Environmental
Project: 1106470
Work Order: **1106472**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1106472-01	1106470-01B	Soil		6/14/2011 09:22	6/17/2011 10:00	☐
1106472-02	1106470-02B	Soil		6/14/2011 15:46	6/17/2011 10:00	☐

ALS Group USA, Corp

Date: 22-Jun-11

Client: ALS Environmental
Project: 1106470
WorkOrder: **1106472**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *22-Jun-11*

Client: ALS Environmental
Project: 1106470

Work Order: 1106472

Lab ID: 1106472-01A
Client Sample ID: 1106470-01B

Collection Date: 6/14/2011 9:22:00 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM

Lab ID: 1106472-02A
Client Sample ID: 1106470-02B

Collection Date: 6/14/2011 3:46:00 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1106472
Project: 1106470

Date: 22-Jun-11

QC BATCH REPORT

Batch ID: **R91366** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-110622-R91366** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**

Client ID: Run ID: **WETCHEM_110622A** SeqNo: **1656007** 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: 1106472-01A 1106472-02A

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

Client: ALS Environmental
Work Order: 1106472
Project: 1106470

QC BATCH REPORT

Batch ID: **R91367** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-110622-R91367** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656013** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-110622-R91367** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656014** 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	0			

LCSD Sample ID: **WLCSDW1-110622-R91367** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656022** 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	234.9	0	35	

MS Sample ID: **1106472-01A MS** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: **1106470-01B** Run ID: **WETCHEM_110622B** SeqNo: **1656017** 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	50-150	0			

MSD Sample ID: **1106472-01A MSD** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: **1106470-01B** Run ID: **WETCHEM_110622B** SeqNo: **1656018** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	234.9	6.06	35	

The following samples were analyzed in this batch: 1106472-01A 1106472-02A

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

1106472

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

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

CHAIN-OF-CUSTODY RECORD

Date: 15-Jun-11
COC ID: 10583
Due Date 27-Jun-11

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	10-2121068	Project Name	1106470	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	Chris Bryson	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsglobal.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1106470-01B (North WWTank Exc Soil)	Soil	14/Jun/2011 9:22	(1) 2OZGNEAT	X	X								
1106470-02B (North Plant Carbon)	Soil	14/Jun/2011 15:46	(1) 2OZGNEAT	X	X								

Comments:

Please analyze these samples Reactive Sulfide & Reactive Cyanide. CC:glenda.ramos@alsglobal.com & mary.knowles@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	6/16/11		6/17/11 1000		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

2.6°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **17-Jun-11 10:00**

Work Order: **1106472** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 17-Jun-11 (Date) Reviewed by: Bill Carey (eSignature) 17-Jun-11 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.6 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Environmental

11-Oct-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Profile for Disposal

Work Order: **1109916**

Dear Aaron,

ALS Environmental received 2 samples on 29-Sep-2011 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 26.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Mary K. Knowles

Patricia L. Lynch
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company
Project: Profile for Disposal
Work Order: **1109916**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1109916-01	D-759 Tail Gas Carbon & Support Media	Solid		9/27/2011 10:05	9/29/2011 09:30	☐
1109916-02	Trip Blank	Water		9/27/2011	9/29/2011 09:30	☑

Client:	Navajo Refining Company
Project:	Profile for Disposal
Work Order:	1109916

Case Narrative

Batch R117144, TCLP Volatiles, Sample 1109808-16 : MSD is for an unrelated sample.

Batch R117144, TCLP Volatiles, Sample 1109808-16 : MS/MSD RPD is for an unrelated sample.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *11-Oct-11*

Client: Navajo Refining Company
Project: Profile for Disposal
Work Order: 1109916
Sample ID: D-759 Tail Gas Carbon & Support Media
Lab ID: 1109916-01
Collection Date: 9/27/2011 10:05 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **10/5/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	10/5/2011 03:14 PM
TCLP METALS			**SW1311/6020**		Prep Date: **10/4/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	10/4/2011 06:25 PM
Barium	**0.0576**		**0.0500**	**mg/L**	10	10/4/2011 06:25 PM
Cadmium	ND		0.0200	mg/L	10	10/4/2011 06:25 PM
Chromium	ND		0.0500	mg/L	10	10/4/2011 06:25 PM
Lead	ND		0.0500	mg/L	10	10/4/2011 06:25 PM
Selenium	ND		0.0500	mg/L	10	10/4/2011 06:25 PM
Silver	ND		0.0500	mg/L	10	10/4/2011 06:25 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **10/4/2011**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
Cresols, Total	ND		0.015	mg/L	1	10/4/2011 08:26 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
Hexachloroethane	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
Nitrobenzene	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
Pentachlorophenol	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
Pyridine	ND		0.0050	mg/L	1	10/4/2011 08:26 PM
Surr: 2,4,6-Tribromophenol	*76.4*		*42-124*	*%REC*	1	10/4/2011 08:26 PM
Surr: 2-Fluorobiphenyl	*59.1*		*48-120*	*%REC*	1	10/4/2011 08:26 PM
Surr: 2-Fluorophenol	*61.8*		*20-120*	*%REC*	1	10/4/2011 08:26 PM
Surr: 4-Terphenyl-d14	*61.8*		*51-135*	*%REC*	1	10/4/2011 08:26 PM
Surr: Nitrobenzene-d5	*61.8*		*41-120*	*%REC*	1	10/4/2011 08:26 PM
Surr: Phenol-d6	*71.7*		*20-120*	*%REC*	1	10/4/2011 08:26 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **10/4/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	10/4/2011 07:21 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	10/4/2011 07:21 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	10/4/2011 07:21 PM
2-Butanone	ND		0.20	mg/L	20	10/4/2011 07:21 PM
Benzene	ND		0.10	mg/L	20	10/4/2011 07:21 PM
Carbon tetrachloride	ND		0.10	mg/L	20	10/4/2011 07:21 PM
Chlorobenzene	ND		0.10	mg/L	20	10/4/2011 07:21 PM
Chloroform	ND		0.10	mg/L	20	10/4/2011 07:21 PM
Tetrachloroethene	ND		0.10	mg/L	20	10/4/2011 07:21 PM
Trichloroethene	ND		0.10	mg/L	20	10/4/2011 07:21 PM

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

ALS Environmental

Date: *11-Oct-11*

Client: Navajo Refining Company
Project: Profile for Disposal
Work Order: 1109916
Sample ID: D-759 Tail Gas Carbon & Support Media
Lab ID: 1109916-01
Collection Date: 9/27/2011 10:05 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	10/4/2011 07:21 PM
Surr: 1,2-Dichloroethane-d4	*101*		*70-125*	*%REC*	20	10/4/2011 07:21 PM
Surr: 4-Bromofluorobenzene	*101*		*72-125*	*%REC*	20	10/4/2011 07:21 PM
Surr: Dibromofluoromethane	*97.3*		*71-125*	*%REC*	20	10/4/2011 07:21 PM
Surr: Toluene-d8	*95.4*		*75-125*	*%REC*	20	10/4/2011 07:21 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	10/7/2011 08:45 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	10/7/2011 08:45 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	10/5/2011 02:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**8.96**		**0.100**	**pH Units**	1	10/4/2011 01:00 PM

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

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company

Work Order: 1109916

Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55873** Instrument ID **ICPMS04** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-100311-55873** Units: **mg/L** Analysis Date: **10/4/2011 06:06 PM**

Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547330** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	0.009167	0.050								J
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW3-100411-55873** Units: **mg/L** Analysis Date: **10/4/2011 06:13 PM**

Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547331** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW3-100411-55873** Units: **mg/L** Analysis Date: **10/4/2011 06:19 PM**

Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547332** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4212	0.050	0.5	0	84.2	80-120	0			
Barium	0.4355	0.050	0.5	0	87.1	80-120	0			
Cadmium	0.4299	0.020	0.5	0	86	80-120	0			
Chromium	0.4034	0.050	0.5	0	80.7	80-120	0			
Lead	0.4329	0.050	0.5	0	86.6	80-120	0			
Silver	0.4298	0.050	0.5	0	86	80-120	0			

LCS Sample ID: **MLCSW3-100411-55873** Units: **mg/L** Analysis Date: **10/5/2011 01:29 PM**

Client ID: Run ID: **ICPMS04_111005A** SeqNo: **2547985** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.4909	0.050	0.5	0	98.2	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55873** Instrument ID **ICPMS04** Method: **SW1311/6020**

MS Sample ID: **1110026-01BMS** Units: **mg/L** Analysis Date: **10/4/2011 07:28 PM**
Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547343** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4621	0.050	0.5	-0.000214	92.5	75-125	0			
Barium	0.6665	0.050	0.5	0.2409	85.1	75-125	0			
Cadmium	0.4573	0.020	0.5	0.000596	91.3	75-125	0			
Chromium	0.4212	0.050	0.5	-0.000017	84.2	75-125	0			
Lead	0.4694	0.050	0.5	0.01007	91.9	75-125	0			
Selenium	0.47	0.050	0.5	0.003313	93.3	75-125	0			
Silver	0.4323	0.050	0.5	-0.000122	86.5	75-125	0			

MSD Sample ID: **1110026-01BMSD** Units: **mg/L** Analysis Date: **10/4/2011 07:34 PM**
Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547344** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4499	0.050	0.5	-0.000214	90	75-125	0.4621	2.66	25	
Barium	0.7129	0.050	0.5	0.2409	94.4	75-125	0.6665	6.73	25	
Cadmium	0.4699	0.020	0.5	0.000596	93.9	75-125	0.4573	2.73	25	
Chromium	0.4382	0.050	0.5	-0.000017	87.6	75-125	0.4212	3.94	25	
Lead	0.4894	0.050	0.5	0.01007	95.9	75-125	0.4694	4.19	25	
Selenium	0.4294	0.050	0.5	0.003313	85.2	75-125	0.47	9.04	25	
Silver	0.4479	0.050	0.5	-0.000122	89.6	75-125	0.4323	3.55	25	

DUP Sample ID: **1110026-01BDUP** Units: **mg/L** Analysis Date: **10/4/2011 07:22 PM**
Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547342** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	-0.000214	0	25	
Barium	0.236	0.050	0	0	0	0-0	0.2409	2.05	25	
Cadmium	ND	0.020	0	0	0	0-0	0.000596	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.000017	0	25	
Lead	0.01046	0.050	0	0	0	0-0	0.01007	0	25	J
Selenium	0.01028	0.050	0	0	0	0-0	0.003313	0	25	J
Silver	ND	0.050	0	0	0	0-0	-0.000122	0	25	

The following samples were analyzed in this batch: 1109916-01A

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55898** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-100511-55898** Units: **mg/L** Analysis Date: **10/5/2011 02:51 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548209** Prep Date: **10/5/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-100411-55898** Units: **mg/L** Analysis Date: **10/5/2011 03:12 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548219** Prep Date: **10/5/2011** DF: **1**

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

LCS Sample ID: **GLCSW1-100511-55898** Units: **mg/L** Analysis Date: **10/5/2011 02:53 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548210** Prep Date: **10/5/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00503	0.00020	0.005	0	101	80-120	0			

MS Sample ID: **1109877-01BMS** Units: **mg/L** Analysis Date: **10/5/2011 03:03 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548215** Prep Date: **10/5/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00507	0.00020	0.005	-0.000005	102	75-125	0			

MSD Sample ID: **1109877-01BMSD** Units: **mg/L** Analysis Date: **10/5/2011 03:05 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548216** Prep Date: **10/5/2011** 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	-0.000005	99.5	75-125	0.00507	1.99	20	

DUP Sample ID: **1109877-01BDUP** Units: **mg/L** Analysis Date: **10/5/2011 02:59 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548214** Prep Date: **10/5/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000005	0	20	

The following samples were analyzed in this batch: 1109916-01A

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55878** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-111004-55878** Units: **µg/L** Analysis Date: **10/4/2011 04:04 PM**
Client ID: Run ID: **SV-3_111004A** SeqNo: **2547545** Prep Date: **10/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*73.07*	5.0	*100*	0	*73.1*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*83.07*	5.0	*100*	0	*83.1*	*48-120*	0			
Surr: 2-Fluorophenol	*72.85*	5.0	*100*	0	*72.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*78.28*	5.0	*100*	0	*78.3*	*51-135*	0			
Surr: Nitrobenzene-d5	*86.13*	5.0	*100*	0	*86.1*	*41-120*	0			
Surr: Phenol-d6	*68.03*	5.0	*100*	0	*68*	*20-120*	0			

LCS Sample ID: **SLCST1-111004-55878** Units: **µg/L** Analysis Date: **10/4/2011 04:28 PM**
Client ID: Run ID: **SV-3_111004A** SeqNo: **2547546** Prep Date: **10/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	80.33	5.0	100	0	80.3	52-115	0			
2,4,6-Trichlorophenol	72.75	5.0	100	0	72.8	53-115	0			
2,4-Dinitrotoluene	44.49	5.0	50	0	89	56-115	0			
Cresols, Total	179.6	15	250	0	71.8	35-115	0			
Hexachlorobenzene	44.78	5.0	50	0	89.6	54-115	0			
Hexachlorobutadiene	47.53	5.0	50	0	95.1	51-115	0			
Hexachloroethane	48.22	5.0	50	0	96.4	54-115	0			
Nitrobenzene	49.44	5.0	50	0	98.9	40-124	0			
Pentachlorophenol	68.07	5.0	100	0	68.1	45-125	0			
Pyridine	37.57	5.0	50	0	75.1	34-115	0			
Surr: 2,4,6-Tribromophenol	*69.99*	5.0	*100*	0	*70*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*77.22*	5.0	*100*	0	*77.2*	*48-120*	0			
Surr: 2-Fluorophenol	*80.12*	5.0	*100*	0	*80.1*	*20-120*	0			
Surr: 4-Terphenyl-d14	*71.68*	5.0	*100*	0	*71.7*	*51-135*	0			
Surr: Nitrobenzene-d5	*82.52*	5.0	*100*	0	*82.5*	*41-120*	0			
Surr: Phenol-d6	*70.33*	5.0	*100*	0	*70.3*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55878** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-111004-55878** Units: **µg/L** Analysis Date: **10/4/2011 04:52 PM**
Client ID: Run ID: **SV-3_111004A** SeqNo: **2547547** Prep Date: **10/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	77.57	5.0	100	0	77.6	52-115	80.33	3.49	25	
2,4,6-Trichlorophenol	74.64	5.0	100	0	74.6	53-115	72.75	2.56	25	
2,4-Dinitrotoluene	46.3	5.0	50	0	92.6	56-115	44.49	3.98	25	
Cresols, Total	199	15	250	0	79.6	35-115	179.6	10.3	25	
Hexachlorobenzene	46.43	5.0	50	0	92.9	54-115	44.78	3.62	25	
Hexachlorobutadiene	47.16	5.0	50	0	94.3	51-115	47.53	0.797	25	
Hexachloroethane	50.16	5.0	50	0	100	54-115	48.22	3.94	25	
Nitrobenzene	50.74	5.0	50	0	101	40-124	49.44	2.59	25	
Pentachlorophenol	71.54	5.0	100	0	71.5	45-125	68.07	4.98	25	
Pyridine	38.66	5.0	50	0	77.3	34-115	37.57	2.86	25	
Surr: 2,4,6-Tribromophenol	*73.46*	5.0	*100*	0	*73.5*	*42-124*	69.99	*4.83*	*25*	
Surr: 2-Fluorobiphenyl	*75.34*	5.0	*100*	0	*75.3*	*48-120*	77.22	*2.46*	*25*	
Surr: 2-Fluorophenol	*83.08*	5.0	*100*	0	*83.1*	*20-120*	80.12	*3.63*	*25*	
Surr: 4-Terphenyl-d14	*74.8*	5.0	*100*	0	*74.8*	*51-135*	71.68	*4.26*	*25*	
Surr: Nitrobenzene-d5	*86.02*	5.0	*100*	0	*86*	*41-120*	82.52	*4.16*	*25*	
Surr: Phenol-d6	*75.75*	5.0	*100*	0	*75.8*	*20-120*	70.33	*7.42*	*25*	

The following samples were analyzed in this batch: 1109916-01A

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117144** Instrument ID **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-100411-R117144** Units: **µg/L** Analysis Date: **10/4/2011 11:17 AM**
Client ID: Run ID: **VOA1_111004B** SeqNo: **2547704** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*46.84*	5.0	*50*	0	*93.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.63*	5.0	*50*	0	*101*	*72.4-125*	0			
Surr: Dibromofluoromethane	*47.29*	5.0	*50*	0	*94.6*	*71.2-125*	0			
Surr: Toluene-d8	*48.74*	5.0	*50*	0	*97.5*	*75-125*	0			

MBLK Sample ID: **MBLKV1-100311-R117144** Units: **µg/L** Analysis Date: **10/4/2011 06:56 PM**
Client ID: Run ID: **VOA1_111004B** SeqNo: **2547710** Prep Date: **10/4/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*1051*	100	*1000*	0	*105*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*983.8*	100	*1000*	0	*98.4*	*72.4-125*	0			
Surr: Dibromofluoromethane	*1057*	100	*1000*	0	*106*	*71.2-125*	0			
Surr: Toluene-d8	*1025*	100	*1000*	0	*103*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117144** Instrument ID **VOA1** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-100411-R117144** Units: **µg/L** Analysis Date: **10/4/2011 10:24 AM**

Client ID: Run ID: **VOA1_111004B** SeqNo: **2547703** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	54.56	5.0	50	0	109	73-124	0			
1,2-Dichloroethane	48.84	5.0	50	0	97.7	76-120	0			
1,4-Dichlorobenzene	49.41	5.0	50	0	98.8	70-130	0			
2-Butanone	102.2	10	100	0	102	70-130	0			
Benzene	51.42	5.0	50	0	103	70-128	0			
Carbon tetrachloride	48.88	5.0	50	0	97.8	70-130	0			
Chlorobenzene	49.01	5.0	50	0	98	72-127	0			
Chloroform	51.86	5.0	50	0	104	70-130	0			
Tetrachloroethene	52.58	5.0	50	0	105	70-130	0			
Trichloroethene	52.55	5.0	50	0	105	72-129	0			
Vinyl chloride	48.65	2.0	50	0	97.3	70-130	0			
Surr: 1,2-Dichloroethane-d4	*50.95*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.19*	5.0	*50*	0	*96.4*	*72-125*	0			
Surr: Dibromofluoromethane	*51.82*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*47.25*	5.0	*50*	0	*94.5*	*75-125*	0			

MS Sample ID: **1109808-16ZMS** Units: **µg/L** Analysis Date: **10/4/2011 12:59 PM**

Client ID: Run ID: **VOA1_111004B** SeqNo: **2547706** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	454.6	50	500	0	90.9	73-124	0			
1,2-Dichloroethane	477.3	50	500	0	95.5	76-120	0			
1,4-Dichlorobenzene	438.6	50	500	0	87.7	70-130	0			
2-Butanone	869.1	100	1000	0	86.9	70-130	0			
Benzene	474	50	500	0	94.8	70-128	0			
Carbon tetrachloride	426.5	50	500	0	85.3	70-130	0			
Chlorobenzene	467.2	50	500	0	93.4	72-127	0			
Chloroform	491.5	50	500	0	98.3	70-130	0			
Tetrachloroethene	800.7	50	500	363.4	87.5	70-130	0			
Trichloroethene	483.9	50	500	13.31	94.1	72-129	0			
Vinyl chloride	437.9	20	500	0	87.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*487.4*	50	*500*	0	*97.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*499.9*	50	*500*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*495.8*	50	*500*	0	*99.2*	*71-125*	0			
Surr: Toluene-d8	*446.6*	50	*500*	0	*89.3*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117144** Instrument ID **VOA1** Method: **SW1311/8260B**

MSD Sample ID: **1109808-16MSD** Units: **µg/L** Analysis Date: **10/4/2011 01:24 PM**
Client ID: Run ID: **VOA1_111004B** SeqNo: **2547707** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	367.4	50	500	0	73.5	73-124	454.6	21.2	20	R
1,2-Dichloroethane	467.1	50	500	0	93.4	76-120	477.3	2.16	20	
1,4-Dichlorobenzene	455.7	50	500	0	91.1	70-130	438.6	3.83	20	
2-Butanone	865.4	100	1000	0	86.5	70-130	869.1	0.426	20	
Benzene	472.9	50	500	0	94.6	70-128	474	0.24	20	
Carbon tetrachloride	338.4	50	500	0	67.7	70-130	426.5	23	20	SR
Chlorobenzene	464.1	50	500	0	92.8	72-127	467.2	0.659	20	
Chloroform	486.1	50	500	0	97.2	70-130	491.5	1.12	20	
Tetrachloroethene	702.6	50	500	363.4	67.8	70-130	800.7	13	20	S
Trichloroethene	454.2	50	500	13.31	88.2	72-129	483.9	6.33	20	
Vinyl chloride	369.4	20	500	0	73.9	70-130	437.9	17	20	
Surr: 1,2-Dichloroethane-d4	*496.2*	50	*500*	0	*99.2*	*70-125*	487.4	*1.8*	*20*	
Surr: 4-Bromofluorobenzene	*506*	50	*500*	0	*101*	*72-125*	499.9	*1.22*	*20*	
Surr: Dibromofluoromethane	*486.1*	50	*500*	0	*97.2*	*71-125*	495.8	*1.98*	*20*	
Surr: Toluene-d8	*464.1*	50	*500*	0	*92.8*	*75-125*	446.6	*3.85*	*20*	

The following samples were analyzed in this batch: 1109916-01A

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117118** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-100411-R117118** Units: **pH Units** Analysis Date: **10/4/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_111004F** SeqNo: **2546898** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.04	0.10	6	0	101	90-110	0			

DUP Sample ID: **1109877-01CDUP** Units: **pH Units** Analysis Date: **10/4/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_111004F** SeqNo: **2546913** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.67	0.10	0	0	0	0-0	0			

The following samples were analyzed in this batch: 1109916-01A

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

Client: Navajo Refining Company
Work Order: 1109916
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117162** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1109946-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **10/5/2011 02:00 PM**

Client ID: Run ID: **WETCHEM_111005G** SeqNo: **2547976** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1109916-01A

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

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company
Project: Profile for Disposal
WorkOrder: 1109916

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

☑ ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

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1109916

NAVAJO REFINING: Navajo Refining Company

Project: Profile for Disposal

ALS Project Manager: Chris Bryson

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Profile for Disposal	A	TCLP Volatiles
Work Order		Project Number		B	TCLP Semi-Volatiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	R. C. I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	A.Strange@hollyfrontier.com	e-Mail Address	A.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	D-759 Tail Gas Carbon & Support Media	9/27/11	10:05	Solid	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Glen Rhodes for Aaron Strange

Shipment Method: Federal Express

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Glen Rhodes for A. Strange	9/27/11	1610		
Relinquished by:	Date:	Time:	Received by (Laboratory): 9/28/11 0830	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **29-Sep-11 09:30**

Work Order: **1109916** Received by: **RDH**

Checklist completed by Raymond N Gamboa 29-Sep-11 Reviewed by: Chris Bryson 30-Sep-11
eSignature Date eSignature Date

Matrices: Solid, Water
Carrier name: ALS.HS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.9c	002	
Cooler(s)/Kit(s):	3872		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Group USA, Corp

Date: 11-Oct-11

Client: ALS Environmental
Project: 1109916
Work Order: **1110040**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1110040-01	1109916-01B	Solid		9/27/2011 10:05	10/1/2011 11:00	☐

ALS Group USA, Corp

Date: 11-Oct-11

Client: ALS Environmental
Project: 1109916
WorkOrder: **1110040**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *11-Oct-11*

Client: ALS Environmental
Project: 1109916
Sample ID: 1109916-01B
Collection Date: 9/27/2011 10:05 AM

Work Order: 1110040
Lab ID: 1110040-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	10/7/2011 08:45 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	10/7/2011 08:45 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1110040
Project: 1109916

Date: 11-Oct-11

QC BATCH REPORT

Batch ID: **R95686** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-100611-R95686** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**

Client ID: Run ID: **WETCHEM_111006I** SeqNo: **1763413** 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: 1110040-01A

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

Client: ALS Environmental
Work Order: 1110040
Project: 1109916

QC BATCH REPORT

Batch ID: **R95687** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-100611-R95687** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763419** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-100611-R95687** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763420** 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	0			

LCSD Sample ID: **WLCSDW1-100611-R95687** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763428** 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	234.9	6.06	35	

MS Sample ID: **1110186-01A MS** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763426** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD Sample ID: **1110186-01A MSD** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763427** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch: 1110040-01A

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

1110040

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 29-Sep-11
COC ID: 10999
Due Date: 11-Oct-11

Salesperson: Jeffrey L Croston

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	10-2121798	Project Name	1109916	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	Patricia L. Lynch	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	pat.lynch@alsenviro.com	eMail CC	mary.knowles@alsglobal.com	J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1109916-01B (D-759 Tail Gas Carbon & Support Media)	Solid	27/Sep/2011 10:05	(1) 4OZGNEAT	X	X								

Comments:

Please analyze for Reactive Cyanide and Reactive Sulfide. Report is due on 10/11/11. Send report to Pat Lynch, pat.lynch@alsglobal.com, and CC: results to Mary Knowles, mary.knowles@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
			10/1/11 1100		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

2.4 °C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **01-Oct-11 11:00**

Work Order: **1110040** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 03-Oct-11 (Date) Reviewed by: Bill Carey (eSignature) 04-Oct-11 (Date)

Matrices: Solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

2.4 c

ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT.
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 30SEP11
ACTWGT: 16.2 LB
CAD: 300130/CAFE2507

BILL SENDER

TO LES ARNOLD
ALS ENVIRONMENTAL
3352 128TH AVE.

HOLLAND MI 49424
(281) 530-5656
REF: SUB-CONTRACT

FedEx Express

TRK# 0201 4340 2166 9625

SATURDAY ### A4
PRIORITY OVERNIGHT

XO GRRA

49424
MI-US GRR

Part # 160946-404 NIBEVA 12/08

ALS Environmental
10450 Stancliff, Suite 210
Houston, TX 77099
Tel: +1 (281) 530-5656
Fax: +1 (281) 530-5887

CUSTODY SEAL

Date:

Seal Broken By:

NO COC

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Thursday, October 13, 2011 9:21 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Moore, Darrell; Strange, Aaron; Rhodes, Glen
Subject: Request for waste disposal--drilling mud from monitor well installation
Attachments: Profile form and C-138--drilling mud.pdf; 1109921 Profile for Disposal Final.pdf

Kim,
Please see the attached profile form, C-138 and analytical results for drilling mud waste. Please let us know via email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia Facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	Drilling mud
ESTIMATED VOLUME:	8 yds^3
GENERATING PROCESS:	Monitor well installation
REMARKS:	see attached ALS report, work order# 1109921-01
NMOCD FACILITY:	CRI
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 10/13/2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Drilling mud generated from monitor well installation.
ALS Work order: 1109921 Sample ID: 1109921-1 Est. waste vol.: 8 yds

Estimated Volume 8 yds^3 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

11-Oct-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Profile for Disposal

Work Order: **1109921**

Dear Aaron,

ALS Environmental received 1 sample on 29-Sep-2011 09:30 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 27.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Mary K. Knowles

Patricia L. Lynch
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company
Project: Profile for Disposal
Work Order: **1109921**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1109921-01	Drilling Mud Composite	Sludge		9/27/2011 09:39	9/29/2011 09:30	☐

Client:	Navajo Refining Company
Project:	Profile for Disposal
Work Order:	1109921

Case Narrative

Batch R117144, TCLP Volatiles, Sample 1109808-16 : MSD is for an unrelated sample.

Batch R117144, TCLP Volatiles, Sample 1109808-16 : MS/MSD RPD is for an unrelated sample.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *11-Oct-11*

Client: Navajo Refining Company
Project: Profile for Disposal
Sample ID: Drilling Mud Composite
Collection Date: 9/27/2011 09:39 AM

Work Order: 1109921
Lab ID: 1109921-01
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **10/5/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	10/5/2011 03:18 PM
TCLP METALS			**SW1311/6020**		Prep Date: **10/4/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	10/4/2011 06:38 PM
Barium	**0.438**		**0.0500**	**mg/L**	10	10/4/2011 06:38 PM
Cadmium	ND		0.0200	mg/L	10	10/4/2011 06:38 PM
Chromium	ND		0.0500	mg/L	10	10/4/2011 06:38 PM
Lead	ND		0.0500	mg/L	10	10/4/2011 06:38 PM
Selenium	ND		0.0500	mg/L	10	10/4/2011 06:38 PM
Silver	ND		0.0500	mg/L	10	10/4/2011 06:38 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **10/4/2011**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
Cresols, Total	ND		0.015	mg/L	1	10/4/2011 07:14 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
Hexachloroethane	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
Nitrobenzene	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
Pentachlorophenol	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
Pyridine	ND		0.0050	mg/L	1	10/4/2011 07:14 PM
Surr: 2,4,6-Tribromophenol	*59.4*		*42-124*	*%REC*	1	10/4/2011 07:14 PM
Surr: 2-Fluorobiphenyl	*48.3*		*48-120*	*%REC*	1	10/4/2011 07:14 PM
Surr: 2-Fluorophenol	*44.2*		*20-120*	*%REC*	1	10/4/2011 07:14 PM
Surr: 4-Terphenyl-d14	*60.0*		*51-135*	*%REC*	1	10/4/2011 07:14 PM
Surr: Nitrobenzene-d5	*51.3*		*41-120*	*%REC*	1	10/4/2011 07:14 PM
Surr: Phenol-d6	*46.9*		*20-120*	*%REC*	1	10/4/2011 07:14 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **10/4/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	10/4/2011 08:13 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	10/4/2011 08:13 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	10/4/2011 08:13 PM
2-Butanone	ND		0.20	mg/L	20	10/4/2011 08:13 PM
Benzene	ND		0.10	mg/L	20	10/4/2011 08:13 PM
Carbon tetrachloride	ND		0.10	mg/L	20	10/4/2011 08:13 PM
Chlorobenzene	ND		0.10	mg/L	20	10/4/2011 08:13 PM
Chloroform	ND		0.10	mg/L	20	10/4/2011 08:13 PM
Tetrachloroethene	ND		0.10	mg/L	20	10/4/2011 08:13 PM
Trichloroethene	ND		0.10	mg/L	20	10/4/2011 08:13 PM

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

ALS Environmental

Date: *11-Oct-11*

Client: Navajo Refining Company
Project: Profile for Disposal
Work Order: 1109921
Sample ID: Drilling Mud Composite
Lab ID: 1109921-01
Collection Date: 9/27/2011 09:39 AM
Matrix: SLUDGE

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	10/4/2011 08:13 PM
Surr: 1,2-Dichloroethane-d4	*101*		*70-125*	*%REC*	20	10/4/2011 08:13 PM
Surr: 4-Bromofluorobenzene	*108*		*72-125*	*%REC*	20	10/4/2011 08:13 PM
Surr: Dibromofluoromethane	*93.8*		*71-125*	*%REC*	20	10/4/2011 08:13 PM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	20	10/4/2011 08:13 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	10/7/2011 08:45 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	10/7/2011 08:45 AM
IGNITIBILITY			**SW1010**			Analyst: **KAH**
Ignitability	*> 212*		50.0	°F	1	10/5/2011
PH			**SW9045B**			Analyst: **TDW**
pH	**7.51**		**0.100**	**pH Units**	1	10/4/2011 01:00 PM

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

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company

Work Order: 1109921

Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55873** Instrument ID **ICPMS04** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-100311-55873** Units: **mg/L** Analysis Date: **10/4/2011 06:06 PM**

Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547330** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	0.009167	0.050								J
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW3-100411-55873** Units: **mg/L** Analysis Date: **10/4/2011 06:13 PM**

Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547331** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW3-100411-55873** Units: **mg/L** Analysis Date: **10/4/2011 06:19 PM**

Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547332** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4212	0.050	0.5	0	84.2	80-120	0			
Barium	0.4355	0.050	0.5	0	87.1	80-120	0			
Cadmium	0.4299	0.020	0.5	0	86	80-120	0			
Chromium	0.4034	0.050	0.5	0	80.7	80-120	0			
Lead	0.4329	0.050	0.5	0	86.6	80-120	0			
Silver	0.4298	0.050	0.5	0	86	80-120	0			

LCS Sample ID: **MLCSW3-100411-55873** Units: **mg/L** Analysis Date: **10/5/2011 01:29 PM**

Client ID: Run ID: **ICPMS04_111005A** SeqNo: **2547985** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.4909	0.050	0.5	0	98.2	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55873** Instrument ID **ICPMS04** Method: **SW1311/6020**

MS Sample ID: **1110026-01BMS** Units: **mg/L** Analysis Date: **10/4/2011 07:28 PM**
Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547343** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4621	0.050	0.5	-0.000214	92.5	75-125	0			
Barium	0.6665	0.050	0.5	0.2409	85.1	75-125	0			
Cadmium	0.4573	0.020	0.5	0.000596	91.3	75-125	0			
Chromium	0.4212	0.050	0.5	-0.000017	84.2	75-125	0			
Lead	0.4694	0.050	0.5	0.01007	91.9	75-125	0			
Selenium	0.47	0.050	0.5	0.003313	93.3	75-125	0			
Silver	0.4323	0.050	0.5	-0.000122	86.5	75-125	0			

MSD Sample ID: **1110026-01BMSD** Units: **mg/L** Analysis Date: **10/4/2011 07:34 PM**
Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547344** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4499	0.050	0.5	-0.000214	90	75-125	0.4621	2.66	25	
Barium	0.7129	0.050	0.5	0.2409	94.4	75-125	0.6665	6.73	25	
Cadmium	0.4699	0.020	0.5	0.000596	93.9	75-125	0.4573	2.73	25	
Chromium	0.4382	0.050	0.5	-0.000017	87.6	75-125	0.4212	3.94	25	
Lead	0.4894	0.050	0.5	0.01007	95.9	75-125	0.4694	4.19	25	
Selenium	0.4294	0.050	0.5	0.003313	85.2	75-125	0.47	9.04	25	
Silver	0.4479	0.050	0.5	-0.000122	89.6	75-125	0.4323	3.55	25	

DUP Sample ID: **1110026-01BDUP** Units: **mg/L** Analysis Date: **10/4/2011 07:22 PM**
Client ID: Run ID: **ICPMS04_111004A** SeqNo: **2547342** Prep Date: **10/4/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	-0.000214	0	25	
Barium	0.236	0.050	0	0	0	0-0	0.2409	2.05	25	
Cadmium	ND	0.020	0	0	0	0-0	0.000596	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.000017	0	25	
Lead	0.01046	0.050	0	0	0	0-0	0.01007	0	25	J
Selenium	0.01028	0.050	0	0	0	0-0	0.003313	0	25	J
Silver	ND	0.050	0	0	0	0-0	-0.000122	0	25	

The following samples were analyzed in this batch: 1109921-01A

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55898** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-100511-55898** Units: **mg/L** Analysis Date: **10/5/2011 02:51 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548209** Prep Date: **10/5/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-100411-55898** Units: **mg/L** Analysis Date: **10/5/2011 03:12 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548219** Prep Date: **10/5/2011** DF: **1**

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

LCS Sample ID: **GLCSW1-100511-55898** Units: **mg/L** Analysis Date: **10/5/2011 02:53 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548210** Prep Date: **10/5/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00503	0.00020	0.005	0	101	80-120	0			

MS Sample ID: **1109877-01BMS** Units: **mg/L** Analysis Date: **10/5/2011 03:03 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548215** Prep Date: **10/5/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00507	0.00020	0.005	-0.000005	102	75-125	0			

MSD Sample ID: **1109877-01BMSD** Units: **mg/L** Analysis Date: **10/5/2011 03:05 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548216** Prep Date: **10/5/2011** 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	-0.000005	99.5	75-125	0.00507	1.99	20	

DUP Sample ID: **1109877-01BDUP** Units: **mg/L** Analysis Date: **10/5/2011 02:59 PM**
Client ID: Run ID: **MERCURY_111005A** SeqNo: **2548214** Prep Date: **10/5/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000005	0	20	

The following samples were analyzed in this batch: 1109921-01A

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55878** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-111004-55878** Units: **µg/L** Analysis Date: **10/4/2011 04:04 PM**
Client ID: Run ID: **SV-3_111004A** SeqNo: **2547545** Prep Date: **10/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*73.07*	5.0	*100*	0	*73.1*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*83.07*	5.0	*100*	0	*83.1*	*48-120*	0			
Surr: 2-Fluorophenol	*72.85*	5.0	*100*	0	*72.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*78.28*	5.0	*100*	0	*78.3*	*51-135*	0			
Surr: Nitrobenzene-d5	*86.13*	5.0	*100*	0	*86.1*	*41-120*	0			
Surr: Phenol-d6	*68.03*	5.0	*100*	0	*68*	*20-120*	0			

LCS Sample ID: **SLCST1-111004-55878** Units: **µg/L** Analysis Date: **10/4/2011 04:28 PM**
Client ID: Run ID: **SV-3_111004A** SeqNo: **2547546** Prep Date: **10/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	80.33	5.0	100	0	80.3	52-115	0			
2,4,6-Trichlorophenol	72.75	5.0	100	0	72.8	53-115	0			
2,4-Dinitrotoluene	44.49	5.0	50	0	89	56-115	0			
Cresols, Total	179.6	15	250	0	71.8	35-115	0			
Hexachlorobenzene	44.78	5.0	50	0	89.6	54-115	0			
Hexachlorobutadiene	47.53	5.0	50	0	95.1	51-115	0			
Hexachloroethane	48.22	5.0	50	0	96.4	54-115	0			
Nitrobenzene	49.44	5.0	50	0	98.9	40-124	0			
Pentachlorophenol	68.07	5.0	100	0	68.1	45-125	0			
Pyridine	37.57	5.0	50	0	75.1	34-115	0			
Surr: 2,4,6-Tribromophenol	*69.99*	5.0	*100*	0	*70*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*77.22*	5.0	*100*	0	*77.2*	*48-120*	0			
Surr: 2-Fluorophenol	*80.12*	5.0	*100*	0	*80.1*	*20-120*	0			
Surr: 4-Terphenyl-d14	*71.68*	5.0	*100*	0	*71.7*	*51-135*	0			
Surr: Nitrobenzene-d5	*82.52*	5.0	*100*	0	*82.5*	*41-120*	0			
Surr: Phenol-d6	*70.33*	5.0	*100*	0	*70.3*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **55878** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-111004-55878** Units: **µg/L** Analysis Date: **10/4/2011 04:52 PM**

Client ID: Run ID: **SV-3_111004A** SeqNo: **2547547** Prep Date: **10/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	77.57	5.0	100	0	77.6	52-115	80.33	3.49	25	
2,4,6-Trichlorophenol	74.64	5.0	100	0	74.6	53-115	72.75	2.56	25	
2,4-Dinitrotoluene	46.3	5.0	50	0	92.6	56-115	44.49	3.98	25	
Cresols, Total	199	15	250	0	79.6	35-115	179.6	10.3	25	
Hexachlorobenzene	46.43	5.0	50	0	92.9	54-115	44.78	3.62	25	
Hexachlorobutadiene	47.16	5.0	50	0	94.3	51-115	47.53	0.797	25	
Hexachloroethane	50.16	5.0	50	0	100	54-115	48.22	3.94	25	
Nitrobenzene	50.74	5.0	50	0	101	40-124	49.44	2.59	25	
Pentachlorophenol	71.54	5.0	100	0	71.5	45-125	68.07	4.98	25	
Pyridine	38.66	5.0	50	0	77.3	34-115	37.57	2.86	25	
Surr: 2,4,6-Tribromophenol	*73.46*	5.0	*100*	0	*73.5*	*42-124*	69.99	*4.83*	*25*	
Surr: 2-Fluorobiphenyl	*75.34*	5.0	*100*	0	*75.3*	*48-120*	77.22	*2.46*	*25*	
Surr: 2-Fluorophenol	*83.08*	5.0	*100*	0	*83.1*	*20-120*	80.12	*3.63*	*25*	
Surr: 4-Terphenyl-d14	*74.8*	5.0	*100*	0	*74.8*	*51-135*	71.68	*4.26*	*25*	
Surr: Nitrobenzene-d5	*86.02*	5.0	*100*	0	*86*	*41-120*	82.52	*4.16*	*25*	
Surr: Phenol-d6	*75.75*	5.0	*100*	0	*75.8*	*20-120*	70.33	*7.42*	*25*	

The following samples were analyzed in this batch: 1109921-01A

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117144** Instrument ID **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-100411-R117144** Units: **µg/L** Analysis Date: **10/4/2011 11:17 AM**
Client ID: Run ID: **VOA1_111004B** SeqNo: **2547704** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*46.84*	5.0	*50*	0	*93.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.63*	5.0	*50*	0	*101*	*72.4-125*	0			
Surr: Dibromofluoromethane	*47.29*	5.0	*50*	0	*94.6*	*71.2-125*	0			
Surr: Toluene-d8	*48.74*	5.0	*50*	0	*97.5*	*75-125*	0			

MBLK Sample ID: **MBLKV1-100311-R117144** Units: **µg/L** Analysis Date: **10/4/2011 06:56 PM**
Client ID: Run ID: **VOA1_111004B** SeqNo: **2547710** Prep Date: **10/4/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*1051*	100	*1000*	0	*105*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*983.8*	100	*1000*	0	*98.4*	*72.4-125*	0			
Surr: Dibromofluoromethane	*1057*	100	*1000*	0	*106*	*71.2-125*	0			
Surr: Toluene-d8	*1025*	100	*1000*	0	*103*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117144** Instrument ID **VOA1** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-100411-R117144** Units: **µg/L** Analysis Date: **10/4/2011 10:24 AM**
Client ID: Run ID: **VOA1_111004B** SeqNo: **2547703** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	54.56	5.0	50	0	109	73-124	0			
1,2-Dichloroethane	48.84	5.0	50	0	97.7	76-120	0			
1,4-Dichlorobenzene	49.41	5.0	50	0	98.8	70-130	0			
2-Butanone	102.2	10	100	0	102	70-130	0			
Benzene	51.42	5.0	50	0	103	70-128	0			
Carbon tetrachloride	48.88	5.0	50	0	97.8	70-130	0			
Chlorobenzene	49.01	5.0	50	0	98	72-127	0			
Chloroform	51.86	5.0	50	0	104	70-130	0			
Tetrachloroethene	52.58	5.0	50	0	105	70-130	0			
Trichloroethene	52.55	5.0	50	0	105	72-129	0			
Vinyl chloride	48.65	2.0	50	0	97.3	70-130	0			
Surr: 1,2-Dichloroethane-d4	*50.95*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.19*	5.0	*50*	0	*96.4*	*72-125*	0			
Surr: Dibromofluoromethane	*51.82*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*47.25*	5.0	*50*	0	*94.5*	*75-125*	0			

MS Sample ID: **1109808-16ZMS** Units: **µg/L** Analysis Date: **10/4/2011 12:59 PM**
Client ID: Run ID: **VOA1_111004B** SeqNo: **2547706** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	454.6	50	500	0	90.9	73-124	0			
1,2-Dichloroethane	477.3	50	500	0	95.5	76-120	0			
1,4-Dichlorobenzene	438.6	50	500	0	87.7	70-130	0			
2-Butanone	869.1	100	1000	0	86.9	70-130	0			
Benzene	474	50	500	0	94.8	70-128	0			
Carbon tetrachloride	426.5	50	500	0	85.3	70-130	0			
Chlorobenzene	467.2	50	500	0	93.4	72-127	0			
Chloroform	491.5	50	500	0	98.3	70-130	0			
Tetrachloroethene	800.7	50	500	363.4	87.5	70-130	0			
Trichloroethene	483.9	50	500	13.31	94.1	72-129	0			
Vinyl chloride	437.9	20	500	0	87.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*487.4*	50	*500*	0	*97.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*499.9*	50	*500*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*495.8*	50	*500*	0	*99.2*	*71-125*	0			
Surr: Toluene-d8	*446.6*	50	*500*	0	*89.3*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117144** Instrument ID **VOA1** Method: **SW1311/8260B**

MSD Sample ID: **1109808-16MSD** Units: **µg/L** Analysis Date: **10/4/2011 01:24 PM**
Client ID: Run ID: **VOA1_111004B** SeqNo: **2547707** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	367.4	50	500	0	73.5	73-124	454.6	21.2	20	R
1,2-Dichloroethane	467.1	50	500	0	93.4	76-120	477.3	2.16	20	
1,4-Dichlorobenzene	455.7	50	500	0	91.1	70-130	438.6	3.83	20	
2-Butanone	865.4	100	1000	0	86.5	70-130	869.1	0.426	20	
Benzene	472.9	50	500	0	94.6	70-128	474	0.24	20	
Carbon tetrachloride	338.4	50	500	0	67.7	70-130	426.5	23	20	SR
Chlorobenzene	464.1	50	500	0	92.8	72-127	467.2	0.659	20	
Chloroform	486.1	50	500	0	97.2	70-130	491.5	1.12	20	
Tetrachloroethene	702.6	50	500	363.4	67.8	70-130	800.7	13	20	S
Trichloroethene	454.2	50	500	13.31	88.2	72-129	483.9	6.33	20	
Vinyl chloride	369.4	20	500	0	73.9	70-130	437.9	17	20	
Surr: 1,2-Dichloroethane-d4	*496.2*	50	*500*	0	*99.2*	*70-125*	487.4	*1.8*	*20*	
Surr: 4-Bromofluorobenzene	*506*	50	*500*	0	*101*	*72-125*	499.9	*1.22*	*20*	
Surr: Dibromofluoromethane	*486.1*	50	*500*	0	*97.2*	*71-125*	495.8	*1.98*	*20*	
Surr: Toluene-d8	*464.1*	50	*500*	0	*92.8*	*75-125*	446.6	*3.85*	*20*	

The following samples were analyzed in this batch: 1109921-01A

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117118** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-100411-R117118** Units: **pH Units** Analysis Date: **10/4/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_111004F** SeqNo: **2546898** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.04	0.10	6	0	101	90-110	0			

DUP Sample ID: **1109877-01CDUP** Units: **pH Units** Analysis Date: **10/4/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_111004F** SeqNo: **2546913** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.67	0.10	0	0	0	0-0	0			

The following samples were analyzed in this batch: 1109921-01A

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

Client: Navajo Refining Company
Work Order: 1109921
Project: Profile for Disposal

QC BATCH REPORT

Batch ID: **R117154** Instrument ID **WetChem** Method: **SW1010**

LCS Sample ID: **WLCS-100511-R117154** Units: **°F** Analysis Date: **10/5/2011**
Client ID: Run ID: **WETCHEM_111005B** SeqNo: **2547886** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	81	50	83	0	97.6	80-120	0			

LCSD Sample ID: **WLCSD-100511-R117154** Units: **°F** Analysis Date: **10/5/2011**
Client ID: Run ID: **WETCHEM_111005B** SeqNo: **2547899** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	81	50	83	0	97.6	80-120	81	0	25	

DUP Sample ID: **1110116-01EDUP** Units: **°F** Analysis Date: **10/5/2011**
Client ID: Run ID: **WETCHEM_111005B** SeqNo: **2547901** 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: 1109921-01A

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

ALS Environmental

Date: 11-Oct-11

Client: Navajo Refining Company
Project: Profile for Disposal
WorkOrder: 1109921

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
°F	Farenheit degrees
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

☑ ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1109921

NAVAJO REFINING: Navajo Refining Company

Project: Profile for Disposal

ALS Project Manager: Chris Bryson

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Profile for Disposal	A	TCLP Volatiles
Work Order		Project Number		B	TCLP Semi-Volatiles
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	R. C. I.
Address	P. O. Box 159	Address	501 East Main	E	
				F	
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	A.Strange@hollyfrontier.com	e-Mail Address	A.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Drilling Mud Composite	9/27/11	9:39	Solid	None	1	X	X	X	X							
2	Trip Blank					2											
3	Temperature Blank					1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Glen Rhodes for Aaron Strange

Shipment Method: Federal Express

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Glen Rhodes for A. Strange	9/27/11	1610		
Relinquished by:	Date:	Time:	Received by (Laboratory): 9/28/11 0830	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ Other: _____
- ☐ TRRP-Checklist
- ☐ TRRP Level IV

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

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **29-Sep-11 09:30**

Work Order: **1109921** Received by: **RDH**

Checklist completed by Raymond N Gamboa (eSignature) 29-Sep-11 (Date) Reviewed by: Chris Bryson (eSignature) 30-Sep-11 (Date)

Matrices: Solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.9c	002	
Cooler(s)/Kit(s):	3872		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip blank logged in with ALS work order 1109916 (received in the same kit).

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

W.O. #116992-1

THU - 29 SEP A2
PRIORITY OVERNIGHT

TRK# 0201 4967 8855 8931

43 SGRA

77099
TX-US
IAH

347544 29Sep 00:10 AFWH 508C2/4299/9A24

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

Date: 9
Name:
Company:

CUSTODY SEAL

-28-11 Time: 1620

Glen Rhodes for A. Strange
NAVAJO

Seal Broken By:

Date:

ALS Group USA, Corp

Date: 11-Oct-11

Client: ALS Environmental
Project: 1109921
Work Order: **1110039**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1110039-01	1109921-01B	Solid		9/27/2011 09:39	10/1/2011 11:00	☐

ALS Group USA, Corp

Date: 11-Oct-11

Client: ALS Environmental
Project: 1109921
WorkOrder: **1110039**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *11-Oct-11*

Client: ALS Environmental
Project: 1109921
Work Order: 1110039
Sample ID: 1109921-01B
Lab ID: 1110039-01
Collection Date: 9/27/2011 09:39 AM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	10/7/2011 08:45 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	10/7/2011 08:45 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1110039
Project: 1109921

Date: 11-Oct-11

QC BATCH REPORT

Batch ID: **R95686** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-100611-R95686** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**

Client ID: Run ID: **WETCHEM_111006I** SeqNo: **1763413** 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: 1110039-01A

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

Client: ALS Environmental
Work Order: 1110039
Project: 1109921

QC BATCH REPORT

Batch ID: **R95687** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-100611-R95687** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763419** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-100611-R95687** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763420** 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	0			

LCSD Sample ID: **WLCSDW1-100611-R95687** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763428** 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	234.9	6.06	35	

MS Sample ID: **1110186-01A MS** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763426** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD Sample ID: **1110186-01A MSD** Units: **mg/Kg** Analysis Date: **10/6/2011 12:45 PM**
Client ID: Run ID: **WETCHEM_111006J** SeqNo: **1763427** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch: 1110039-01A

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

1110039

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 29-Sep-11
COC ID: 11001
Due Date: 11-Oct-11

Salesperson: Jeffrey L Croston

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	10-2121800	Project Name	1109921	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	Patricia L. Lynch	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	pat.lynch@alsenviro.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1109921-01B (Drilling Mud Composite)	Solid	27/Sep/2011 9:39	(1) 4OZGNEAT	X	X								

Comments:
Please analyze for Reactive Cyanide and Reactive Sulfide. Report is due on 10/11/11. Send report to Pat Lynch, pat.lynch@alsglobal.com, and CC: results to Mary Knowles, mary.knowles@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
			10/1/11 1100		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

24°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **01-Oct-11 11:00**

Work Order: **1110039** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 03-Oct-11 (Date) Reviewed by: Bill Carey (eSignature) 04-Oct-11 (Date)

Matrices: Solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ORIGIN ID: SGRA (281) 530-5656
SHIPPING DEPT.
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 30SEP11
ACTWGT: 16.2 LB
CAD: 300130/CAFE2507

BILL SENDER

TO LES ARNOLD
ALS ENVIRONMENTAL
3352 128TH AVE.

HOLLAND MI 49424
(281) 530-5656
REF: SUB-CONTRACT

FedEx Express

SATURDAY ### A4
PRIORITY OVERNIGHT

TRK# 0201 4340 2166 9625

XO GRRA

49424
MI-US GRR

Part # 150140-404 NNIT V3 12/09

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

CUSTODY SEAL

Date:

Seal Broken By:

2.4 c

NO COC

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Thursday, October 06, 2011 3:30 PM
To: Kim Flowers (kim.flowers@crihobbs.com); Chavez, Carl J, EMNRD
Cc: Les Elliott; Moore, Darrell; Strange, Aaron
Subject: Request for waste disposal--effluent pipeline spill @ Chukka 16 Sept 2011
Attachments: Profile form and C-138.pdf; 1109583 Wastewater Effluent Spill Final.pdf

Kim,
Please see the attached profile form and C-138. Also attached are the analytical results for the soil samples. Please let us know via email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	Excavated/contaminated soil
ESTIMATED VOLUME:	100 yds
GENERATING PROCESS:	Waste Water Treatment Plant
REMARKS:	see attached ALS report work order# 1109583
NMOCD FACILITY:	CRI
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: _____
SIGNATURE

NAME: Robert Combs
PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 10/6/2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Excavated soil contaminated with treated waste water.

Estimated Volume 100 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

28-Sep-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Wastewater Effluent Spill

Work Order: **1109583**

Dear Aaron,

ALS Environmental received 4 samples on 20-Sep-2011 09:08 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 31.

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

Sincerely,

Patricia L. Lynch

Electronically approved by: Mary K. Knowles

Patricia L. Lynch
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

Client:	Navajo Refining Company
Project:	Wastewater Effluent Spill
Work Order:	1109583

Case Narrative

Batch R116751, BTEX, Sample 1109616-02 : MS/MSD is for an unrelated sample.

Batch R116751, BTEX, Sample 1109616-02 : MSD RPD is for an unrelated sample.

Batch 55593, Metals, Sample 1109560-06 : MS/MSD is for an unrelated sample.

Batch 55593, Metals, Sample 1109560-06 : Duplicate RPD is for an unrelated sample.

Batch 55693, Anions, Sample Chukka-Bottom Hole 32°45'50.53N-104°14'17.58"W : MS/MSD recoveries were above the control limits for Chloride. The associated RPD was within the control limits. Results are flagged with an O qualifier.

Batch 55693, Anions, Sample Chukka-Bottom Hole 32°45'50.53N-104°14'17.58"W : MSD recoveries were below the control limits for Sulfate. Results are flagged with an E and an O qualifier.

ALS Environmental

Date: 28-Sep-11

Client: Navajo Refining Company
Project: Wastewater Effluent Spill
Work Order: **1109583**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1109583-01	Chukka-Background 32°45'50.68"N-104°14'16.67"W	Soil		9/19/2011 10:13	9/20/2011 09:08	☐
1109583-02	Chukka-Bottom Hole 32°45'50.53N-104°14'17.58"W	Soil		9/19/2011 10:16	9/20/2011 09:08	☐
1109583-03	Chukka-Excavation Spill Cleanup	Soil		9/19/2011 10:20	9/20/2011 09:08	☐
1109583-04	Trip Blank	Water		9/19/2011	9/20/2011 09:08	☑

ALS Environmental

Date: *28-Sep-11*

Client: Navajo Refining Company
Project: Wastewater Effluent Spill
Work Order: 1109583
Sample ID: Chukka-Background 32°45'50.68"N-104°14'16.67"W
Lab ID: 1109583-01
Collection Date: 9/19/2011 10:13 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	ND		0.0010	mg/Kg	1	9/27/2011 03:38 PM
Toluene	ND		0.0010	mg/Kg	1	9/27/2011 03:38 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	9/27/2011 03:38 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	9/27/2011 03:38 PM
Surr: 4-Bromofluorobenzene	*97.2*		*75-131*	*%REC*	1	9/27/2011 03:38 PM
Surr: Trifluorotoluene	*88.8*		*73-130*	*%REC*	1	9/27/2011 03:38 PM
MERCURY - SW7471B			**SW7471A**		Prep Date: **9/22/2011**	Analyst: **JCJ**
Mercury	ND		0.00361	mg/Kg	1	9/22/2011 02:45 PM
METALS			**SW6020**		Prep Date: **9/22/2011**	Analyst: **ALR**
Aluminum	**5,140**		**191**	**mg/Kg**	100	9/23/2011 06:40 PM
Antimony	ND		0.478	mg/Kg	1	9/23/2011 06:24 AM
Arsenic	**2.28**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Barium	**107**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Beryllium	ND		0.478	mg/Kg	1	9/23/2011 06:24 AM
Cadmium	ND		0.478	mg/Kg	1	9/23/2011 06:24 AM
Calcium	**74,400**		**4,780**	**mg/Kg**	100	9/23/2011 06:40 PM
Chromium	**5.77**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Cobalt	**1.95**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Copper	**4.93**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Iron	**3,970**		**47.8**	**mg/Kg**	1	9/23/2011 06:24 AM
Lead	**7.36**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Magnesium	**7,190**		**47.8**	**mg/Kg**	1	9/23/2011 06:24 AM
Manganese	**83.7**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Nickel	**4.25**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Potassium	**1,070**		**47.8**	**mg/Kg**	1	9/23/2011 06:24 AM
Selenium	ND		0.478	mg/Kg	1	9/23/2011 06:24 AM
Silver	ND		0.478	mg/Kg	1	9/23/2011 06:24 AM
Sodium	**80.4**		**47.8**	**mg/Kg**	1	9/23/2011 06:24 AM
Strontium	**341**		**47.8**	**mg/Kg**	100	9/23/2011 06:40 PM
Thallium	ND		0.478	mg/Kg	1	9/23/2011 06:24 AM
Vanadium	**14.6**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
Zinc	**21.6**		**0.478**	**mg/Kg**	1	9/23/2011 06:24 AM
ANIONS - EPA 300.0 (1993)			**E300**		Prep Date: **9/26/2011**	Analyst: **RPM**
Chloride	**12.0**		**4.95**	**mg/Kg**	1	9/27/2011 01:30 PM
Sulfate	**12,300**		**495**	**mg/Kg**	100	9/27/2011 02:57 PM
Surr: Selenate (surr)	*95.0*		*85-115*	*%REC*	100	9/27/2011 02:57 PM
Surr: Selenate (surr)	*97.3*		*85-115*	*%REC*	1	9/27/2011 01:30 PM

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

ALS Environmental

Date: *28-Sep-11*

Client: Navajo Refining Company
Project: Wastewater Effluent Spill
Work Order: 1109583
Sample ID: Chukka-Bottom Hole 32°45'50.53N-104°14'17.58"W
Lab ID: 1109583-02
Collection Date: 9/19/2011 10:16 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	ND		0.0010	mg/Kg	1	9/27/2011 03:55 PM
Toluene	ND		0.0010	mg/Kg	1	9/27/2011 03:55 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	9/27/2011 03:55 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	9/27/2011 03:55 PM
Surr: 4-Bromofluorobenzene	*103*		*75-131*	*%REC*	1	9/27/2011 03:55 PM
Surr: Trifluorotoluene	*103*		*73-130*	*%REC*	1	9/27/2011 03:55 PM
MERCURY - SW7471B			**SW7471A**		Prep Date: **9/22/2011**	Analyst: **JCJ**
Mercury	ND		0.00352	mg/Kg	1	9/22/2011 02:47 PM
METALS			**SW6020**		Prep Date: **9/22/2011**	Analyst: **ALR**
Aluminum	**5,910**		**181**	**mg/Kg**	100	9/23/2011 06:46 PM
Antimony	ND		0.452	mg/Kg	1	9/23/2011 06:30 AM
Arsenic	**2.55**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Barium	**65.2**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Beryllium	ND		0.452	mg/Kg	1	9/23/2011 06:30 AM
Cadmium	ND		0.452	mg/Kg	1	9/23/2011 06:30 AM
Calcium	**102,000**		**4,520**	**mg/Kg**	100	9/23/2011 06:46 PM
Chromium	**6.45**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Cobalt	**2.06**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Copper	**4.37**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Iron	**4,330**		**45.2**	**mg/Kg**	1	9/23/2011 06:30 AM
Lead	**4.15**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Magnesium	**14,600**		**45.2**	**mg/Kg**	1	9/23/2011 06:30 AM
Manganese	**76.5**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Nickel	**4.84**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Potassium	**966**		**45.2**	**mg/Kg**	1	9/23/2011 06:30 AM
Selenium	ND		0.452	mg/Kg	1	9/23/2011 06:30 AM
Silver	ND		0.452	mg/Kg	1	9/23/2011 06:30 AM
Sodium	**422**		**45.2**	**mg/Kg**	1	9/23/2011 06:30 AM
Strontium	**828**		**45.2**	**mg/Kg**	100	9/23/2011 06:46 PM
Thallium	ND		0.452	mg/Kg	1	9/23/2011 06:30 AM
Vanadium	**15.8**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
Zinc	**20.5**		**0.452**	**mg/Kg**	1	9/23/2011 06:30 AM
ANIONS - EPA 300.0 (1993)			**E300**		Prep Date: **9/26/2011**	Analyst: **RPM**
Chloride	**526**		**4.82**	**mg/Kg**	1	9/27/2011 12:25 PM
Sulfate	**14,300**		**482**	**mg/Kg**	100	9/27/2011 01:52 PM
Surr: Selenate (surr)	*96.2*		*85-115*	*%REC*	100	9/27/2011 01:52 PM
Surr: Selenate (surr)	*96.8*		*85-115*	*%REC*	1	9/27/2011 12:25 PM

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

ALS Environmental

Date: *28-Sep-11*

Client: Navajo Refining Company
Project: Wastewater Effluent Spill
Sample ID: Chukka-Excavation Spill Cleanup
Collection Date: 9/19/2011 10:20 AM

Work Order: 1109583
Lab ID: 1109583-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **9/23/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	9/23/2011 03:15 PM
TCLP METALS			**SW1311/6020**		Prep Date: **9/23/2011**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	9/23/2011 04:35 PM
Barium	**0.108**		**0.0500**	**mg/L**	10	9/23/2011 04:35 PM
Cadmium	ND		0.0200	mg/L	10	9/23/2011 04:35 PM
Chromium	ND		0.0500	mg/L	10	9/23/2011 04:35 PM
Lead	ND		0.0500	mg/L	10	9/23/2011 04:35 PM
Selenium	ND		0.0500	mg/L	10	9/23/2011 04:35 PM
Silver	ND		0.0500	mg/L	10	9/23/2011 04:35 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **9/25/2011**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
Cresols, Total	ND		0.015	mg/L	1	9/26/2011 03:22 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
Hexachloroethane	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
Nitrobenzene	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
Pentachlorophenol	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
Pyridine	ND		0.0050	mg/L	1	9/26/2011 03:22 PM
Surr: 2,4,6-Tribromophenol	*68.0*		*42-124*	*%REC*	1	9/26/2011 03:22 PM
Surr: 2-Fluorobiphenyl	*59.4*		*48-120*	*%REC*	1	9/26/2011 03:22 PM
Surr: 2-Fluorophenol	*51.1*		*20-120*	*%REC*	1	9/26/2011 03:22 PM
Surr: 4-Terphenyl-d14	*73.0*		*51-135*	*%REC*	1	9/26/2011 03:22 PM
Surr: Nitrobenzene-d5	*63.3*		*41-120*	*%REC*	1	9/26/2011 03:22 PM
Surr: Phenol-d6	*58.8*		*20-120*	*%REC*	1	9/26/2011 03:22 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **9/24/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	9/26/2011 04:49 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	9/26/2011 04:49 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	9/26/2011 04:49 PM
2-Butanone	ND		0.20	mg/L	20	9/26/2011 04:49 PM
Benzene	ND		0.10	mg/L	20	9/26/2011 04:49 PM
Carbon tetrachloride	ND		0.10	mg/L	20	9/26/2011 04:49 PM
Chlorobenzene	ND		0.10	mg/L	20	9/26/2011 04:49 PM
Chloroform	ND		0.10	mg/L	20	9/26/2011 04:49 PM
Tetrachloroethene	ND		0.10	mg/L	20	9/26/2011 04:49 PM
Trichloroethene	ND		0.10	mg/L	20	9/26/2011 04:49 PM

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

ALS Environmental

Date: *28-Sep-11*

Client: Navajo Refining Company
Project: Wastewater Effluent Spill
Sample ID: Chukka-Excavation Spill Cleanup
Collection Date: 9/19/2011 10:20 AM

Work Order: 1109583
Lab ID: 1109583-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	9/26/2011 04:49 PM
Surr: 1,2-Dichloroethane-d4	*104*		*70-125*	*%REC*	20	9/26/2011 04:49 PM
Surr: 4-Bromofluorobenzene	*98.9*		*72-125*	*%REC*	20	9/26/2011 04:49 PM
Surr: Dibromofluoromethane	*102*		*71-125*	*%REC*	20	9/26/2011 04:49 PM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	20	9/26/2011 04:49 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	9/26/2011 12:45 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	9/26/2011 12:45 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	9/23/2011 05:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**7.81**		**0.100**	**pH Units**	1	9/22/2011 04:00 PM

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

ALS Environmental

Date: 28-Sep-11

Client: Navajo Refining Company

Work Order: 1109583

Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R116751** Instrument ID **BTEX3** Method: **SW8021B**

MBLK Sample ID: **BBLKS1-082711-R116751** Units: **µg/Kg** Analysis Date: **9/27/2011 03:03 PM**

Client ID: Run ID: **BTEX3_110927A** SeqNo: **2538758** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*25.54*	1.0	*30*	0	*85.1*	*75-131*	0			
Surr: Trifluorotoluene	*25.67*	1.0	*30*	0	*85.6*	*73-130*	0			

LCS Sample ID: **BLCSS1-082711-R116751** Units: **µg/Kg** Analysis Date: **9/27/2011 02:21 PM**

Client ID: Run ID: **BTEX3_110927A** SeqNo: **2538752** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	16.34	1.0	20	0	81.7	74-129	0			
Toluene	16.52	1.0	20	0	82.6	75-128	0			
Ethylbenzene	17.1	1.0	20	0	85.5	73-127	0			
Xylenes, Total	50.43	3.0	60	0	84.1	74-127	0			
Surr: 4-Bromofluorobenzene	*26.6*	1.0	*30*	0	*88.7*	*75-131*	0			
Surr: Trifluorotoluene	*25.21*	1.0	*30*	0	*84*	*73-130*	0			

MS Sample ID: **1109616-02AMS** Units: **µg/Kg** Analysis Date: **9/27/2011 04:47 PM**

Client ID: Run ID: **BTEX3_110927A** SeqNo: **2538798** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	16.96	1.0	20	0	84.8	74-129	0			
Toluene	14.77	1.0	20	0	73.8	75-128	0			S
Ethylbenzene	12.88	1.0	20	0	64.4	73-127	0			S
Xylenes, Total	39.66	3.0	60	5.564	56.8	74-127	0			S
Surr: 4-Bromofluorobenzene	*31.23*	1.0	*30*	0	*104*	*75-131*	0			
Surr: Trifluorotoluene	*29.6*	1.0	*30*	0	*98.7*	*73-130*	0			

MSD Sample ID: **1109616-02AMSD** Units: **µg/Kg** Analysis Date: **9/27/2011 05:05 PM**

Client ID: Run ID: **BTEX3_110927A** SeqNo: **2538878** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	13.93	1.0	20	0	69.7	74-129	16.96	19.6	30	S
Toluene	11.2	1.0	20	0	56	75-128	14.77	27.5	30	S
Ethylbenzene	8.651	1.0	20	0	43.3	73-127	12.88	39.3	30	SR
Xylenes, Total	27.43	3.0	60	5.564	36.4	74-127	39.66	36.5	30	SR
Surr: 4-Bromofluorobenzene	*28.23*	1.0	*30*	0	*94.1*	*75-131*	31.23	*10.1*	*30*	
Surr: Trifluorotoluene	*25.41*	1.0	*30*	0	*84.7*	*73-130*	29.6	*15.2*	*30*	

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R116751** Instrument ID **BTEX3** Method: **SW8021B**

The following samples were analyzed in this batch: 1109583-01A 1109583-02A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55587** Instrument ID **HG02** Method: **SW7471A**

MBLK Sample ID: **GBLKS1-092211-55587** Units: **µg/Kg** Analysis Date: **9/22/2011 02:12 PM**
Client ID: Run ID: **HG02_110922A** SeqNo: **2534290** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	3.3								

LCS Sample ID: **GLCSS1-092211-55587** Units: **µg/Kg** Analysis Date: **9/22/2011 02:14 PM**
Client ID: Run ID: **HG02_110922A** SeqNo: **2534292** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	330.7	3.3	333.3	0	99.2	85-115	0			

MS Sample ID: **1109625-09CMS** Units: **µg/Kg** Analysis Date: **9/22/2011 02:23 PM**
Client ID: Run ID: **HG02_110922A** SeqNo: **2534299** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	302.6	3.5	347.8	0.1396	87	85-115	0			

MSD Sample ID: **1109625-09CMSD** Units: **µg/Kg** Analysis Date: **9/22/2011 02:25 PM**
Client ID: Run ID: **HG02_110922A** SeqNo: **2534302** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	308	3.5	354	0.1396	87	85-115	302.6	1.75	20	

DUP Sample ID: **1109625-09CDUP** Units: **µg/Kg** Analysis Date: **9/22/2011 02:20 PM**
Client ID: Run ID: **HG02_110922A** SeqNo: **2534297** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.3478	3.5	0	0	0		0.1396	0	20	J

The following samples were analyzed in this batch: 1109583-01A 1109583-02A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55593** Instrument ID **ICPMS03** Method: **SW6020**

MBLK Sample ID: **MBLKS1-092211-55593** Units: **mg/Kg** Analysis Date: **9/23/2011 03:00 AM**

Client ID: Run ID: **ICPMS03_110922A** SeqNo: **2535108** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.064	2.0								J
Antimony	ND	0.50								
Arsenic	ND	0.50								
Barium	ND	0.50								
Beryllium	ND	0.50								
Cadmium	ND	0.50								
Calcium	ND	50								
Chromium	ND	0.50								
Cobalt	ND	0.50								
Copper	0.1047	0.50								J
Iron	ND	50								
Lead	ND	0.50								
Magnesium	ND	50								
Manganese	0.1816	0.50								J
Nickel	ND	0.50								
Potassium	ND	50								
Selenium	0.199	0.50								J
Silver	ND	0.50								
Sodium	ND	50								
Strontium	ND	0.50								
Thallium	ND	0.50								
Vanadium	ND	0.50								
Zinc	ND	0.50								

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55593** Instrument ID **ICPMS03** Method: **SW6020**

LCS Sample ID: **MLCSS1-092211-55593** Units: **mg/Kg** Analysis Date: **9/23/2011 03:06 AM**

Client ID: Run ID: **ICPMS03_110922A** SeqNo: **2535111** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	10.42	2.0	10	0	104	80-120	0			
Antimony	10.64	0.50	10	0	106	80-120	0			
Arsenic	9.518	0.50	10	0	95.2	80-120	0			
Barium	10.67	0.50	10	0	107	80-120	0			
Beryllium	9.51	0.50	10	0	95.1	80-120	0			
Cadmium	10.15	0.50	10	0	102	80-120	0			
Calcium	908	50	1000	0	90.8	80-120	0			
Chromium	9.939	0.50	10	0	99.4	80-120	0			
Cobalt	10.18	0.50	10	0	102	80-120	0			
Copper	10.1	0.50	10	0	101	80-120	0			
Iron	954.6	50	1000	0	95.5	80-120	0			
Lead	10.87	0.50	10	0	109	80-120	0			
Magnesium	1011	50	1000	0	101	80-120	0			
Manganese	10.96	0.50	10	0	110	80-120	0			
Nickel	9.959	0.50	10	0	99.6	80-120	0			
Potassium	996.7	50	1000	0	99.7	80-120	0			
Selenium	9.498	0.50	10	0	95	80-120	0			
Silver	10.28	0.50	10	0	103	80-120	0			
Sodium	1022	50	1000	0	102	80-120	0			
Strontium	11.03	0.50	10	0	110	80-120	0			
Thallium	10.28	0.50	10	0	103	80-120	0			
Vanadium	10	0.50	10	0	100	80-120	0			
Zinc	9.675	0.50	10	0	96.8	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55593** Instrument ID **ICPMS03** Method: **SW6020**

MS Sample ID: **1109560-06CMS** Units: **mg/Kg** Analysis Date: **9/23/2011 03:29 AM**
Client ID: Run ID: **ICPMS03_110922A** SeqNo: **2535117** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	668.9	1.8	9.125	556	1240	75-125	0			SEO
Antimony	10.14	0.46	9.125	0.6623	104	75-125	0			
Arsenic	14.43	0.46	9.125	6.439	87.5	75-125	0			
Barium	154.8	0.46	9.125	158.6	-42.5	75-125	0			SO
Beryllium	8.665	0.46	9.125	0.09744	93.9	75-125	0			
Cadmium	9.07	0.46	9.125	0.1839	97.4	75-125	0			
Calcium	4405	46	912.5	4341	6.93	75-125	0			SO
Chromium	22.61	0.46	9.125	14.96	83.9	75-125	0			
Cobalt	11.21	0.46	9.125	2.157	99.2	75-125	0			
Copper	79.04	0.46	9.125	69.47	105	75-125	0			O
Iron	10140	46	912.5	10060	8.34	75-125	0			SO
Lead	91.06	0.46	9.125	90.96	1.11	75-125	0			SO
Magnesium	1298	46	912.5	418	96.5	75-125	0			
Manganese	125	0.46	9.125	109.1	174	75-125	0			SO
Nickel	13.66	0.46	9.125	4.584	99.5	75-125	0			
Potassium	1086	46	912.5	153.3	102	75-125	0			
Selenium	8.557	0.46	9.125	0.365	89.8	75-125	0			
Silver	9.244	0.46	9.125	0.0232	101	75-125	0			
Sodium	988.2	46	912.5	66.69	101	75-125	0			
Strontium	23.39	0.46	9.125	14.79	94.2	75-125	0			
Thallium	8.983	0.46	9.125	0.07629	97.6	75-125	0			
Vanadium	13.75	0.46	9.125	5.864	86.4	75-125	0			
Zinc	1445	0.46	9.125	1357	974	75-125	0			SEO

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55593** Instrument ID **ICPMS03** Method: **SW6020**

MSD Sample ID: **1109560-06CMSD** Units: **mg/Kg** Analysis Date: **9/23/2011 03:35 AM**

Client ID: Run ID: **ICPMS03_110922A** SeqNo: **2535118** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	558.2	1.8	9.062	556	25	75-125	668.9	18	25	SEO
Antimony	10.02	0.45	9.062	0.6623	103	75-125	10.14	1.14	25	
Arsenic	14.8	0.45	9.062	6.439	92.2	75-125	14.43	2.54	25	
Barium	157.4	0.45	9.062	158.6	-13.5	75-125	154.8	1.7	25	SO
Beryllium	8.457	0.45	9.062	0.09744	92.2	75-125	8.665	2.43	25	
Cadmium	8.563	0.45	9.062	0.1839	92.5	75-125	9.07	5.76	25	
Calcium	4441	45	906.2	4341	11	75-125	4405	0.83	25	SO
Chromium	20.12	0.45	9.062	14.96	56.9	75-125	22.61	11.7	25	S
Cobalt	11.04	0.45	9.062	2.157	98	75-125	11.21	1.51	25	
Copper	81.27	0.45	9.062	69.47	130	75-125	79.04	2.78	25	SO
Iron	9832	45	906.2	10060	-25.3	75-125	10140	3.06	25	SO
Lead	116.1	0.45	9.062	90.96	277	75-125	91.06	24.2	25	SO
Magnesium	1251	45	906.2	418	92	75-125	1298	3.69	25	
Manganese	101.4	0.45	9.062	109.1	-85.1	75-125	125	20.9	25	SO
Nickel	12.71	0.45	9.062	4.584	89.7	75-125	13.66	7.17	25	
Potassium	1024	45	906.2	153.3	96.1	75-125	1086	5.86	25	
Selenium	8.125	0.45	9.062	0.365	85.6	75-125	8.557	5.18	25	
Silver	8.99	0.45	9.062	0.0232	98.9	75-125	9.244	2.79	25	
Sodium	947.9	45	906.2	66.69	97.2	75-125	988.2	4.17	25	
Strontium	24.81	0.45	9.062	14.79	111	75-125	23.39	5.91	25	
Thallium	8.675	0.45	9.062	0.07629	94.9	75-125	8.983	3.49	25	
Vanadium	14.54	0.45	9.062	5.864	95.8	75-125	13.75	5.61	25	
Zinc	1278	0.45	9.062	1357	-869	75-125	1445	12.3	25	SEO

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55593** Instrument ID **ICPMS03** Method: **SW6020**

DUP Sample ID: **1109560-06CDUP** Units: **mg/Kg** Analysis Date: **9/23/2011 03:18 AM**
Client ID: Run ID: **ICPMS03_110922A** SeqNo: **2535115** Prep Date: **9/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.8428	0.46	0	0	0	0-0	0.6623	24	25	
Arsenic	7.769	0.46	0	0	0	0-0	6.439	18.7	25	
Barium	161.2	0.46	0	0	0	0-0	158.6	1.62	25	
Beryllium	0.09933	0.46	0	0	0	0-0	0.09744	0	25	J
Cadmium	0.1724	0.46	0	0	0	0-0	0.1839	0	25	J
Calcium	4842	46	0	0	0	0-0	4341	10.9	25	
Chromium	10.73	0.46	0	0	0	0-0	14.96	32.9	25	R
Cobalt	2.183	0.46	0	0	0	0-0	2.157	1.21	25	
Copper	80.4	0.46	0	0	0	0-0	69.47	14.6	25	
Iron	9970	46	0	0	0	0-0	10060	0.919	25	
Lead	99.42	0.46	0	0	0	0-0	90.96	8.89	25	
Magnesium	388.9	46	0	0	0	0-0	418	7.22	25	
Manganese	98.78	0.46	0	0	0	0-0	109.1	9.95	25	
Nickel	4.086	0.46	0	0	0	0-0	4.584	11.5	25	
Potassium	179.3	46	0	0	0	0-0	153.3	15.7	25	
Selenium	0.3339	0.46	0	0	0	0-0	0.365	0	25	J
Silver	ND	0.46	0	0	0	0-0	0.0232	0	25	
Sodium	69.07	46	0	0	0	0-0	66.69	3.51	25	
Strontium	16.33	0.46	0	0	0	0-0	14.79	9.93	25	
Thallium	ND	0.46	0	0	0	0-0	0.07629	0	25	
Vanadium	5.228	0.46	0	0	0	0-0	5.864	11.5	25	

DUP Sample ID: **1109560-06CDUP** Units: **mg/Kg** Analysis Date: **9/23/2011 06:22 PM**
Client ID: Run ID: **ICPMS03_110923A** SeqNo: **2536570** Prep Date: **9/22/2011** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	593.4	180	0	0	0	0-0	571.7	3.73	25	
Zinc	1390	46	0	0	0	0-0	1499	7.6	25	

The following samples were analyzed in this batch: 1109583-01A 1109583-02A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55618** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-092311-55618** Units: **mg/L** Analysis Date: **9/23/2011 02:41 PM**
Client ID: Run ID: **MERCURY_110923A** SeqNo: **2535707** Prep Date: **9/23/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-092211-55618** Units: **mg/L** Analysis Date: **9/23/2011 03:07 PM**
Client ID: Run ID: **MERCURY_110923A** SeqNo: **2535715** Prep Date: **9/23/2011** DF: **1**

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

LCS Sample ID: **GLCSW1-092311-55618** Units: **mg/L** Analysis Date: **9/23/2011 02:47 PM**
Client ID: Run ID: **MERCURY_110923A** SeqNo: **2535708** Prep Date: **9/23/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00473	0.00020	0.005	0	94.6	80-120	0			

MS Sample ID: **1109676-02CMS** Units: **mg/L** Analysis Date: **9/23/2011 02:57 PM**
Client ID: Run ID: **MERCURY_110923A** SeqNo: **2535711** Prep Date: **9/23/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0046	0.00020	0.005	0.000015	91.7	75-125	0			

MSD Sample ID: **1109676-02CMSD** Units: **mg/L** Analysis Date: **9/23/2011 02:59 PM**
Client ID: Run ID: **MERCURY_110923A** SeqNo: **2535712** Prep Date: **9/23/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00474	0.00020	0.005	0.000015	94.5	75-125	0.0046	3	20	

DUP Sample ID: **1109676-02CDUP** Units: **mg/L** Analysis Date: **9/23/2011 02:52 PM**
Client ID: Run ID: **MERCURY_110923A** SeqNo: **2535710** Prep Date: **9/23/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	0.000015	0	20	

The following samples were analyzed in this batch: 1109583-03A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55623** Instrument ID **ICPMS05** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-092211-55623** Units: **mg/L** Analysis Date: **9/23/2011 04:25 PM**
Client ID: Run ID: **ICPMS05_110923A** SeqNo: **2535957** Prep Date: **9/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKT2-092211-55623** Units: **mg/L** Analysis Date: **9/23/2011 04:28 PM**
Client ID: Run ID: **ICPMS05_110923A** SeqNo: **2535958** Prep Date: **9/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW3-092311-55623** Units: **mg/L** Analysis Date: **9/23/2011 04:30 PM**
Client ID: Run ID: **ICPMS05_110923A** SeqNo: **2535959** Prep Date: **9/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55623** Instrument ID **ICPMS05** Method: **SW1311/6020**

LCS Sample ID: **MLCSW3-092311-55623** Units: **mg/L** Analysis Date: **9/23/2011 04:33 PM**
Client ID: Run ID: **ICPMS05_110923A** SeqNo: **2535960** Prep Date: **9/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4911	0.050	0.5	0	98.2	80-120	0			
Barium	0.4728	0.050	0.5	0	94.6	80-120	0			
Cadmium	0.4862	0.020	0.5	0	97.2	80-120	0			
Chromium	0.4854	0.050	0.5	0	97.1	80-120	0			
Lead	0.486	0.050	0.5	0	97.2	80-120	0			
Selenium	0.4908	0.050	0.5	0	98.2	80-120	0			
Silver	0.4568	0.050	0.5	0	91.4	80-120	0			

MS Sample ID: **1109676-02CMS** Units: **mg/L** Analysis Date: **9/23/2011 05:00 PM**
Client ID: Run ID: **ICPMS05_110923A** SeqNo: **2535971** Prep Date: **9/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5503	0.050	0.5	0.00652	109	75-125	0			
Barium	0.6771	0.050	0.5	0.1659	102	75-125	0			
Cadmium	0.5199	0.020	0.5	0.005715	103	75-125	0			
Chromium	0.5273	0.050	0.5	0.001199	105	75-125	0			
Lead	0.5084	0.050	0.5	0.003487	101	75-125	0			
Selenium	0.5309	0.050	0.5	0.005939	105	75-125	0			
Silver	0.4892	0.050	0.5	0.00072	97.7	75-125	0			

MSD Sample ID: **1109676-02CMSD** Units: **mg/L** Analysis Date: **9/23/2011 05:02 PM**
Client ID: Run ID: **ICPMS05_110923A** SeqNo: **2535972** Prep Date: **9/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5598	0.050	0.5	0.00652	111	75-125	0.5503	1.72	25	
Barium	0.712	0.050	0.5	0.1659	109	75-125	0.6771	5.01	25	
Cadmium	0.54	0.020	0.5	0.005715	107	75-125	0.5199	3.81	25	
Chromium	0.5411	0.050	0.5	0.001199	108	75-125	0.5273	2.58	25	
Lead	0.5202	0.050	0.5	0.003487	103	75-125	0.5084	2.29	25	
Selenium	0.5387	0.050	0.5	0.005939	107	75-125	0.5309	1.45	25	
Silver	0.4918	0.050	0.5	0.00072	98.2	75-125	0.4892	0.535	25	

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55623** Instrument ID **ICPMS05** Method: **SW1311/6020**

DUP Sample ID: **1109676-02CDUP** Units: **mg/L** Analysis Date: **9/23/2011 04:57 PM**

Client ID: Run ID: **ICPMS05_110923A** SeqNo: **2535970** Prep Date: **9/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.00652	0	25	
Barium	0.1746	0.050	0	0	0	0-0	0.1659	5.13	25	
Cadmium	ND	0.020	0	0	0	0-0	0.005715	0	25	
Chromium	ND	0.050	0	0	0	0-0	0.001199	0	25	
Lead	ND	0.050	0	0	0	0-0	0.003487	0	25	
Selenium	ND	0.050	0	0	0	0-0	0.005939	0	25	
Silver	ND	0.050	0	0	0	0-0	0.00072	0	25	

The following samples were analyzed in this batch: 1109583-03A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55659** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110925-55659** Units: **µg/L** Analysis Date: **9/26/2011 12:52 PM**
Client ID: Run ID: **SV-3_110926A** SeqNo: **2537328** Prep Date: **9/25/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*82.16*	5.0	*100*	0	*82.2*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*71.41*	5.0	*100*	0	*71.4*	*48-120*	0			
Surr: 2-Fluorophenol	*58.29*	5.0	*100*	0	*58.3*	*20-120*	0			
Surr: 4-Terphenyl-d14	*67.8*	5.0	*100*	0	*67.8*	*51-135*	0			
Surr: Nitrobenzene-d5	*79.14*	5.0	*100*	0	*79.1*	*41-120*	0			
Surr: Phenol-d6	*66.67*	5.0	*100*	0	*66.7*	*20-120*	0			

LCS Sample ID: **SLCST1-110925-55659** Units: **µg/L** Analysis Date: **9/26/2011 01:16 PM**
Client ID: Run ID: **SV-3_110926A** SeqNo: **2537329** Prep Date: **9/25/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	57.19	5.0	100	0	57.2	52-115	0			
2,4,6-Trichlorophenol	57.3	5.0	100	0	57.3	53-115	0			
2,4-Dinitrotoluene	39.56	5.0	50	0	79.1	56-115	0			
Cresols, Total	216.2	15	250	0	86.5	35-115	0			
Hexachlorobenzene	45.84	5.0	50	0	91.7	54-115	0			
Hexachlorobutadiene	35.89	5.0	50	0	71.8	51-115	0			
Hexachloroethane	37.73	5.0	50	0	75.5	54-115	0			
Nitrobenzene	40.59	5.0	50	0	81.2	40-124	0			
Pentachlorophenol	64.07	5.0	100	0	64.1	45-125	0			
Pyridine	21.92	5.0	50	0	43.8	34-115	0			
Surr: 2,4,6-Tribromophenol	*62.18*	5.0	*100*	0	*62.2*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*61.67*	5.0	*100*	0	*61.7*	*48-120*	0			
Surr: 2-Fluorophenol	*71.01*	5.0	*100*	0	*71*	*20-120*	0			
Surr: 4-Terphenyl-d14	*65.22*	5.0	*100*	0	*65.2*	*51-135*	0			
Surr: Nitrobenzene-d5	*71.73*	5.0	*100*	0	*71.7*	*41-120*	0			
Surr: Phenol-d6	*73.89*	5.0	*100*	0	*73.9*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55659** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110925-55659** Units: **µg/L** Analysis Date: **9/26/2011 01:40 PM**
Client ID: Run ID: **SV-3_110926A** SeqNo: **2537330** Prep Date: **9/25/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	62.35	5.0	100	0	62.4	52-115	57.19	8.64	25	
2,4,6-Trichlorophenol	57.39	5.0	100	0	57.4	53-115	57.3	0.157	25	
2,4-Dinitrotoluene	42.37	5.0	50	0	84.7	56-115	39.56	6.86	25	
Cresols, Total	217	15	250	0	86.8	35-115	216.2	0.364	25	
Hexachlorobenzene	46.21	5.0	50	0	92.4	54-115	45.84	0.8	25	
Hexachlorobutadiene	37.86	5.0	50	0	75.7	51-115	35.89	5.32	25	
Hexachloroethane	39.65	5.0	50	0	79.3	54-115	37.73	4.94	25	
Nitrobenzene	42.2	5.0	50	0	84.4	40-124	40.59	3.88	25	
Pentachlorophenol	66.71	5.0	100	0	66.7	45-125	64.07	4.03	25	
Pyridine	23.2	5.0	50	0	46.4	34-115	21.92	5.69	25	
Surr: 2,4,6-Tribromophenol	*66.25*	5.0	*100*	0	*66.2*	*42-124*	62.18	*6.33*	*25*	
Surr: 2-Fluorobiphenyl	*64.83*	5.0	*100*	0	*64.8*	*48-120*	61.67	*5*	*25*	
Surr: 2-Fluorophenol	*73.74*	5.0	*100*	0	*73.7*	*20-120*	71.01	*3.77*	*25*	
Surr: 4-Terphenyl-d14	*68.76*	5.0	*100*	0	*68.8*	*51-135*	65.22	*5.29*	*25*	
Surr: Nitrobenzene-d5	*74.39*	5.0	*100*	0	*74.4*	*41-120*	71.73	*3.63*	*25*	
Surr: Phenol-d6	*75.07*	5.0	*100*	0	*75.1*	*20-120*	73.89	*1.58*	*25*	

The following samples were analyzed in this batch: 1109583-03A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R116718** Instrument ID **VOA6** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-092611-R116718** Units: **µg/L** Analysis Date: **9/26/2011 12:24 PM**

Client ID: Run ID: **VOA6_110926B** SeqNo: **2538056** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*51.04*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.91*	5.0	*50*	0	*99.8*	*72.4-125*	0			
Surr: Dibromofluoromethane	*51.35*	5.0	*50*	0	*103*	*71.2-125*	0			
Surr: Toluene-d8	*50.25*	5.0	*50*	0	*101*	*75-125*	0			

MBLK Sample ID: **MBLKV1-092311-R116718** Units: **µg/L** Analysis Date: **9/26/2011 01:17 PM**

Client ID: Run ID: **VOA6_110926B** SeqNo: **2538060** Prep Date: **9/24/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*1035*	100	*1000*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*992.8*	100	*1000*	0	*99.3*	*72.4-125*	0			
Surr: Dibromofluoromethane	*1032*	100	*1000*	0	*103*	*71.2-125*	0			
Surr: Toluene-d8	*1015*	100	*1000*	0	*102*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R116718** Instrument ID **VOA6** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-092611-R116718** Units: **µg/L** Analysis Date: **9/26/2011 11:31 AM**
Client ID: Run ID: **VOA6_110926B** SeqNo: **2538055** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	47.01	5.0	50	0	94	73-124	0			
1,2-Dichloroethane	45.77	5.0	50	0	91.5	76-120	0			
1,4-Dichlorobenzene	46.07	5.0	50	0	92.1	70-130	0			
2-Butanone	96.88	10	100	0	96.9	70-130	0			
Benzene	46.45	5.0	50	0	92.9	70-128	0			
Carbon tetrachloride	43.72	5.0	50	0	87.4	70-130	0			
Chlorobenzene	45.15	5.0	50	0	90.3	72-127	0			
Chloroform	47.51	5.0	50	0	95	70-130	0			
Tetrachloroethene	43.24	5.0	50	0	86.5	70-130	0			
Trichloroethene	46.47	5.0	50	0	92.9	72-129	0			
Vinyl chloride	50.91	2.0	50	0	102	70-130	0			
Surr: 1,2-Dichloroethane-d4	*50.77*	5.0	*50*	0	*102*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.36*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*51.36*	5.0	*50*	0	*103*	*71-125*	0			
Surr: Toluene-d8	*50.49*	5.0	*50*	0	*101*	*75-125*	0			

MS Sample ID: **1109669-19ZMS** Units: **µg/L** Analysis Date: **9/26/2011 03:03 PM**
Client ID: Run ID: **VOA6_110926B** SeqNo: **2538067** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	45.85	5.0	50	0	91.7	73-124	0			
1,2-Dichloroethane	45.04	5.0	50	0	90.1	76-120	0			
1,4-Dichlorobenzene	43.75	5.0	50	0	87.5	70-130	0			
2-Butanone	89.41	10	100	0	89.4	70-130	0			
Benzene	45.59	5.0	50	0	91.2	70-128	0			
Carbon tetrachloride	41.67	5.0	50	0	83.3	70-130	0			
Chlorobenzene	44.04	5.0	50	0	88.1	72-127	0			
Chloroform	47.81	5.0	50	0	95.6	70-130	0			
Tetrachloroethene	41.18	5.0	50	0	82.4	70-130	0			
Trichloroethene	44.1	5.0	50	0	88.2	72-129	0			
Vinyl chloride	41.68	2.0	50	0	83.4	70-130	0			
Surr: 1,2-Dichloroethane-d4	*50.69*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.13*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*53.68*	5.0	*50*	0	*107*	*71-125*	0			
Surr: Toluene-d8	*50.33*	5.0	*50*	0	*101*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R116718** Instrument ID **VOA6** Method: **SW1311/8260B**

MSD Sample ID: **1109669-19ZMSD** Units: **µg/L** Analysis Date: **9/26/2011 03:30 PM**

Client ID: Run ID: **VOA6_110926B** SeqNo: **2538069** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	43.15	5.0	50	0	86.3	73-124	45.85	6.07	20	
1,2-Dichloroethane	44.12	5.0	50	0	88.2	76-120	45.04	2.08	20	
1,4-Dichlorobenzene	42.37	5.0	50	0	84.7	70-130	43.75	3.22	20	
2-Butanone	88.77	10	100	0	88.8	70-130	89.41	0.709	20	
Benzene	43.62	5.0	50	0	87.2	70-128	45.59	4.41	20	
Carbon tetrachloride	39.11	5.0	50	0	78.2	70-130	41.67	6.33	20	
Chlorobenzene	42.6	5.0	50	0	85.2	72-127	44.04	3.32	20	
Chloroform	45.02	5.0	50	0	90	70-130	47.81	6.02	20	
Tetrachloroethene	38.93	5.0	50	0	77.9	70-130	41.18	5.62	20	
Trichloroethene	42.9	5.0	50	0	85.8	72-129	44.1	2.76	20	
Vinyl chloride	38.68	2.0	50	0	77.4	70-130	41.68	7.48	20	
Surr: 1,2-Dichloroethane-d4	*50.66*	5.0	*50*	0	*101*	*70-125*	50.69	*0.0734*	*20*	
Surr: 4-Bromofluorobenzene	*51.17*	5.0	*50*	0	*102*	*72-125*	50.13	*2.05*	*20*	
Surr: Dibromofluoromethane	*52.07*	5.0	*50*	0	*104*	*71-125*	53.68	*3.06*	*20*	
Surr: Toluene-d8	*50.96*	5.0	*50*	0	*102*	*75-125*	50.33	*1.24*	*20*	

The following samples were analyzed in this batch: 1109583-03A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **55693** Instrument ID **ICS3K2** Method: **E300**

MBLK Sample ID: **WBLKS1-092611-55693** Units: **mg/Kg** Analysis Date: **9/27/2011 11:09 AM**
Client ID: Run ID: **ICS3K2_110927A** SeqNo: **2538697** Prep Date: **9/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	5.0								
Sulfate	ND	5.0								
Surr: Selenate (surr)	*45.26*	1.0	*49.99*	0	*90.5*	*85-115*	0			

LCS Sample ID: **WLCSS1-092611-55693** Units: **mg/Kg** Analysis Date: **9/27/2011 11:30 AM**
Client ID: Run ID: **ICS3K2_110927A** SeqNo: **2538698** Prep Date: **9/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	192.5	5.0	199.9	0	96.3	90-110	0			
Sulfate	180.6	5.0	199.9	0	90.3	90-110	0			
Surr: Selenate (surr)	*44.74*	1.0	*49.98*	0	*89.5*	*85-115*	0			

MS Sample ID: **1109583-02AMS** Units: **mg/Kg** Analysis Date: **9/27/2011 12:46 PM**
Client ID: **Chukka-Bottom Hole 32°45'50.53N-104°14'17.58"W** Run ID: **ICS3K2_110927A** SeqNo: **2538711** Prep Date: **9/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	618.6	4.8	97.01	463.7	160	75-125	0			SO
Sulfate	13350	4.8	97.01	14310	-983	75-125	0			SEO
Surr: Selenate (surr)	*47.82*	0.97	*48.51*	0	*98.6*	*80-120*	0			

MSD Sample ID: **1109583-02AMSD** Units: **mg/Kg** Analysis Date: **9/27/2011 01:08 PM**
Client ID: **Chukka-Bottom Hole 32°45'50.53N-104°14'17.58"W** Run ID: **ICS3K2_110927A** SeqNo: **2538712** Prep Date: **9/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	619.3	4.8	97.05	463.7	160	75-125	618.6	0.112	20	SO
Sulfate	13380	4.8	97.05	14310	-959	75-125	13350	0.173	20	SEO
Surr: Selenate (surr)	*48*	0.97	*48.52*	0	*98.9*	*80-120*	47.82	*0.383*	*20*	

The following samples were analyzed in this batch: 1109583-01A 1109583-02A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R116550** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSW1-092211-R116550** Units: **pH Units** Analysis Date: **9/22/2011 04:00 PM**

Client ID: Run ID: **WETCHEM_110922B** SeqNo: **2534493** Prep Date: DF: **1**

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

DUP Sample ID: **1109454-05ADUP** Units: **pH Units** Analysis Date: **9/22/2011 04:00 PM**

Client ID: Run ID: **WETCHEM_110922B** SeqNo: **2534510** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.84	0.10	0	0	0	0-0	7.8	0.512	20	

The following samples were analyzed in this batch: 1109583-03A

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

Client: Navajo Refining Company
Work Order: 1109583
Project: Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R116614** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1109583-03ADUP** Units: **Burn Rate, mm/se** Analysis Date: **9/23/2011 05:00 PM**

Client ID: **Chukka-Excavation Spill Cleanup** Run ID: **WETCHEM_110923H** SeqNo: **2535990** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1109583-03A

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

Client: Navajo Refining Company
Project: Wastewater Effluent Spill
WorkOrder: 1109583

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

4572

ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

1109583

NAVAJO REFINING: Navajo Refining Company

Project: Wastewater Effluent Spill

ALS Project Manager: Chris Bryson

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Wastewater Effluent Spill	A	BTEX
Work Order		Project Number		B	Metals (Total)
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	Anions (Chlorides & Sulfate)
Send Report To	Aaron Strange	Invoice Attn.	Aaron Strange	D	TCLP Volatiles
Address	P. O. Box 159	Address	501 East Main	E	TCLP Semi-Volatiles
				F	TCLP Metals
City/State/Zip	Artesia, New Mexico 88211-0159	City/State/Zip	Artesia, New Mexico 88210	G	R. C. I.
Phone	(575) 748-3311	Phone	(575) 748-3311	H	
Fax	(575) 746-5451	Fax	(575) 746-5451	I	
e-Mail Address	A.Strange@hollyfrontier.com	e-Mail Address	A.Strange@hollyfrontier.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Chukka - Background 32°45'50.68"N - 104°14'16.67"W	9/19/11	10:13	Solid	None	1	X	X	X								
2	Chukka - Bottom Hole 32°45'50.53N - 104°14'17.58"W	9/19/11	10:16	Solid	None	1	X	X	X								
3	Chukka - Excavation Spill Cleanup	9/19/11	10:20	Solid	None	1				X	X	X	X				
4	Trip Blank					2											
5	Temperature Blank					1											
6																	
7																	
10																	

Sampler(s): Please Print & Sign: Aaron Strange

Shipment Method: Federal Express

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
	9-19-2011	1615		
Relinquished by:	Date:	Time:	Received by (Laboratory): 9.20.11 0908	Cooler Temp.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

- ☐ Level II: Standard QC
- ☐ Level III: Std QC + Raw Data
- ☐ Level IV: SW846 CLP-Like
- ☐ TRRP-Checklist
- ☐ TRRP Level IV
- ☐ Other: _____

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

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **20-Sep-11 09:08**

Work Order: **1109583** Received by: **PMG**

Checklist completed by Raymond N Gamboa 21-Sep-11 Reviewed by: Chris Bryson 22-Sep-11
eSignature Date eSignature Date

Matrices: Solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.6c	002	
Cooler(s)/Kit(s):	4573		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login.Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

W.O.# 1109583

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

4573

CUSTODY SEAL

Date: 9-19-11 Time: 1620
Name: Glen Rhodes for A. Strong
Company: NUCO2 REFINING CO

Seal Broken By:
Date: 9.20.11

ORIGIN ID: ROWA
NAVAJO ARTESIA
501 E MAIN
ARTESIA , NM 882109440
UNITED STATES US

SHIP DATE: 19SEP11
ACTWGT: 30.0 LB MAN
CAD: 634483/CAFE2472
BILL RECIPIENT

TO CHRIS BRYSON
ALS LABORATOR[illegible]
10450 STANCL[illegible] ITE 210
HOUSTON TX
(281) 530-5656
INV:
PO:

8200 09.20
RT 254 1 A
BO3
FZ

FedEx Express

J1010180908124

TUE - 20 SEP A2
PRIORITY OVERNIGHT

TRK# 0201 4967 8855 8200

77099
TX-US
IAH

AB SGRA

Part # 156140-434 RITZ 05/10

505C2/4299/DA47

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Tuesday, October 11, 2011 4:04 PM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Les Elliott; Moore, Darrell; Strange, Aaron
Subject: Request for waste disposal--excavated soil near WWTP
Attachments: profile form and C-138--exc soil near WWTP.pdf; 1106470 Disposal Final.pdf; 1104676 Disposal Final.pdf

Kim,
Please see the attached profile form and C-138. Also attached are the analytical results for the soil samples. Please let us know via email if this waste is approved for disposal.
Thanks,
Robert

Robert Combs
Environmental Specialist
The HollyFrontier Companies
P.O. Box 159
Artesia, NM 88211-0159
office: 575-746-5382
cell: 575-308-2718
fax: 575-746-5451
Robert.Combs@hollyfrontier.com

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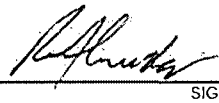
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS NON-EXEMPT WASTE MATERIAL

COMPANY/GENERATOR:	Navajo Refining Co.
ADDRESS:	501 E. Main St.
GENERATING SITE:	Artesia Facility
COUNTY	Eddy
STATE	NM
TYPE OF WASTE:	Excavated/contaminated soil
ESTIMATED VOLUME:	400 yds, total
GENERATING PROCESS:	Construction activities at Waste Water Treatment Plant
REMARKS:	see attached ALS reports, work order# 1104676, 1106470
NMOCD FACILITY:	CRI
TRUCKING COMPANY:	S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT:  SIGNATURE

NAME: Robert Combs PRINTED

ADDRESS: 501 E. Main St., Artesia, NM 88210

DATE: 10/11/2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Facility

3. ***Location of Material (Street Address, City, State or ULSTR):***
501 E. Main St., Artesia, NM

4. **Source and Description of Waste:**
Excavated soil from tank construction site near WWTP and soil from effluent pipeline tie-point location.
Please see the attached analytical data from ALS:
Work order: 1106470 Sample ID: 1106470-1 Est. waste vol: 250 yds
Work order: 1104676 Sample ID: 1104676-1 Est. waste vol: 150 yds

Estimated Volume 400 yds yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Robert Combs, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

27-Jun-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Disposal

Work Order: **1106470**

Dear Aaron,

ALS Environmental received 2 samples on 15-Jun-2011 09:00 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 27.

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

Sincerely,

Chris Bryson

Electronically approved by: Glenda H. Ramos

Chris Bryson
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 27-Jun-11

Client: Navajo Refining Company
Project: Disposal
Work Order: **1106470**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1106470-01	North WWTank Exc Soil	Soil		6/14/2011 09:22	6/15/2011 09:00	☐
1106470-02	North Plant Carbon	Soil		6/14/2011 15:46	6/15/2011 09:00	☐

Client: Navajo Refining Company
Project: Disposal
Work Order: 1106470

Case Narrative

Batch R111559, Ignitability, Sample 1106221-03 : Duplicate results, which are flagged with an H qualifier, are for an unrelated sample.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *27-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North WWTank Exc Soil
Collection Date: 6/14/2011 09:22 AM

Work Order: 1106470
Lab ID: 1106470-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/21/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/21/2011 03:28 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/17/2011**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
Barium	**0.274**		**0.0500**	**mg/L**	10	6/17/2011 09:27 PM
Cadmium	ND		0.0200	mg/L	10	6/17/2011 09:27 PM
Chromium	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
Lead	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
Selenium	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
Silver	ND		0.0500	mg/L	10	6/17/2011 09:27 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/18/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Cresols, Total	ND		0.015	mg/L	1	6/21/2011 08:03 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Hexachloroethane	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Nitrobenzene	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Pentachlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Pyridine	ND		0.0050	mg/L	1	6/21/2011 08:03 PM
Surr: 2,4,6-Tribromophenol	*62.0*		*42-124*	*%REC*	1	6/21/2011 08:03 PM
Surr: 2-Fluorobiphenyl	*56.7*		*48-120*	*%REC*	1	6/21/2011 08:03 PM
Surr: 2-Fluorophenol	*48.2*		*20-120*	*%REC*	1	6/21/2011 08:03 PM
Surr: 4-Terphenyl-d14	*54.0*		*51-135*	*%REC*	1	6/21/2011 08:03 PM
Surr: Nitrobenzene-d5	*58.5*		*41-120*	*%REC*	1	6/21/2011 08:03 PM
Surr: Phenol-d6	*48.9*		*20-120*	*%REC*	1	6/21/2011 08:03 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/17/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	6/18/2011 03:42 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
2-Butanone	ND		0.20	mg/L	20	6/18/2011 03:42 AM
Benzene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Carbon tetrachloride	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Chlorobenzene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Chloroform	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Tetrachloroethene	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Trichloroethene	ND		0.10	mg/L	20	6/18/2011 03:42 AM

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

ALS Environmental

Date: *27-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North WWTank Exc Soil
Collection Date: 6/14/2011 09:22 AM

Work Order: 1106470
Lab ID: 1106470-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	6/18/2011 03:42 AM
Surr: 1,2-Dichloroethane-d4	*92.2*		*70-125*	*%REC*	20	6/18/2011 03:42 AM
Surr: 4-Bromofluorobenzene	*99.3*		*72-125*	*%REC*	20	6/18/2011 03:42 AM
Surr: Dibromofluoromethane	*90.2*		*71-125*	*%REC*	20	6/18/2011 03:42 AM
Surr: Toluene-d8	*99.2*		*75-125*	*%REC*	20	6/18/2011 03:42 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	6/17/2011 09:30 AM
PH			**SW9045B**			Analyst: **DM**
pH	**7.88**		**0.100**	**pH Units**	1	6/21/2011 02:40 PM

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

ALS Environmental

Date: *27-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North Plant Carbon
Collection Date: 6/14/2011 03:46 PM

Work Order: 1106470
Lab ID: 1106470-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/21/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/21/2011 03:30 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/17/2011**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	6/17/2011 09:32 PM
Barium	**0.0860**		**0.0500**	**mg/L**	10	6/17/2011 09:32 PM
Cadmium	ND		0.0200	mg/L	10	6/17/2011 09:32 PM
Chromium	ND		0.0500	mg/L	10	6/17/2011 09:32 PM
Lead	ND		0.0500	mg/L	10	6/17/2011 09:32 PM
Selenium	**0.166**		**0.0500**	**mg/L**	10	6/17/2011 09:32 PM
Silver	ND		0.0500	mg/L	10	6/17/2011 09:32 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/18/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Cresols, Total	ND		0.015	mg/L	1	6/21/2011 08:27 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Hexachloroethane	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Nitrobenzene	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Pentachlorophenol	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Pyridine	ND		0.0050	mg/L	1	6/21/2011 08:27 PM
Surr: 2,4,6-Tribromophenol	*64.9*		*42-124*	*%REC*	1	6/21/2011 08:27 PM
Surr: 2-Fluorobiphenyl	*60.8*		*48-120*	*%REC*	1	6/21/2011 08:27 PM
Surr: 2-Fluorophenol	*50.3*		*20-120*	*%REC*	1	6/21/2011 08:27 PM
Surr: 4-Terphenyl-d14	*58.3*		*51-135*	*%REC*	1	6/21/2011 08:27 PM
Surr: Nitrobenzene-d5	*58.3*		*41-120*	*%REC*	1	6/21/2011 08:27 PM
Surr: Phenol-d6	*50.1*		*20-120*	*%REC*	1	6/21/2011 08:27 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/17/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	6/18/2011 02:00 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
2-Butanone	ND		0.20	mg/L	20	6/18/2011 02:00 AM
Benzene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Carbon tetrachloride	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Chlorobenzene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Chloroform	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Tetrachloroethene	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Trichloroethene	ND		0.10	mg/L	20	6/18/2011 02:00 AM

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

ALS Environmental

Date: *27-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North Plant Carbon
Collection Date: 6/14/2011 03:46 PM

Work Order: 1106470
Lab ID: 1106470-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	6/18/2011 02:00 AM
Surr: 1,2-Dichloroethane-d4	*88.7*		*70-125*	*%REC*	20	6/18/2011 02:00 AM
Surr: 4-Bromofluorobenzene	*98.5*		*72-125*	*%REC*	20	6/18/2011 02:00 AM
Surr: Dibromofluoromethane	*87.3*		*71-125*	*%REC*	20	6/18/2011 02:00 AM
Surr: Toluene-d8	*98.1*		*75-125*	*%REC*	20	6/18/2011 02:00 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	6/17/2011 09:30 AM
PH			**SW9045B**			Analyst: **DM**
pH	**6.80**		**0.100**	**pH Units**	1	6/21/2011 02:40 PM

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

ALS Environmental

Date: 27-Jun-11

Client: Navajo Refining Company

Work Order: 1106470

Project: Disposal

QC BATCH REPORT

Batch ID: **53280** Instrument ID **ICPMS03** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-061611-53280** Units: **mg/L** Analysis Date: **6/17/2011 06:34 PM**

Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428532** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW4-061711-53280** Units: **mg/L** Analysis Date: **6/17/2011 06:39 PM**

Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428534** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW4-061711-53280** Units: **mg/L** Analysis Date: **6/20/2011 02:28 PM**

Client ID: Run ID: **ICPMS04_110620A** SeqNo: **2429237** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4811	0.050	0.5	0	96.2	80-120	0			
Barium	0.4817	0.050	0.5	0	96.3	80-120	0			
Cadmium	0.4865	0.020	0.5	0	97.3	80-120	0			
Chromium	0.498	0.050	0.5	0	99.6	80-120	0			
Lead	0.5025	0.050	0.5	0	101	80-120	0			
Selenium	0.4703	0.050	0.5	0	94.1	80-120	0			
Silver	0.4558	0.050	0.5	0	91.2	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **53280** Instrument ID **ICPMS03** Method: **SW1311/6020**

MS Sample ID: **1106501-04BMS** Units: **mg/L** Analysis Date: **6/17/2011 07:08 PM**
Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428549** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4929	0.050	0.5	0.004773	97.6	75-125	0			
Barium	1.607	0.050	0.5	1.145	92.4	75-125	0			
Cadmium	0.5027	0.020	0.5	0.002893	100	75-125	0			
Chromium	0.4957	0.050	0.5	0.002935	98.6	75-125	0			
Lead	0.5209	0.050	0.5	0.03247	97.7	75-125	0			
Selenium	0.4732	0.050	0.5	0.009273	92.8	75-125	0			
Silver	0.4913	0.050	0.5	0.0006439	98.1	75-125	0			

MSD Sample ID: **1106501-04BMSD** Units: **mg/L** Analysis Date: **6/17/2011 07:14 PM**
Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428552** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4982	0.050	0.5	0.004773	98.7	75-125	0.4929	1.07	25	
Barium	1.589	0.050	0.5	1.145	88.8	75-125	1.607	1.13	25	
Cadmium	0.4957	0.020	0.5	0.002893	98.6	75-125	0.5027	1.4	25	
Chromium	0.4985	0.050	0.5	0.002935	99.1	75-125	0.4957	0.563	25	
Lead	0.5215	0.050	0.5	0.03247	97.8	75-125	0.5209	0.115	25	
Selenium	0.4881	0.050	0.5	0.009273	95.8	75-125	0.4732	3.1	25	
Silver	0.4961	0.050	0.5	0.0006439	99.1	75-125	0.4913	0.972	25	

DUP Sample ID: **1106501-04BDUP** Units: **mg/L** Analysis Date: **6/17/2011 06:57 PM**
Client ID: Run ID: **ICPMS03_110617A** SeqNo: **2428543** Prep Date: **6/17/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	0.004773	0	25	
Barium	1.163	0.050	0	0	0	0-0	1.145	1.56	25	
Cadmium	ND	0.020	0	0	0	0-0	0.002893	0	25	
Chromium	ND	0.050	0	0	0	0-0	0.002935	0	25	
Lead	0.03234	0.050	0	0	0	0-0	0.03247	0	25	J
Selenium	ND	0.050	0	0	0	0-0	0.009273	0	25	
Silver	ND	0.050	0	0	0	0-0	0.0006439	0	25	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **53344** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW3-062111-53344** Units: **mg/L** Analysis Date: **6/21/2011 02:36 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430787** Prep Date: **6/21/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-062011-53344** Units: **mg/L** Analysis Date: **6/21/2011 02:44 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430789** Prep Date: **6/21/2011** DF: **1**

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

LCS Sample ID: **GLCSW3-062111-53344** Units: **mg/L** Analysis Date: **6/21/2011 02:38 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430788** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00534	0.00020	0.005	0	107	80-120	0			

MS Sample ID: **1106521-01CMS** Units: **mg/L** Analysis Date: **6/21/2011 02:50 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430792** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00537	0.00020	0.005	0.00002	107	75-125	0			

MSD Sample ID: **1106521-01CMSD** Units: **mg/L** Analysis Date: **6/21/2011 02:52 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430793** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00539	0.00020	0.005	0.00002	107	75-125	0.00537	0.372	20	

DUP Sample ID: **1106521-01CDUP** Units: **mg/L** Analysis Date: **6/21/2011 02:48 PM**
Client ID: Run ID: **MERCURY_110621A** SeqNo: **2430791** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	0.00002	0	20	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **53308** Instrument ID **SV-5** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110618-53308** Units: **µg/L** Analysis Date: **6/20/2011 04:10 PM**
Client ID: Run ID: **SV-5_110620B** SeqNo: **2431303** Prep Date: **6/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*64.65*	5.0	*100*	0	*64.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*68.69*	5.0	*100*	0	*68.7*	*48-120*	0			
Surr: 2-Fluorophenol	*58.01*	5.0	*100*	0	*58*	*20-120*	0			
Surr: 4-Terphenyl-d14	*68.77*	5.0	*100*	0	*68.8*	*51-135*	0			
Surr: Nitrobenzene-d5	*69.78*	5.0	*100*	0	*69.8*	*41-120*	0			
Surr: Phenol-d6	*59.17*	5.0	*100*	0	*59.2*	*20-120*	0			

LCS Sample ID: **SLCST1-110618-53308** Units: **µg/L** Analysis Date: **6/20/2011 03:24 PM**
Client ID: Run ID: **SV-5_110620B** SeqNo: **2431301** Prep Date: **6/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	81.45	5.0	100	0	81.5	52-115	0			
2,4,6-Trichlorophenol	83.42	5.0	100	0	83.4	53-115	0			
2,4-Dinitrotoluene	41.33	5.0	50	0	82.7	56-115	0			
Cresols, Total	169.9	15	250	0	68	35-115	0			
Hexachlorobenzene	44.14	5.0	50	0	88.3	54-115	0			
Hexachlorobutadiene	45	5.0	50	0	90	51-115	0			
Hexachloroethane	38.42	5.0	50	0	76.8	54-115	0			
Nitrobenzene	40.47	5.0	50	0	80.9	40-124	0			
Pentachlorophenol	71.71	5.0	100	0	71.7	45-125	0			
Pyridine	32.23	5.0	50	0	64.5	34-115	0			
Surr: 2,4,6-Tribromophenol	*73.71*	5.0	*100*	0	*73.7*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*77.33*	5.0	*100*	0	*77.3*	*48-120*	0			
Surr: 2-Fluorophenol	*70.83*	5.0	*100*	0	*70.8*	*20-120*	0			
Surr: 4-Terphenyl-d14	*73.63*	5.0	*100*	0	*73.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*75.81*	5.0	*100*	0	*75.8*	*41-120*	0			
Surr: Phenol-d6	*66.91*	5.0	*100*	0	*66.9*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **53308** Instrument ID **SV-5** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110618-53308** Units: **µg/L** Analysis Date: **6/20/2011 03:47 PM**

Client ID: Run ID: **SV-5_110620B** SeqNo: **2431302** Prep Date: **6/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	81.79	5.0	100	0	81.8	52-115	81.45	0.406	25	
2,4,6-Trichlorophenol	83.12	5.0	100	0	83.1	53-115	83.42	0.369	25	
2,4-Dinitrotoluene	41.97	5.0	50	0	83.9	56-115	41.33	1.54	25	
Cresols, Total	164.3	15	250	0	65.7	35-115	169.9	3.38	25	
Hexachlorobenzene	43.23	5.0	50	0	86.5	54-115	44.14	2.08	25	
Hexachlorobutadiene	45.02	5.0	50	0	90	51-115	45	0.0473	25	
Hexachloroethane	38.25	5.0	50	0	76.5	54-115	38.42	0.443	25	
Nitrobenzene	40.4	5.0	50	0	80.8	40-124	40.47	0.173	25	
Pentachlorophenol	70.52	5.0	100	0	70.5	45-125	71.71	1.67	25	
Pyridine	31.83	5.0	50	0	63.7	34-115	32.23	1.23	25	
Surr: 2,4,6-Tribromophenol	*75.42*	5.0	*100*	0	*75.4*	*42-124*	73.71	*2.28*	*25*	
Surr: 2-Fluorobiphenyl	*77.81*	5.0	*100*	0	*77.8*	*48-120*	77.33	*0.624*	*25*	
Surr: 2-Fluorophenol	*69.28*	5.0	*100*	0	*69.3*	*20-120*	70.83	*2.21*	*25*	
Surr: 4-Terphenyl-d14	*71.26*	5.0	*100*	0	*71.3*	*51-135*	73.63	*3.26*	*25*	
Surr: Nitrobenzene-d5	*75.7*	5.0	*100*	0	*75.7*	*41-120*	75.81	*0.141*	*25*	
Surr: Phenol-d6	*68.37*	5.0	*100*	0	*68.4*	*20-120*	66.91	*2.16*	*25*	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **R111605** Instrument ID **VOA7** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-061711-R111605** Units: **µg/L** Analysis Date: **6/18/2011 01:34 AM**

Client ID: Run ID: **VOA7_110617D** SeqNo: **2428374** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*45.65*	5.0	*50*	0	*91.3*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.27*	5.0	*50*	0	*101*	*72.4-125*	0			
Surr: Dibromofluoromethane	*45.13*	5.0	*50*	0	*90.3*	*71.2-125*	0			
Surr: Toluene-d8	*50.19*	5.0	*50*	0	*100*	*75-125*	0			

LCS Sample ID: **VLCSW-061711-R111605** Units: **µg/L** Analysis Date: **6/18/2011 12:43 AM**

Client ID: Run ID: **VOA7_110617D** SeqNo: **2428373** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	44.28	5.0	50	0	88.6	73-124	0			
1,2-Dichloroethane	48.05	5.0	50	0	96.1	76-120	0			
1,4-Dichlorobenzene	49.12	5.0	50	0	98.2	70-130	0			
2-Butanone	90.26	10	100	0	90.3	70-130	0			
Benzene	46.62	5.0	50	0	93.2	70-128	0			
Carbon tetrachloride	46.48	5.0	50	0	93	70-130	0			
Chlorobenzene	48.63	5.0	50	0	97.3	72-127	0			
Chloroform	42.64	5.0	50	0	85.3	70-130	0			
Tetrachloroethene	48.09	5.0	50	0	96.2	70-130	0			
Trichloroethene	47.02	5.0	50	0	94	72-129	0			
Vinyl chloride	43.39	2.0	50	0	86.8	70-130	0			
Surr: 1,2-Dichloroethane-d4	*45.76*	5.0	*50*	0	*91.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.56*	5.0	*50*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*44.63*	5.0	*50*	0	*89.3*	*71-125*	0			
Surr: Toluene-d8	*50.9*	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: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **R111605** Instrument ID **VOA7** Method: **SW1311/8260B**

MS Sample ID: **1106470-02AMS** Units: **µg/L** Analysis Date: **6/18/2011 02:51 AM**

Client ID: **North Plant Carbon** Run ID: **VOA7_110617D** SeqNo: **2428376** Prep Date: **6/17/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	752.1	100	1000	0	75.2	73-124	0			
1,2-Dichloroethane	1035	100	1000	0	104	76-120	0			
1,4-Dichlorobenzene	964.2	100	1000	0	96.4	70-130	0			
2-Butanone	1951	200	2000	0	97.6	70-130	0			
Benzene	959.9	100	1000	0	96	70-128	0			
Carbon tetrachloride	*759*	*100*	*1000*	*0*	*75.9*	70-130	*0*			
Chlorobenzene	1005	100	1000	0	100	72-127	0			
Chloroform	900.8	100	1000	0	90.1	70-130	0			
Tetrachloroethene	800.7	100	1000	0	80.1	70-130	0			
Trichloroethene	840.6	100	1000	0	84.1	72-129	0			
Vinyl chloride	749.5	40	1000	0	74.9	70-130	0			
Surr: 1,2-Dichloroethane-d4	*877.4*	100	*1000*	0	*87.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1005*	100	*1000*	0	*101*	*72-125*	0			
Surr: Dibromofluoromethane	*869.7*	100	*1000*	0	*87*	*71-125*	0			
Surr: Toluene-d8	*1019*	100	*1000*	0	*102*	*75-125*	0			

MSD Sample ID: **1106470-02AMSD** Units: **µg/L** Analysis Date: **6/18/2011 03:16 AM**

Client ID: **North Plant Carbon** Run ID: **VOA7_110617D** SeqNo: **2428377** Prep Date: **6/17/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	755.7	100	1000	0	75.6	73-124	752.1	0.488	20	
1,2-Dichloroethane	1016	100	1000	0	102	76-120	1035	1.84	20	
1,4-Dichlorobenzene	934.7	100	1000	0	93.5	70-130	964.2	3.11	20	
2-Butanone	1933	200	2000	0	96.7	70-130	1951	0.932	20	
Benzene	954.3	100	1000	0	95.4	70-128	959.9	0.581	20	
Carbon tetrachloride	763.1	100	1000	0	76.3	70-130	759	0.548	20	
Chlorobenzene	979.3	100	1000	0	97.9	72-127	1005	2.58	20	
Chloroform	913	100	1000	0	91.3	70-130	900.8	1.35	20	
Tetrachloroethene	801.2	100	1000	0	80.1	70-130	800.7	0.0697	20	
Trichloroethene	860.7	100	1000	0	86.1	72-129	840.6	2.36	20	
Vinyl chloride	743.9	40	1000	0	74.4	70-130	749.5	0.741	20	
Surr: 1,2-Dichloroethane-d4	*898.7*	100	*1000*	0	*89.9*	*70-125*	877.4	*2.4*	*20*	
Surr: 4-Bromofluorobenzene	*1000*	100	*1000*	0	*100*	*72-125*	1005	*0.485*	*20*	
Surr: Dibromofluoromethane	*890.9*	100	*1000*	0	*89.1*	*71-125*	869.7	*2.4*	*20*	
Surr: Toluene-d8	*1019*	100	*1000*	0	*102*	*75-125*	1019	*0.00016*	*20*	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **R111559** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1106221-03ADUP** Units: **Burn Rate, mm/se** Analysis Date: **6/17/2011 09:30 AM**
Client ID: Run ID: **WETCHEM_110617A** SeqNo: **2427401** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		H

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

Client: Navajo Refining Company
Work Order: 1106470
Project: Disposal

QC BATCH REPORT

Batch ID: **R111712** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-062111-R111712** Units: **pH Units** Analysis Date: **6/21/2011 02:40 PM**

Client ID: Run ID: **WETCHEM_110621K** SeqNo: **2430816** 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: **1106537-01Adup** Units: **pH Units** Analysis Date: **6/21/2011 02:40 PM**

Client ID: Run ID: **WETCHEM_110621K** SeqNo: **2430832** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	2.6	0.10	0	0	0	0-0	2.54	2.33	20	

The following samples were analyzed in this batch: 1106470-01A 1106470-02A

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

ALS Environmental

Date: 27-Jun-11

Client: Navajo Refining Company
Project: Disposal
WorkOrder: 1106470

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

1106470

NAVAJO REFINING: Navajo Refining Company

Project: Disposal

Page ___ of ___

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Disposal	A	TCLP VOAs
Work Order		Project Number		B	TCLP Semi VOAs
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D	RCI
Address	P.O. Box 159	Address	P.O. Box 159	E	
				F	
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G	
Phone	~~(505)~~ 575 748-3311	Phone	~~(505)~~ 575 748-3311	H	
Fax	~~(505) 746-5421~~ 575 5451	Fax	~~(505) 746-5421~~ 575 5451	I	
e-Mail Address	~~dgboyer@SESI-NM.com~~	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	North WW Tank Exc Soil	6-14-11	0922	S	NO	1	X	X	X	X							
2	North Plant Carbon	6-14-11	1546	S	No	1	X	X	X	X							
3	Temp Blank																
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Relinquished by:	Date: 6-14-11	Time: 1615	Received by:	Notes:
Relinquished by:	Date:	Time:	Received by (Laboratory): 6/15/11 09:50	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
- ☐ Level I Std QC
- ☐ Level II Std QC/Raw Data
- ☐ Level III SW846/CLP
- ☐ Other / EDD ___
- ☐ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **15-Jun-11 09:00**

Work Order: **1106470** Received by: **RNG**

Checklist completed by Salvador A. Yanez (eSignature) 15-Jun-11 (Date) Reviewed by: Chris Bryson (eSignature) 16-Jun-11 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.7c	002	
Cooler(s)/Kit(s):	3540		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip Blank where Login w/ the other NAVAJO COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

1106470

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

CUSTOD

Date: 6-14-11 Tim

~~Contact~~ Name: Nayda Re

~~Company~~: Name: Aglow Sta

Y SEAL

ie: 1615

-ing Co.

Angle

Seal Broken By:

Date: 6/15/11

ALS Group USA, Corp

Date: 22-Jun-11

Client: ALS Environmental
Project: 1106470
Work Order: **1106472**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1106472-01	1106470-01B	Soil		6/14/2011 09:22	6/17/2011 10:00	☐
1106472-02	1106470-02B	Soil		6/14/2011 15:46	6/17/2011 10:00	☐

ALS Group USA, Corp

Date: 22-Jun-11

Client: ALS Environmental
Project: 1106470
WorkOrder: **1106472**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *22-Jun-11*

Client: ALS Environmental
Project: 1106470

Work Order: 1106472

Lab ID: 1106472-01A
Client Sample ID: 1106470-01B

Collection Date: 6/14/2011 9:22:00 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM

Lab ID: 1106472-02A
Client Sample ID: 1106470-02B

Collection Date: 6/14/2011 3:46:00 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	6/22/2011 10:00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 22-Jun-11

Client: ALS Environmental

Work Order: 1106472

Project: 1106470

QC BATCH REPORT

Batch ID: **R91366** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-110622-R91366** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**

Client ID: Run ID: **WETCHEM_110622A** SeqNo: **1656007** 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: 1106472-01A 1106472-02A

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

Client: ALS Environmental
Work Order: 1106472
Project: 1106470

QC BATCH REPORT

Batch ID: **R91367** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-110622-R91367** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656013** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-110622-R91367** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656014** 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	0			

LCSD Sample ID: **WLCSDW1-110622-R91367** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656022** 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	234.9	0	35	

MS Sample ID: **1106472-01A MS** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: **1106470-01B** Run ID: **WETCHEM_110622B** SeqNo: **1656017** 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	50-150	0			

MSD Sample ID: **1106472-01A MSD** Units: **mg/Kg** Analysis Date: **6/22/2011 10:00 AM**
Client ID: **1106470-01B** Run ID: **WETCHEM_110622B** SeqNo: **1656018** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	234.9	6.06	35	

The following samples were analyzed in this batch: 1106472-01A 1106472-02A

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

1106472

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

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

CHAIN-OF-CUSTODY RECORD

Date: 15-Jun-11
COC ID: 10583
Due Date: 27-Jun-11

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	10-2121068	Project Name	1106470	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	Chris Bryson	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsglobal.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1106470-01B (North WWTank Exc Soil)	Soil	14/Jun/2011 9:22	(1) 2OZGNEAT	X	X								
1106470-02B (North Plant Carbon)	Soil	14/Jun/2011 15:46	(1) 2OZGNEAT	X	X								

Comments:

Please analyze these samples Reactive Sulfide & Reactive Cyanide. CC:glenda.ramos@alsglobal.com & mary.knowles@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	6/16/11		6/17/11 1000		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

2.6°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **17-Jun-11 10:00**

Work Order: **1106472** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 17-Jun-11 (Date) Reviewed by: Bill Carey (eSignature) 17-Jun-11 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.6 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Environmental

29-Apr-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Disposal

Work Order: **1104676**

Dear Aaron,

ALS Environmental received 3 samples on 21-Apr-2011 09:50 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 35.

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

Sincerely,

JayLynn F Thibault

Electronically approved by: Makenzie L. Henderson

JayLynn F Thibault
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 29-Apr-11

Client: Navajo Refining Company
Project: Disposal
Work Order: **1104676**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1104676-01	Exc Soil @ WWT	Soil		4/19/2011 14:19	4/20/2011 09:50	☐
1104676-02	5th Street Exc Soil	Soil		4/19/2011 14:37	4/20/2011 09:50	☐
1104676-03	Maintenance Office	Soil		4/19/2011 14:41	4/20/2011 09:50	☐

Client:	Navajo Refining Company
Project:	Disposal
Work Order:	1104676

Case Narrative

The result for Ignitability reflects negative.

The Reactives were subbed to Michigan.

ALS Environmental

Date: *29-Apr-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: Exc Soil @ WWT
Collection Date: 4/19/2011 02:19 PM

Work Order: 1104676
Lab ID: 1104676-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **4/26/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	4/26/2011 05:33 PM
TCLP METALS			**SW1311/6020**		Prep Date: **4/25/2011**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	4/25/2011 09:22 PM
Barium	**0.237**		**0.0500**	**mg/L**	10	4/25/2011 09:22 PM
Cadmium	ND		0.0500	mg/L	10	4/25/2011 09:22 PM
Chromium	ND		0.0500	mg/L	10	4/25/2011 09:22 PM
Lead	ND		0.0500	mg/L	10	4/25/2011 09:22 PM
Selenium	ND		0.0500	mg/L	10	4/25/2011 09:22 PM
Silver	ND		0.0500	mg/L	10	4/25/2011 09:22 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **4/26/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	4/27/2011 08:08 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	4/27/2011 08:08 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	4/27/2011 08:08 PM
Cresols, Total	**160**		**30**	**µg/L**	2	4/28/2011 03:21 PM
Hexachlorobenzene	ND		5.0	µg/L	1	4/27/2011 08:08 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	4/27/2011 08:08 PM
Hexachloroethane	ND		5.0	µg/L	1	4/27/2011 08:08 PM
Nitrobenzene	ND		5.0	µg/L	1	4/27/2011 08:08 PM
Pentachlorophenol	ND		5.0	µg/L	1	4/27/2011 08:08 PM
Pyridine	ND		5.0	µg/L	1	4/27/2011 08:08 PM
Surr: 2,4,6-Tribromophenol	*69.4*		*42-124*	*%REC*	1	4/27/2011 08:08 PM
Surr: 2,4,6-Tribromophenol	*78.4*		*42-124*	*%REC*	2	4/28/2011 03:21 PM
Surr: 2-Fluorobiphenyl	*71.4*		*48-120*	*%REC*	1	4/27/2011 08:08 PM
Surr: 2-Fluorobiphenyl	*85.8*		*48-120*	*%REC*	2	4/28/2011 03:21 PM
Surr: 2-Fluorophenol	*69.7*		*20-120*	*%REC*	2	4/28/2011 03:21 PM
Surr: 2-Fluorophenol	*68.4*		*20-120*	*%REC*	1	4/27/2011 08:08 PM
Surr: 4-Terphenyl-d14	*69.1*		*51-135*	*%REC*	1	4/27/2011 08:08 PM
Surr: 4-Terphenyl-d14	*74.7*		*51-135*	*%REC*	2	4/28/2011 03:21 PM
Surr: Nitrobenzene-d5	*79.9*		*41-120*	*%REC*	1	4/27/2011 08:08 PM
Surr: Nitrobenzene-d5	*82.7*		*41-120*	*%REC*	2	4/28/2011 03:21 PM
Surr: Phenol-d6	*85.8*		*20-120*	*%REC*	1	4/27/2011 08:08 PM
Surr: Phenol-d6	*76.3*		*20-120*	*%REC*	2	4/28/2011 03:21 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **4/27/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	4/28/2011 03:57 AM
1,2-Dichloroethane	ND		100	µg/L	20	4/28/2011 03:57 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	4/28/2011 03:57 AM
2-Butanone	ND		200	µg/L	20	4/28/2011 03:57 AM

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

ALS Environmental

Date: *29-Apr-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1104676
Sample ID: Exc Soil @ WWT
Lab ID: 1104676-01
Collection Date: 4/19/2011 02:19 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	ND		100	µg/L	20	4/28/2011 03:57 AM
Carbon tetrachloride	ND		100	µg/L	20	4/28/2011 03:57 AM
Chlorobenzene	ND		100	µg/L	20	4/28/2011 03:57 AM
Chloroform	ND		100	µg/L	20	4/28/2011 03:57 AM
Tetrachloroethene	ND		100	µg/L	20	4/28/2011 03:57 AM
Trichloroethene	ND		100	µg/L	20	4/28/2011 03:57 AM
Vinyl chloride	ND		100	µg/L	20	4/28/2011 03:57 AM
Surr: 1,2-Dichloroethane-d4	*97.8*		*70-125*	*%REC*	20	4/28/2011 03:57 AM
Surr: 4-Bromofluorobenzene	*97.1*		*72-125*	*%REC*	20	4/28/2011 03:57 AM
Surr: Dibromofluoromethane	*97.6*		*71-125*	*%REC*	20	4/28/2011 03:57 AM
Surr: Toluene-d8	*99.4*		*75-125*	*%REC*	20	4/28/2011 03:57 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	4/25/2011 01:00 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	4/25/2011 01:00 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	4/27/2011
PH			**SW9045B**			Analyst: **DM**
pH	**8.71**		**0.100**	**pH Units**	1	4/27/2011 03:00 PM

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

ALS Environmental

Date: *29-Apr-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: 5th Street Exc Soil
Collection Date: 4/19/2011 02:37 PM

Work Order: 1104676
Lab ID: 1104676-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **4/26/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	4/26/2011 05:35 PM
TCLP METALS			**SW1311/6020**		Prep Date: **4/25/2011**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	4/25/2011 09:28 PM
Barium	**0.354**		**0.0500**	**mg/L**	10	4/25/2011 09:28 PM
Cadmium	ND		0.0500	mg/L	10	4/25/2011 09:28 PM
Chromium	ND		0.0500	mg/L	10	4/25/2011 09:28 PM
Lead	ND		0.0500	mg/L	10	4/25/2011 09:28 PM
Selenium	ND		0.0500	mg/L	10	4/25/2011 09:28 PM
Silver	ND		0.0500	mg/L	10	4/25/2011 09:28 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **4/26/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	4/27/2011 08:31 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	4/27/2011 08:31 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	4/27/2011 08:31 PM
Cresols, Total	ND		15	µg/L	1	4/27/2011 08:31 PM
Hexachlorobenzene	ND		5.0	µg/L	1	4/27/2011 08:31 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	4/27/2011 08:31 PM
Hexachloroethane	ND		5.0	µg/L	1	4/27/2011 08:31 PM
Nitrobenzene	ND		5.0	µg/L	1	4/27/2011 08:31 PM
Pentachlorophenol	ND		5.0	µg/L	1	4/27/2011 08:31 PM
Pyridine	ND		5.0	µg/L	1	4/27/2011 08:31 PM
Surr: 2,4,6-Tribromophenol	*70.0*		*42-124*	*%REC*	1	4/27/2011 08:31 PM
Surr: 2-Fluorobiphenyl	*66.9*		*48-120*	*%REC*	1	4/27/2011 08:31 PM
Surr: 2-Fluorophenol	*64.4*		*20-120*	*%REC*	1	4/27/2011 08:31 PM
Surr: 4-Terphenyl-d14	*73.5*		*51-135*	*%REC*	1	4/27/2011 08:31 PM
Surr: Nitrobenzene-d5	*71.9*		*41-120*	*%REC*	1	4/27/2011 08:31 PM
Surr: Phenol-d6	*81.3*		*20-120*	*%REC*	1	4/27/2011 08:31 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **4/27/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	4/28/2011 04:21 AM
1,2-Dichloroethane	ND		100	µg/L	20	4/28/2011 04:21 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	4/28/2011 04:21 AM
2-Butanone	ND		200	µg/L	20	4/28/2011 04:21 AM
Benzene	ND		100	µg/L	20	4/28/2011 04:21 AM
Carbon tetrachloride	ND		100	µg/L	20	4/28/2011 04:21 AM
Chlorobenzene	ND		100	µg/L	20	4/28/2011 04:21 AM
Chloroform	ND		100	µg/L	20	4/28/2011 04:21 AM
Tetrachloroethene	ND		100	µg/L	20	4/28/2011 04:21 AM
Trichloroethene	ND		100	µg/L	20	4/28/2011 04:21 AM

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

ALS Environmental

Date: *29-Apr-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1104676
Sample ID: 5th Street Exc Soil
Lab ID: 1104676-02
Collection Date: 4/19/2011 02:37 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	4/28/2011 04:21 AM
Surr: 1,2-Dichloroethane-d4	*99.8*		*70-125*	*%REC*	20	4/28/2011 04:21 AM
Surr: 4-Bromofluorobenzene	*97.8*		*72-125*	*%REC*	20	4/28/2011 04:21 AM
Surr: Dibromofluoromethane	*99.0*		*71-125*	*%REC*	20	4/28/2011 04:21 AM
Surr: Toluene-d8	*99.6*		*75-125*	*%REC*	20	4/28/2011 04:21 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	4/26/2011 01:00 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	4/26/2011 01:00 PM
IGNITIBILITY			**SW1010**			Analyst: **KAH**
Ignitability	*> 212*		50.0	°F	1	4/27/2011 04:00 PM
PH			**SW9045B**			Analyst: **DM**
pH	**7.90**		**0.100**	**pH Units**	1	4/27/2011 03:00 PM

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

ALS Environmental

Date: *29-Apr-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: Maintenance Office
Collection Date: 4/19/2011 02:41 PM

Work Order: 1104676
Lab ID: 1104676-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **4/26/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	4/26/2011 05:37 PM
TCLP METALS			**SW1311/6020**		Prep Date: **4/25/2011**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	4/25/2011 09:33 PM
Barium	**1.69**		**0.0500**	**mg/L**	10	4/25/2011 09:33 PM
Cadmium	ND		0.0500	mg/L	10	4/25/2011 09:33 PM
Chromium	ND		0.0500	mg/L	10	4/25/2011 09:33 PM
Lead	ND		0.0500	mg/L	10	4/25/2011 09:33 PM
Selenium	ND		0.0500	mg/L	10	4/25/2011 09:33 PM
Silver	ND		0.0500	mg/L	10	4/25/2011 09:33 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **4/26/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	4/27/2011 08:53 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	4/27/2011 08:53 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	4/27/2011 08:53 PM
Cresols, Total	ND		15	µg/L	1	4/27/2011 08:53 PM
Hexachlorobenzene	ND		5.0	µg/L	1	4/27/2011 08:53 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	4/27/2011 08:53 PM
Hexachloroethane	ND		5.0	µg/L	1	4/27/2011 08:53 PM
Nitrobenzene	ND		5.0	µg/L	1	4/27/2011 08:53 PM
Pentachlorophenol	ND		5.0	µg/L	1	4/27/2011 08:53 PM
Pyridine	ND		5.0	µg/L	1	4/27/2011 08:53 PM
Surr: 2,4,6-Tribromophenol	*57.3*		*42-124*	*%REC*	1	4/27/2011 08:53 PM
Surr: 2-Fluorobiphenyl	*65.6*		*48-120*	*%REC*	1	4/27/2011 08:53 PM
Surr: 2-Fluorophenol	*57.9*		*20-120*	*%REC*	1	4/27/2011 08:53 PM
Surr: 4-Terphenyl-d14	*68.6*		*51-135*	*%REC*	1	4/27/2011 08:53 PM
Surr: Nitrobenzene-d5	*74.1*		*41-120*	*%REC*	1	4/27/2011 08:53 PM
Surr: Phenol-d6	*65.6*		*20-120*	*%REC*	1	4/27/2011 08:53 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **4/27/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	4/28/2011 04:45 AM
1,2-Dichloroethane	ND		100	µg/L	20	4/28/2011 04:45 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	4/28/2011 04:45 AM
2-Butanone	ND		200	µg/L	20	4/28/2011 04:45 AM
Benzene	ND		100	µg/L	20	4/28/2011 04:45 AM
Carbon tetrachloride	ND		100	µg/L	20	4/28/2011 04:45 AM
Chlorobenzene	ND		100	µg/L	20	4/28/2011 04:45 AM
Chloroform	ND		100	µg/L	20	4/28/2011 04:45 AM
Tetrachloroethene	ND		100	µg/L	20	4/28/2011 04:45 AM
Trichloroethene	ND		100	µg/L	20	4/28/2011 04:45 AM

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

ALS Environmental

Date: *29-Apr-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1104676
Sample ID: Maintenance Office
Lab ID: 1104676-03
Collection Date: 4/19/2011 02:41 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	4/28/2011 04:45 AM
Surr: 1,2-Dichloroethane-d4	*97.9*		*70-125*	*%REC*	20	4/28/2011 04:45 AM
Surr: 4-Bromofluorobenzene	*97.7*		*72-125*	*%REC*	20	4/28/2011 04:45 AM
Surr: Dibromofluoromethane	*97.8*		*71-125*	*%REC*	20	4/28/2011 04:45 AM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	20	4/28/2011 04:45 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	4/26/2011 01:00 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	4/26/2011 01:00 PM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	4/27/2011
PH			**SW9045B**			Analyst: **DM**
pH	**8.16**		**0.100**	**pH Units**	1	4/27/2011 03:00 PM

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

ALS Environmental

Date: 29-Apr-11

Client: Navajo Refining Company

Work Order: 1104676

Project: Disposal

QC BATCH REPORT

Batch ID: **51830** Instrument ID **ICP7500** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-042211-51830** Units: **mg/L** Analysis Date: **4/25/2011 06:22 PM**

Client ID: Run ID: **ICP7500_110425A** SeqNo: **2360656** Prep Date: **4/25/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	0.005176	0.050								J
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKT2-042211-51830** Units: **mg/L** Analysis Date: **4/25/2011 06:28 PM**

Client ID: Run ID: **ICP7500_110425A** SeqNo: **2360657** Prep Date: **4/25/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	0.005301	0.050								J
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW1-042511-51830** Units: **mg/L** Analysis Date: **4/25/2011 06:33 PM**

Client ID: Run ID: **ICP7500_110425A** SeqNo: **2360658** Prep Date: **4/25/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	0.005585	0.050								J
Selenium	ND	0.050								
Silver	ND	0.050								

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **51830** Instrument ID **ICP7500** Method: **SW1311/6020**

LCS Sample ID: **MLCSW1-042511-51830** Units: **mg/L** Analysis Date: **4/25/2011 07:28 PM**
Client ID: Run ID: **ICP7500_110425A** SeqNo: **2360668** Prep Date: **4/25/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5291	0.050	0.5	0	106	80-120	0			
Barium	0.5313	0.050	0.5	0	106	80-120	0			
Cadmium	0.5435	0.050	0.5	0	109	80-120	0			
Chromium	0.5395	0.050	0.5	0	108	80-120	0			
Lead	0.5311	0.050	0.5	0	106	80-120	0			
Selenium	0.5351	0.050	0.5	0	107	80-120	0			
Silver	0.5159	0.050	0.5	0	103	80-120	0			

MS Sample ID: **1104726-01AMS** Units: **mg/L** Analysis Date: **4/25/2011 07:12 PM**
Client ID: Run ID: **ICP7500_110425A** SeqNo: **2360665** Prep Date: **4/25/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5252	0.050	0.5	0.005643	104	75-125	0			
Barium	1.418	0.050	0.5	0.8928	105	75-125	0			
Cadmium	0.5313	0.050	0.5	0.0009969	106	75-125	0			
Chromium	0.512	0.050	0.5	0.0001319	102	75-125	0			
Lead	0.5386	0.050	0.5	0.03336	101	75-125	0			
Selenium	0.5405	0.050	0.5	0.001417	108	75-125	0			
Silver	0.4553	0.050	0.5	-0.002313	91.5	75-125	0			

MSD Sample ID: **1104726-01AMSD** Units: **mg/L** Analysis Date: **4/25/2011 07:17 PM**
Client ID: Run ID: **ICP7500_110425A** SeqNo: **2360666** Prep Date: **4/25/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5351	0.050	0.5	0.005643	106	75-125	0.5252	1.87	25	
Barium	1.46	0.050	0.5	0.8928	113	75-125	1.418	2.92	25	
Cadmium	0.5477	0.050	0.5	0.0009969	109	75-125	0.5313	3.04	25	
Chromium	0.5223	0.050	0.5	0.0001319	104	75-125	0.512	1.99	25	
Lead	0.5531	0.050	0.5	0.03336	104	75-125	0.5386	2.66	25	
Selenium	0.5422	0.050	0.5	0.001417	108	75-125	0.5405	0.314	25	
Silver	0.4646	0.050	0.5	-0.002313	93.4	75-125	0.4553	2.02	25	

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **51830** Instrument ID **ICP7500** Method: **SW1311/6020**

DUP Sample ID: **1104726-01ADUP** Units: **mg/L** Analysis Date: **4/25/2011 07:01 PM**

Client ID: Run ID: **ICP7500_110425A** SeqNo: **2360663** Prep Date: **4/25/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	-0 0	0.005643	0	25	
Barium	0.8931	0.050	0	0	0	-0 0	0.8928	0.0336	25	
Cadmium	ND	0.050	0	0	0	-0 0	0.0009969	0	25	
Chromium	ND	0.050	0	0	0	-0 0	0.0001319	0	25	
Lead	0.03353	0.050	0	0	0	-0 0	0.03336	0	25	J
Selenium	ND	0.050	0	0	0	-0 0	0.001417	0	25	
Silver	ND	0.050	0	0	0	-0 0	-0.002313	0	25	

The following samples were analyzed in this batch: 1104676-01A 1104676-02A 1104676-03A

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **51856** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-042611-51856** Units: **mg/L** Analysis Date: **4/26/2011 04:21 PM**
Client ID: Run ID: **MERCURY_110426A** SeqNo: **2362195** Prep Date: **4/26/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-042511-51856** Units: **mg/L** Analysis Date: **4/26/2011 04:41 PM**
Client ID: Run ID: **MERCURY_110426A** SeqNo: **2362197** Prep Date: **4/26/2011** DF: **1**

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

LCS Sample ID: **GLCSW2-042611-51856** Units: **mg/L** Analysis Date: **4/26/2011 04:23 PM**
Client ID: Run ID: **MERCURY_110426A** SeqNo: **2362196** Prep Date: **4/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00492	0.00020	0.005	0	98.4	80-120	0			

MS Sample ID: **1104709-01DMS** Units: **mg/L** Analysis Date: **4/26/2011 04:47 PM**
Client ID: Run ID: **MERCURY_110426A** SeqNo: **2362200** Prep Date: **4/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00508	0.00020	0.005	0.000024	101	75-125	0			

MSD Sample ID: **1104709-01DMSD** Units: **mg/L** Analysis Date: **4/26/2011 04:49 PM**
Client ID: Run ID: **MERCURY_110426A** SeqNo: **2362201** Prep Date: **4/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.00020	0.005	0.000024	99.1	75-125	0.00508	1.99	20	

DUP Sample ID: **1104709-01DDUP** Units: **mg/L** Analysis Date: **4/26/2011 04:45 PM**
Client ID: Run ID: **MERCURY_110426A** SeqNo: **2362199** Prep Date: **4/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	-0 0	0.000024	0	20	

The following samples were analyzed in this batch: 1104676-01A 1104676-02A 1104676-03A

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **51886** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT2-110426-51886** Units: **µg/L** Analysis Date: **4/27/2011 03:20 PM**
Client ID: Run ID: **SV-3_110427B** SeqNo: **2365336** Prep Date: **4/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*63.62*	5.0	*100*	0	*63.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*61*	5.0	*100*	0	*61*	*48-120*	0			
Surr: 2-Fluorophenol	*51.66*	5.0	*100*	0	*51.7*	*20-120*	0			
Surr: 4-Terphenyl-d14	*67.06*	5.0	*100*	0	*67.1*	*51-135*	0			
Surr: Nitrobenzene-d5	*68.9*	5.0	*100*	0	*68.9*	*41-120*	0			
Surr: Phenol-d6	*67.45*	5.0	*100*	0	*67.5*	*20-120*	0			

LCS Sample ID: **SLCST2-110426-51886** Units: **µg/L** Analysis Date: **4/27/2011 01:50 PM**
Client ID: Run ID: **SV-3_110427B** SeqNo: **2365335** Prep Date: **4/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	65.6	5.0	100	0	65.6	52-115	0			
2,4,6-Trichlorophenol	66.74	5.0	100	0	66.7	53-115	0			
2,4-Dinitrotoluene	39.25	5.0	50	0	78.5	56-115	0			
Cresols, Total	180.9	15	250	0	72.4	35-115	0			
Hexachlorobenzene	39.06	5.0	50	0	78.1	54-115	0			
Hexachlorobutadiene	35.95	5.0	50	0	71.9	51-115	0			
Hexachloroethane	33.75	5.0	50	0	67.5	54-115	0			
Nitrobenzene	39.11	5.0	50	0	78.2	40-124	0			
Pentachlorophenol	59.05	5.0	100	0	59.1	45-125	0			
Pyridine	30.36	5.0	50	0	60.7	34-115	0			
Surr: 2,4,6-Tribromophenol	*65.03*	5.0	*100*	0	*65*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*67.67*	5.0	*100*	0	*67.7*	*48-120*	0			
Surr: 2-Fluorophenol	*70.65*	5.0	*100*	0	*70.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*68.86*	5.0	*100*	0	*68.9*	*51-135*	0			
Surr: Nitrobenzene-d5	*73.1*	5.0	*100*	0	*73.1*	*41-120*	0			
Surr: Phenol-d6	*67.51*	5.0	*100*	0	*67.5*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **51886** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT2-110426-51886** Units: **µg/L** Analysis Date: **4/27/2011 04:52 PM**
Client ID: Run ID: **SV-3_110427B** SeqNo: **2365337** Prep Date: **4/26/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	70.7	5.0	100	0	70.7	52-115	65.6	7.49	25	
2,4,6-Trichlorophenol	66.87	5.0	100	0	66.9	53-115	66.74	0.196	25	
2,4-Dinitrotoluene	39.95	5.0	50	0	79.9	56-115	39.25	1.77	25	
Cresols, Total	201.1	15	250	0	80.4	35-115	180.9	10.6	25	
Hexachlorobenzene	38.53	5.0	50	0	77.1	54-115	39.06	1.35	25	
Hexachlorobutadiene	34.78	5.0	50	0	69.6	51-115	35.95	3.3	25	
Hexachloroethane	34.14	5.0	50	0	68.3	54-115	33.75	1.14	25	
Nitrobenzene	38.36	5.0	50	0	76.7	40-124	39.11	1.93	25	
Pentachlorophenol	59.21	5.0	100	0	59.2	45-125	59.05	0.263	25	
Pyridine	27.32	5.0	50	0	54.6	34-115	30.36	10.5	25	
Surr: 2,4,6-Tribromophenol	*65.45*	5.0	*100*	0	*65.5*	*42-124*	65.03	*0.645*	*25*	
Surr: 2-Fluorobiphenyl	*66.63*	5.0	*100*	0	*66.6*	*48-120*	67.67	*1.54*	*25*	
Surr: 2-Fluorophenol	*74.34*	5.0	*100*	0	*74.3*	*20-120*	70.65	*5.09*	*25*	
Surr: 4-Terphenyl-d14	*70.45*	5.0	*100*	0	*70.5*	*51-135*	68.86	*2.29*	*25*	
Surr: Nitrobenzene-d5	*71.72*	5.0	*100*	0	*71.7*	*41-120*	73.1	*1.92*	*25*	
Surr: Phenol-d6	*78.28*	5.0	*100*	0	*78.3*	*20-120*	67.51	*14.8*	*25*	

The following samples were analyzed in this batch: 1104676-01A 1104676-02A 1104676-03A

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **R109017** Instrument ID **VOA2** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-042711-R109017** Units: **µg/L** Analysis Date: **4/27/2011 07:34 PM**
Client ID: Run ID: **VOA2_110427B** SeqNo: **2366186** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*49.09*	5.0	*50*	0	*98.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*47.83*	5.0	*50*	0	*95.7*	*72.4-125*	0			
Surr: Dibromofluoromethane	*49.34*	5.0	*50*	0	*98.7*	*71.2-125*	0			
Surr: Toluene-d8	*49.05*	5.0	*50*	0	*98.1*	*75-125*	0			

MBLK Sample ID: **MBLKV1-042611-R109017** Units: **µg/L** Analysis Date: **4/27/2011 10:45 PM**
Client ID: Run ID: **VOA2_110427B** SeqNo: **2366191** Prep Date: **4/27/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	100								
Surr: 1,2-Dichloroethane-d4	*964.7*	100	*1000*	0	*96.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*969.5*	100	*1000*	0	*96.9*	*72.4-125*	0			
Surr: Dibromofluoromethane	*964.1*	100	*1000*	0	*96.4*	*71.2-125*	0			
Surr: Toluene-d8	*1022*	100	*1000*	0	*102*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **R109017** Instrument ID **VOA2** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-042711-R109017** Units: **µg/L** Analysis Date: **4/27/2011 06:21 PM**
Client ID: Run ID: **VOA2_110427B** SeqNo: **2366185** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	49.58	5.0	50	0	99.2	73-124	0			
1,2-Dichloroethane	53.31	5.0	50	0	107	76-120	0			
1,4-Dichlorobenzene	52.94	5.0	50	0	106	70-130	0			
2-Butanone	107.6	10	100	0	108	70-130	0			
Benzene	52.18	5.0	50	0	104	70-128	0			
Carbon tetrachloride	49.53	5.0	50	0	99.1	70-130	0			
Chlorobenzene	52.34	5.0	50	0	105	72-127	0			
Chloroform	51.54	5.0	50	0	103	70-130	0			
Tetrachloroethene	50.25	5.0	50	0	100	70-130	0			
Trichloroethene	51.57	5.0	50	0	103	72-129	0			
Vinyl chloride	50.94	5.0	50	0	102	70-130	0			
Surr: 1,2-Dichloroethane-d4	*48.87*	5.0	*50*	0	*97.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.83*	5.0	*50*	0	*99.7*	*72-125*	0			
Surr: Dibromofluoromethane	*49.6*	5.0	*50*	0	*99.2*	*71-125*	0			
Surr: Toluene-d8	*49.99*	5.0	*50*	0	*100*	*75-125*	0			

MS Sample ID: **1104748-04ZMS** Units: **µg/L** Analysis Date: **4/27/2011 09:33 PM**
Client ID: Run ID: **VOA2_110427B** SeqNo: **2366189** Prep Date: DF: **200**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	9258	1,000	10000	0	92.6	73-124	0			
1,2-Dichloroethane	9799	1,000	10000	0	98	76-120	0			
1,4-Dichlorobenzene	9268	1,000	10000	0	92.7	70-130	0			
2-Butanone	17790	2,000	20000	0	89	70-130	0			
Benzene	13670	1,000	10000	4008	96.7	70-128	0			
Carbon tetrachloride	9636	1,000	10000	0	96.4	70-130	0			
Chlorobenzene	9604	1,000	10000	0	96	72-127	0			
Chloroform	9473	1,000	10000	0	94.7	70-130	0			
Tetrachloroethene	9035	1,000	10000	0	90.4	70-130	0			
Trichloroethene	9402	1,000	10000	0	94	72-129	0			
Vinyl chloride	9463	1,000	10000	0	94.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*9825*	1,000	*10000*	0	*98.2*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*9970*	1,000	*10000*	0	*99.7*	*72-125*	0			
Surr: Dibromofluoromethane	*10100*	1,000	*10000*	0	*101*	*71-125*	0			
Surr: Toluene-d8	*10090*	1,000	*10000*	0	*101*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **R109017** Instrument ID **VOA2** Method: **SW1311/8260B**

MSD Sample ID: **1104748-04ZMSD** Units: **µg/L** Analysis Date: **4/27/2011 09:57 PM**

Client ID: Run ID: **VOA2_110427B** SeqNo: **2366190** Prep Date: DF: **200**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	9403	1,000	10000	0	94	73-124	9258	1.56	20	
1,2-Dichloroethane	10440	1,000	10000	0	104	76-120	9799	6.34	20	
1,4-Dichlorobenzene	9789	1,000	10000	0	97.9	70-130	9268	5.47	20	
2-Butanone	18580	2,000	20000	0	92.9	70-130	17790	4.29	20	
Benzene	14290	1,000	10000	4008	103	70-128	13670	4.41	20	
Carbon tetrachloride	9596	1,000	10000	0	96	70-130	9636	0.418	20	
Chlorobenzene	10120	1,000	10000	0	101	72-127	9604	5.2	20	
Chloroform	10020	1,000	10000	0	100	70-130	9473	5.63	20	
Tetrachloroethene	9014	1,000	10000	0	90.1	70-130	9035	0.233	20	
Trichloroethene	9768	1,000	10000	0	97.7	72-129	9402	3.82	20	
Vinyl chloride	9501	1,000	10000	0	95	70-130	9463	0.406	20	
Surr: 1,2-Dichloroethane-d4	*9669*	1,000	*10000*	0	*96.7*	*70-125*	9825	*1.6*	*20*	
Surr: 4-Bromofluorobenzene	*9964*	1,000	*10000*	0	*99.6*	*72-125*	9970	*0.0564*	*20*	
Surr: Dibromofluoromethane	*10030*	1,000	*10000*	0	*100*	*71-125*	10100	*0.704*	*20*	
Surr: Toluene-d8	*10010*	1,000	*10000*	0	*100*	*75-125*	10090	*0.788*	*20*	

The following samples were analyzed in this batch: 1104676-01A 1104676-02A 1104676-03A

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **R108941** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSS1-042711-R108941** Units: **pH Units** Analysis Date: **4/27/2011 03:00 PM**

Client ID: Run ID: **WETCHEM_110427E** SeqNo: **2364200** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.05	0.10	6	0	101	90-110	0			

DUP Sample ID: **1104676-03ADUP** Units: **pH Units** Analysis Date: **4/27/2011 03:00 PM**

Client ID: **Maintenance Office** Run ID: **WETCHEM_110427E** SeqNo: **2364209** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.14	0.10	0	0	0	-0 0	8.16	0.245	20	

The following samples were analyzed in this batch: 1104676-01A 1104676-02A 1104676-03A

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **R108993** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1104676-03DUP** Units: **Burn Rate, mm/se** Analysis Date: **4/27/2011**

Client ID: **Maintenance Office** Run ID: **WETCHEM_110427I** SeqNo: **2365616** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1104676-01A 1104676-03A

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

Client: Navajo Refining Company
Work Order: 1104676
Project: Disposal

QC BATCH REPORT

Batch ID: **R108997** Instrument ID **WetChem** Method: **SW1010**

LCS Sample ID: **WLCS-042711-R108997** Units: **°F** Analysis Date: **4/27/2011 04:00 PM**
Client ID: Run ID: **WETCHEM_110427J** SeqNo: **2366410** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	82	50	83	0	98.8	80-120	0			

LCSD Sample ID: **WLCSD-042711-R108997** Units: **°F** Analysis Date: **4/27/2011 04:00 PM**
Client ID: Run ID: **WETCHEM_110427J** SeqNo: **2366419** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	84	50	83	0	101	80-120	82	2.41	25	

DUP Sample ID: **1104576-01ADUP** Units: **°F** Analysis Date: **4/27/2011 04:00 PM**
Client ID: Run ID: **WETCHEM_110427J** SeqNo: **2366417** 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: 1104676-02A

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

ALS Environmental

Date: 29-Apr-11

Client: Navajo Refining Company
Project: Disposal
WorkOrder: 1104676

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
°F	Farenheit degrees
µg/L	Micrograms per Liter
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

1104676

Page 1 of 1

NAVAJO REFINING: Navajo Refining Company

Project: Disposal

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP semivoas
Company Name	Navajo Refining Co	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strang	Invoice Attn		D	RCI
Address	PO Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5450	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Exc Soil @ WWT	4-19-11	1419	S	NO	1	X	X	X	X							
2	5th street Exc Soil	4-19-11	1437	S	NO	1	X	X	X	X							
3	Maintenance Office	4-19-11	1441	S	NO	1	X	X	X	X							
4	Trip Blank																
5	Temp Blank																
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strang

Shipment Method: Fed Ex

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Aaron Strang	4-19-11	1615	KN ALS	4/20/11 0850
Relinquished by:	Date:	Time:	Received by (Laboratory):	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_3$ 7-Other 8-4°C 9-5035

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **21-Apr-11 09:50**

Work Order: **1104676** Received by: **RDN**

Checklist completed by Robert D. Harris (eSignature) 21-Apr-11 (Date) Reviewed by: Hector Coronado (eSignature) 25-Apr-11 (Date)

Matrices: soils
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):	5.1c	002	
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

11416516

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

CUSTODY SEAL

Date: 4-19-11 Time: 1615
Name: Andy Gilmore
Company: Navajo Refining Co

Seal #: 05
Initials: 4/20/11

ORIGIN ID: ROWA
NAVAJO ARTESIA
501 E MAIN
ARTESIA, NM 88210 9440
UNITED STATES US

ACTWGT: 47.0 LB MAN
CAD: 634483/CAFE2472

BILL RECIPIENT

TO
ALS LABORATORY GROUP
10450 STANCLIFF RD., SUITE 210
HOUSTON TX 77099
(281) 530-6656
REF:
INV:
PO:
DEPT:

FedEx Express

PT 254 1
FZ
A
248J
04.20

20 APR A2
CITY OVERNIGHT

TRK# 0201 4347 1019 2481

77099
TX-US
IAH

AB SGRA

Part # 156148-434 RIT2 05/10
505CJ/25A8/DA47

ALS Group USA, Corp

Date: 27-Apr-11

Client: ALS Environmental
Project: 1104676
Work Order: **1104576**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1104576-01	1104676-01B	Soil		4/19/2011 14:19	4/22/2011 10:00	☐
1104576-02	1104676-02B	Soil		4/19/2011 14:37	4/22/2011 10:00	☐
1104576-03	1104676-03B	Soil		4/19/2011 14:41	4/22/2011 10:00	☐

ALS Group USA, Corp

Date: 27-Apr-11

Client: ALS Environmental
Project: 1104676
WorkOrder: **1104576**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *27-Apr-11*

Client: ALS Environmental
Project: 1104676
Sample ID: 1104676-01B
Collection Date: 4/19/2011 02:19 PM

Work Order: 1104576
Lab ID: 1104576-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	4/25/2011 01:00 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	4/25/2011 01:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *27-Apr-11*

Client: ALS Environmental
Project: 1104676
Sample ID: 1104676-02B
Collection Date: 4/19/2011 02:37 PM

Work Order: 1104576
Lab ID: 1104576-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	4/26/2011 01:00 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	4/26/2011 01:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *27-Apr-11*

Client: ALS Environmental
Project: 1104676
Sample ID: 1104676-03B
Collection Date: 4/19/2011 02:41 PM

Work Order: 1104576
Lab ID: 1104576-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	4/26/2011 01:00 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	4/26/2011 01:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Apr-11

Client: ALS Environmental

Work Order: 1104576

Project: 1104676

QC BATCH REPORT

Batch ID: **R89374** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-042511-R89374** Units: **mg/Kg** Analysis Date: **4/25/2011 01:00 PM**

Client ID: Run ID: **WETCHEM_110425C** SeqNo: **1609501** 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: 1104576-01A 1104576-02A 1104576-03A

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

Client: ALS Environmental
Work Order: 1104576
Project: 1104676

QC BATCH REPORT

Batch ID: **R89375** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-042511-R89375** Units: **mg/Kg** Analysis Date: **4/25/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_110425D** SeqNo: **1609507** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-042511-R89375** Units: **mg/Kg** Analysis Date: **4/25/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_110425D** SeqNo: **1609508** 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	0			

LCSD Sample ID: **WLCSDW1-042511-R89375** Units: **mg/Kg** Analysis Date: **4/25/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_110425D** SeqNo: **1609516** 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	234.9	6.06	35	

MS Sample ID: **1104596-01A MS** Units: **mg/Kg** Analysis Date: **4/25/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_110425D** SeqNo: **1609512** 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	14.68	88.1	50-150	0			

MSD Sample ID: **1104596-01A MSD** Units: **mg/Kg** Analysis Date: **4/25/2011 01:00 PM**
Client ID: Run ID: **WETCHEM_110425D** SeqNo: **1609513** 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	14.68	94	50-150	234.9	6.06	35	

The following samples were analyzed in this batch: 1104576-01A 1104576-02A 1104576-03A

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

1104576

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

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

CHAIN-OF-CUSTODY RECORD

Date: 21-Apr-11
COC ID: 10329
Due Date: 29-Apr-11

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1104676	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	JayLynn F Thibault	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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.thibault@alsenviro.com	eMail CC	mary.knowles@alsglobal.com	J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1104676-01B (Exc Soil @ WWT)	Soil	19/Apr/2011 14:19	(1) 2OZGNEAT	X	X								
1104676-02B (5th Street Exc Soil)	Soil	19/Apr/2011 14:37	(1) 2OZGNEAT	X	X								
1104676-03B (Maintenance Office)	Soil	19/Apr/2011 14:41	(1) 2OZGNEAT	X	X								

Comments:
Please analyze for Reactive Cyanide & Reactive Sulfide.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
					Std
Relinquished by:	Date/Time	Received by:	Date/Time		
	FedEx		4/22/11 1000		

3.2°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **22-Apr-11 10:00**

Work Order: **1104576** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 22-Apr-11 (Date) Reviewed by: Bill Carey (eSignature) 22-Apr-11 (Date)

Matrices: Soil
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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

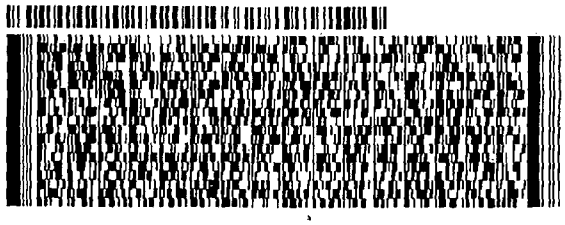
ORIGIN ID: JGQA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 21APR11
ACTWGT: 23.1 LB
CAD: 300130/CAFE2472

BILL SENDER

TO **LES ARNOLD**
ALS ENVIRONMENTAL
3352 128TH AVE.

HOLLAND MI 49424
(281) 530-5656
REF: SUBCONTRACT



FedEx
Express

J10101080101124

FRI - 22 APR A4
PRIORITY OVERNIGHT

TRK# 0201 **4340 2164 4919**

49424
MI-US
GRR

:: **NI GRRA**

5050C3/2608/DA47

Part # 156148-434 NRIT V3 12-09

Chavez, Carl J, EMNRD

From: Strange, Aaron [aaron.strange@hollycorp.com]
Sent: Thursday, June 30, 2011 4:07 PM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Request for Waste Approval
Attachments: Refrac Brick.pdf

Kim,

Please see the attached request for waste approval.

Thank you,
Aaron

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged, proprietary and/or confidential. If you
received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Refractory Brick

ESTIMATED VOLUME: 125 yds

GENERATING PROCESS: Demolition of old equipment

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 6-30-11

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Refractory Brick in the Bone Yard from the demolition of old equipment.

Estimated Volume 125 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

29-Jun-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Disposal

Work Order: **1106537**

Dear Aaron,

ALS Environmental received 1 sample on 17-Jun-2011 09:00 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 26.

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

Sincerely,

Chris Bryson

Electronically approved by Mary K Knowles

Chris Bryson
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No. T104704231-09A-TX

ALS Environmental

Date: 29-Jun-11

Client: Navajo Refining Company
Project: Disposal
Work Order: 1106537

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1106537-01	Bone Yard Refrac Brick	Solid		6/16/2011 13:45	6/17/2011 09:00	☐

Client:	Navajo Refining Company
Project:	Disposal
Work Order:	1106537

Case Narrative

Batch R111825, TCLP Volatiles, Sample 1106514-12 : MS/MSD is for an unrelated sample.

Batch R111825, TCLP Volatiles, Sample 1106514-12 : MSD RPD is for an unrelated sample.

The analysis for Reactive Cyanide and Reactive Sulfide was subcontracted to ALS Laboratory Group in Holland, MI.

ALS Environmental

Date: *29-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: Bone Yard Refrac Brick
Collection Date: 6/16/2011 01:45 PM

Work Order: 1106537
Lab ID: 1106537-01
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/22/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/22/2011 03:00 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/22/2011**	Analyst: **ALR**
Arsenic	ND		0.0500	mg/L	10	6/23/2011 07:19 AM
Barium	ND		0.0500	mg/L	10	6/23/2011 07:19 AM
Cadmium	ND		0.0200	mg/L	10	6/23/2011 07:19 AM
Chromium	**0.434**		**0.0500**	**mg/L**	10	6/23/2011 07:19 AM
Lead	**0.0645**		**0.0500**	**mg/L**	10	6/23/2011 07:19 AM
Selenium	ND		0.0500	mg/L	10	6/23/2011 07:19 AM
Silver	ND		0.0500	mg/L	10	6/23/2011 07:19 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/21/2011**	Analyst: **JLJ**
2,4,5-Trichlorophenol	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
Cresols, Total	ND		0.015	mg/L	1	6/22/2011 02:29 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
Hexachloroethane	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
Nitrobenzene	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
Pentachlorophenol	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
Pyridine	ND		0.0050	mg/L	1	6/22/2011 02:29 PM
Surr: 2,4,6-Tribromophenol	*65.6*		*42-124*	*%REC*	1	6/22/2011 02:29 PM
Surr: 2-Fluorobiphenyl	*52.4*		*48-120*	*%REC*	1	6/22/2011 02:29 PM
Surr: 2-Fluorophenol	*45.0*		*20-120*	*%REC*	1	6/22/2011 02:29 PM
Surr: 4-Terphenyl-d14	*67.0*		*51-135*	*%REC*	1	6/22/2011 02:29 PM
Surr: Nitrobenzene-d5	*53.1*		*41-120*	*%REC*	1	6/22/2011 02:29 PM
Surr: Phenol-d6	*47.9*		*20-120*	*%REC*	1	6/22/2011 02:29 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/21/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		0.10	mg/L	20	6/21/2011 05:52 PM
1,2-Dichloroethane	ND		0.10	mg/L	20	6/21/2011 05:52 PM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	6/21/2011 05:52 PM
2-Butanone	ND		0.20	mg/L	20	6/21/2011 05:52 PM
Benzene	ND		0.10	mg/L	20	6/21/2011 05:52 PM
Carbon tetrachloride	ND		0.10	mg/L	20	6/21/2011 05:52 PM
Chlorobenzene	ND		0.10	mg/L	20	6/21/2011 05:52 PM
Chloroform	ND		0.10	mg/L	20	6/21/2011 05:52 PM
Tetrachloroethene	ND		0.10	mg/L	20	6/21/2011 05:52 PM
Trichloroethene	ND		0.10	mg/L	20	6/21/2011 05:52 PM

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

ALS Environmental

Date: *29-Jun-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1106537
Sample ID: Bone Yard Refrac Brick
Lab ID: 1106537-01
Collection Date: 6/16/2011 01:45 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.10	mg/L	20	6/21/2011 05:52 PM
Surr. 1,2-Dichloroethane-d4	*102*		*70-125*	*%REC*	20	6/21/2011 05:52 PM
Surr: 4-Bromofluorobenzene	*105*		*72-125*	*%REC*	20	6/21/2011 05:52 PM
Surr. Dibromofluoromethane	*93.9*		*71-125*	*%REC*	20	6/21/2011 05:52 PM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	20	6/21/2011 05:52 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/23/2011 11:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst. **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/23/2011 11:00 AM
IGNITABILITY			**SW1030**			Analyst: **KAH**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	6/27/2011 10:30 AM
PH			**SW9045B**			Analyst: **DM**
pH	**2.54**		**0.100**	**pH Units**	1	6/21/2011 02:40 PM

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

ALS Environmental

Date 29-Jun-11

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID: **53385** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW1-062211-53385** Units: **mg/L** Analysis Date: **6/22/2011 02:35 PM**
Client ID: Run ID: **MERCURY_110622A** SeqNo: **2432463** Prep Date: **6/22/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-062111-53385** Units: **mg/L** Analysis Date: **6/22/2011 02:58 PM**
Client ID. Run ID: **MERCURY_110622A** SeqNo. **2432478** Prep Date: **6/22/2011** DF: **1**

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

LCS Sample ID: **GLCSW1-062211-53385** Units: **mg/L** Analysis Date: **6/22/2011 02:37 PM**
Client ID: Run ID: **MERCURY_110622A** SeqNo: **2432464** Prep Date: **6/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.00020	0.005	0	99.6	80-120	0			

MS Sample ID **1106611-01AMS** Units: **mg/L** Analysis Date: **6/22/2011 02:47 PM**
Client ID: Run ID: **MERCURY_110622A** SeqNo: **2432469** Prep Date: **6/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00513	0.00020	0 005	-0.000037	103	75-125	0			

MSD Sample ID: **1106611-01AMSD** Units: **mg/L** Analysis Date: **6/22/2011 02:49 PM**
Client ID: Run ID: **MERCURY_110622A** SeqNo: **2432471** Prep Date **6/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00513	0.00020	0.005	-0.000037	103	75-125	0.00513	0	20	

DUP Sample ID: **1106611-01ADUP** Units: **mg/L** Analysis Date: **6/22/2011 02:45 PM**
Client ID: Run ID: **MERCURY_110622A** SeqNo: **2432466** Prep Date. **6/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0 000037	0	20	

The following samples were analyzed in this batch: 1106537-01A

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

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID: **53391** Instrument ID **ICPMS03** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-062111-53391** Units: **mg/L** Analysis Date: **6/22/2011 03:38 PM**
Client ID: Run ID: **ICPMS03_110622A** SeqNo: **2432609** Prep Date: **6/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW2-062211-53391** Units: **mg/L** Analysis Date: **6/22/2011 03:43 PM**
Client ID: Run ID: **ICPMS03_110622A** SeqNo: **2432610** Prep Date: **6/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW2-062211-53391** Units: **mg/L** Analysis Date: **6/22/2011 03:49 PM**
Client ID: Run ID: **ICPMS03_110622A** SeqNo: **2432611** Prep Date: **6/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5045	0.050	0.5	0	101	80-120	0			
Barium	0.4781	0.050	0.5	0	95.6	80-120	0			
Cadmium	0.5045	0.020	0.5	0	101	80-120	0			
Chromium	0.5194	0.050	0.5	0	104	80-120	0			
Lead	0.4889	0.050	0.5	0	97.8	80-120	0			
Selenium	0.4813	0.050	0.5	0	96.3	80-120	0			
Silver	0.5078	0.050	0.5	0	102	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID: **53391** Instrument ID **ICPMS03** Method: **SW1311/6020**

MS Sample ID: **1106590-01CMS** Units: **mg/L** Analysis Date **6/22/2011 05:51 PM**
Client ID: Run ID. **ICPMS03_110622A** SeqNo: **2433117** Prep Date: **6/22/2011** DF. **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5054	0.050	0.5	0.001121	101	75-125	0			
Barium	2 055	0.050	0.5	1.462	119	75-125	0			
Cadmium	0.512	0.020	0.5	-0.001789	103	75-125	0			
Chromium	0.5054	0 050	0.5	-0.002273	102	75-125	0			
Lead	0.5072	0 050	0.5	-0.0003694	102	75-125	0			
Selenium	0.4876	0 050	0.5	-0.00208	97.9	75-125	0			
Silver	0.4916	0 050	0.5	-0 001956	98 7	75-125	0			

MSD Sample ID: **1106590-01CMSD** Units: **mg/L** Analysis Date: **6/22/2011 05:57 PM**
Client ID: Run ID: **ICPMS03_110622A** SeqNo: **2433118** Prep Date: **6/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4932	0.050	0.5	0.001121	98 4	75-125	0 5054	2.44	25	
Barium	2.002	0.050	0.5	1 462	108	75-125	2.055	2.61	25	
Cadmium	0.5008	0.020	0.5	-0.001789	101	75-125	0.512	2.21	25	
Chromium	0.5031	0.050	0.5	-0.002273	101	75-125	0.5054	0.456	25	
Lead	0.5007	0.050	0.5	-0.0003694	100	75-125	0.5072	1.29	25	
Selenium	0.496	0.050	0.5	-0.00208	99.6	75-125	0.4876	1.71	25	
Silver	0.486	0.050	0.5	-0.001956	97.6	75-125	0.4916	1.15	25	

DUP Sample ID **1106590-01CDUP** Units: **mg/L** Analysis Date: **6/22/2011 05:37 PM**
Client ID: Run ID: **ICPMS03_110622A** SeqNo: **2433114** Prep Date: **6/22/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0 050	0	0	0	0-0	0.001121	0	25	
Barium	1.532	0.050	0	0	0	0-0	1.462	4.68	25	
Cadmium	ND	0.020	0	0	0	0-0	-0.001789	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.002273	0	25	
Lead	ND	0.050	0	0	0	0-0	-0.0003694	0	25	
Selenium	ND	0 050	0	0	0	0-0	-0 00208	0	25	
Silver	ND	0.050	0	0	0	0-0	-0.001956	0	25	

The following samples were analyzed in this batch: 1106537-01A

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

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID: **53372** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110621-53372** Units: **µg/L** Analysis Date: **6/22/2011 12:34 PM**
Client ID. Run ID: **SV-3_110622A** SeqNo: **2432412** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*81.84*	5.0	*100*	0	*81.8*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*81.22*	5.0	*100*	0	*81.2*	*48-120*	0			
Surr: 2-Fluorophenol	*65.85*	5.0	*100*	0	*65.8*	*20-120*	0			
Surr: 4-Terphenyl-d14	*81.35*	5.0	*100*	0	*81.3*	*51-135*	0			
Surr: Nitrobenzene-d5	*81.84*	5.0	*100*	0	*81.8*	*41-120*	0			
Surr: Phenol-d6	*62.78*	5.0	*100*	0	*62.8*	*20-120*	0			

LCS Sample ID: **SLCST1-110621-53372** Units: **µg/L** Analysis Date: **6/22/2011 12:57 PM**
Client ID: Run ID: **SV-3_110622A** SeqNo: **2432413** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	93.14	5.0	100	0	93.1	52-115	0			
2,4,6-Trichlorophenol	70.26	5.0	100	0	70.3	53-115	0			
2,4-Dinitrotoluene	38.74	5.0	50	0	77.5	56-115	0			
Cresols, Total	166.4	15	250	0	66.6	35-115	0			
Hexachlorobenzene	44.62	5.0	50	0	89.2	54-115	0			
Hexachlorobutadiene	43.78	5.0	50	0	87.6	51-115	0			
Hexachloroethane	39.75	5.0	50	0	79.5	54-115	0			
Nitrobenzene	40.42	5.0	50	0	80.8	40-124	0			
Pentachlorophenol	76.11	5.0	100	0	76.1	45-125	0			
Pyridine	30.23	5.0	50	0	60.5	34-115	0			
Surr: 2,4,6-Tribromophenol	*72.53*	5.0	*100*	0	*72.5*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*75.11*	5.0	*100*	0	*75.1*	*48-120*	0			
Surr: 2-Fluorophenol	*73.58*	5.0	*100*	0	*73.6*	*20-120*	0			
Surr: 4-Terphenyl-d14	*76.63*	5.0	*100*	0	*76.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*75.76*	5.0	*100*	0	*75.8*	*41-120*	0			
Surr: Phenol-d6	*66.47*	5.0	*100*	0	*66.5*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID. **53372** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110621-53372** Units: **µg/L** Analysis Date. **6/22/2011 01:20 PM**

Client ID: Run ID: **SV-3_110622A** SeqNo: **2432415** Prep Date: **6/21/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	103.4	5.0	100	0	103	52-115	93.14	10.4	25	
2,4,6-Trichlorophenol	75.62	5.0	100	0	75.6	53-115	70 26	7.35	25	
2,4-Dinitrotoluene	41.47	5.0	50	0	82.9	56-115	38.74	6.82	25	
Cresols, Total	174.4	15	250	0	69.7	35-115	166.4	4.65	25	
Hexachlorobenzene	47.13	5.0	50	0	94.3	54-115	44.62	5.48	25	
Hexachlorobutadiene	47.36	5.0	50	0	94.7	51-115	43.78	7.86	25	
Hexachloroethane	41.65	5.0	50	0	83.3	54-115	39 75	4.67	25	
Nitrobenzene	43.21	5.0	50	0	86.4	40-124	40 42	6.66	25	
Pentachlorophenol	79.96	5.0	100	0	80	45-125	76.11	4.93	25	
Pyridine	32.13	5.0	50	0	64.3	34-115	30 23	6.08	25	
Surr. 2,4,6-Tribromophenol	*73.82*	5.0	*100*	0	*73.8*	*42-124*	72.53	*1.77*	*25*	
Surr. 2-Fluorobiphenyl	*80.45*	5 0	*100*	0	*80 4*	*48-120*	75.11	*6.87*	*25*	
Surr: 2-Fluorophenol	*77.5*	5.0	*100*	0	*77.5*	*20-120*	73.58	*5.18*	*25*	
Surr. 4-Terphenyl-d14	*80.62*	5.0	*100*	0	*80 6*	*51-135*	76 63	*5 07*	*25*	
Surr: Nitrobenzene-d5	*79.37*	5.0	*100*	0	*79.4*	*41-120*	75.76	*4.65*	*25*	
Surr: Phenol-d6	*68.91*	5.0	*100*	0	*68.9*	*20-120*	66.47	*3.62*	*25*	

The following samples were analyzed in this batch: 1106537-01A

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

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID: **R111825** Instrument ID **VOA7** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-062111-R111825** Units: **µg/L** Analysis Date: **6/21/2011 12:20 PM**
Client ID: Run ID: **VOA7_110621B** SeqNo: **2433643** Prep Date. DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	2.0								
Surr: 1,2-Dichloroethane-d4	*49.35*	5.0	*50*	0	*98.7*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.48*	5.0	*50*	0	*103*	*72.4-125*	0			
Surr: Dibromofluoromethane	*45.49*	5.0	*50*	0	*91*	*71.2-125*	0			
Surr: Toluene-d8	*51.38*	5.0	*50*	0	*103*	*75-125*	0			

MBLK Sample ID: **MBLKV1-062111-R111825** Units: **µg/L** Analysis Date: **6/21/2011 04:10 PM**
Client ID: Run ID: **VOA7_110621B** SeqNo: **2433650** Prep Date: **6/21/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	40								
Surr: 1,2-Dichloroethane-d4	*1011*	100	*1000*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*1027*	100	*1000*	0	*103*	*72.4-125*	0			
Surr: Dibromofluoromethane	*922.7*	100	*1000*	0	*92.3*	*71.2-125*	0			
Surr: Toluene-d8	*1007*	100	*1000*	0	*101*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID: **R111825** Instrument ID **VOA7** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-062111-R111825** Units: **µg/L** Analysis Date. **6/21/2011 11:28 AM**
Client ID: Run ID: **VOA7_110621B** SeqNo **2433641** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	49 24	5.0	50	0	98.5	73-124	0			
1,2-Dichloroethane	49.63	5.0	50	0	99.3	76-120	0			
1,4-Dichlorobenzene	51.11	5.0	50	0	102	70-130	0			
2-Butanone	96 85	10	100	0	96.9	70-130	0			
Benzene	49.73	5 0	50	0	99.5	70-128	0			
Carbon tetrachloride	50.17	5 0	50	0	100	70-130	0			
Chlorobenzene	49 37	5.0	50	0	98.7	72-127	0			
Chloroform	48 65	5.0	50	0	97.3	70-130	0			
Tetrachloroethene	49.44	5.0	50	0	98.9	70-130	0			
Trichloroethene	47.31	5.0	50	0	94.6	72-129	0			
Vinyl chloride	48.86	2.0	50	0	97.7	70-130	0			
Surr. 1,2-Dichloroethane-d4	*48.81*	5 0	*50*	0	*97.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*51.96*	5.0	*50*	0	*104*	*72-125*	0			
Surr. Dibromofluoromethane	*46.38*	5.0	*50*	0	*92.8*	*71-125*	0			
Surr Toluene-d8	*50 64*	5.0	*50*	0	*101*	*75-125*	0			

MS Sample ID **1106514-12AMS** Units: **µg/L** Analysis Date: **6/21/2011 02:02 PM**
Client ID: Run ID **VOA7_110621B** SeqNo: **2433647** Prep Date. DF. 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	28.62	5.0	50	0	57.2	73-124	0			S
1,2-Dichloroethane	40.35	5.0	50	0	80.7	76-120	0			
1,4-Dichlorobenzene	36.74	5.0	50	0	73.5	70-130	0			
2-Butanone	88.48	10	100	0	88.5	70-130	0			
Benzene	37.04	5 0	50	0	74.1	70-128	0			
Carbon tetrachloride	28.64	5.0	50	0	57.3	70-130	0			S
Chlorobenzene	37.48	5.0	50	0	75	72-127	0			
Chloroform	37	5.0	50	0	74	70-130	0			
Tetrachloroethene	28.98	5.0	50	0	58	70-130	0			S
Trichloroethene	31.36	5.0	50	0	62.7	72-129	0			S
Vinyl chloride	31.29	2.0	50	0	62.6	70-130	0			S
Surr 1,2-Dichloroethane-d4	*50.44*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*52.04*	5.0	*50*	0	*104*	*72-125*	0			
Surr: Dibromofluoromethane	*47.77*	5 0	*50*	0	*95.5*	*71-125*	0			
Surr: Toluene-d8	*51 24*	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: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID: **R111825** Instrument ID **VOA7** Method: **SW1311/8260B**

MSD Sample ID: **1106514-12AMSD** Units: **µg/L** Analysis Date: **6/21/2011 02:28 PM**

Client ID: Run ID: **VOA7_110621B** SeqNo: **2433649** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	23.21	5.0	50	0	46.4	73-124	28.62	20 9	20	SR
1,2-Dichloroethane	39.28	5.0	50	0	78.6	76-120	40.35	2.7	20	
1,4-Dichlorobenzene	34.22	5.0	50	0	68.4	70-130	36.74	7.11	20	S
2-Butanone	88.56	10	100	0	88.6	70-130	88.48	0.0894	20	
Benzene	35.71	5.0	50	0	71.4	70-128	37.04	3.67	20	
Carbon tetrachloride	22.21	5.0	50	0	44.4	70-130	28.64	25 3	20	SR
Chlorobenzene	36.16	5.0	50	0	72.3	72-127	37.48	3 6	20	
Chloroform	35.4	5.0	50	0	70 8	70-130	37	4.41	20	
Tetrachloroethene	25.54	5.0	50	0	51.1	70-130	28.98	12.6	20	S
Trichloroethene	29.24	5.0	50	0	58.5	72-129	31.36	7	20	S
Vinyl chloride	24.24	2.0	50	0	48.5	70-130	31.29	25.4	20	SR
Surr: 1,2-Dichloroethane-d4	*49.44*	5.0	*50*	0	*98.9*	*70-125*	50.44	*2*	*20*	
Surr: 4-Bromofluorobenzene	*52.02*	5.0	*50*	0	*104*	*72-125*	52.04	*0.037*	*20*	
Surr: Dibromofluoromethane	*46.14*	5.0	*50*	0	*92.3*	*71-125*	47.77	*3.47*	*20*	
Surr. Toluene-d8	*50.92*	5.0	*50*	0	*102*	*75-125*	51.24	*0.626*	*20*	

The following samples were analyzed in this batch: 1106537-01A

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

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID: **R111712** Instrument ID **WetChem** Method **SW9045B**

LCS Sample ID: **WLCSS1-062111-R111712** Units: **pH Units** Analysis Date: **6/21/2011 02:40 PM**

Client ID: Run ID: **WETCHEM_110621K** SeqNo: **2430816** 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: **1106537-01Adup** Units: **pH Units** Analysis Date: **6/21/2011 02:40 PM**

Client ID: **Bone Yard Refrac Brick** Run ID: **WETCHEM_110621K** SeqNo: **2430832** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	2.6	0.10	0	0	0	0-0	2.54	2.33	20	

The following samples were analyzed in this batch: 1106537-01A

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

Client: Navajo Refining Company
Work Order: 1106537
Project: Disposal

QC BATCH REPORT

Batch ID. **R112026** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1106537-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **6/27/2011 10:30 AM**

Client ID: **Bone Yard Refrac Brick** Run ID: **WETCHEM_110627A** SeqNo: **2437818** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1106537-01A

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

ALS Environmental

Date: 29-Jun-11

Client: Navajo Refining Company
Project: Disposal
WorkOrder: 1106537

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
;urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

1106537

Page 1 of 1

NAVAJO REFINING: Navajo Refining Company

Project: Disposal

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP SemiVOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCT
Address	P.O. Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88210	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Bone Yard Refrac Brick	6-16-11	1345	S	N0	1	X	X	X	X							
2	Temp blank																
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Relinquished by:	Date: 6-16-11	Time: 1615	Received by:	Notes:
Relinquished by:	Date:	Time:	Received by (Laboratory): 6-17-11 0900	Cooler ID: 2971 / Cooler Temp:
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	QC Package: (Check One Box Below)

☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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ALS Environmental

Sample Receipt Checklist

Client Name. **NAVAJO REFINING** Date/Time Received. **17-Jun-11 09:00**

Work Order: **1106537** Received by. **PMG**

Checklist completed by Sarah M. Gross 17-Jun-11 Reviewed by. Chris Bryan 17-Jun-11
eSignature Date eSignature Date

Matrices. Solid
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.8	002	
Cooler(s)/Kit(s):	3730		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

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

CUS
Date: 6-16-11
Name: Aguilera
Company: Stanley

STODY SEAL
Time: 1015
Stanley
to Rollins Co.

Seal Broken By:
Date: 6-17-11

PRIORITY OVERNIGHT
FRI
Deliver By:
17JUN11
Entry 790805 00:35 17JUN11
TRK# 4347 1019 4040 FORM 0201
IAH
77099 - TX - US
BO SGRA

ALS Group USA, Corp

Date: 27-Jun-11

Client: ALS Environmental
Project: 1106537
Work Order: **1106558**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1106558-01	1106537-01B	Solid		06/16/11 13:45	06/21/11 10:00	☐

ALS Group USA, Corp

Date: 27-Jun-11

Client: ALS Environmental
Project: 1106537
WorkOrder: 1106558

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *27-Jun-11*

Client: ALS Environmental
Project: 1106537
Work Order: 1106558
Sample ID: 1106537-01B
Lab ID: 1106558-01
Collection Date: 06/16/11 01.45 PM
Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40	mg/Kg	1	06/23/11 11:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40	mg/Kg	1	06/23/11 11 00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Jun-11

Client: ALS Environmental

Work Order: 1106558

Project: 1106537

QC BATCH REPORT

Batch ID: **R91366** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-110622-R91366** Units: **mg/Kg** Analysis Date **06/22/11 10:00 AM**

Client ID: Run ID: **WETCHEM_110622A** SeqNo: **1656007** 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: 1106558-01A

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

Client: ALS Environmental
Work Order: 1106558
Project: 1106537

QC BATCH REPORT

Batch ID. **R91367** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-110622-R91367** Units: **mg/Kg** Analysis Date: **06/22/11 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656013** Prep Date: DF: **1**

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

LCS Sample ID. **WLCSW1-110622-R91367** Units: **mg/Kg** Analysis Date: **06/22/11 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656014** 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	0			

LCSD Sample ID: **WLCSDW1-110622-R91367** Units: **mg/Kg** Analysis Date: **06/22/11 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656022** 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	234.9	0	35	

MS Sample ID: **1106472-01A MS** Units: **mg/Kg** Analysis Date: **06/22/11 10:00 AM**
Client ID: Run ID: **WETCHEM_110622B** SeqNo: **1656017** 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	50-150	0			

MSD Sample ID: **1106472-01A MSD** Units: **mg/Kg** Analysis Date: **06/22/11 10:00 AM**
Client ID Run ID: **WETCHEM_110622B** SeqNo: **1656018** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	234.9	6.06	35	

The following samples were analyzed in this batch: 1106558-01A

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

1106558

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 17-Jun-11
COC ID: 10589
Due Date 29-Jun-11

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1106537	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	Chris Bryson	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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	chris.bryson@alsglobal.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1106537-01B (Bone Yard Refrac Brick)	Solid	16/Jun/2011 13:45	(1) 4OZGNEAT	X	X								

Comments:

Please analyze for reactive cyanide & reactive sulfide. cc Mary.knowles & Glenda.ramos@alsglobal.com

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	6/20/11		6/21/11 1000		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

2.4°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received. **21-Jun-11 10:00**

Work Order: **1106558** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 21-Jun-11 (Date) Reviewed by: Bill Carey (eSignature) 21-Jun-11 (Date)

Matrices: Solid
Carrier name. FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted.

Contacted By: Regarding:

Comments

CorrectiveAction:

Chavez, Carl J, EMNRD

From: Strange, Aaron [aaron.strange@hollycorp.com]
Sent: Tuesday, April 05, 2011 8:34 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Requests for Waste Approval
Attachments: Gas Oil Soil South Flare and SRU2 D-290.pdf

Kim,

Please see the attached requests for waste approval. There are three separate wastes in the attachment. Also you will notice on the analytical that we sampled a forth waste (WW Effluent Leak) that also shows to be non hazardous, however we already have an earlier approval for this waste.

Thank you,
Aaron

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged, proprietary and/or confidential. If you
received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated/Contaminated soil

ESTIMATED VOLUME: 60 yds

GENERATING PROCESS: Gas Oil contaminated soil

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: [signature]
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 4-9-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Navajo Refining Co.

2. Originating Site:
Artesia Plant

3. Location of Material (Street Address, City, State or ULSTR):
501 E Main Artesia NM

4. Source and Description of Waste:
Gas Oil contaminated soil.

Estimated Volume 60 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated Soil

ESTIMATED VOLUME: 40 yds

GENERATING PROCESS: Soil excavated from flare drum foundation at South Plant Flare.

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 4-5-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

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REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Soil excavated from flare drum foundation at South Plant Flare

Estimated Volume 40 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Activated Alumina Catalysts

ESTIMATED VOLUME: 100 yds

GENERATING PROCESS: Catalysts from D-290 in the SRU #2 (Unit 30)

REMARKS: _____

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 4-5-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Activated Alumina Catalysts from D-290 in the SRU #2 (Unit 30).

Estimated Volume 100 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

01-Apr-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: TCLP Parameters

Work Order: **1103639**

Dear Aaron,

ALS Environmental received 4 samples on 18-Mar-2011 08:50 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 35.

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

Sincerely,

Jay Lynn F Thibault

Electronically approved by: Glenda H. Ramos

JayLynn F Thibault
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 01-Apr-11

Client: Navajo Refining Company
Project: TCLP Parameters
Work Order: 1103639

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1103639-01	WW Effluent Leak 2/13/2011	Soil		3/17/2011 09:12	3/18/2011 08:50	☐
1103639-02	Gas Oil Contaminated Soil	Soil		3/17/2011 09:25	3/18/2011 08:50	☐
1103639-03	South Flate Excavated Soil	Soil		3/17/2011 09:32	3/18/2011 08:50	☐
1103639-04	D-290	Soil		3/17/2011 14:00	3/18/2011 08:50	☐

ALS Environmental

Date: *01-Apr-11*

Client: Navajo Refining Company
Project: TCLP Parameters
Work Order: 1103639
Sample ID: WW Effluent Leak 2/13/2011
Lab ID: 1103639-01
Collection Date: 3/17/2011 09:12 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **3/25/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	3/25/2011 05:14 PM
TCLP METALS			**SW1311/6020**		Prep Date: **3/23/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	3/23/2011 07:58 PM
Barium	**0.127**		**0.0500**	**mg/L**	10	3/23/2011 07:58 PM
Cadmium	ND		0.0500	mg/L	10	3/23/2011 07:58 PM
Chromium	ND		0.0500	mg/L	10	3/23/2011 07:58 PM
Lead	ND		0.0500	mg/L	10	3/23/2011 07:58 PM
Selenium	ND		0.0500	mg/L	10	3/23/2011 07:58 PM
Silver	ND		0.0500	mg/L	10	3/23/2011 07:58 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **3/22/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	3/28/2011 03:39 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	3/28/2011 03:39 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	3/28/2011 03:39 PM
Cresols, Total	ND		15	µg/L	1	3/28/2011 03:39 PM
Hexachlorobenzene	ND		5.0	µg/L	1	3/28/2011 03:39 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	3/28/2011 03:39 PM
Hexachloroethane	ND		5.0	µg/L	1	3/28/2011 03:39 PM
Nitrobenzene	ND		5.0	µg/L	1	3/28/2011 03:39 PM
Pentachlorophenol	ND		5.0	µg/L	1	3/28/2011 03:39 PM
Pyridine	ND		5.0	µg/L	1	3/28/2011 03:39 PM
Surr: 2,4,6-Tribromophenol	*43.3*		*42-124*	*%REC*	1	3/28/2011 03:39 PM
Surr: 2-Fluorobiphenyl	*48.1*		*48-120*	*%REC*	1	3/28/2011 03:39 PM
Surr: 2-Fluorophenol	*22.4*		*20-120*	*%REC*	1	3/28/2011 03:39 PM
Surr: 4-Terphenyl-d14	*52.6*		*51-135*	*%REC*	1	3/28/2011 03:39 PM
Surr: Nitrobenzene-d5	*42.6*		*41-120*	*%REC*	1	3/28/2011 03:39 PM
Surr: Phenol-d6	*17.2*	S	*20-120*	*%REC*	1	3/28/2011 03:39 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **3/22/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	3/25/2011 01:23 AM
1,2-Dichloroethane	ND		100	µg/L	20	3/25/2011 01:23 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	3/25/2011 01:23 AM
2-Butanone	ND		200	µg/L	20	3/25/2011 01:23 AM
Benzene	ND		100	µg/L	20	3/25/2011 01:23 AM
Carbon tetrachloride	ND		100	µg/L	20	3/25/2011 01:23 AM
Chlorobenzene	ND		100	µg/L	20	3/25/2011 01:23 AM
Chloroform	ND		100	µg/L	20	3/25/2011 01:23 AM
Tetrachloroethene	ND		100	µg/L	20	3/25/2011 01:23 AM
Trichloroethene	ND		100	µg/L	20	3/25/2011 01:23 AM

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

ALS Environmental

Date: *01-Apr-11*

Client: Navajo Refining Company
Project: TCLP Parameters
Work Order: 1103639
Sample ID: WW Effluent Leak 2/13/2011
Lab ID: 1103639-01
Collection Date: 3/17/2011 09:12 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	3/25/2011 01:23 AM
Surr: 1,2-Dichloroethane-d4	*88.2*		*70-125*	*%REC*	20	3/25/2011 01:23 AM
Surr: 4-Bromofluorobenzene	*98.5*		*72-125*	*%REC*	20	3/25/2011 01:23 AM
Surr: Dibromofluoromethane	*84.6*		*71-125*	*%REC*	20	3/25/2011 01:23 AM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	20	3/25/2011 01:23 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	3/23/2011 09:00 AM
PH			**SW9045B**			Analyst: **DM**
pH	**7.65**		**0.100**	**pH Units**	1	3/29/2011 12:00 PM

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

ALS Environmental

Date: *01-Apr-11*

Client: Navajo Refining Company
Project: TCLP Parameters
Sample ID: Gas Oil Contaminated Soil
Collection Date: 3/17/2011 09:25 AM

Work Order: 1103639
Lab ID: 1103639-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **3/25/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	3/25/2011 05:17 PM
TCLP METALS			**SW1311/6020**		Prep Date: **3/23/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	3/23/2011 08:04 PM
Barium	**0.414**		**0.0500**	**mg/L**	10	3/23/2011 08:04 PM
Cadmium	ND		0.0500	mg/L	10	3/23/2011 08:04 PM
Chromium	ND		0.0500	mg/L	10	3/23/2011 08:04 PM
Lead	ND		0.0500	mg/L	10	3/23/2011 08:04 PM
Selenium	ND		0.0500	mg/L	10	3/23/2011 08:04 PM
Silver	ND		0.0500	mg/L	10	3/23/2011 08:04 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **3/22/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	3/23/2011 02:29 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	3/23/2011 02:29 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	3/23/2011 02:29 PM
Cresols, Total	ND		15	µg/L	1	3/23/2011 02:29 PM
Hexachlorobenzene	ND		5.0	µg/L	1	3/23/2011 02:29 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	3/23/2011 02:29 PM
Hexachloroethane	ND		5.0	µg/L	1	3/23/2011 02:29 PM
Nitrobenzene	ND		5.0	µg/L	1	3/23/2011 02:29 PM
Pentachlorophenol	ND		5.0	µg/L	1	3/23/2011 02:29 PM
Pyridine	ND		5.0	µg/L	1	3/23/2011 02:29 PM
Surr: 2,4,6-Tribromophenol	*67.1*		*42-124*	*%REC*	1	3/23/2011 02:29 PM
Surr: 2-Fluorobiphenyl	*55.4*		*48-120*	*%REC*	1	3/23/2011 02:29 PM
Surr: 2-Fluorophenol	*38.4*		*20-120*	*%REC*	1	3/23/2011 02:29 PM
Surr: 4-Terphenyl-d14	*64.2*		*51-135*	*%REC*	1	3/23/2011 02:29 PM
Surr: Nitrobenzene-d5	*42.2*		*41-120*	*%REC*	1	3/23/2011 02:29 PM
Surr: Phenol-d6	*38.7*		*20-120*	*%REC*	1	3/23/2011 02:29 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **3/22/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	3/25/2011 01:50 AM
1,2-Dichloroethane	ND		100	µg/L	20	3/25/2011 01:50 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	3/25/2011 01:50 AM
2-Butanone	ND		200	µg/L	20	3/25/2011 01:50 AM
Benzene	ND		100	µg/L	20	3/25/2011 01:50 AM
Carbon tetrachloride	ND		100	µg/L	20	3/25/2011 01:50 AM
Chlorobenzene	ND		100	µg/L	20	3/25/2011 01:50 AM
Chloroform	ND		100	µg/L	20	3/25/2011 01:50 AM
Tetrachloroethene	ND		100	µg/L	20	3/25/2011 01:50 AM
Trichloroethene	ND		100	µg/L	20	3/25/2011 01:50 AM

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

ALS Environmental

Date: *01-Apr-11*

Client: Navajo Refining Company
Project: TCLP Parameters
Work Order: 1103639
Sample ID: Gas Oil Contaminated Soil
Lab ID: 1103639-02
Collection Date: 3/17/2011 09:25 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	3/25/2011 01:50 AM
Surr: 1,2-Dichloroethane-d4	*86.9*		*70-125*	*%REC*	20	3/25/2011 01:50 AM
Surr: 4-Bromofluorobenzene	*98.6*		*72-125*	*%REC*	20	3/25/2011 01:50 AM
Surr: Dibromofluoromethane	*84.3*		*71-125*	*%REC*	20	3/25/2011 01:50 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	20	3/25/2011 01:50 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	Negative			Burn Rate, mm/	1	3/23/2011 09:00 AM
PH			**SW9045B**			Analyst: **DM**
pH	8.42		0.100	pH Units	1	3/29/2011 12:00 PM

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

ALS Environmental

Date: *01-Apr-11*

Client: Navajo Refining Company
Project: TCLP Parameters
Work Order: 1103639
Sample ID: South Flate Excavated Soil
Lab ID: 1103639-03
Collection Date: 3/17/2011 09:32 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **3/25/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	3/25/2011 05:19 PM
TCLP METALS			**SW1311/6020**		Prep Date: **3/23/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	3/23/2011 08:11 PM
Barium	**0.328**		**0.0500**	**mg/L**	10	3/23/2011 08:11 PM
Cadmium	ND		0.0500	mg/L	10	3/23/2011 08:11 PM
Chromium	ND		0.0500	mg/L	10	3/23/2011 08:11 PM
Lead	ND		0.0500	mg/L	10	3/23/2011 08:11 PM
Selenium	ND		0.0500	mg/L	10	3/23/2011 08:11 PM
Silver	ND		0.0500	mg/L	10	3/23/2011 08:11 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **3/22/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	3/23/2011 02:51 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	3/23/2011 02:51 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	3/23/2011 02:51 PM
Cresols, Total	ND		15	µg/L	1	3/23/2011 02:51 PM
Hexachlorobenzene	ND		5.0	µg/L	1	3/23/2011 02:51 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	3/23/2011 02:51 PM
Hexachloroethane	ND		5.0	µg/L	1	3/23/2011 02:51 PM
Nitrobenzene	ND		5.0	µg/L	1	3/23/2011 02:51 PM
Pentachlorophenol	ND		5.0	µg/L	1	3/23/2011 02:51 PM
Pyridine	ND		5.0	µg/L	1	3/23/2011 02:51 PM
Surr: 2,4,6-Tribromophenol	*72.6*		*42-124*	*%REC*	1	3/23/2011 02:51 PM
Surr: 2-Fluorobiphenyl	*49.1*		*48-120*	*%REC*	1	3/23/2011 02:51 PM
Surr: 2-Fluorophenol	*41.4*		*20-120*	*%REC*	1	3/23/2011 02:51 PM
Surr: 4-Terphenyl-d14	*71.8*		*51-135*	*%REC*	1	3/23/2011 02:51 PM
Surr: Nitrobenzene-d5	*44.7*		*41-120*	*%REC*	1	3/23/2011 02:51 PM
Surr: Phenol-d6	*47.3*		*20-120*	*%REC*	1	3/23/2011 02:51 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **3/22/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	3/25/2011 02:17 AM
1,2-Dichloroethane	ND		100	µg/L	20	3/25/2011 02:17 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	3/25/2011 02:17 AM
2-Butanone	ND		200	µg/L	20	3/25/2011 02:17 AM
Benzene	ND		100	µg/L	20	3/25/2011 02:17 AM
Carbon tetrachloride	ND		100	µg/L	20	3/25/2011 02:17 AM
Chlorobenzene	ND		100	µg/L	20	3/25/2011 02:17 AM
Chloroform	ND		100	µg/L	20	3/25/2011 02:17 AM
Tetrachloroethene	ND		100	µg/L	20	3/25/2011 02:17 AM
Trichloroethene	ND		100	µg/L	20	3/25/2011 02:17 AM

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

ALS Environmental

Date: *01-Apr-11*

Client: Navajo Refining Company
Project: TCLP Parameters
Work Order: 1103639
Sample ID: South Flate Excavated Soil
Lab ID: 1103639-03
Collection Date: 3/17/2011 09:32 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	3/25/2011 02:17 AM
Surr: 1,2-Dichloroethane-d4	*86.7*		*70-125*	*%REC*	20	3/25/2011 02:17 AM
Surr: 4-Bromofluorobenzene	*96.9*		*72-125*	*%REC*	20	3/25/2011 02:17 AM
Surr: Dibromofluoromethane	*83.6*		*71-125*	*%REC*	20	3/25/2011 02:17 AM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	20	3/25/2011 02:17 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	Negative			Burn Rate, mm/	1	3/23/2011 09:00 AM
PH			**SW9045B**			Analyst: **DM**
pH	**7.64**		**0.100**	**pH Units**	1	3/29/2011 12:00 PM

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

ALS Environmental

Date: *01-Apr-11*

Client: Navajo Refining Company
Project: TCLP Parameters
Work Order: 1103639
Sample ID: D-290
Lab ID: 1103639-04
Collection Date: 3/17/2011 02:00 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **3/25/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	3/25/2011 05:06 PM
TCLP METALS			**SW1311/6020**		Prep Date: **3/23/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	3/23/2011 08:17 PM
Barium	ND		0.0500	mg/L	10	3/23/2011 08:17 PM
Cadmium	ND		0.0500	mg/L	10	3/23/2011 08:17 PM
Chromium	ND		0.0500	mg/L	10	3/23/2011 08:17 PM
Lead	ND		0.0500	mg/L	10	3/23/2011 08:17 PM
Selenium	ND		0.0500	mg/L	10	3/23/2011 08:17 PM
Silver	ND		0.0500	mg/L	10	3/23/2011 08:17 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **3/22/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	3/23/2011 03:13 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	3/23/2011 03:13 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	3/23/2011 03:13 PM
Cresols, Total	ND		15	µg/L	1	3/23/2011 03:13 PM
Hexachlorobenzene	ND		5.0	µg/L	1	3/23/2011 03:13 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	3/23/2011 03:13 PM
Hexachloroethane	ND		5.0	µg/L	1	3/23/2011 03:13 PM
Nitrobenzene	ND		5.0	µg/L	1	3/23/2011 03:13 PM
Pentachlorophenol	ND		5.0	µg/L	1	3/23/2011 03:13 PM
Pyridine	ND		5.0	µg/L	1	3/23/2011 03:13 PM
Surr: 2,4,6-Tribromophenol	*68.4*		*42-124*	*%REC*	1	3/23/2011 03:13 PM
Surr: 2-Fluorobiphenyl	*48.4*		*48-120*	*%REC*	1	3/23/2011 03:13 PM
Surr: 2-Fluorophenol	*43.3*		*20-120*	*%REC*	1	3/23/2011 03:13 PM
Surr: 4-Terphenyl-d14	*70.7*		*51-135*	*%REC*	1	3/23/2011 03:13 PM
Surr: Nitrobenzene-d5	*47.5*		*41-120*	*%REC*	1	3/23/2011 03:13 PM
Surr: Phenol-d6	*47.3*		*20-120*	*%REC*	1	3/23/2011 03:13 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **3/22/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	3/25/2011 02:44 AM
1,2-Dichloroethane	ND		100	µg/L	20	3/25/2011 02:44 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	3/25/2011 02:44 AM
2-Butanone	ND		200	µg/L	20	3/25/2011 02:44 AM
Benzene	ND		100	µg/L	20	3/25/2011 02:44 AM
Carbon tetrachloride	ND		100	µg/L	20	3/25/2011 02:44 AM
Chlorobenzene	ND		100	µg/L	20	3/25/2011 02:44 AM
Chloroform	ND		100	µg/L	20	3/25/2011 02:44 AM
Tetrachloroethene	ND		100	µg/L	20	3/25/2011 02:44 AM
Trichloroethene	ND		100	µg/L	20	3/25/2011 02:44 AM

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

ALS Environmental

Date: *01-Apr-11*

Client: Navajo Refining Company
Project: TCLP Parameters
Work Order: 1103639
Sample ID: D-290
Lab ID: 1103639-04
Collection Date: 3/17/2011 02:00 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	3/25/2011 02:44 AM
Surr: 1,2-Dichloroethane-d4	*89.8*		*70-125*	*%REC*	20	3/25/2011 02:44 AM
Surr: 4-Bromofluorobenzene	*98.9*		*72-125*	*%REC*	20	3/25/2011 02:44 AM
Surr: Dibromofluoromethane	*86.3*		*71-125*	*%REC*	20	3/25/2011 02:44 AM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	20	3/25/2011 02:44 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	3/23/2011 09:00 AM
PH			**SW9045B**			Analyst: **DM**
pH	**3.80**		**0.100**	**pH Units**	1	3/29/2011 12:00 PM

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

ALS Environmental

Date: 01-Apr-11

Client: Navajo Refining Company

Work Order: 1103639

Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **51016** Instrument ID **ICPMS04** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-032211-51016** Units: **mg/L** Analysis Date: **3/23/2011 06:17 PM**

Client ID: Run ID: **ICPMS04_110323A** SeqNo: **2322874** Prep Date: **3/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKT2-032211-51016** Units: **mg/L** Analysis Date: **3/23/2011 06:23 PM**

Client ID: Run ID: **ICPMS04_110323A** SeqNo: **2322876** Prep Date: **3/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	0.008668	0.050								J
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW5-032311-51016** Units: **mg/L** Analysis Date: **3/23/2011 06:29 PM**

Client ID: Run ID: **ICPMS04_110323A** SeqNo: **2322877** Prep Date: **3/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **51016** Instrument ID **ICPMS04** Method: **SW1311/6020**

LCS Sample ID: **MLCSW5-032311-51016** Units: **mg/L** Analysis Date: **3/23/2011 06:36 PM**
Client ID: Run ID: **ICPMS04_110323A** SeqNo: **2322879** Prep Date: **3/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4901	0.050	0.5	0	98	80-120	0			
Barium	0.5002	0.050	0.5	0	100	80-120	0			
Cadmium	0.5161	0.050	0.5	0	103	80-120	0			
Chromium	0.5155	0.050	0.5	0	103	80-120	0			
Lead	0.5331	0.050	0.5	0	107	80-120	0			
Selenium	0.4938	0.050	0.5	0	98.8	80-120	0			
Silver	0.5216	0.050	0.5	0	104	80-120	0			

MS Sample ID: **1103573-01AMS** Units: **mg/L** Analysis Date: **3/23/2011 07:08 PM**
Client ID: Run ID: **ICPMS04_110323A** SeqNo: **2322886** Prep Date: **3/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4865	0.050	0.5	-0.007613	98.8	75-125	0			
Barium	0.646	0.050	0.5	0.1358	102	75-125	0			
Cadmium	0.5069	0.050	0.5	-0.000085	101	75-125	0			
Chromium	0.5037	0.050	0.5	0.000144	101	75-125	0			
Lead	0.5359	0.050	0.5	0.000665	107	75-125	0			
Selenium	0.4604	0.050	0.5	-0.000899	92.3	75-125	0			
Silver	0.4847	0.050	0.5	-0.000134	97	75-125	0			

MSD Sample ID: **1103573-01AMSD** Units: **mg/L** Analysis Date: **3/23/2011 07:14 PM**
Client ID: Run ID: **ICPMS04_110323A** SeqNo: **2322888** Prep Date: **3/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.496	0.050	0.5	-0.007613	101	75-125	0.4865	1.93	25	
Barium	0.6493	0.050	0.5	0.1358	103	75-125	0.646	0.508	25	
Cadmium	0.5182	0.050	0.5	-0.000085	104	75-125	0.5069	2.22	25	
Chromium	0.5157	0.050	0.5	0.000144	103	75-125	0.5037	2.36	25	
Lead	0.5281	0.050	0.5	0.000665	105	75-125	0.5359	1.47	25	
Selenium	0.4635	0.050	0.5	-0.000899	92.9	75-125	0.4604	0.665	25	
Silver	0.4887	0.050	0.5	-0.000134	97.8	75-125	0.4847	0.826	25	

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **51016** Instrument ID **ICPMS04** Method: **SW1311/6020**

DUP Sample ID: **1103573-01ADUP** Units: **mg/L** Analysis Date: **3/23/2011 07:01 PM**

Client ID: Run ID: **ICPMS04_110323A** SeqNo: **2322885** Prep Date: **3/23/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	-0.007613	0	25	
Barium	0.136	0.050	0	0	0	0-0	0.1358	0.135	25	
Cadmium	ND	0.050	0	0	0	0-0	-0.000085	0	25	
Chromium	ND	0.050	0	0	0	0-0	0.000144	0	25	
Lead	ND	0.050	0	0	0	0-0	0.000665	0	25	
Selenium	ND	0.050	0	0	0	0-0	-0.000899	0	25	
Silver	ND	0.050	0	0	0	0-0	-0.000134	0	25	

The following samples were analyzed in this batch: 1103639-01A 1103639-02A 1103639-03A 1103639-04A

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **51065** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW3-032511-51065** Units: **mg/L** Analysis Date: **3/25/2011 04:56 PM**
Client ID: Run ID: **MERCURY_110325A** SeqNo: **2324578** Prep Date: **3/25/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-032511-51065** Units: **mg/L** Analysis Date: **3/25/2011 05:04 PM**
Client ID: Run ID: **MERCURY_110325A** SeqNo: **2324580** Prep Date: **3/25/2011** DF: **1**

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

LCS Sample ID: **GLCSW3-032511-51065** Units: **mg/L** Analysis Date: **3/25/2011 04:58 PM**
Client ID: Run ID: **MERCURY_110325A** SeqNo: **2324579** Prep Date: **3/25/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00515	0.00020	0.005	0	103	80-120	0			

MS Sample ID: **1103639-04AMS** Units: **mg/L** Analysis Date: **3/25/2011 05:10 PM**
Client ID: **D-290** Run ID: **MERCURY_110325A** SeqNo: **2324588** Prep Date: **3/25/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00509	0.00020	0.005	-0.000028	102	75-125	0			

MSD Sample ID: **1103639-04AMSD** Units: **mg/L** Analysis Date: **3/25/2011 05:12 PM**
Client ID: **D-290** Run ID: **MERCURY_110325A** SeqNo: **2324756** Prep Date: **3/25/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00508	0.00020	0.005	-0.000028	102	75-125	0.00509	0.197	20	

DUP Sample ID: **1103639-04ADUP** Units: **mg/L** Analysis Date: **3/25/2011 05:08 PM**
Client ID: **D-290** Run ID: **MERCURY_110325A** SeqNo: **2324585** Prep Date: **3/25/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000028	0	20	

The following samples were analyzed in this batch: 1103639-01A 1103639-02A 1103639-03A 1103639-04A

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **51000** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110322-51000** Units: **µg/L** Analysis Date: **3/23/2011 12:34 PM**
Client ID: Run ID: **SV-3_110323A** SeqNo: **2321937** Prep Date: **3/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*65.65*	5.0	*100*	0	*65.6*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*75.63*	5.0	*100*	0	*75.6*	*48-120*	0			
Surr: 2-Fluorophenol	*59.86*	5.0	*100*	0	*59.9*	*20-120*	0			
Surr: 4-Terphenyl-d14	*71.2*	5.0	*100*	0	*71.2*	*51-135*	0			
Surr: Nitrobenzene-d5	*66.82*	5.0	*100*	0	*66.8*	*41-120*	0			
Surr: Phenol-d6	*56.18*	5.0	*100*	0	*56.2*	*20-120*	0			

LCS Sample ID: **SLCST1-110322-51000** Units: **µg/L** Analysis Date: **3/23/2011 12:56 PM**
Client ID: Run ID: **SV-3_110323A** SeqNo: **2321938** Prep Date: **3/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	82.19	5.0	100	0	82.2	52-115	0			
2,4,6-Trichlorophenol	78.47	5.0	100	0	78.5	53-115	0			
2,4-Dinitrotoluene	39.94	5.0	50	0	79.9	56-115	0			
Cresols, Total	183.7	15	250	0	73.5	35-115	0			
Hexachlorobenzene	42.06	5.0	50	0	84.1	54-115	0			
Hexachlorobutadiene	42.14	5.0	50	0	84.3	51-115	0			
Hexachloroethane	36.41	5.0	50	0	72.8	54-115	0			
Nitrobenzene	38.08	5.0	50	0	76.2	40-124	0			
Pentachlorophenol	74.13	5.0	100	0	74.1	45-125	0			
Pyridine	25.05	5.0	50	0	50.1	34-115	0			
Surr: 2,4,6-Tribromophenol	*77.09*	5.0	*100*	0	*77.1*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*78.14*	5.0	*100*	0	*78.1*	*48-120*	0			
Surr: 2-Fluorophenol	*78.18*	5.0	*100*	0	*78.2*	*20-120*	0			
Surr: 4-Terphenyl-d14	*73.58*	5.0	*100*	0	*73.6*	*51-135*	0			
Surr: Nitrobenzene-d5	*72.03*	5.0	*100*	0	*72*	*41-120*	0			
Surr: Phenol-d6	*74.29*	5.0	*100*	0	*74.3*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **51000** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110322-51000** Units: **µg/L** Analysis Date: **3/23/2011 01:18 PM**

Client ID: Run ID: **SV-3_110323A** SeqNo: **2321939** Prep Date: **3/22/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	83.12	5.0	100	0	83.1	52-115	82.19	1.12	25	
2,4,6-Trichlorophenol	82.37	5.0	100	0	82.4	53-115	78.47	4.85	25	
2,4-Dinitrotoluene	41.08	5.0	50	0	82.2	56-115	39.94	2.81	25	
Cresols, Total	183.3	15	250	0	73.3	35-115	183.7	0.206	25	
Hexachlorobenzene	43.44	5.0	50	0	86.9	54-115	42.06	3.24	25	
Hexachlorobutadiene	44.17	5.0	50	0	88.3	51-115	42.14	4.7	25	
Hexachloroethane	38.04	5.0	50	0	76.1	54-115	36.41	4.38	25	
Nitrobenzene	38.49	5.0	50	0	77	40-124	38.08	1.06	25	
Pentachlorophenol	74.74	5.0	100	0	74.7	45-125	74.13	0.818	25	
Pyridine	24.62	5.0	50	0	49.2	34-115	25.05	1.75	25	
Surr: 2,4,6-Tribromophenol	*78.75*	5.0	*100*	0	*78.7*	*42-124*	77.09	*2.13*	*25*	
Surr: 2-Fluorobiphenyl	*82.94*	5.0	*100*	0	*82.9*	*48-120*	78.14	*5.96*	*25*	
Surr: 2-Fluorophenol	*80.15*	5.0	*100*	0	*80.2*	*20-120*	78.18	*2.5*	*25*	
Surr: 4-Terphenyl-d14	*73.57*	5.0	*100*	0	*73.6*	*51-135*	73.58	*0.0126*	*25*	
Surr: Nitrobenzene-d5	*75.28*	5.0	*100*	0	*75.3*	*41-120*	72.03	*4.42*	*25*	
Surr: Phenol-d6	*74.86*	5.0	*100*	0	*74.9*	*20-120*	74.29	*0.767*	*25*	

The following samples were analyzed in this batch: 1103639-01A 1103639-02A 1103639-03A 1103639-04A

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **R107326** Instrument ID **VOA7** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-110324-R107326** Units: **µg/L** Analysis Date: **3/24/2011 06:38 PM**
Client ID: Run ID: **VOA7_110324A** SeqNo: **2324047** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*47.48*	5.0	*50*	0	*95*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.83*	5.0	*50*	0	*97.7*	*72.4-125*	0			
Surr: Dibromofluoromethane	*47.69*	5.0	*50*	0	*95.4*	*71.2-125*	0			
Surr: Toluene-d8	*50.7*	5.0	*50*	0	*101*	*75-125*	0			

MBLK Sample ID: **MBLKV1-110323-R107326** Units: **µg/L** Analysis Date: **3/24/2011 10:14 PM**
Client ID: Run ID: **VOA7_110324A** SeqNo: **2324051** Prep Date: **3/24/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	100								
Surr: 1,2-Dichloroethane-d4	*921.2*	100	*1000*	0	*92.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*968.2*	100	*1000*	0	*96.8*	*72.4-125*	0			
Surr: Dibromofluoromethane	*888.3*	100	*1000*	0	*88.8*	*71.2-125*	0			
Surr: Toluene-d8	*1005*	100	*1000*	0	*100*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **R107326** Instrument ID **VOA7** Method: **SW1311/8260B**

MBLK Sample ID: **MBLKV1-110322-R107326** Units: **µg/L** Analysis Date: **3/24/2011 09:47 PM**
Client ID: Run ID: **VOA7_110324A** SeqNo: **2324116** Prep Date: **3/22/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	100								
Surr: 1,2-Dichloroethane-d4	*904.6*	100	*1000*	0	*90.5*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*966.5*	100	*1000*	0	*96.6*	*72.4-125*	0			
Surr: Dibromofluoromethane	*887.8*	100	*1000*	0	*88.8*	*71.2-125*	0			
Surr: Toluene-d8	*987.9*	100	*1000*	0	*98.8*	*75-125*	0			

LCS Sample ID: **VLCSW-032411-R107326** Units: **µg/L** Analysis Date: **3/24/2011 05:17 PM**
Client ID: Run ID: **VOA7_110324A** SeqNo: **2324046** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	48.55	5.0	50	0	97.1	73-124	0			
1,2-Dichloroethane	48.86	5.0	50	0	97.7	76-120	0			
1,4-Dichlorobenzene	49.63	5.0	50	0	99.3	70-130	0			
2-Butanone	98.2	10	100	0	98.2	70-130	0			
Benzene	49.48	5.0	50	0	99	70-128	0			
Carbon tetrachloride	50.39	5.0	50	0	101	70-130	0			
Chlorobenzene	49.38	5.0	50	0	98.8	72-127	0			
Chloroform	47.47	5.0	50	0	94.9	70-130	0			
Tetrachloroethene	46.76	5.0	50	0	93.5	70-130	0			
Trichloroethene	49.67	5.0	50	0	99.3	72-129	0			
Vinyl chloride	48.82	5.0	50	0	97.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*48.39*	5.0	*50*	0	*96.8*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*50.02*	5.0	*50*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*48.62*	5.0	*50*	0	*97.2*	*71-125*	0			
Surr: Toluene-d8	*50.28*	5.0	*50*	0	*101*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **R107326** Instrument ID **VOA7** Method: **SW1311/8260B**

MS Sample ID: **1103751-01ZMS** Units: **µg/L** Analysis Date: **3/24/2011 08:53 PM**
Client ID: Run ID: **VOA7_110324A** SeqNo: **2324049** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	3815	500	5000	0	76.3	73-124	0			
1,2-Dichloroethane	4465	500	5000	0	89.3	76-120	0			
1,4-Dichlorobenzene	4262	500	5000	0	85.2	70-130	0			
2-Butanone	8581	1,000	10000	0	85.8	70-130	0			
Benzene	4394	500	5000	0	87.9	70-128	0			
Carbon tetrachloride	3895	500	5000	0	77.9	70-130	0			
Chlorobenzene	4435	500	5000	0	88.7	72-127	0			
Chloroform	8270	500	5000	3720	91	70-130	0			
Tetrachloroethene	5498	500	5000	0	110	70-130	0			
Trichloroethene	4340	500	5000	0	86.8	72-129	0			
Vinyl chloride	3741	500	5000	0	74.8	70-130	0			
Surr: 1,2-Dichloroethane-d4	*4679*	500	*5000*	0	*93.6*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*5001*	500	*5000*	0	*100*	*72-125*	0			
Surr: Dibromofluoromethane	*4644*	500	*5000*	0	*92.9*	*71-125*	0			
Surr: Toluene-d8	*5059*	500	*5000*	0	*101*	*75-125*	0			

MSD Sample ID: **1103751-01ZMSD** Units: **µg/L** Analysis Date: **3/24/2011 09:20 PM**
Client ID: Run ID: **VOA7_110324A** SeqNo: **2324050** Prep Date: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	3929	500	5000	0	78.6	73-124	3815	2.95	20	
1,2-Dichloroethane	4678	500	5000	0	93.6	76-120	4465	4.65	20	
1,4-Dichlorobenzene	4672	500	5000	0	93.4	70-130	4262	9.17	20	
2-Butanone	8839	1,000	10000	0	88.4	70-130	8581	2.96	20	
Benzene	4545	500	5000	0	90.9	70-128	4394	3.36	20	
Carbon tetrachloride	4176	500	5000	0	83.5	70-130	3895	6.97	20	
Chlorobenzene	4738	500	5000	0	94.8	72-127	4435	6.61	20	
Chloroform	8682	500	5000	3720	99.2	70-130	8270	4.86	20	
Tetrachloroethene	5758	500	5000	0	115	70-130	5498	4.63	20	
Trichloroethene	4633	500	5000	0	92.7	72-129	4340	6.53	20	
Vinyl chloride	3955	500	5000	0	79.1	70-130	3741	5.56	20	
Surr: 1,2-Dichloroethane-d4	*4638*	500	*5000*	0	*92.8*	*70-125*	4679	*0.877*	*20*	
Surr: 4-Bromofluorobenzene	*5059*	500	*5000*	0	*101*	*72-125*	5001	*1.15*	*20*	
Surr: Dibromofluoromethane	*4669*	500	*5000*	0	*93.4*	*71-125*	4644	*0.529*	*20*	
Surr: Toluene-d8	*5062*	500	*5000*	0	*101*	*75-125*	5059	*0.0579*	*20*	

The following samples were analyzed in this batch: 1103639-01A 1103639-02A 1103639-03A 1103639-04A

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **R107199** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1103691-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **3/23/2011 09:00 AM**

Client ID: Run ID: **WETCHEM_110323A** SeqNo: **2321389** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch:

1103639-01A 1103639-02A 1103639-03A
1103639-04A

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

Client: Navajo Refining Company
Work Order: 1103639
Project: TCLP Parameters

QC BATCH REPORT

Batch ID: **R107445** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCS-032911-R107445** Units: **pH Units** Analysis Date: **3/29/2011 12:00 PM**

Client ID: Run ID: **WETCHEM_110329F** SeqNo: **2327084** Prep Date: DF: **1**

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

DUP Sample ID: **1103885-01ADUP** Units: **pH Units** Analysis Date: **3/29/2011 12:00 PM**

Client ID: Run ID: **WETCHEM_110329F** SeqNo: **2327091** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.61	0.10	0	0	0	0-0	7.69	1.05	20	

The following samples were analyzed in this batch: 1103639-01A 1103639-02A 1103639-03A 1103639-04A

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

Client: Navajo Refining Company
Project: TCLP Parameters
WorkOrder: 1103639

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
µg/L	Micrograms per Liter
·um Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 1103639

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name		A	TCLP VOAS
Work Order		Project Number		B	TCLP semi VOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCT
Address	P.O. Box 159	Address		E	
City/State/Zip	Artesia NM 88211	City/State/Zip		F	
Phone	575-748-3311	Phone		G	
Fax	575-746-5451	Fax		H	
e-Mail Address		e-Mail Address		I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WW Effluent leak 2/13/2011	3-17-11	0912	S	NO	1	X	X	X	X							
2	Gas oil contaminated soil	3-17-11	0925	S	NO	1	X	X	X	X							
3	South Flare Excavated Soil	3-17-11	0932	S	NO	1	X	X	X	X							
4	D-290	3-17-11	1400	S	NO	1	X	X	X	X							
5	Trip Blank																
6	Temp Blank																
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange | Shipment Method: FedEx | Required Turnaround Time: (Check Box) ☐ Other ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour | Results Due Date:

Relinquished by: Aaron Strange	Date: 3-17-11	Time: 1615	Received by:	Notes:	
Relinquished by:	Date: 3/18/11	Time: 0850	Received by (Laboratory): RW ALS	Cooler ID	Cooler Temp
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **18-Mar-11 08:50**

Work Order: **1103639** Received by: **RDN**

Checklist completed by Eugene V. Smalley Jr. (eSignature) 18-Mar-11 (Date) Reviewed by: Lay Lynn F Thibault (eSignature) 22-Mar-11 (Date)

Matrices: soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4c	002	
Cooler(s)/Kit(s):	0938		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

1103639

ALS Environmental	CUSTODY SEAL	Seal Broken By:
10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: 3-12-11 Time: 1615 Name: Agenda Strange Company: Navajo Refining Co.	Date: 3/15/11

ALS Group USA, Corp

Date: 24-Mar-11

Client: ALS Environmental
Project: 1103639
Work Order: **1103527**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1103527-01	1103639-01B	Soil		3/17/2011 09:12	3/22/2011 12:20	☐
1103527-02	1103639-02B	Soil		3/17/2011 09:25	3/22/2011 12:20	☐
1103527-03	1103639-03B	Soil		3/17/2011 09:32	3/22/2011 12:20	☐
1103527-04	1103639-04B	Soil		3/17/2011 14:00	3/22/2011 12:20	☐

ALS Group USA, Corp

Date: 24-Mar-11

Client: ALS Environmental
Project: 1103639
WorkOrder: 1103527

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *24-Mar-11*

Client: ALS Environmental
Project: 1103639
Work Order: 1103527
Sample ID: 1103639-01B
Lab ID: 1103527-01
Collection Date: 3/17/2011 09:12 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Mar-11*

Client:	ALS Environmental		
Project:	1103639	**Work Order:**	1103527
Sample ID:	1103639-02B	**Lab ID:**	1103527-02
Collection Date:	3/17/2011 09:25 AM	**Matrix:**	SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Mar-11*

Client: ALS Environmental
Project: 1103639
Work Order: 1103527
Sample ID: 1103639-03B
Lab ID: 1103527-03
Collection Date: 3/17/2011 09:32 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Mar-11*

Client:	ALS Environmental		
Project:	1103639	**Work Order:**	1103527
Sample ID:	1103639-04B	**Lab ID:**	1103527-04
Collection Date:	3/17/2011 02:00 PM	**Matrix:**	SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **CV**
Cyanide, Reactive	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **CV**
Sulfide, Reactive	ND		40.0	mg/Kg	1	3/24/2011 12:30 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1103527
Project: 1103639

Date: 24-Mar-11

QC BATCH REPORT

Batch ID: **R88274** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-110324-R88274** Units: **mg/Kg** Analysis Date: **3/24/2011 12:30 PM**

Client ID: Run ID: **WETCHEM_110324E** SeqNo: **1582331** 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:

1103527-01A 1103527-02A 1103527-03A
1103527-04A

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

Client: ALS Environmental
Work Order: 1103527
Project: 1103639

QC BATCH REPORT

Batch ID: **R88275** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-110324-R88275** Units: **mg/Kg** Analysis Date: **3/24/2011 12:30 PM**
Client ID: Run ID: **WETCHEM_110324F** SeqNo: **1582351** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-110324-R88275** Units: **mg/Kg** Analysis Date: **3/24/2011 12:30 PM**
Client ID: Run ID: **WETCHEM_110324F** SeqNo: **1582352** 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	0			

LCSD Sample ID: **WLCSDW1-110324-R88275** Units: **mg/Kg** Analysis Date: **3/24/2011 12:30 PM**
Client ID: Run ID: **WETCHEM_110324F** SeqNo: **1582367** 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	234.9	0	35	

MS Sample ID: **1103528-01A MS** Units: **mg/Kg** Analysis Date: **3/24/2011 12:30 PM**
Client ID: Run ID: **WETCHEM_110324F** SeqNo: **1582360** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	0			

MSD Sample ID: **1103528-01A MSD** Units: **mg/Kg** Analysis Date: **3/24/2011 12:30 PM**
Client ID: Run ID: **WETCHEM_110324F** SeqNo: **1582361** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	249.6	0	35	

The following samples were analyzed in this batch: 1103527-01A, 1103527-02A, 1103527-03A, 1103527-04A

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

wo# 1103527

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 21-Mar-11
COC ID: 10205
Due Date 30-Mar-11

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1103639	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	JayLynn F Thibault	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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.thibault@alsenviro.com	eMail CC	mary.knowles@alsglobal.com	J	

	Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1	1103639-01B (WW Effluent Leak 2/13/2011)	Soil	17/Mar/2011 9:12	(1) 4OZGNEAT	X	X								
2	1103639-02B (Gas Oil Contaminated Soil)	Soil	17/Mar/2011 9:25	(1) 4OZGNEAT	X	X								
3	1103639-03B (South Flate Excavated Soil)	Soil	17/Mar/2011 9:32	(1) 4OZGNEAT	X	X								
4	1103639-04B (D-290)	Soil	17/Mar/2011 14:00	(1) 4OZGNEAT	X	X								

Comments:
Please analyse for Reactive Sulfide and Reactive Cyanide... CC: glenda.ramose & mary.knowles@alsglobal.com

Relinquished by	Date/Time	Received by	Date/Time	Cooler IDs	Report/QC Level
	3/21/11 Fed Ex		3/22/11 1220		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: ALS - HOUSTON Date/Time Received: 22-Mar-11 12:20

Work Order: 1103527 Received by: KRW

Checklist completed by Keith Wierenga (eSignature) 22-Mar-11 (Date) Reviewed by: Bill Carey (eSignature) 23-Mar-11 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.8 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Chavez, Carl J, EMNRD

From: Strange, Aaron [aaron.strange@hollycorp.com]
Sent: Friday, March 11, 2011 7:53 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Request for waste approval
Attachments: Asphalt and North Plant Fire Water Line.pdf

Kim,

Please see the attached requests for waste approval.

Thank you,
Aaron

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged, proprietary and/or confidential. If you
received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Asphalt

ESTIMATED VOLUME: 50 yards/wk

GENERATING PROCESS: Spills of Asphalt

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 3-11-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Spills of Asphalt

Estimated Volume 50/week yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated/contaminated soil

ESTIMATED VOLUME: 150 yds

GENERATING PROCESS: Soil excavated to repair leaking fire water line

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 3-11-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Soil excavated to repair leaking fire water line

Estimated Volume 150 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

10-Mar-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Disposal

Work Order: **1102794**

Dear Aaron,

ALS Environmental received 3 samples on 26-Feb-2011 09:40 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 28.

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

Sincerely,

JayLynn F Thibault

Electronically approved by: Mary K. Knowles

JayLynn F Thibault
Project Manager

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 10-Mar-11

Client: Navajo Refining Company
Project: Disposal
Work Order: **1102794**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1102794-01	North Plant Fire Water Leak	Soil		2/25/2011 10:00	2/26/2011 09:40	☐
1102794-02	Asphalt	Soil		2/25/2011 13:40	2/26/2011 09:40	☐
1102794-03	Trip Blank	Water		2/25/2011	2/26/2011 09:40	☑

ALS Environmental

Date: *10-Mar-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: North Plant Fire Water Leak
Collection Date: 2/25/2011 10:00 AM

Work Order: 1102794
Lab ID: 1102794-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **3/4/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	3/4/2011 03:17 PM
TCLP METALS			**SW1311/6020**		Prep Date: **3/7/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	3/7/2011 03:36 PM
Barium	**1.65**		**0.0500**	**mg/L**	10	3/7/2011 03:36 PM
Cadmium	ND		0.0500	mg/L	10	3/7/2011 03:36 PM
Chromium	ND		0.0500	mg/L	10	3/7/2011 03:36 PM
Lead	**2.83**		**0.0500**	**mg/L**	10	3/7/2011 03:36 PM
Selenium	ND		0.0500	mg/L	10	3/7/2011 03:36 PM
Silver	ND		0.0500	mg/L	10	3/7/2011 03:36 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **3/3/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	3/4/2011 07:43 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	3/4/2011 07:43 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	3/4/2011 07:43 PM
Cresols, Total	ND		15	µg/L	1	3/4/2011 07:43 PM
Hexachlorobenzene	ND		5.0	µg/L	1	3/4/2011 07:43 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	3/4/2011 07:43 PM
Hexachloroethane	ND		5.0	µg/L	1	3/4/2011 07:43 PM
Nitrobenzene	ND		5.0	µg/L	1	3/4/2011 07:43 PM
Pentachlorophenol	ND		5.0	µg/L	1	3/4/2011 07:43 PM
Pyridine	ND		5.0	µg/L	1	3/4/2011 07:43 PM
Surr: 2,4,6-Tribromophenol	*47.3*		*42-124*	*%REC*	1	3/4/2011 07:43 PM
Surr: 2-Fluorobiphenyl	*49.3*		*48-120*	*%REC*	1	3/4/2011 07:43 PM
Surr: 2-Fluorophenol	*38.6*		*20-120*	*%REC*	1	3/4/2011 07:43 PM
Surr: 4-Terphenyl-d14	*52.2*		*51-135*	*%REC*	1	3/4/2011 07:43 PM
Surr: Nitrobenzene-d5	*42.6*		*41-120*	*%REC*	1	3/4/2011 07:43 PM
Surr: Phenol-d6	*41.2*		*20-120*	*%REC*	1	3/4/2011 07:43 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **3/4/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	3/5/2011 07:18 AM
1,2-Dichloroethane	ND		100	µg/L	20	3/5/2011 07:18 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	3/5/2011 07:18 AM
2-Butanone	ND		200	µg/L	20	3/5/2011 07:18 AM
Benzene	ND		100	µg/L	20	3/5/2011 07:18 AM
Carbon tetrachloride	ND		100	µg/L	20	3/5/2011 07:18 AM
Chlorobenzene	ND		100	µg/L	20	3/5/2011 07:18 AM
Chloroform	ND		100	µg/L	20	3/5/2011 07:18 AM
Tetrachloroethene	ND		100	µg/L	20	3/5/2011 07:18 AM
Trichloroethene	ND		100	µg/L	20	3/5/2011 07:18 AM

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

ALS Environmental

Date: *10-Mar-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1102794
Sample ID: North Plant Fire Water Leak
Lab ID: 1102794-01
Collection Date: 2/25/2011 10:00 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	3/5/2011 07:18 AM
Surr: 1,2-Dichloroethane-d4	*109*		*70-125*	*%REC*	20	3/5/2011 07:18 AM
Surr: 4-Bromofluorobenzene	*102*		*72-125*	*%REC*	20	3/5/2011 07:18 AM
Surr: Dibromofluoromethane	*104*		*71-125*	*%REC*	20	3/5/2011 07:18 AM
Surr: Toluene-d8	*103*		*75-125*	*%REC*	20	3/5/2011 07:18 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	3/4/2011 11:30 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	3/4/2011 11:30 AM
IGNITABILITY			**SW1030**			Analyst: **JBA**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	3/9/2011 02:10 PM
PH			**SW9045B**			Analyst: **DM**
pH	**8.18**		**0.100**	**pH Units**	1	3/9/2011 09:45 AM

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

ALS Environmental

Date: *10-Mar-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: Asphalt
Collection Date: 2/25/2011 01:40 PM

Work Order: 1102794
Lab ID: 1102794-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **3/4/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	3/4/2011 03:19 PM
TCLP METALS			**SW1311/6020**		Prep Date: **3/7/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	3/7/2011 03:42 PM
Barium	**0.181**		**0.0500**	**mg/L**	10	3/7/2011 03:42 PM
Cadmium	ND		0.0500	mg/L	10	3/7/2011 03:42 PM
Chromium	ND		0.0500	mg/L	10	3/7/2011 03:42 PM
Lead	ND		0.0500	mg/L	10	3/7/2011 03:42 PM
Selenium	ND		0.0500	mg/L	10	3/7/2011 03:42 PM
Silver	ND		0.0500	mg/L	10	3/7/2011 03:42 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **3/3/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	3/4/2011 06:15 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	3/4/2011 06:15 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	3/4/2011 06:15 PM
Cresols, Total	ND		15	µg/L	1	3/4/2011 06:15 PM
Hexachlorobenzene	ND		5.0	µg/L	1	3/4/2011 06:15 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	3/4/2011 06:15 PM
Hexachloroethane	ND		5.0	µg/L	1	3/4/2011 06:15 PM
Nitrobenzene	ND		5.0	µg/L	1	3/4/2011 06:15 PM
Pentachlorophenol	ND		5.0	µg/L	1	3/4/2011 06:15 PM
Pyridine	ND		5.0	µg/L	1	3/4/2011 06:15 PM
Surr: 2,4,6-Tribromophenol	*60.1*		*42-124*	*%REC*	1	3/4/2011 06:15 PM
Surr: 2-Fluorobiphenyl	*45.3*	S	*48-120*	*%REC*	1	3/4/2011 06:15 PM
Surr: 2-Fluorophenol	*38.6*		*20-120*	*%REC*	1	3/4/2011 06:15 PM
Surr: 4-Terphenyl-d14	*61.6*		*51-135*	*%REC*	1	3/4/2011 06:15 PM
Surr: Nitrobenzene-d5	*42.4*		*41-120*	*%REC*	1	3/4/2011 06:15 PM
Surr: Phenol-d6	*39.1*		*20-120*	*%REC*	1	3/4/2011 06:15 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **3/4/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	3/5/2011 07:43 AM
1,2-Dichloroethane	ND		100	µg/L	20	3/5/2011 07:43 AM
1,4-Dichlorobenzene	ND		100	µg/L	20	3/5/2011 07:43 AM
2-Butanone	ND		200	µg/L	20	3/5/2011 07:43 AM
Benzene	ND		100	µg/L	20	3/5/2011 07:43 AM
Carbon tetrachloride	ND		100	µg/L	20	3/5/2011 07:43 AM
Chlorobenzene	ND		100	µg/L	20	3/5/2011 07:43 AM
Chloroform	ND		100	µg/L	20	3/5/2011 07:43 AM
Tetrachloroethene	ND		100	µg/L	20	3/5/2011 07:43 AM
Trichloroethene	ND		100	µg/L	20	3/5/2011 07:43 AM

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

ALS Environmental

Date: *10-Mar-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: Asphalt
Collection Date: 2/25/2011 01:40 PM

Work Order: 1102794
Lab ID: 1102794-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	3/5/2011 07:43 AM
Surr: 1,2-Dichloroethane-d4	*103*		*70-125*	*%REC*	20	3/5/2011 07:43 AM
Surr: 4-Bromofluorobenzene	*94.5*		*72-125*	*%REC*	20	3/5/2011 07:43 AM
Surr: Dibromofluoromethane	*101*		*71-125*	*%REC*	20	3/5/2011 07:43 AM
Surr: Toluene-d8	*94.4*		*75-125*	*%REC*	20	3/5/2011 07:43 AM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	3/4/2011 11:30 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	3/4/2011 11:30 AM
IGNITIBILITY			**SW1010**			Analyst: **JBA**
Ignitability	*> 212*		50.0	°F	1	3/9/2011 01:20 PM
PH			**SW9045B**			Analyst: **DM**
pH	**8.87**		**0.100**	**pH Units**	1	3/9/2011 09:45 AM

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

ALS Environmental

Date: 10-Mar-11

Client: Navajo Refining Company

Work Order: 1102794

Project: Disposal

QC BATCH REPORT

Batch ID: **50548** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-030411-50548** Units: **mg/L** Analysis Date: **3/4/2011 02:51 PM**

Client ID: Run ID: **MERCURY_110304A** SeqNo: **2299608** Prep Date: **3/4/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-030311-50548** Units: **mg/L** Analysis Date: **3/4/2011 02:55 PM**

Client ID: Run ID: **MERCURY_110304A** SeqNo: **2299614** Prep Date: **3/4/2011** DF: **1**

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

LCS Sample ID: **GLCSW2-030411-50548** Units: **mg/L** Analysis Date: **3/4/2011 02:53 PM**

Client ID: Run ID: **MERCURY_110304A** SeqNo: **2299611** Prep Date: **3/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00481	0.00020	0.005	0	96.2	80-120	0			

MS Sample ID: **1103049-02BMS** Units: **mg/L** Analysis Date: **3/4/2011 03:01 PM**

Client ID: Run ID: **MERCURY_110304A** SeqNo: **2299623** Prep Date: **3/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00466	0.00020	0.005	-0.000005	93.3	75-125	0			

MSD Sample ID: **1103049-02BMSD** Units: **mg/L** Analysis Date: **3/4/2011 03:03 PM**

Client ID: Run ID: **MERCURY_110304A** SeqNo: **2299626** Prep Date: **3/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0047	0.00020	0.005	-0.000005	94.1	75-125	0.00466	0.855	20	

DUP Sample ID: **1103049-02BDUP** Units: **mg/L** Analysis Date: **3/4/2011 02:59 PM**

Client ID: Run ID: **MERCURY_110304A** SeqNo: **2299621** Prep Date: **3/4/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	0-0	-0.000005	0	20	

The following samples were analyzed in this batch: 1102794-01A 1102794-02A

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **50592** Instrument ID **ICP7500** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-030511-50592** Units: **mg/L** Analysis Date: **3/7/2011 03:20 PM**

Client ID: Run ID: **ICP7500_110307A** SeqNo: **2301832** Prep Date: **3/7/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW3-030711-50592** Units: **mg/L** Analysis Date: **3/7/2011 03:25 PM**

Client ID: Run ID: **ICP7500_110307A** SeqNo: **2301833** Prep Date: **3/7/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW3-030711-50592** Units: **mg/L** Analysis Date: **3/7/2011 03:31 PM**

Client ID: Run ID: **ICP7500_110307A** SeqNo: **2301834** Prep Date: **3/7/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5124	0.050	0.5	0	102	80-120	0			
Barium	0.5458	0.050	0.5	0	109	80-120	0			
Cadmium	0.5693	0.050	0.5	0	114	80-120	0			
Chromium	0.5256	0.050	0.5	0	105	80-120	0			
Lead	0.5617	0.050	0.5	0	112	80-120	0			
Selenium	0.5216	0.050	0.5	0	104	80-120	0			
Silver	0.5459	0.050	0.5	0	109	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **50592** Instrument ID **ICP7500** Method: **SW1311/6020**

MS Sample ID: **1103166-02AMS** Units: **mg/L** Analysis Date: **3/7/2011 06:52 PM**

Client ID: Run ID: **ICP7500_110307A** SeqNo: **2302312** Prep Date: **3/7/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5746	0.050	0.5	-0.00048	115	75-125	0			
Barium	2.154	0.050	0.5	1.533	124	75-125	0			
Cadmium	0.5701	0.050	0.5	0.002125	114	75-125	0			
Chromium	0.5497	0.050	0.5	0.001044	110	75-125	0			
Lead	0.6409	0.050	0.5	0.08171	112	75-125	0			
Selenium	0.6004	0.050	0.5	-0.007828	122	75-125	0			
Silver	0.5179	0.050	0.5	-0.00404	104	75-125	0			

MSD Sample ID: **1103166-02AMSD** Units: **mg/L** Analysis Date: **3/7/2011 06:58 PM**

Client ID: Run ID: **ICP7500_110307A** SeqNo: **2302313** Prep Date: **3/7/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5452	0.050	0.5	-0.00048	109	75-125	0.5746	5.25	25	
Barium	2.073	0.050	0.5	1.533	108	75-125	2.154	3.83	25	
Cadmium	0.5431	0.050	0.5	0.002125	108	75-125	0.5701	4.85	25	
Chromium	0.5289	0.050	0.5	0.001044	106	75-125	0.5497	3.86	25	
Lead	0.6249	0.050	0.5	0.08171	109	75-125	0.6409	2.53	25	
Selenium	0.588	0.050	0.5	-0.007828	119	75-125	0.6004	2.09	25	
Silver	0.5016	0.050	0.5	-0.00404	101	75-125	0.5179	3.2	25	

DUP Sample ID: **1103166-02ADUP** Units: **mg/L** Analysis Date: **3/7/2011 05:40 PM**

Client ID: Run ID: **ICP7500_110307A** SeqNo: **2302309** Prep Date: **3/7/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	0-0	-0.00048	0	25	
Barium	1.573	0.050	0	0	0	0-0	1.533	2.58	25	
Cadmium	ND	0.050	0	0	0	0-0	0.002125	0	25	
Chromium	ND	0.050	0	0	0	0-0	0.001044	0	25	
Lead	0.08209	0.050	0	0	0	0-0	0.08171	0.464	25	
Selenium	ND	0.050	0	0	0	0-0	-0.007828	0	25	
Silver	ND	0.050	0	0	0	0-0	-0.00404	0	25	

The following samples were analyzed in this batch: 1102794-01A 1102794-02A

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **50533** Instrument ID **SV-3** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110303-50533** Units: **µg/L** Analysis Date: **3/4/2011 03:53 PM**
Client ID: Run ID: **SV-3_110304A** SeqNo: **2299948** Prep Date: **3/3/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*72.67*	5.0	*100*	0	*72.7*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*72.36*	5.0	*100*	0	*72.4*	*48-120*	0			
Surr: 2-Fluorophenol	*60.26*	5.0	*100*	0	*60.3*	*20-120*	0			
Surr: 4-Terphenyl-d14	*73.33*	5.0	*100*	0	*73.3*	*51-135*	0			
Surr: Nitrobenzene-d5	*71.12*	5.0	*100*	0	*71.1*	*41-120*	0			
Surr: Phenol-d6	*56.74*	5.0	*100*	0	*56.7*	*20-120*	0			

LCS Sample ID: **SLCST1-110303-50533** Units: **µg/L** Analysis Date: **3/4/2011 04:15 PM**
Client ID: Run ID: **SV-3_110304A** SeqNo: **2299950** Prep Date: **3/3/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	88.69	5.0	100	0	88.7	52-115	0			
2,4,6-Trichlorophenol	86.95	5.0	100	0	86.9	53-115	0			
2,4-Dinitrotoluene	45.34	5.0	50	0	90.7	56-115	0			
Cresols, Total	180.1	15	250	0	72	35-115	0			
Hexachlorobenzene	46.72	5.0	50	0	93.4	54-115	0			
Hexachlorobutadiene	46.99	5.0	50	0	94	51-115	0			
Hexachloroethane	39.43	5.0	50	0	78.9	54-115	0			
Nitrobenzene	41.99	5.0	50	0	84	40-124	0			
Pentachlorophenol	85.95	5.0	100	0	85.9	45-125	0			
Pyridine	31.95	5.0	50	0	63.9	34-115	0			
Surr: 2,4,6-Tribromophenol	*82.11*	5.0	*100*	0	*82.1*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*85.3*	5.0	*100*	0	*85.3*	*48-120*	0			
Surr: 2-Fluorophenol	*79.14*	5.0	*100*	0	*79.1*	*20-120*	0			
Surr: 4-Terphenyl-d14	*79.08*	5.0	*100*	0	*79.1*	*51-135*	0			
Surr: Nitrobenzene-d5	*75.78*	5.0	*100*	0	*75.8*	*41-120*	0			
Surr: Phenol-d6	*68.48*	5.0	*100*	0	*68.5*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **50533** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110303-50533** Units: **µg/L** Analysis Date: **3/4/2011 04:37 PM**
Client ID: Run ID: **SV-3_110304A** SeqNo: **2299951** Prep Date: **3/3/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	86.86	5.0	100	0	86.9	52-115	88.69	2.08	25	
2,4,6-Trichlorophenol	84.54	5.0	100	0	84.5	53-115	86.95	2.8	25	
2,4-Dinitrotoluene	42.6	5.0	50	0	85.2	56-115	45.34	6.23	25	
Cresols, Total	151.7	15	250	0	60.7	35-115	180.1	17.2	25	
Hexachlorobenzene	45.52	5.0	50	0	91	54-115	46.72	2.61	25	
Hexachlorobutadiene	46.8	5.0	50	0	93.6	51-115	46.99	0.409	25	
Hexachloroethane	37.51	5.0	50	0	75	54-115	39.43	4.98	25	
Nitrobenzene	41.09	5.0	50	0	82.2	40-124	41.99	2.16	25	
Pentachlorophenol	84.79	5.0	100	0	84.8	45-125	85.95	1.35	25	
Pyridine	34.16	5.0	50	0	68.3	34-115	31.95	6.7	25	
Surr: 2,4,6-Tribromophenol	*77.9*	5.0	*100*	0	*77.9*	*42-124*	82.11	*5.26*	*25*	
Surr: 2-Fluorobiphenyl	*80.65*	5.0	*100*	0	*80.7*	*48-120*	85.3	*5.6*	*25*	
Surr: 2-Fluorophenol	*72.06*	5.0	*100*	0	*72.1*	*20-120*	79.14	*9.36*	*25*	
Surr: 4-Terphenyl-d14	*72.57*	5.0	*100*	0	*72.6*	*51-135*	79.08	*8.59*	*25*	
Surr: Nitrobenzene-d5	*74.73*	5.0	*100*	0	*74.7*	*41-120*	75.78	*1.4*	*25*	
Surr: Phenol-d6	*58.88*	5.0	*100*	0	*58.9*	*20-120*	68.48	*15.1*	*25*	

The following samples were analyzed in this batch: 1102794-01A 1102794-02A

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **R106388** Instrument ID **VOA1** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-030411-R106388** Units: **µg/L** Analysis Date: **3/5/2011 12:30 AM**
Client ID: Run ID: **VOA1_110304D** SeqNo: **2301402** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*48.55*	5.0	*50*	0	*97.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*49.14*	5.0	*50*	0	*98.3*	*72.4-125*	0			
Surr: Dibromofluoromethane	*48.99*	5.0	*50*	0	*98*	*71.2-125*	0			
Surr: Toluene-d8	*49.53*	5.0	*50*	0	*99.1*	*75-125*	0			

MBLK Sample ID: **MBLKW-030311-R106388** Units: **µg/L** Analysis Date: **3/5/2011 06:52 AM**
Client ID: Run ID: **VOA1_110304D** SeqNo: **2301409** Prep Date: **3/4/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	100								
Surr: 1,2-Dichloroethane-d4	*1039*	100	*1000*	0	*104*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*956.9*	100	*1000*	0	*95.7*	*72.4-125*	0			
Surr: Dibromofluoromethane	*1022*	100	*1000*	0	*102*	*71.2-125*	0			
Surr: Toluene-d8	*1016*	100	*1000*	0	*102*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **R106388** Instrument ID **VOA1** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-030411-R106388** Units: **µg/L** Analysis Date: **3/4/2011 11:13 PM**
Client ID: Run ID: **VOA1_110304D** SeqNo: **2301400** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	47.97	5.0	50	0	95.9	73-124	0			
1,2-Dichloroethane	45.46	5.0	50	0	90.9	76-120	0			
1,4-Dichlorobenzene	46.57	5.0	50	0	93.1	70-130	0			
2-Butanone	88.49	10	100	0	88.5	70-130	0			
Benzene	48.31	5.0	50	0	96.6	70-128	0			
Carbon tetrachloride	47.18	5.0	50	0	94.4	70-130	0			
Chlorobenzene	44.46	5.0	50	0	88.9	72-127	0			
Chloroform	43.58	5.0	50	0	87.2	70-130	0			
Tetrachloroethene	43.59	5.0	50	0	87.2	70-130	0			
Trichloroethene	51.76	5.0	50	0	104	72-129	0			
Vinyl chloride	46.87	5.0	50	0	93.7	70-130	0			
Surr: 1,2-Dichloroethane-d4	*48.55*	5.0	*50*	0	*97.1*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*42.01*	5.0	*50*	0	*84*	*72-125*	0			
Surr: Dibromofluoromethane	*48.55*	5.0	*50*	0	*97.1*	*71-125*	0			
Surr: Toluene-d8	*47.19*	5.0	*50*	0	*94.4*	*75-125*	0			

LCSD Sample ID: **VLCSDW-030411-R106388** Units: **µg/L** Analysis Date: **3/4/2011 11:39 PM**
Client ID: Run ID: **VOA1_110304D** SeqNo: **2301401** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	51.47	5.0	50	0	103	73-124	47.97	7.04	20	
1,2-Dichloroethane	42.64	5.0	50	0	85.3	76-120	45.46	6.41	20	
1,4-Dichlorobenzene	44.68	5.0	50	0	89.4	70-130	46.57	4.14	20	
2-Butanone	89.45	10	100	0	89.4	70-130	88.49	1.07	20	
Benzene	46.42	5.0	50	0	92.8	70-128	48.31	4.01	20	
Carbon tetrachloride	45.97	5.0	50	0	91.9	70-130	47.18	2.6	20	
Chlorobenzene	47	5.0	50	0	94	72-127	44.46	5.55	20	
Chloroform	46.78	5.0	50	0	93.6	70-130	43.58	7.08	20	
Tetrachloroethene	48.15	5.0	50	0	96.3	70-130	43.59	9.94	20	
Trichloroethene	49.41	5.0	50	0	98.8	72-129	51.76	4.64	20	
Vinyl chloride	49.1	5.0	50	0	98.2	70-130	46.87	4.65	20	
Surr: 1,2-Dichloroethane-d4	*48.88*	5.0	*50*	0	*97.8*	*70-125*	48.55	*0.672*	*20*	
Surr: 4-Bromofluorobenzene	*51.21*	5.0	*50*	0	*102*	*72-125*	42.01	*19.7*	*20*	
Surr: Dibromofluoromethane	*47.92*	5.0	*50*	0	*95.8*	*71-125*	48.55	*1.31*	*20*	
Surr: Toluene-d8	*47.88*	5.0	*50*	0	*95.8*	*75-125*	47.19	*1.44*	*20*	

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **R106388** Instrument ID **VOA1** Method: **SW1311/8260B**

MS Sample ID: **1103038-02ZMS** Units: **µg/L** Analysis Date: **3/5/2011 02:12 AM**
Client ID: Run ID: **VOA1_110304D** SeqNo: **2301407** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	39.76	5.0	50	0	79.5	73-124	0			
1,2-Dichloroethane	45.6	5.0	50	0	91.2	76-120	0			
1,4-Dichlorobenzene	40.11	5.0	50	0	80.2	70-130	0			
2-Butanone	89.17	10	100	0	89.2	70-130	0			
Benzene	46.57	5.0	50	0	93.1	70-128	0			
Carbon tetrachloride	39.7	5.0	50	0	79.4	70-130	0			
Chlorobenzene	41.26	5.0	50	0	82.5	72-127	0			
Chloroform	44.73	5.0	50	0	89.5	70-130	0			
Tetrachloroethene	40.98	5.0	50	0.7829	80.4	70-130	0			
Trichloroethene	43.62	5.0	50	0	87.2	72-129	0			
Vinyl chloride	41.32	5.0	50	0	82.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*50.25*	5.0	*50*	0	*100*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*53.08*	5.0	*50*	0	*106*	*72-125*	0			
Surr: Dibromofluoromethane	*50.94*	5.0	*50*	0	*102*	*71-125*	0			
Surr: Toluene-d8	*51.12*	5.0	*50*	0	*102*	*75-125*	0			

MSD Sample ID: **1103038-02ZMSD** Units: **µg/L** Analysis Date: **3/5/2011 02:37 AM**
Client ID: Run ID: **VOA1_110304D** SeqNo: **2301408** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	39.49	5.0	50	0	79	73-124	39.76	0.693	20	
1,2-Dichloroethane	45.38	5.0	50	0	90.8	76-120	45.6	0.483	20	
1,4-Dichlorobenzene	44.08	5.0	50	0	88.2	70-130	40.11	9.41	20	
2-Butanone	98.4	10	100	0	98.4	70-130	89.17	9.84	20	
Benzene	46.03	5.0	50	0	92.1	70-128	46.57	1.17	20	
Carbon tetrachloride	37.69	5.0	50	0	75.4	70-130	39.7	5.18	20	
Chlorobenzene	44.25	5.0	50	0	88.5	72-127	41.26	6.98	20	
Chloroform	49.57	5.0	50	0	99.1	70-130	44.73	10.3	20	
Tetrachloroethene	39.06	5.0	50	0.7829	76.6	70-130	40.98	4.81	20	
Trichloroethene	42.95	5.0	50	0	85.9	72-129	43.62	1.55	20	
Vinyl chloride	41.98	5.0	50	0	84	70-130	41.32	1.58	20	
Surr: 1,2-Dichloroethane-d4	*52.34*	5.0	*50*	0	*105*	*70-125*	50.25	*4.09*	*20*	
Surr: 4-Bromofluorobenzene	*47.85*	5.0	*50*	0	*95.7*	*72-125*	53.08	*10.4*	*20*	
Surr: Dibromofluoromethane	*52.75*	5.0	*50*	0	*105*	*71-125*	50.94	*3.49*	*20*	
Surr: Toluene-d8	*46.21*	5.0	*50*	0	*92.4*	*75-125*	51.12	*10.1*	*20*	

The following samples were analyzed in this batch: 1102794-01A 1102794-02A

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **R106513** Instrument ID **WetChem** Method: **SW9045B**

DUP Sample ID: **1102794-01ADUP** Units: **pH Units** Analysis Date: **3/9/2011 09:45 AM**

Client ID: **North Plant Fire Water Leak** Run ID: **WETCHEM_110309B** SeqNo: **2304744** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.26	0.10	0	0	0	0-0	8.18	0.973	20	

The following samples were analyzed in this batch: 1102794-01A 1102794-02A

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

Client: Navajo Refining Company
Work Order: 1102794
Project: Disposal

QC BATCH REPORT

Batch ID: **R106535** Instrument ID **WetChem** Method: **SW1010**

LCS Sample ID: **WLCS-030911-R106535** Units: **°F** Analysis Date: **3/9/2011 01:20 PM**
Client ID: Run ID: **WETCHEM_110309E** SeqNo: **2305127** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	81	50	83	0	97.6	80-120	0			

LCSD Sample ID: **WLCSDW-030911-R106535** Units: **°F** Analysis Date: **3/9/2011 01:20 PM**
Client ID: Run ID: **WETCHEM_110309E** SeqNo: **2305133** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability	81	50	83	0	97.6	80-120	81	0	25	

DUP Sample ID: **1102794-02ADUP** Units: **°F** Analysis Date: **3/9/2011 01:20 PM**
Client ID: **Asphalt** Run ID: **WETCHEM_110309E** SeqNo: **2305130** 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			

The following samples were analyzed in this batch: 1102794-02A

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

ALS Environmental

Date: 10-Mar-11

Client: Navajo Refining Company
Project: Disposal
WorkOrder: 1102794

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
°F	Farenheit degrees
µg/L	Micrograms per Liter
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 1102994

Customer Information		Project Information		Parameter/Method Request for Analysis
Purchase Order		Project Name	~~RC Reject Quarterly~~ Disposal	A ~~Total Metals (6020/7000) Select~~ TCLP VOAs
Work Order		Project Number		B ~~Anions (300) Cl, F, SO4~~ TCLP semi VOAs
Company Name	Navajo Refining Company	Bill To Company	Navajo Refining Company	C ~~Alkalinity~~ TCLP Metals
Send Report To	Aaron Strange	Invoice Attn	Aaron Strange	D RCI
Address	P.O. Box 159	Address	PO Box 159	E
				F
City/State/Zip	Artesia, NM 88211	City/State/Zip	Artesia, NM 88211	G
Phone	575 ~~(575)~~ 748-3311	Phone	(575) 748-6733	H
Fax	575 ~~(575)~~ 746-~~5421~~ 5451	Fax	(575) 746-~~5421~~ 5451	I
e-Mail Address		e-Mail Address		J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	North Plant Fire Water Leak	2-25-11	10:00	S	NO	1	X	X	X	X							
2	ASPHALT	2-25-11	13:40	S	NO	1	X	X	X	X							
3	Temp Blank																
4	Trip Blank																
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes: 10 Day TAT.
Aaron Strange	2-25-11	1615		
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID / Cooler Temp.
			2/26/11 09:40	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

QC Package: (Check One Box Below)
☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **26-Feb-11 09:40**

Work Order: **1102794** Received by: **SAY**

Checklist completed by Bethany Jaramillo 26-Feb-11 Reviewed by: Lay Lynn F Thibault 01-Mar-11
eSignature Date eSignature Date

Matrices: soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.7 c	002	
Cooler(s)/Kit(s):	3555		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes: Trip blank listed on coc, not logged for tclp voa only.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ORIGIN ID: ROWA

NAVAJO ARTESIA
501 E MAIN

ARTESIA , NM 882109440
UNITED STATES US

SHIP DATE: 25FEB11
ACTWGT: 27.0 LB MAN
CAD: 634483/CAFE2472

BILL RECIPIENT

TO

ALS LABORATORY GROUP
10450 STANCLIFF RD., SUITE ---

HOUSTON TX 77099
(281) 530-5656

INV:
PO:
REF:
DEPT:

RT 808 1

FZ

01
02

FedEx Express

TRK# 0201 4347 1019 0055

SATURDAY ### A2
PRIORITY OVERNIGHT

XO SGRA

77099
TX-US
IAH

Part # 156148-434 RIT2 05/10

6D9C1/02C2/0A47

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

Date: 2-25-11
Name: ALS
Company:

CUSTODY SEAL

Time: 1615

Seal Broken By:

Date: 2/26/11

1102 794

ALS Group USA, Corp

Date: 08-Mar-11

Client: ALS Environmental
Project: 1102794
Work Order: **1103101**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1103101-01	1102794-01B	Soil		2/25/2011 10:00	3/3/2011 09:30	☐
1103101-02	1102794-02B	Soil		2/25/2011 13:40	3/3/2011 09:30	☐

Client: ALS Environmental
Project: 1102794
WorkOrder: **1103101**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: *08-Mar-11*

Client:	ALS Environmental		
Project:	1102794	**Work Order:**	1103101
Sample ID:	1102794-01B	**Lab ID:**	1103101-01
Collection Date:	2/25/2011 10:00 AM	**Matrix:**	SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **ED**
Cyanide, Reactive	ND		40.0	mg/Kg	1	3/4/2011 11:30 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **ED**
Sulfide, Reactive	ND		40.0	mg/Kg	1	3/4/2011 11:30 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *08-Mar-11*

Client: ALS Environmental
Project: 1102794
Work Order: 1103101
Sample ID: 1102794-02B
Lab ID: 1103101-02
Collection Date: 2/25/2011 01:40 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: ED
Cyanide, Reactive	ND		40.0	mg/Kg	1	3/4/2011 11:30 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: ED
Sulfide, Reactive	ND		40.0	mg/Kg	1	3/4/2011 11:30 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Client: ALS Environmental
Work Order: 1103101
Project: 1102794

Date: 08-Mar-11

QC BATCH REPORT

Batch ID: **R87646** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-110304-R87646** Units: **mg/Kg** Analysis Date: **3/4/2011 11:30 AM**
Client ID: Run ID: **WETCHEM_110304C** SeqNo: **1569817** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-110304-R87646** Units: **mg/Kg** Analysis Date: **3/4/2011 11:30 AM**
Client ID: Run ID: **WETCHEM_110304C** SeqNo: **1569844** 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: **WLCSDW1-110304-R87646** Units: **mg/Kg** Analysis Date: **3/4/2011 11:30 AM**
Client ID: Run ID: **WETCHEM_110304C** SeqNo: **1569845** 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: **1103102-02A MS** Units: **mg/Kg** Analysis Date: **3/4/2011 11:30 AM**
Client ID: Run ID: **WETCHEM_110304C** SeqNo: **1569842** 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	50-150	0			

MSD Sample ID: **1103102-02A MSD** Units: **mg/Kg** Analysis Date: **3/4/2011 11:30 AM**
Client ID: Run ID: **WETCHEM_110304C** SeqNo: **1569843** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Reactive	249.6	40	250	0	99.8	50-150	234.9	6.06	35	

The following samples were analyzed in this batch: 1103101-01A 1103101-02A

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

Client: ALS Environmental
Work Order: 1103101
Project: 1102794

QC BATCH REPORT

Batch ID: **R87648** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-110304-R87648** Units: **mg/Kg** Analysis Date: **3/4/2011 11:30 AM**

Client ID: Run ID: **WETCHEM_110304D** SeqNo: **1570205** 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: 1103101-01A 1103101-02A

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

L103101

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

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Date: 2
COC ID: 101
Due Date: 10-Ma

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1102794	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	JayLynn F Thibault	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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.thibault@alsenviro.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1102794-01B (North Plant Fire Water Leak)	Soil	25/Feb/2011 10:00	(1) 2OZGNEAT	X	X								
1102794-02B (Asphalt)	Soil	25/Feb/2011 13:40	(1) 2OZGNEAT	X	X								

Comments:

Send report for reactivities to Jaylynn Thibault and Mary Knowles

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	2/28/11 Fed Ex		3/3/11 0930		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

4.4°C

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: ALS - HOUSTON Date/Time Received: 03-Mar-11 09:30

Work Order: 1103101 Received by: DS

Checklist completed by Diane Shaw (eSignature) 03-Mar-11 (Date) Reviewed by: Bill Carey (eSignature) 03-Mar-11 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.4 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John H. Bemis
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Daniel Sanchez
Acting Division Director
Oil Conservation Division

March 16, 2011

Mr. Randy Schmaltz
Environmental Manager
Western Refining Southwest- Bloomfield Refinery
P.O. Box 159
Bloomfield, New Mexico 87413

Re: Termination of Discharge Permit
Disposal Well No. 1 (API# 30-045-29002) 2010 Fall-Off Test Report & "Annual Class I Well Waste Report (UICI-009) January 2011" (UICI-009)
Western Refining Southwest, Inc. - Bloomfield Refinery

Dear Mr. Schmaltz:

Staff of the New Mexico Oil Conservation Division (OCD), Environmental Bureau (EB) in consultation with the Engineering Bureau has completed its review of the "2010 Annual Bottom hole Pressure Surveys and Pressure Fall-Off Test (FOT) for Waste Disposal Well #1" (Report) dated October 12, 2010. In addition, the Annual Report was received and reviewed.

The Annual Report indicates that the operator believes the disposal well has about 10 more years of life subsequent to a couple of well stimulations and most recent installation of a filtration system. The OCD concerns about the above subject disposal well and documented discussions of those concerns have been presented to the operator as they relate to: § 20.6.2.5206(A)(1) NMAC, § 20.6.2.5206(B)(1) NMAC, etc. These concerns have not changed based on the most recent information. Consequently, the OCD is now considering the "Termination" of the discharge permit under § 20.6.2.3109 NMAC and/or § 20.6.2.5101(I) NMAC. This letter is to inform you of the OCD's plans and to allow the operator one more opportunity to reconsider the OCD's concerns and to possibly meet to discuss issues with the operator before the OCD initiates action(s).

One of the OCD's primary responsibilities under the Underground Injection Control (UIC) Program is to ensure that the well fractures are not continuing to grow in the injection zone(s) under permitted operating conditions. The OCD letter of April 9, 2010 (see attachment) documented the concerns of the OCD with reasons for the reduction of the maximum surface injection pressure (MSIP) in the OCD draft discharge permit renewal. Subsequently, the operator requested a hearing in its April 19, 2010 letter to the OCD Director (Mark Fesmire).

You will recall that the OCD issued a draft discharge permit via letter dated February 25, 2010 for Western Refining Southwest, Inc. (WRSW) signature and remittance of the final permit fee. However, WRSW did not agree with the reduced MSIP of 600 psig from 1150 psi. Unfortunately, the Director was unable to act on the

hearing request before departing service from the OCD. Since the hearing request was made, another FOT was performed, and it continues to indicate, in addition to the 2008 and 2009 FOTs, that the injection zones are over pressured. In fact, the formations appear to have achieved maximum capacity with formation(s) pressure build-up observed even at reduced injection rates.

The OCD has determined that the most recent FOT was unsuccessful (similar to the 2008 – 2009 FOTs) and inconclusive as certain minimum conditions (i.e., pseudo steady-state injection rate and minimum pressure differential of 100 psig) were not achieved (see FOT Figure 3 "Pressure vs. Time" Chart) as required under the OCD "New Mexico Oil Conservation Division UIC Class I Fall Off Test Guidance" dated December 3, 2007. In addition, the operator submitted the UIC Class I (non-hazardous) Test Plan (TP) for OCD approval and the OCD approved the TP on June 11, 2008. Therefore, any injection zone calculations from the FOT fail to reflect the true characteristics of the injection zone(s) or formation(s). The over pressured injection intervals are likely fracturing even at the reduced injection (see FOT Figure 11 Average Injection Pressure vs. Total Flow) in the FOT.

Other issues that the OCD is aware of from the Bloomfield Refinery Discharge Permit (GW-001) where this disposal well is located are: 1) Ongoing remediation activities (even before the facility was idled) involving this well and its disposal function for treated RCRA waste fluids from remediation activities; and 2) Whether contaminated and/or treated ground water meets the UIC oilfield disposal criteria now that the facility is idle?

Therefore, in order to evaluate these issues, the OCD requires the following information:

a. Identify the source(s) of fluids (i.e., waste types, daily injection volumes per waste type, and percentage of total daily injection volume) injected into the disposal well. For example, how many barrels per day are actually from the refinery operations versus how many are from "ground water remediation"?

b. Other RCRA remediation derived waste water treatment and disposition options, i.e., surface treatment of derived waste water with Class V Injection, land discharge, and/or other proposed remedial processes need to be considered and proposed by the operator.

Regardless of the above, the OCD believes that the discharge permit should be terminated within 6 months from the date of this letter. The OCD has been in discussions with the operator about a possible new well, since 2008 when the Environmental Protection Agency reviewed the 2008 FOT. The operator may consider the installation of a replacement disposal well seated into an acceptable injection zone at the facility if it wishes to replace the disposal well based on the specified type waste(s). The operator will need to consider options "a and/or b" for treatment of RCRA derived waste under the OCD refinery discharge permit (GW-001) to ensure RCRA corrective action activity is not disrupted. The operator may also wish to forego any meeting with the OCD about the disposal well and request a hearing based on this letter.

To request a meeting (Tuesdays/Wednesdays) about this letter, please respond by COB March 25, 2011. If the operator misses this deadline, the OCD will move forward with termination of the discharge

permit. Please contact Mr. Carl Chavez of my staff at (505) 476-3490 or CarlJ.Chavez@state.nm.us to schedule a meeting or if you have questions. Thank you.

Sincerely,

Daniel Sanchez
UIC Director & Acting OCD Director

DJS/cjc
Attachment: OCD Letter of April 9, 2010

xc: David Cobrain, NMED- Hazardous Waste Bureau
Carl Chavez, UIC Quality Assurance Officer
Richard Ezeanyim, Supervisor- Engineering Bureau
Will Jones, Engineering Bureau
Glenn von Gonten, Acting Supervisor- Environmental Bureau
OCD Aztec District Office

Chavez, Carl J, EMNRD

From: Strange, Aaron [aaron.strange@hollycorp.com]
Sent: Friday, January 28, 2011 8:39 AM
To: Chavez, Carl J, EMNRD; Kim Flowers
Cc: Moore, Darrell
Subject: RE: Request for waste approval
Attachments: 1-27-2011 analytical for waste approval.pdf

Carl,

Attached is the full analytical report for the waste approval that I requested yesterday. It includes all the QA/QC. This is also being sent to Kim.

Thanks,
Aaron

Aaron Strange
Environmental Technician, Senior
Off: (575) 746-5468
Cell: (575) 703-5057

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Friday, January 28, 2011 7:05 AM
To: Strange, Aaron; Kim Flowers
Subject: RE: Request for waste approval

Aaron:

Good morning.

OCD should be receiving the QA/QC (lab receipt info. of sample condition, % Recovery, RPD, etc.) from the lab along with any analytical laboratory data submitted to the OCD.

Also, OCD requests final signed C-138s with final information from the OCD receiving waste facility for our waste records.

Please contact me if you have questions. 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")

From: Strange, Aaron [mailto:aaron.strange@hollycorp.com]
Sent: Thursday, January 27, 2011 4:29 PM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Request for waste approval

Kim,

Please see the attached requests for waste approval.

Thank you,
Aaron

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

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ALS Environmental

21-Jan-2011

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

Tel: (575) 748-3311
Fax: (575) 746-5421

Re: Disposal

Work Order: **1101210**

Dear Aaron,

ALS Environmental received 3 samples on 08-Jan-2011 09:00 AM for the analyses presented in the following report.

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

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

The total number of pages in this report is 36.

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

ACCREDITED IN ACCORDANCE WITH nelac

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 21-Jan-11

Client: Navajo Refining Company
Project: Disposal
Work Order: **1101210**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1101210-01	T-439 Frac Tank Berm	Soil		1/6/2011 13:33	1/8/2011 09:00	☐
1101210-02	SP Hydro Exc. Soil	Soil		1/6/2011 14:06	1/8/2011 09:00	☐
1101210-03	FreemanSafety Shower	Soil		1/6/2011 13:27	1/8/2011 09:00	☐

ALS Environmental

Date: 21-Jan-11

Client:	Navajo Refining Company
Project:	Disposal
Work Order:	1101210

Case Narrative

Batch 49249 TCLP Semivolatiles (Sample 1101210-01 and 02) recovery out of control limits for 2-Fluorobiphenyl, sample re-ran with similar results.

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: T-439 Frac Tank Berm
Collection Date: 1/6/2011 01:33 PM

Work Order: 1101210
Lab ID: 1101210-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **1/18/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	1/18/2011 03:08 PM
TCLP METALS			**SW1311/6020**		Prep Date: **1/11/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Barium	**0.203**		**0.0500**	**mg/L**	10	1/11/2011 08:33 PM
Cadmium	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Chromium	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Lead	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Selenium	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Silver	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **1/11/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:12 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:12 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Cresols, Total	ND		15	µg/L	1	1/11/2011 11:12 PM
Hexachlorobenzene	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Hexachloroethane	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Nitrobenzene	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Pentachlorophenol	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Pyridine	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Surr: 2,4,6-Tribromophenol	*68.2*		*42-124*	*%REC*	1	1/11/2011 11:12 PM
Surr: 2-Fluorobiphenyl	*47.1*	S	*48-120*	*%REC*	1	1/11/2011 11:12 PM
Surr: 2-Fluorophenol	*38.0*		*20-120*	*%REC*	1	1/11/2011 11:12 PM
Surr: 4-Terphenyl-d14	*67.1*		*51-135*	*%REC*	1	1/11/2011 11:12 PM
Surr: Nitrobenzene-d5	*43.6*		*41-120*	*%REC*	1	1/11/2011 11:12 PM
Surr: Phenol-d6	*41.3*		*20-120*	*%REC*	1	1/11/2011 11:12 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **1/11/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	1/13/2011 06:28 PM
1,2-Dichloroethane	ND		100	µg/L	20	1/13/2011 06:28 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	1/13/2011 06:28 PM
2-Butanone	ND		200	µg/L	20	1/13/2011 06:28 PM
Benzene	ND		100	µg/L	20	1/13/2011 06:28 PM
Carbon tetrachloride	ND		100	µg/L	20	1/13/2011 06:28 PM
Chlorobenzene	ND		100	µg/L	20	1/13/2011 06:28 PM
Chloroform	ND		100	µg/L	20	1/13/2011 06:28 PM
Tetrachloroethene	ND		100	µg/L	20	1/13/2011 06:28 PM
Trichloroethene	ND		100	µg/L	20	1/13/2011 06:28 PM

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

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1101210
Sample ID: T-439 Frac Tank Berm
Lab ID: 1101210-01
Collection Date: 1/6/2011 01:33 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	1/13/2011 06:28 PM
Surr: 1,2-Dichloroethane-d4	*106*		*70-125*	*%REC*	20	1/13/2011 06:28 PM
Surr: 4-Bromofluorobenzene	*95.9*		*72-125*	*%REC*	20	1/13/2011 06:28 PM
Surr: Dibromofluoromethane	*107*		*71-125*	*%REC*	20	1/13/2011 06:28 PM
Surr: Toluene-d8	*98.3*		*75-125*	*%REC*	20	1/13/2011 06:28 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	1/20/2011 03:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**7.59**		**0.100**	**pH Units**	1	1/13/2011 11:00 AM

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

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: SP Hydro Exc. Soil
Collection Date: 1/6/2011 02:06 PM

Work Order: 1101210
Lab ID: 1101210-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **1/18/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	1/18/2011 03:10 PM
TCLP METALS			**SW1311/6020**		Prep Date: **1/11/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Barium	**0.742**		**0.0500**	**mg/L**	10	1/11/2011 08:39 PM
Cadmium	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Chromium	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Lead	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Selenium	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Silver	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **1/11/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:35 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:35 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Cresols, Total	ND		15	µg/L	1	1/11/2011 11:35 PM
Hexachlorobenzene	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Hexachloroethane	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Nitrobenzene	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Pentachlorophenol	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Pyridine	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Surr: 2,4,6-Tribromophenol	*65.5*		*42-124*	*%REC*	1	1/11/2011 11:35 PM
Surr: 2-Fluorobiphenyl	*42.8*	S	*48-120*	*%REC*	1	1/11/2011 11:35 PM
Surr: 2-Fluorophenol	*37.3*		*20-120*	*%REC*	1	1/11/2011 11:35 PM
Surr: 4-Terphenyl-d14	*66.8*		*51-135*	*%REC*	1	1/11/2011 11:35 PM
Surr: Nitrobenzene-d5	*44.8*		*41-120*	*%REC*	1	1/11/2011 11:35 PM
Surr: Phenol-d6	*51.4*		*20-120*	*%REC*	1	1/11/2011 11:35 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **1/11/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	1/13/2011 06:49 PM
1,2-Dichloroethane	ND		100	µg/L	20	1/13/2011 06:49 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	1/13/2011 06:49 PM
2-Butanone	ND		200	µg/L	20	1/13/2011 06:49 PM
Benzene	ND		100	µg/L	20	1/13/2011 06:49 PM
Carbon tetrachloride	ND		100	µg/L	20	1/13/2011 06:49 PM
Chlorobenzene	ND		100	µg/L	20	1/13/2011 06:49 PM
Chloroform	ND		100	µg/L	20	1/13/2011 06:49 PM
Tetrachloroethene	ND		100	µg/L	20	1/13/2011 06:49 PM
Trichloroethene	ND		100	µg/L	20	1/13/2011 06:49 PM

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

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: SP Hydro Exc. Soil
Collection Date: 1/6/2011 02:06 PM

Work Order: 1101210
Lab ID: 1101210-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	1/13/2011 06:49 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	1/13/2011 06:49 PM
Surr: 4-Bromofluorobenzene	*94.8*		*72-125*	*%REC*	20	1/13/2011 06:49 PM
Surr: Dibromofluoromethane	*106*		*71-125*	*%REC*	20	1/13/2011 06:49 PM
Surr: Toluene-d8	*98.1*		*75-125*	*%REC*	20	1/13/2011 06:49 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	1/20/2011 03:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**7.75**		**0.100**	**pH Units**	1	1/13/2011 11:00 AM

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

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: FreemanSafety Shower
Collection Date: 1/6/2011 01:27 PM

Work Order: 1101210
Lab ID: 1101210-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **1/18/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	1/18/2011 03:12 PM
TCLP METALS			**SW1311/6020**		Prep Date: **1/11/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
Barium	**0.536**		**0.0500**	**mg/L**	10	1/11/2011 08:45 PM
Cadmium	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
Chromium	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
Lead	**0.0576**		**0.0500**	**mg/L**	10	1/11/2011 08:45 PM
Selenium	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
Silver	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **1/11/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:57 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:57 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Cresols, Total	ND		15	µg/L	1	1/11/2011 11:57 PM
Hexachlorobenzene	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Hexachloroethane	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Nitrobenzene	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Pentachlorophenol	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Pyridine	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Surr: 2,4,6-Tribromophenol	*80.0*		*42-124*	*%REC*	1	1/11/2011 11:57 PM
Surr: 2-Fluorobiphenyl	*48.6*		*48-120*	*%REC*	1	1/11/2011 11:57 PM
Surr: 2-Fluorophenol	*40.6*		*20-120*	*%REC*	1	1/11/2011 11:57 PM
Surr: 4-Terphenyl-d14	*69.0*		*51-135*	*%REC*	1	1/11/2011 11:57 PM
Surr: Nitrobenzene-d5	*41.3*		*41-120*	*%REC*	1	1/11/2011 11:57 PM
Surr: Phenol-d6	*51.5*		*20-120*	*%REC*	1	1/11/2011 11:57 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **1/11/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	1/13/2011 07:09 PM
1,2-Dichloroethane	ND		100	µg/L	20	1/13/2011 07:09 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	1/13/2011 07:09 PM
2-Butanone	ND		200	µg/L	20	1/13/2011 07:09 PM
Benzene	ND		100	µg/L	20	1/13/2011 07:09 PM
Carbon tetrachloride	ND		100	µg/L	20	1/13/2011 07:09 PM
Chlorobenzene	ND		100	µg/L	20	1/13/2011 07:09 PM
Chloroform	ND		100	µg/L	20	1/13/2011 07:09 PM
Tetrachloroethene	ND		100	µg/L	20	1/13/2011 07:09 PM
Trichloroethene	ND		100	µg/L	20	1/13/2011 07:09 PM

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

Client: Navajo Refining Company
Project: Disposal **Work Order:** 1101210
Sample ID: FreemanSafety Shower **Lab ID:** 1101210-03
Collection Date: 1/6/2011 01:27 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	1/13/2011 07:09 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	1/13/2011 07:09 PM
Surr: 4-Bromofluorobenzene	*96.9*		*72-125*	*%REC*	20	1/13/2011 07:09 PM
Surr: Dibromofluoromethane	*106*		*71-125*	*%REC*	20	1/13/2011 07:09 PM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	20	1/13/2011 07:09 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	1/18/2011 09:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	1/18/2011 09:00 AM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	1/20/2011 03:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**6.94**		**0.100**	**pH Units**	1	1/13/2011 11:00 AM

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

ALS Environmental

Date: 21-Jan-11

Client: Navajo Refining Company

Work Order: 1101210

Project: Disposal

QC BATCH REPORT

Batch ID: **49235** Instrument ID **ICP7500** Method: **SW1311/6020**

MBLK Sample ID: **MBLKT1-011011-49235** Units: **mg/L** Analysis Date: **1/11/2011 06:55 PM**

Client ID: Run ID: **ICP7500_110111A** SeqNo: **2243668** Prep Date: **1/11/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

MBLK Sample ID: **MBLKW2-011111-49235** Units: **mg/L** Analysis Date: **1/11/2011 07:01 PM**

Client ID: Run ID: **ICP7500_110111A** SeqNo: **2243669** Prep Date: **1/11/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050								
Barium	ND	0.050								
Cadmium	ND	0.050								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	ND	0.050								
Silver	ND	0.050								

LCS Sample ID: **MLCSW2-011111-49235** Units: **mg/L** Analysis Date: **1/11/2011 07:07 PM**

Client ID: Run ID: **ICP7500_110111A** SeqNo: **2243670** Prep Date: **1/11/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4692	0.050	0.5	0	93.8	80-120	0			
Barium	0.4641	0.050	0.5	0	92.8	80-120	0			
Cadmium	0.4747	0.050	0.5	0	94.9	80-120	0			
Chromium	0.4749	0.050	0.5	0	95	80-120	0			
Lead	0.4747	0.050	0.5	0	94.9	80-120	0			
Selenium	0.4711	0.050	0.5	0	94.2	80-120	0			
Silver	0.4832	0.050	0.5	0	96.6	80-120	0			

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **49235** Instrument ID **ICP7500** Method: **SW1311/6020**

MS Sample ID: **1101215-01AMS** Units: **mg/L** Analysis Date: **1/11/2011 07:30 PM**

Client ID: Run ID: **ICP7500_110111A** SeqNo: **2243676** Prep Date: **1/11/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.5067	0.050	0.5	0.00714	99.9	75-125	0			
Barium	0.7347	0.050	0.5	0.2441	98.1	75-125	0			
Cadmium	0.4843	0.050	0.5	0.0008606	96.7	75-125	0			
Chromium	0.4717	0.050	0.5	0.001362	94.1	75-125	0			
Lead	0.4871	0.050	0.5	0.001325	97.2	75-125	0			
Selenium	0.6192	0.050	0.5	0.09884	104	75-125	0			
Silver	0.4537	0.050	0.5	-0.001298	91	75-125	0			

MSD Sample ID: **1101215-01AMSD** Units: **mg/L** Analysis Date: **1/11/2011 07:36 PM**

Client ID: Run ID: **ICP7500_110111A** SeqNo: **2243677** Prep Date: **1/11/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4993	0.050	0.5	0.00714	98.4	75-125	0.5067	1.47	25	
Barium	0.7012	0.050	0.5	0.2441	91.4	75-125	0.7347	4.67	25	
Cadmium	0.4764	0.050	0.5	0.0008606	95.1	75-125	0.4843	1.64	25	
Chromium	0.4725	0.050	0.5	0.001362	94.2	75-125	0.4717	0.169	25	
Lead	0.4714	0.050	0.5	0.001325	94	75-125	0.4871	3.28	25	
Selenium	0.6252	0.050	0.5	0.09884	105	75-125	0.6192	0.964	25	
Silver	0.4378	0.050	0.5	-0.001298	87.8	75-125	0.4537	3.57	25	

DUP Sample ID: **1101215-01ADUP** Units: **mg/L** Analysis Date: **1/11/2011 07:19 PM**

Client ID: Run ID: **ICP7500_110111A** SeqNo: **2243672** Prep Date: **1/11/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.050	0	0	0	-0 0	0.00714	0	25	
Barium	0.2416	0.050	0	0	0	-0 0	0.2441	1.03	25	
Cadmium	ND	0.050	0	0	0	-0 0	0.0008606	0	25	
Chromium	ND	0.050	0	0	0	-0 0	0.001362	0	25	
Lead	ND	0.050	0	0	0	-0 0	0.001325	0	25	
Selenium	0.09678	0.050	0	0	0	-0 0	0.09884	2.11	25	
Silver	ND	0.050	0	0	0	-0 0	-0.001298	0	25	

The following samples were analyzed in this batch: 1101210-01A 1101210-02A 1101210-03A

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **49383** Instrument ID **Mercury** Method: **SW7470**

MBLK Sample ID: **GBLKW2-011811-49383** Units: **mg/L** Analysis Date: **1/18/2011 02:44 PM**
Client ID: Run ID: **MERCURY_110118A** SeqNo: **2250168** Prep Date: **1/18/2011** DF: **1**

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

MBLK Sample ID: **GBLKT1-011711-49383** Units: **mg/L** Analysis Date: **1/18/2011 02:48 PM**
Client ID: Run ID: **MERCURY_110118A** SeqNo: **2250170** Prep Date: **1/18/2011** DF: **1**

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

LCS Sample ID: **GLCSW2-011811-49383** Units: **mg/L** Analysis Date: **1/18/2011 02:46 PM**
Client ID: Run ID: **MERCURY_110118A** SeqNo: **2250169** Prep Date: **1/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00487	0.00020	0.005	0	97.4	80-120	0			

MS Sample ID: **1101360-10CMS** Units: **mg/L** Analysis Date: **1/18/2011 02:54 PM**
Client ID: Run ID: **MERCURY_110118A** SeqNo: **2250173** Prep Date: **1/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00486	0.00020	0.005	0.000001	97.2	75-125	0			

MSD Sample ID: **1101360-10CMSD** Units: **mg/L** Analysis Date: **1/18/2011 02:56 PM**
Client ID: Run ID: **MERCURY_110118A** SeqNo: **2250174** Prep Date: **1/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00487	0.00020	0.005	0.000001	97.4	75-125	0.00486	0.206	20	

DUP Sample ID: **1101360-10CDUP** Units: **mg/L** Analysis Date: **1/18/2011 02:52 PM**
Client ID: Run ID: **MERCURY_110118A** SeqNo: **2250172** Prep Date: **1/18/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.00020	0	0	0	-0 0	0.000001	0	20	

The following samples were analyzed in this batch: 1101210-01A 1101210-02A 1101210-03A

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **49249** Instrument ID **SV-5** Method: **SW1311/8270**

MBLK Sample ID: **SBLKT1-110111-49249** Units: **µg/L** Analysis Date: **1/11/2011 10:05 PM**

Client ID: Run ID: **SV-5_110111B** SeqNo: **2246833** Prep Date: **1/11/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	ND	5.0								
2,4,6-Trichlorophenol	ND	5.0								
2,4-Dinitrotoluene	ND	5.0								
Cresols, Total	ND	15								
Hexachlorobenzene	ND	5.0								
Hexachlorobutadiene	ND	5.0								
Hexachloroethane	ND	5.0								
Nitrobenzene	ND	5.0								
Pentachlorophenol	ND	5.0								
Pyridine	ND	5.0								
Surr: 2,4,6-Tribromophenol	*89.09*	5.0	*100*	0	*89.1*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*70.31*	5.0	*100*	0	*70.3*	*48-120*	0			
Surr: 2-Fluorophenol	*60.07*	5.0	*100*	0	*60.1*	*20-120*	0			
Surr: 4-Terphenyl-d14	*74.26*	5.0	*100*	0	*74.3*	*51-135*	0			
Surr: Nitrobenzene-d5	*71.51*	5.0	*100*	0	*71.5*	*41-120*	0			
Surr: Phenol-d6	*68.64*	5.0	*100*	0	*68.6*	*20-120*	0			

LCS Sample ID: **SLCST1-110111-49249** Units: **µg/L** Analysis Date: **1/11/2011 10:27 PM**

Client ID: Run ID: **SV-5_110111B** SeqNo: **2246834** Prep Date: **1/11/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	64.37	5.0	100	0	64.4	52-115	0			
2,4,6-Trichlorophenol	66.83	5.0	100	0	66.8	53-115	0			
2,4-Dinitrotoluene	37.57	5.0	50	0	75.1	56-115	0			
Cresols, Total	194.6	15	250	0	77.8	35-115	0			
Hexachlorobenzene	35.55	5.0	50	0	71.1	54-115	0			
Hexachlorobutadiene	33.02	5.0	50	0	66	51-115	0			
Hexachloroethane	33	5.0	50	0	66	54-115	0			
Nitrobenzene	33.39	5.0	50	0	66.8	40-124	0			
Pentachlorophenol	70.67	5.0	100	0	70.7	45-125	0			
Pyridine	25.32	5.0	50	0	50.6	34-115	0			
Surr: 2,4,6-Tribromophenol	*83.42*	5.0	*100*	0	*83.4*	*42-124*	0			
Surr: 2-Fluorobiphenyl	*72.43*	5.0	*100*	0	*72.4*	*48-120*	0			
Surr: 2-Fluorophenol	*71.51*	5.0	*100*	0	*71.5*	*20-120*	0			
Surr: 4-Terphenyl-d14	*74.99*	5.0	*100*	0	*75*	*51-135*	0			
Surr: Nitrobenzene-d5	*74.21*	5.0	*100*	0	*74.2*	*41-120*	0			
Surr: Phenol-d6	*78.32*	5.0	*100*	0	*78.3*	*20-120*	0			

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **49249** Instrument ID **SV-5** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-110111-49249** Units: **µg/L** Analysis Date: **1/11/2011 10:50 PM**

Client ID: Run ID: **SV-5_110111B** SeqNo: **2246835** Prep Date: **1/11/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	62.44	5.0	100	0	62.4	52-115	64.37	3.04	25	
2,4,6-Trichlorophenol	64.19	5.0	100	0	64.2	53-115	66.83	4.04	25	
2,4-Dinitrotoluene	37.05	5.0	50	0	74.1	56-115	37.57	1.41	25	
Cresols, Total	203.9	15	250	0	81.5	35-115	194.6	4.64	25	
Hexachlorobenzene	34.1	5.0	50	0	68.2	54-115	35.55	4.16	25	
Hexachlorobutadiene	29.97	5.0	50	0	59.9	51-115	33.02	9.68	25	
Hexachloroethane	32.11	5.0	50	0	64.2	54-115	33	2.75	25	
Nitrobenzene	32.15	5.0	50	0	64.3	40-124	33.39	3.78	25	
Pentachlorophenol	67.84	5.0	100	0	67.8	45-125	70.67	4.08	25	
Pyridine	21.66	5.0	50	0	43.3	34-115	25.32	15.6	25	
Surr: 2,4,6-Tribromophenol	*81.84*	5.0	*100*	0	*81.8*	*42-124*	83.42	*1.91*	*25*	
Surr: 2-Fluorobiphenyl	*69.64*	5.0	*100*	0	*69.6*	*48-120*	72.43	*3.92*	*25*	
Surr: 2-Fluorophenol	*73.26*	5.0	*100*	0	*73.3*	*20-120*	71.51	*2.41*	*25*	
Surr: 4-Terphenyl-d14	*75.09*	5.0	*100*	0	*75.1*	*51-135*	74.99	*0.135*	*25*	
Surr: Nitrobenzene-d5	*70.27*	5.0	*100*	0	*70.3*	*41-120*	74.21	*5.46*	*25*	
Surr: Phenol-d6	*81.16*	5.0	*100*	0	*81.2*	*20-120*	78.32	*3.55*	*25*	

The following samples were analyzed in this batch: 1101210-01A 1101210-02A 1101210-03A

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **R103803** Instrument ID **VOA8** Method: **SW1311/8260B**

MBLK Sample ID: **VBLKW-011311-R103803** Units: **µg/L** Analysis Date: **1/13/2011 12:37 PM**
Client ID: Run ID: **VOA8_110113A** SeqNo: **2245436** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroform	ND	5.0								
Tetrachloroethene	ND	5.0								
Trichloroethene	ND	5.0								
Vinyl chloride	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*52.25*	5.0	*50*	0	*104*	*70-125*		0		
Surr: 4-Bromofluorobenzene	*48.67*	5.0	*50*	0	*97.3*	*72.4-125*		0		
Surr: Dibromofluoromethane	*52.35*	5.0	*50*	0	*105*	*71.2-125*		0		
Surr: Toluene-d8	*50.12*	5.0	*50*	0	*100*	*75-125*		0		

MBLK Sample ID: **MBLKV1-011111-R103803** Units: **µg/L** Analysis Date: **1/13/2011 12:58 PM**
Client ID: Run ID: **VOA8_110113A** SeqNo: **2245437** Prep Date: **1/11/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	100								
Surr: 1,2-Dichloroethane-d4	*1051*	100	*1000*	0	*105*	*70-125*		0		
Surr: 4-Bromofluorobenzene	*985.3*	100	*1000*	0	*98.5*	*72.4-125*		0		
Surr: Dibromofluoromethane	*1063*	100	*1000*	0	*106*	*71.2-125*		0		
Surr: Toluene-d8	*1007*	100	*1000*	0	*101*	*75-125*		0		

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **R103803** Instrument ID **VOA8** Method: **SW1311/8260B**

MBLK Sample ID: **MBLKV1-011211-R103803** Units: **µg/L** Analysis Date: **1/13/2011 01:19 PM**

Client ID: Run ID: **VOA8_110113A** SeqNo: **2245438** Prep Date: **1/12/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	100								
Surr: 1,2-Dichloroethane-d4	*1032*	100	*1000*	0	*103*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*967.8*	100	*1000*	0	*96.8*	*72.4-125*	0			
Surr: Dibromofluoromethane	*1049*	100	*1000*	0	*105*	*71.2-125*	0			
Surr: Toluene-d8	*1001*	100	*1000*	0	*100*	*75-125*	0			

MBLK Sample ID: **MBLKV1-011111-R103803** Units: **µg/L** Analysis Date: **1/13/2011 06:07 PM**

Client ID: Run ID: **VOA8_110113A** SeqNo: **2246488** Prep Date: **1/11/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	ND	100								
1,2-Dichloroethane	ND	100								
1,4-Dichlorobenzene	ND	100								
2-Butanone	ND	200								
Benzene	ND	100								
Carbon tetrachloride	ND	100								
Chlorobenzene	ND	100								
Chloroform	ND	100								
Tetrachloroethene	ND	100								
Trichloroethene	ND	100								
Vinyl chloride	ND	100								
Surr: 1,2-Dichloroethane-d4	*1057*	100	*1000*	0	*106*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*974.9*	100	*1000*	0	*97.5*	*72.4-125*	0			
Surr: Dibromofluoromethane	*1059*	100	*1000*	0	*106*	*71.2-125*	0			
Surr: Toluene-d8	*999.6*	100	*1000*	0	*100*	*75-125*	0			

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **R103803** Instrument ID **VOA8** Method: **SW1311/8260B**

LCS Sample ID: **VLCSW-011311-R103803** Units: **µg/L** Analysis Date: **1/13/2011 11:36 AM**
Client ID: Run ID: **VOA8_110113A** SeqNo: **2245434** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	49.55	5.0	50	0	99.1	73-124	0			
1,2-Dichloroethane	49.18	5.0	50	0	98.4	76-120	0			
1,4-Dichlorobenzene	48.62	5.0	50	0	97.2	70-130	0			
2-Butanone	83.03	10	100	0	83	70-130	0			
Benzene	49.31	5.0	50	0	98.6	70-128	0			
Carbon tetrachloride	45.12	5.0	50	0	90.2	70-130	0			
Chlorobenzene	49.51	5.0	50	0	99	72-127	0			
Chloroform	51.49	5.0	50	0	103	70-130	0			
Tetrachloroethene	45.02	5.0	50	0	90	70-130	0			
Trichloroethene	48.82	5.0	50	0	97.6	72-129	0			
Vinyl chloride	49.83	5.0	50	0	99.7	70-130	0			
Surr: 1,2-Dichloroethane-d4	*50.58*	5.0	*50*	0	*101*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*48.09*	5.0	*50*	0	*96.2*	*72-125*	0			
Surr: Dibromofluoromethane	*52.17*	5.0	*50*	0	*104*	*71-125*	0			
Surr: Toluene-d8	*49.82*	5.0	*50*	0	*99.6*	*75-125*	0			

LCSD Sample ID: **VLCSDW-011311-R103803** Units: **µg/L** Analysis Date: **1/13/2011 11:56 AM**
Client ID: Run ID: **VOA8_110113A** SeqNo: **2245435** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	41.76	5.0	50	0	83.5	73-124	49.55	17.1	20	
1,2-Dichloroethane	47.14	5.0	50	0	94.3	76-120	49.18	4.24	20	
1,4-Dichlorobenzene	46.05	5.0	50	0	92.1	70-130	48.62	5.43	20	
2-Butanone	96.88	10	100	0	96.9	70-130	83.03	15.4	20	
Benzene	45.58	5.0	50	0	91.2	70-128	49.31	7.86	20	
Carbon tetrachloride	39.12	5.0	50	0	78.2	70-130	45.12	14.3	20	
Chlorobenzene	47.07	5.0	50	0	94.1	72-127	49.51	5.06	20	
Chloroform	46.98	5.0	50	0	94	70-130	51.49	9.16	20	
Tetrachloroethene	41.8	5.0	50	0	83.6	70-130	45.02	7.4	20	
Trichloroethene	43.97	5.0	50	0	87.9	72-129	48.82	10.5	20	
Vinyl chloride	43.73	5.0	50	0	87.5	70-130	49.83	13	20	
Surr: 1,2-Dichloroethane-d4	*49.94*	5.0	*50*	0	*99.9*	*70-125*	50.58	*1.28*	*20*	
Surr: 4-Bromofluorobenzene	*48.58*	5.0	*50*	0	*97.2*	*72-125*	48.09	*1.02*	*20*	
Surr: Dibromofluoromethane	*50.83*	5.0	*50*	0	*102*	*71-125*	52.17	*2.61*	*20*	
Surr: Toluene-d8	*50.48*	5.0	*50*	0	*101*	*75-125*	49.82	*1.31*	*20*	

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **R103803** Instrument ID **VOA8** Method: **SW1311/8260B**

MS Sample ID: **1101289-03AMS** Units: **µg/L** Analysis Date: **1/13/2011 02:41 PM**

Client ID: Run ID: **VOA8_110113A** SeqNo: **2245487** Prep Date: **1/12/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	931.7	100	1000	0	93.2	73-124	0			
1,2-Dichloroethane	1006	100	1000	0	101	76-120	0			
1,4-Dichlorobenzene	948	100	1000	0	94.8	70-130	0			
2-Butanone	690.5	200	2000	0	34.5	70-130	0			S
Benzene	997.3	100	1000	0	99.7	70-128	0			
Carbon tetrachloride	888.7	100	1000	0	88.9	70-130	0			
Chlorobenzene	1005	100	1000	0	101	72-127	0			
Chloroform	1051	100	1000	0	105	70-130	0			
Tetrachloroethene	896.6	100	1000	14.7	88.2	70-130	0			
Trichloroethene	965.4	100	1000	0	96.5	72-129	0			
Vinyl chloride	935.8	100	1000	0	93.6	70-130	0			
Surr: 1,2-Dichloroethane-d4	*1051*	100	*1000*	0	*105*	*70-125*	0			
Surr: 4-Bromofluorobenzene	*961.9*	100	*1000*	0	*96.2*	*72-125*	0			
Surr: Dibromofluoromethane	*1050*	100	*1000*	0	*105*	*71-125*	0			
Surr: Toluene-d8	*995.3*	100	*1000*	0	*99.5*	*75-125*	0			

MSD Sample ID: **1101289-03AMSD** Units: **µg/L** Analysis Date: **1/13/2011 03:02 PM**

Client ID: Run ID: **VOA8_110113A** SeqNo: **2245488** Prep Date: **1/12/2011** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethene	980.6	100	1000	0	98.1	73-124	931.7	5.12	20	
1,2-Dichloroethane	996	100	1000	0	99.6	76-120	1006	0.968	20	
1,4-Dichlorobenzene	972.8	100	1000	0	97.3	70-130	948	2.58	20	
2-Butanone	612.9	200	2000	0	30.6	70-130	690.5	11.9	20	S
Benzene	992.6	100	1000	0	99.3	70-128	997.3	0.471	20	
Carbon tetrachloride	882.9	100	1000	0	88.3	70-130	888.7	0.653	20	
Chlorobenzene	1000	100	1000	0	100	72-127	1005	0.491	20	
Chloroform	1068	100	1000	0	107	70-130	1051	1.6	20	
Tetrachloroethene	917.8	100	1000	14.7	90.3	70-130	896.6	2.33	20	
Trichloroethene	987	100	1000	0	98.7	72-129	965.4	2.22	20	
Vinyl chloride	978	100	1000	0	97.8	70-130	935.8	4.4	20	
Surr: 1,2-Dichloroethane-d4	*1056*	100	*1000*	0	*106*	*70-125*	1051	*0.507*	*20*	
Surr: 4-Bromofluorobenzene	*962.3*	100	*1000*	0	*96.2*	*72-125*	961.9	*0.032*	*20*	
Surr: Dibromofluoromethane	*1074*	100	*1000*	0	*107*	*71-125*	1050	*2.31*	*20*	
Surr: Toluene-d8	*998.1*	100	*1000*	0	*99.8*	*75-125*	995.3	*0.277*	*20*	

The following samples were analyzed in this batch: 1101210-01A 1101210-02A 1101210-03A

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **R103788** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSW1-011311-R103788** Units: **pH Units** Analysis Date: **1/13/2011 11:00 AM**
Client ID: Run ID: **WETCHEM_110113B** SeqNo: **2245205** Prep Date: DF: **1**

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

DUP Sample ID: **1101210-03ADUP** Units: **pH Units** Analysis Date: **1/13/2011 11:00 AM**
Client ID: **FreemanSafety Shower** Run ID: **WETCHEM_110113B** SeqNo: **2245218** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.97	0.10	0	0	0	-0 0	6.94	0.431	20	

The following samples were analyzed in this batch: 1101210-01A 1101210-02A 1101210-03A

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

Client: Navajo Refining Company
Work Order: 1101210
Project: Disposal

QC BATCH REPORT

Batch ID: **R104172** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1101210-03ADUP** Units: **Burn Rate, mm/se** Analysis Date: **1/20/2011 03:00 PM**

Client ID: **FreemanSafety Shower** Run ID: **WETCHEM_110120G** SeqNo: **2253480** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ignitability, Solid	ND	0	0	0	0		0	0		

The following samples were analyzed in this batch: 1101210-01A 1101210-02A 1101210-03A

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

Client: Navajo Refining Company
Project: Disposal
WorkOrder: **1101210**

QUALIFIERS, ACRONYMS, UNITS

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

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

Units Reported	Description
µg/L	Micrograms per Liter
urn Rate, mm/se	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	

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

Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 61210

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP semiVOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCI
Address	PO Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	T-439 Frac Tank Berm	1-6-11	1333	S	NO	1	X	X	X	X							
2	SP Hydro Exc. Soil	1-6-11	1406	S	NO	1	X	X	X	X							
3	Freeman Safety Shower	1-6-11	1327	S	NO	1	X	X	X	X							
4	Trip Blank																
5	Temp Blank																
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Aaron Strange	1-7-11	1615		
Relinquished by:	Date: 1-8-11	Time: 0900	Received by (Laboratory): CN ALS	Cooler ID / Cooler Temp
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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110210

ALS Environmental	CUSTODY SEAL	Seal Taken By:
10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: 1-7-11 Time: 1615 Name: Harold Strange Company: Navajo Refining Co.	Date: 1-7-11

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON** Date/Time Received: **11-Jan-11 11:20**

Work Order: **1101220** Received by: **WJC**

Checklist completed by Bill Carey (eSignature) 11-Jan-11 (Date) Reviewed by: Bill Carey (eSignature) 11-Jan-11 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.0 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 ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Group USA, Corp

Date: 18-Jan-11

Client: ALS Environmental
Project: 1101210
Work Order: **1101220**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1101220-01	1101210-01B	Soil		1/6/2011 13:33	1/11/2011 11:20	☐
1101220-02	1101210-02B	Soil		1/6/2011 14:06	1/11/2011 11:20	☐
1101220-03	1101210-03B	Soil		1/6/2011 13:27	1/11/2011 11:20	☐

ALS Group USA, Corp

Date: 18-Jan-11

Client: ALS Environmental
Project: 1101210
WorkOrder: **1101220**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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
TDL	Target Detection Limit

Units Reported	Description
mg/Kg	Milligrams per Kilogram

Client: ALS Environmental
Project: 1101210
Work Order: 1101220

Case Narrative

Batch R85923, Method CNR_7.3.3.2_WST, Sample 1101175-01A MS: Sulfide interference
Batch R85923, Method CNR_7.3.3.2_WST, Sample 1101175-01A MSD: Sulfide interference

ALS Group USA, Corp

Date: *18-Jan-11*

Client: ALS Environmental
Project: 1101210
Work Order: 1101220
Sample ID: 1101210-01B
Lab ID: 1101220-01
Collection Date: 1/6/2011 01:33 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *18-Jan-11*

Client: ALS Environmental
Project: 1101210
Work Order: 1101220
Sample ID: 1101210-02B
Lab ID: 1101220-02
Collection Date: 1/6/2011 02:06 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *18-Jan-11*

Client: ALS Environmental
Project: 1101210
Work Order: 1101220
Sample ID: 1101210-03B
Lab ID: 1101220-03
Collection Date: 1/6/2011 01:27 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, REACTIVE			**SW7.3.3.2**			Analyst: **EE**
Cyanide, Reactive	ND		40.0	mg/Kg	1	1/18/2011 09:00 AM
SULFIDE, REACTIVE			**SW7.3.4.2**			Analyst: **EE**
Sulfide, Reactive	ND		40.0	mg/Kg	1	1/18/2011 09:00 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 18-Jan-11

Client: ALS Environmental

Work Order: 1101220

Project: 1101210

QC BATCH REPORT

Batch ID: **R85922** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-011411-R85922** Units: **mg/Kg** Analysis Date: **1/14/2011 11:00 AM**

Client ID: Run ID: **WETCHEM_110114E** SeqNo: **1532428** 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: 1101220-01A 1101220-02A

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

Client: ALS Environmental
Work Order: 1101220
Project: 1101210

QC BATCH REPORT

Batch ID: **R85923** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-011411-R85923** Units: **mg/Kg** Analysis Date: **1/14/2011 11:00 AM**
Client ID: Run ID: **WETCHEM_110114F** SeqNo: **1532434** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-011411-R85923** Units: **mg/Kg** Analysis Date: **1/14/2011 11:00 AM**
Client ID: Run ID: **WETCHEM_110114F** SeqNo: **1532435** 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	0			

LCSD Sample ID: **WLCSDW1-011411-R85923** Units: **mg/Kg** Analysis Date: **1/14/2011 11:00 AM**
Client ID: Run ID: **WETCHEM_110114F** SeqNo: **1532443** 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	234.9	6.06	35	

MS Sample ID: **1101175-01A MS** Units: **mg/Kg** Analysis Date: **1/14/2011 11:00 AM**
Client ID: Run ID: **WETCHEM_110114F** SeqNo: **1532437** 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	250	0	0	50-150	0			S

MSD Sample ID: **1101175-01A MSD** Units: **mg/Kg** Analysis Date: **1/14/2011 11:00 AM**
Client ID: Run ID: **WETCHEM_110114F** SeqNo: **1532438** 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	250	0	0	50-150	0	0	35	S

The following samples were analyzed in this batch: 1101220-01A 1101220-02A

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

Client: ALS Environmental
Work Order: 1101220
Project: 1101210

QC BATCH REPORT

Batch ID: **R86040** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK Sample ID: **WBLKW1-011811-R86040** Units: **mg/Kg** Analysis Date: **1/18/2011 09:00 AM**
Client ID: Run ID: **WETCHEM_110118A** SeqNo: **1535571** 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: 1101220-03A

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

Client: ALS Environmental
Work Order: 1101220
Project: 1101210

QC BATCH REPORT

Batch ID: **R86041** Instrument ID **WETCHEM** Method: **SW7.3.3.2**

MBLK Sample ID: **WBLKW1-011811-R86041** Units: **mg/Kg** Analysis Date: **1/18/2011 09:00 AM**
Client ID: Run ID: **WETCHEM_110118B** SeqNo: **1535592** Prep Date: DF: **1**

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

LCS Sample ID: **WLCSW1-011811-R86041** Units: **mg/Kg** Analysis Date: **1/18/2011 09:00 AM**
Client ID: Run ID: **WETCHEM_110118B** SeqNo: **1535593** 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: **WLCSDW1-011811-R86041** Units: **mg/Kg** Analysis Date: **1/18/2011 09:00 AM**
Client ID: Run ID: **WETCHEM_110118B** SeqNo: **1535601** 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: **1101220-03A MS** Units: **mg/Kg** Analysis Date: **1/18/2011 09:00 AM**
Client ID: **1101210-03B** Run ID: **WETCHEM_110118B** SeqNo: **1535595** 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	50-150	0			

MSD Sample ID: **1101220-03A MSD** Units: **mg/Kg** Analysis Date: **1/18/2011 09:00 AM**
Client ID: **1101210-03B** Run ID: **WETCHEM_110118B** SeqNo: **1535596** 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	50-150	234.9	0	35	

The following samples were analyzed in this batch: 1101220-03A

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

1101220

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-Jan-11
COC ID: 9904
Due Date 20-Jan-11

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	1101210	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	JayLynn F Thibault	Inv Attn	Accounts Payable	D	
Address	10450 Stancliff Rd, Suite 210	Address	10450 Stancliff 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.thibault@alsenviro.com	eMail CC		J	

Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
1101210-01B (T-439 Frac Tank Berm)	Soil	6/Jan/2011 13:33	(1) 4OZGNEAT	X	X								
1101210-02B (SP Hydro Exc. Soil)	Soil	6/Jan/2011 14:06	(1) 4OZGNEAT	X	X								
1101210-03B (FreemanSafety Shower)	Soil	6/Jan/2011 13:27	(1) 4OZGNEAT	X	X								

Comments:

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
	1/6/11 Fed Ex		1/11/11 1120		Std
Relinquished by:	Date/Time	Received by:	Date/Time		

ALS Environmental

Sample Receipt Checklist

Client Name: **NAVAJO REFINING** Date/Time Received: **08-Jan-11 09:00**

Work Order: **1101210** Received by: **LOT**

Checklist completed by Login Tech (eSignature) 08-Jan-11 (Date) Reviewed by: Lay Lynn F Thibault (eSignature) 10-Jan-11 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☐	No ☑	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.4	002	
Cooler(s)/Kit(s):	3862		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes: multiple chains sent with one set of trip blanks

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, January 28, 2011 7:05 AM
To: 'Strange, Aaron'; Kim Flowers
Subject: RE: Request for waste approval

Aaron:

Good morning.

OCD should be receiving the QA/QC (lab receipt info. of sample condition, % Recovery, RPD, etc.) from the lab along with any analytical laboratory data submitted to the OCD.

Also, OCD requests final signed C-138s with final information from the OCD receiving waste facility for our waste records.

Please contact me if you have questions. 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")

From: Strange, Aaron [mailto:aaron.strange@hollycorp.com]
Sent: Thursday, January 27, 2011 4:29 PM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Request for waste approval

Kim,

Please see the attached requests for waste approval.

Thank you,
Aaron

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

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attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

Chavez, Carl J, EMNRD

From: Strange, Aaron [aaron.strange@hollycorp.com]
Sent: Thursday, January 27, 2011 4:29 PM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Request for waste approval
Attachments: South Plant Hydro Exc. Soil.pdf; T-439 Frac Tank Berm.pdf; Freeman Safety Shower.pdf

Kim,

Please see the attached requests for waste approval.

Thank you,
Aaron

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

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CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated/Contaminated Soil

ESTIMATED VOLUME: 250 yds

GENERATING PROCESS: South Plant Hydro Exc. Soil

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 1-27-11

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Hydro Excavated soil form South Plant

Estimated Volume 250 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: SP Hydro Exc. Soil
Collection Date: 1/6/2011 02:06 PM

Work Order: 1101210
Lab ID: 1101210-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **1/18/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	1/18/2011 03:10 PM
TCLP METALS			**SW1311/6020**		Prep Date: **1/11/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Barium	**0.742**		**0.0500**	**mg/L**	10	1/11/2011 08:39 PM
Cadmium	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Chromium	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Lead	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Selenium	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
Silver	ND		0.0500	mg/L	10	1/11/2011 08:39 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **1/11/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:35 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:35 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Cresols, Total	ND		15	µg/L	1	1/11/2011 11:35 PM
Hexachlorobenzene	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Hexachloroethane	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Nitrobenzene	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Pentachlorophenol	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Pyridine	ND		5.0	µg/L	1	1/11/2011 11:35 PM
Surr: 2,4,6-Tribromophenol	*65.5*		*42-124*	*%REC*	1	1/11/2011 11:35 PM
Surr: 2-Fluorobiphenyl	*42.8*	S	*48-120*	*%REC*	1	1/11/2011 11:35 PM
Surr: 2-Fluorophenol	*37.3*		*20-120*	*%REC*	1	1/11/2011 11:35 PM
Surr: 4-Terphenyl-d14	*66.8*		*51-135*	*%REC*	1	1/11/2011 11:35 PM
Surr: Nitrobenzene-d5	*44.8*		*41-120*	*%REC*	1	1/11/2011 11:35 PM
Surr: Phenol-d6	*51.4*		*20-120*	*%REC*	1	1/11/2011 11:35 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **1/11/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	1/13/2011 06:49 PM
1,2-Dichloroethane	ND		100	µg/L	20	1/13/2011 06:49 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	1/13/2011 06:49 PM
2-Butanone	ND		200	µg/L	20	1/13/2011 06:49 PM
Benzene	ND		100	µg/L	20	1/13/2011 06:49 PM
Carbon tetrachloride	ND		100	µg/L	20	1/13/2011 06:49 PM
Chlorobenzene	ND		100	µg/L	20	1/13/2011 06:49 PM
Chloroform	ND		100	µg/L	20	1/13/2011 06:49 PM
Tetrachloroethene	ND		100	µg/L	20	1/13/2011 06:49 PM
Trichloroethene	ND		100	µg/L	20	1/13/2011 06:49 PM

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

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: SP Hydro Exc. Soil
Collection Date: 1/6/2011 02:06 PM

Work Order: 1101210
Lab ID: 1101210-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	1/13/2011 06:49 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	1/13/2011 06:49 PM
Surr: 4-Bromofluorobenzene	*94.8*		*72-125*	*%REC*	20	1/13/2011 06:49 PM
Surr: Dibromofluoromethane	*106*		*71-125*	*%REC*	20	1/13/2011 06:49 PM
Surr: Toluene-d8	*98.1*		*75-125*	*%REC*	20	1/13/2011 06:49 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	1/20/2011 03:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**7.75**		**0.100**	**pH Units**	1	1/13/2011 11:00 AM

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

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

Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 61210

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP semiVOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCI
Address	PO Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	T-439 Frac Tank Berm	1-6-11	1333	S	NO	1	X	X	X	X							
2	SP Hydro Exc. Soil	1-6-11	1406	S	NO	1	X	X	X	X							
3	Freeman Safety Shower	1-6-11	1327	S	NO	1	X	X	X	X							
4	Trip Blank																
5	Temp Blank																
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: Fed Ex

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Tom Gonzales	1-7-11	1615	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	1-8-11	0900	CN ACS
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Contaminated Soil

ESTIMATED VOLUME: 100 yds

GENERATING PROCESS: T-439 Frac Tank Berm

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 1-27-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Temporary Frac Tank Berm near T-439.

Estimated Volume 100 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: T-439 Frac Tank Berm
Collection Date: 1/6/2011 01:33 PM

Work Order: 1101210
Lab ID: 1101210-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **1/18/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	1/18/2011 03:08 PM
TCLP METALS			**SW1311/6020**		Prep Date: **1/11/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Barium	**0.203**		**0.0500**	**mg/L**	10	1/11/2011 08:33 PM
Cadmium	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Chromium	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Lead	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Selenium	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
Silver	ND		0.0500	mg/L	10	1/11/2011 08:33 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **1/11/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:12 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:12 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Cresols, Total	ND		15	µg/L	1	1/11/2011 11:12 PM
Hexachlorobenzene	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Hexachloroethane	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Nitrobenzene	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Pentachlorophenol	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Pyridine	ND		5.0	µg/L	1	1/11/2011 11:12 PM
Surr: 2,4,6-Tribromophenol	*68.2*		*42-124*	*%REC*	1	1/11/2011 11:12 PM
Surr: 2-Fluorobiphenyl	*47.1*	S	*48-120*	*%REC*	1	1/11/2011 11:12 PM
Surr: 2-Fluorophenol	*38.0*		*20-120*	*%REC*	1	1/11/2011 11:12 PM
Surr: 4-Terphenyl-d14	*67.1*		*51-135*	*%REC*	1	1/11/2011 11:12 PM
Surr: Nitrobenzene-d5	*43.6*		*41-120*	*%REC*	1	1/11/2011 11:12 PM
Surr: Phenol-d6	*41.3*		*20-120*	*%REC*	1	1/11/2011 11:12 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **1/11/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	1/13/2011 06:28 PM
1,2-Dichloroethane	ND		100	µg/L	20	1/13/2011 06:28 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	1/13/2011 06:28 PM
2-Butanone	ND		200	µg/L	20	1/13/2011 06:28 PM
Benzene	ND		100	µg/L	20	1/13/2011 06:28 PM
Carbon tetrachloride	ND		100	µg/L	20	1/13/2011 06:28 PM
Chlorobenzene	ND		100	µg/L	20	1/13/2011 06:28 PM
Chloroform	ND		100	µg/L	20	1/13/2011 06:28 PM
Tetrachloroethene	ND		100	µg/L	20	1/13/2011 06:28 PM
Trichloroethene	ND		100	µg/L	20	1/13/2011 06:28 PM

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

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1101210
Sample ID: T-439 Frac Tank Berm
Lab ID: 1101210-01
Collection Date: 1/6/2011 01:33 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	1/13/2011 06:28 PM
Surr: 1,2-Dichloroethane-d4	*106*		*70-125*	*%REC*	20	1/13/2011 06:28 PM
Surr: 4-Bromofluorobenzene	*95.9*		*72-125*	*%REC*	20	1/13/2011 06:28 PM
Surr: Dibromofluoromethane	*107*		*71-125*	*%REC*	20	1/13/2011 06:28 PM
Surr: Toluene-d8	*98.3*		*75-125*	*%REC*	20	1/13/2011 06:28 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	1/14/2011 11:00 AM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	**Negative**			**Burn Rate, mm/**	1	1/20/2011 03:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	7.59		0.100	pH Units	1	1/13/2011 11:00 AM

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

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

Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 0210

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP semiVOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCI
Address	PO Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	T-439 Frac Tank Berm	1-6-11	1333	S	NO	1	X	X	X	X							
2	SP Hydro Exc. Soil	1-6-11	1406	S	NO	1	X	X	X	X							
3	Freeman Safety Shower	1-6-11	1327	S	NO	1	X	X	X	X							
4	Trip Blank																
5	Temp Blank																
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: Fed Ex

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

Results Due Date:

Relinquished by: Aaron Strange	Date: 1-7-11	Time: 1615	Received by:	Notes:	
Relinquished by:	Date: 1-8-11	Time: 0900	Received by (Laboratory): CN ALS	Cooler ID:	Cooler Temp:
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated/Contaminated Soil

ESTIMATED VOLUME: 110 yds

GENERATING PROCESS: Freeman Safety Shower

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 1-27-2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Excavated soil for Safety Shower on Freeman St.

Estimated Volume 110 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: FreemanSafety Shower
Collection Date: 1/6/2011 01:27 PM

Work Order: 1101210
Lab ID: 1101210-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **1/18/2011**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	1/18/2011 03:12 PM
TCLP METALS			**SW1311/6020**		Prep Date: **1/11/2011**	Analyst: **IGF**
Arsenic	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
Barium	**0.536**		**0.0500**	**mg/L**	10	1/11/2011 08:45 PM
Cadmium	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
Chromium	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
Lead	**0.0576**		**0.0500**	**mg/L**	10	1/11/2011 08:45 PM
Selenium	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
Silver	ND		0.0500	mg/L	10	1/11/2011 08:45 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **1/11/2011**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:57 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	1/11/2011 11:57 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Cresols, Total	ND		15	µg/L	1	1/11/2011 11:57 PM
Hexachlorobenzene	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Hexachloroethane	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Nitrobenzene	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Pentachlorophenol	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Pyridine	ND		5.0	µg/L	1	1/11/2011 11:57 PM
Surr: 2,4,6-Tribromophenol	*80.0*		*42-124*	*%REC*	1	1/11/2011 11:57 PM
Surr: 2-Fluorobiphenyl	*48.6*		*48-120*	*%REC*	1	1/11/2011 11:57 PM
Surr: 2-Fluorophenol	*40.6*		*20-120*	*%REC*	1	1/11/2011 11:57 PM
Surr: 4-Terphenyl-d14	*69.0*		*51-135*	*%REC*	1	1/11/2011 11:57 PM
Surr: Nitrobenzene-d5	*41.3*		*41-120*	*%REC*	1	1/11/2011 11:57 PM
Surr: Phenol-d6	*51.5*		*20-120*	*%REC*	1	1/11/2011 11:57 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **1/11/2011**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	1/13/2011 07:09 PM
1,2-Dichloroethane	ND		100	µg/L	20	1/13/2011 07:09 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	1/13/2011 07:09 PM
2-Butanone	ND		200	µg/L	20	1/13/2011 07:09 PM
Benzene	ND		100	µg/L	20	1/13/2011 07:09 PM
Carbon tetrachloride	ND		100	µg/L	20	1/13/2011 07:09 PM
Chlorobenzene	ND		100	µg/L	20	1/13/2011 07:09 PM
Chloroform	ND		100	µg/L	20	1/13/2011 07:09 PM
Tetrachloroethene	ND		100	µg/L	20	1/13/2011 07:09 PM
Trichloroethene	ND		100	µg/L	20	1/13/2011 07:09 PM

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

ALS Environmental

Date: *21-Jan-11*

Client: Navajo Refining Company
Project: Disposal
Sample ID: FreemanSafety Shower
Collection Date: 1/6/2011 01:27 PM

Work Order: 1101210
Lab ID: 1101210-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	1/13/2011 07:09 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	1/13/2011 07:09 PM
Surr: 4-Bromofluorobenzene	*96.9*		*72-125*	*%REC*	20	1/13/2011 07:09 PM
Surr: Dibromofluoromethane	*106*		*71-125*	*%REC*	20	1/13/2011 07:09 PM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	20	1/13/2011 07:09 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	1/18/2011 09:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	1/18/2011 09:00 AM
IGNITABILITY			**SW1030**			Analyst: **IAB**
Ignitability, Solid	Negative			Burn Rate, mm/	1	1/20/2011 03:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**6.94**		**0.100**	**pH Units**	1	1/13/2011 11:00 AM

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

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Houston, Texas 77099
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Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 61210

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP semiVOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCI
Address	PO Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	T-439 Frac Tank Berm	1-6-11	1333	S	NO	1	X	X	X	X							
2	SP Hydro Exc. Soil	1-6-11	1406	S	NO	1	X	X	X	X							
3	Freeman Safety Shower	1-6-11	1327	S	NO	1	X	X	X	X							
4	Trip Blank																
5	Temp Blank																
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: Fed Ex

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Aaron Strange	1-7-11	1615		
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID / Cooler Temp
	1-8-11	0900	CN ALS	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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Chavez, Carl J, EMNRD

From: Strange, Aaron [aaron.strange@hollycorp.com]
Sent: Monday, October 11, 2010 11:29 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Requests for waste approval
Attachments: ISOM Fire Water Line Soil.pdf; HEP Yard Soil.pdf

Kim,

Please see the attached requests for waste approval

Thanks,
Aaron

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged, proprietary and/or confidential. If you
received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any
attachments. Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated Soil/Contaminated Soil

ESTIMATED VOLUME: 150 yds

GENERATING PROCESS: Excavated Soil for Fire Water Line repairs.

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 10-11-2010

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Excavated soil from fire water line at the ISOM unit.

Estimated Volume 150 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

Date: *08-Oct-10*

Client: Navajo Refining Company
Project: Disposal
Sample ID: ISOM Fire Water Line
Collection Date: 9/23/2010 01:30 PM

Work Order: 1009799
Lab ID: 1009799-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			Method: **SW7470**		Leachate: SW7470 / 10/1/10 Prep: SW7470 / 10/1/10		Analyst: **JCJ**
Mercury	ND		0.0000420	0.000200	mg/L	1	10/1/2010 15:24
TCLP METALS			Method: **SW1311/6020**		Leachate: SW7470 / 10/1/10 Prep: SW3010A / 10/1/10		Analyst: **ALR**
Arsenic	ND		0.00900	0.0500	mg/L	10	10/2/2010 09:34
Barium	**0.289**		**0.00700**	**0.0500**	**mg/L**	10	10/2/2010 09:34
Cadmium	ND		0.00600	0.0500	mg/L	10	10/2/2010 09:34
Chromium	ND		0.00600	0.0500	mg/L	10	10/2/2010 09:34
Lead	ND		0.00400	0.0500	mg/L	10	10/2/2010 09:34
Selenium	ND		0.0250	0.0500	mg/L	10	10/2/2010 09:34
Silver	ND		0.00700	0.0500	mg/L	10	10/2/2010 09:34
TCLP MISCELLANEOUS METALS			Method: **SW1311/6020**		Leachate: SW7470 / 10/1/10 Prep: SW3010A / 10/1/10		Analyst: **ALR**
Antimony	ND		0.00500	0.0500	mg/L	10	10/2/2010 09:34
Beryllium	ND		0.00300	0.0500	mg/L	10	10/2/2010 09:34
Nickel	ND		0.0140	0.0500	mg/L	10	10/2/2010 09:34
TCLP SEMIVOLATILES			Method: **SW1311/8270**		Leachate: SW1311 / 9/30/10 Prep: SW3510 / 10/1/10		Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.90	5.0	µg/L	1	10/4/2010 20:28
2,4,6-Trichlorophenol	ND		1.4	5.0	µg/L	1	10/4/2010 20:28
2,4-Dinitrotoluene	ND		1.0	5.0	µg/L	1	10/4/2010 20:28
Cresols, Total	ND		2.0	15	µg/L	1	10/4/2010 20:28
Hexachlorobenzene	ND		1.1	5.0	µg/L	1	10/4/2010 20:28
Hexachlorobutadiene	ND		1.1	5.0	µg/L	1	10/4/2010 20:28
Hexachloroethane	ND		1.0	5.0	µg/L	1	10/4/2010 20:28
Nitrobenzene	ND		0.80	5.0	µg/L	1	10/4/2010 20:28
Pentachlorophenol	ND		1.6	5.0	µg/L	1	10/4/2010 20:28
Pyridine	ND		2.0	5.0	µg/L	1	10/4/2010 20:28
Surr: 2,4,6-Tribromophenol	*75.3*			*42-124*	*%REC*	1	10/4/2010 20:28
Surr: 2-Fluorobiphenyl	*44.8*	S		*48-120*	*%REC*	1	10/4/2010 20:28
Surr: 2-Fluorophenol	*34.8*			*20-120*	*%REC*	1	10/4/2010 20:28
Surr: 4-Terphenyl-d14	*67.8*	°		*51-135*	*%REC*	1	10/4/2010 20:28
Surr: Nitrobenzene-d5	*41.9*			*41-120*	*%REC*	1	10/4/2010 20:28
Surr: Phenol-d6	*40.7*			*20-120*	*%REC*	1	10/4/2010 20:28
TCLP VOLATILES			Method: **SW1311/8260B**		Leachate: SW1311 / 9/30/10		Analyst: **PC**
1,1-Dichloroethene	ND		12	100	µg/L	20	10/4/2010 21:05
1,2-Dichloroethane	ND		10	100	µg/L	20	10/4/2010 21:05

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

ALS Environmental

Date: *08-Oct-10*

Client: Navajo Refining Company
Project: Disposal
Sample ID: ISOM Fire Water Line
Collection Date: 9/23/2010 01:30 PM

Work Order: 1009799
Lab ID: 1009799-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dichlorobenzene	ND		14	100	µg/L	20	10/4/2010 21:05
2-Butanone	ND		16	200	µg/L	20	10/4/2010 21:05
Benzene	ND		12	100	µg/L	20	10/4/2010 21:05
Carbon tetrachloride	ND		12	100	µg/L	20	10/4/2010 21:05
Chlorobenzene	ND		10	100	µg/L	20	10/4/2010 21:05
Chloroform	ND		10	100	µg/L	20	10/4/2010 21:05
Tetrachloroethene	ND		10	100	µg/L	20	10/4/2010 21:05
Trichloroethene	ND		14	100	µg/L	20	10/4/2010 21:05
Vinyl chloride	ND		12	100	µg/L	20	10/4/2010 21:05
Surr: 1,2-Dichloroethane-d4	*115*			*70-125*	*%REC*	20	10/4/2010 21:05
Surr: 4-Bromofluorobenzene	*97.6*			*72-125*	*%REC*	20	10/4/2010 21:05
Surr: Dibromofluoromethane	*113*			*71-125*	*%REC*	20	10/4/2010 21:05
Surr: Toluene-d8	*101*			*75-125*	*%REC*	20	10/4/2010 21:05
REACTIVE CYANIDE		Method: **SW-846**					Analyst: **HN**
Reactive Cyanide	ND		23	40.0	mg/Kg	1	9/30/2010 10:00
REACTIVE SULFIDE		Method: **SW-846**					Analyst: **HN**
Reactive Sulfide	ND		14	40.0	mg/Kg	1	9/30/2010 10:00
IGNITABILITY		Method: **SW1030**					Analyst: **JLC**
Ignitability, Solid	**Negative**		**0**		**no unit**	1	9/28/2010 10:00
PH		Method: **SW9045B**					Analyst: **JLC**
pH	**7.96**		**0.10**	**0.100**	**pH Units**	1	10/5/2010 17:00

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

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10450 Stancliff Rd., Suite 210
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Tel. +1 281 530 5656
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Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 1000799

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP Semi VOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCI
Address	P.O. Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	HEP Yard	9-23-10	1300	S	NO	1	X	X	X	X							
2	ISOM Fire Water Line	9-23-10	1330	S	NO	1	X	X	X	X							
3	Trip Blank																
4	Temp Blank																
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Aaron Strange	9-23-10	1615	
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated/Contaminated Soil

ESTIMATED VOLUME: 25 yds

GENERATING PROCESS: Excavated Soil from Line Testing

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 10-11-2010

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Excavated soil from line testing at HEP yard (southwest of main control room)

Estimated Volume 25 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Environmental

Date: *08-Oct-10*

Client: Navajo Refining Company
Project: Disposal
Sample ID: HEP Yard
Collection Date: 9/23/2010 01:00 PM

Work Order: 1009799
Lab ID: 1009799-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			Method: **SW7470**		Leachate: SW7470 / 10/1/10 Prep: SW7470 / 10/1/10		Analyst: **JCJ**
Mercury	ND		0.0000420	0.000200	mg/L	1	10/1/2010 15:22
TCLP METALS			Method: **SW1311/6020**		Leachate: SW7470 / 10/1/10 Prep: SW3010A / 10/1/10		Analyst: **ALR**
Arsenic	ND		0.00900	0.0500	mg/L	10	10/2/2010 09:29
Barium	**0.298**		**0.00700**	**0.0500**	**mg/L**	10	10/2/2010 09:29
Cadmium	ND		0.00600	0.0500	mg/L	10	10/2/2010 09:29
Chromium	ND		0.00600	0.0500	mg/L	10	10/2/2010 09:29
Lead	ND		0.00400	0.0500	mg/L	10	10/2/2010 09:29
Selenium	ND		0.0250	0.0500	mg/L	10	10/2/2010 09:29
Silver	ND		0.00700	0.0500	mg/L	10	10/2/2010 09:29
TCLP MISCELLANEOUS METALS			Method: **SW1311/6020**		Leachate: SW7470 / 10/1/10 Prep: SW3010A / 10/1/10		Analyst: **ALR**
Antimony	ND		0.00500	0.0500	mg/L	10	10/2/2010 09:29
Beryllium	ND		0.00300	0.0500	mg/L	10	10/2/2010 09:29
Nickel	ND		0.0140	0.0500	mg/L	10	10/2/2010 09:29
TCLP SEMIVOLATILES			Method: **SW1311/8270**		Leachate: SW1311 / 9/30/10 Prep: SW3510 / 10/1/10		Analyst: **ACN**
2,4,5-Trichlorophenol	ND		0.90	5.0	µg/L	1	10/4/2010 20:06
2,4,6-Trichlorophenol	ND		1.4	5.0	µg/L	1	10/4/2010 20:06
2,4-Dinitrotoluene	ND		1.0	5.0	µg/L	1	10/4/2010 20:06
Cresols, Total	**26**		**2.0**	**15**	**µg/L**	1	10/4/2010 20:06
Hexachlorobenzene	ND		1.1	5.0	µg/L	1	10/4/2010 20:06
Hexachlorobutadiene	ND		1.1	5.0	µg/L	1	10/4/2010 20:06
Hexachloroethane	ND		1.0	5.0	µg/L	1	10/4/2010 20:06
Nitrobenzene	ND		0.80	5.0	µg/L	1	10/4/2010 20:06
Pentachlorophenol	ND		1.6	5.0	µg/L	1	10/4/2010 20:06
Pyridine	ND		2.0	5.0	µg/L	1	10/4/2010 20:06
Surr: 2,4,6-Tribromophenol	*88.9*			*42-124*	*%REC*	1	10/4/2010 20:06
Surr: 2-Fluorobiphenyl	*72.2*			*48-120*	*%REC*	1	10/4/2010 20:06
Surr: 2-Fluorophenol	*54.8*			*20-120*	*%REC*	1	10/4/2010 20:06
Surr: 4-Terphenyl-d14	*82.6*			*51-135*	*%REC*	1	10/4/2010 20:06
Surr: Nitrobenzene-d5	*64.5*			*41-120*	*%REC*	1	10/4/2010 20:06
Surr: Phenol-d6	*59.7*			*20-120*	*%REC*	1	10/4/2010 20:06
TCLP VOLATILES			Method: **SW1311/8260B**		Leachate: SW1311 / 9/30/10		Analyst: **PC**
1,1-Dichloroethene	ND		12	100	µg/L	20	10/4/2010 20:18
1,2-Dichloroethane	ND		10	100	µg/L	20	10/4/2010 20:18

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

ALS Environmental

Date: *08-Oct-10*

Client: Navajo Refining Company
Project: Disposal
Sample ID: HEP Yard
Collection Date: 9/23/2010 01:00 PM

Work Order: 1009799
Lab ID: 1009799-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dichlorobenzene	ND		14	100	µg/L	20	10/4/2010 20:18
2-Butanone	ND		16	200	µg/L	20	10/4/2010 20:18
Benzene	ND		12	100	µg/L	20	10/4/2010 20:18
Carbon tetrachloride	ND		12	100	µg/L	20	10/4/2010 20:18
Chlorobenzene	ND		10	100	µg/L	20	10/4/2010 20:18
Chloroform	ND		10	100	µg/L	20	10/4/2010 20:18
Tetrachloroethene	ND		10	100	µg/L	20	10/4/2010 20:18
Trichloroethene	ND		14	100	µg/L	20	10/4/2010 20:18
Vinyl chloride	ND		12	100	µg/L	20	10/4/2010 20:18
Surr: 1,2-Dichloroethane-d4	*115*			*70-125*	*%REC*	20	10/4/2010 20:18
Surr: 4-Bromofluorobenzene	*96.8*			*72-125*	*%REC*	20	10/4/2010 20:18
Surr: Dibromofluoromethane	*115*			*71-125*	*%REC*	20	10/4/2010 20:18
Surr: Toluene-d8	*102*			*75-125*	*%REC*	20	10/4/2010 20:18
REACTIVE CYANIDE		Method:	**SW-846**				Analyst: **HN**
Reactive Cyanide	ND		23	40.0	mg/Kg	1	9/30/2010 10:00
REACTIVE SULFIDE		Method:	**SW-846**				Analyst: **HN**
Reactive Sulfide	ND		14	40.0	mg/Kg	1	9/30/2010 10:00
IGNITABILITY		Method:	**SW1030**				Analyst: **JLC**
Ignitability, Solid	**Negative**		**0**		**no unit**	1	9/28/2010 10:00
PH		Method:	**SW9045B**				Analyst: **JLC**
pH	**7.46**		**0.10**	**0.100**	**pH Units**	1	10/5/2010 17:00

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

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

Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 10799

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP SemiVOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCI
Address	P.O. Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	HEP Yard	9-23-10	1300	S	NO	1	X	X	X	X							
2	ISOM Fire Water Line	9-23-10	1330	S	NO	1	X	X	X	X							
3	Trip Blank																
4	Temp Blank																
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Relinquished by:	Date: 9-23-10	Time: 1615	Received by:	Notes:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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Chavez, Carl J, EMNRD

From: Strange, Aaron [aaron.strange@hollycorp.com]
Sent: Tuesday, September 21, 2010 10:32 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Request for waste approval
Attachments: T-433 soil and gravel.pdf

Kim,

Please see the attached request for waste approval.

Thanks,

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

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CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated/Contaminated Soil & gravel

ESTIMATED VOLUME: 225 yds

GENERATING PROCESS: Excavated Soil & gravel from T-433 Leak (Gas Oil)

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 9-21-10

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Navajo Refining Co.

2. **Originating Site:**
Artesia Plant

3. **Location of Material (Street Address, City, State or ULSTR):**
501 E Main Artesia NM

4. **Source and Description of Waste:**
Excavated / contaminated soil and gravel from T-433 leak (Gas Oil).

Estimated Volume 225 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:**
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Laboratory Group

Date: *23-Jul-10*

Client: Navajo Refining Company
Project: T-433 **Work Order:** 1007422
Sample ID: T-433 Leak/Soil **Lab ID:** 1007422-01
Collection Date: 7/13/2010 03:04 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **7/19/2010**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	7/19/2010 05:11 PM
TCLP METALS			**SW1311/6020**		Prep Date: **7/19/2010**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	7/19/2010 06:50 PM
Barium	**0.494**		**0.0500**	**mg/L**	10	7/19/2010 06:50 PM
Cadmium	ND		0.0500	mg/L	10	7/19/2010 06:50 PM
Chromium	ND		0.0500	mg/L	10	7/19/2010 06:50 PM
Lead	ND		0.0500	mg/L	10	7/19/2010 06:50 PM
Selenium	ND		0.0500	mg/L	10	7/19/2010 06:50 PM
Silver	ND		0.0500	mg/L	10	7/19/2010 06:50 PM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **7/20/2010**	Analyst: **KMB**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	7/21/2010 11:13 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	7/21/2010 11:13 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	7/21/2010 11:13 PM
Cresols, Total	ND		15	µg/L	1	7/21/2010 11:13 PM
Hexachlorobenzene	ND		5.0	µg/L	1	7/21/2010 11:13 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	7/21/2010 11:13 PM
Hexachloroethane	ND		5.0	µg/L	1	7/21/2010 11:13 PM
Nitrobenzene	ND		5.0	µg/L	1	7/21/2010 11:13 PM
Pentachlorophenol	ND		5.0	µg/L	1	7/21/2010 11:13 PM
Pyridine	ND		5.0	µg/L	1	7/21/2010 11:13 PM
Surr: 2,4,6-Tribromophenol	*77.8*		*42-124*	*%REC*	1	7/21/2010 11:13 PM
Surr: 2-Fluorobiphenyl	*68.9*		*48-120*	*%REC*	1	7/21/2010 11:13 PM
Surr: 2-Fluorophenol	*63.4*		*20-120*	*%REC*	1	7/21/2010 11:13 PM
Surr: 4-Terphenyl-d14	*72.9*		*51-135*	*%REC*	1	7/21/2010 11:13 PM
Surr: Nitrobenzene-d5	*68.1*		*41-120*	*%REC*	1	7/21/2010 11:13 PM
Surr: Phenol-d6	*70.3*		*20-120*	*%REC*	1	7/21/2010 11:13 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **7/16/2010**	Analyst: **PC**
1,1-Dichloroethene	ND		100	µg/L	20	7/22/2010 06:38 PM
1,2-Dichloroethane	ND		100	µg/L	20	7/22/2010 06:38 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	7/22/2010 06:38 PM
2-Butanone	ND		200	µg/L	20	7/22/2010 06:38 PM
Benzene	ND		100	µg/L	20	7/22/2010 06:38 PM
Carbon tetrachloride	ND		100	µg/L	20	7/22/2010 06:38 PM
Chlorobenzene	ND		100	µg/L	20	7/22/2010 06:38 PM
Chloroform	ND		100	µg/L	20	7/22/2010 06:38 PM
Tetrachloroethene	ND		100	µg/L	20	7/22/2010 06:38 PM
Trichloroethene	ND		100	µg/L	20	7/22/2010 06:38 PM

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

ALS Laboratory Group

Date: *23-Jul-10*

Client: Navajo Refining Company
Project: T-433 **Work Order:** 1007422
Sample ID: T-433 Leak/Soil **Lab ID:** 1007422-01
Collection Date: 7/13/2010 03:04 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	7/22/2010 06:38 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	7/22/2010 06:38 PM
Surr: 4-Bromofluorobenzene	*107*		*72-125*	*%REC*	20	7/22/2010 06:38 PM
Surr: Dibromofluoromethane	*110*		*71-125*	*%REC*	20	7/22/2010 06:38 PM
Surr: Toluene-d8	*118*		*75-125*	*%REC*	20	7/22/2010 06:38 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	7/19/2010 10:30 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	7/19/2010 10:30 AM
IGNITABILITY			**SW1030**			Analyst: **JLC**
Ignitability, Solid	**Negative**			**no unit**	1	7/15/2010 03:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**8.66**		**0.100**	**pH Units**	1	7/20/2010 12:00 PM

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

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

Chain of Custody Form

Page 1 of 1

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

ALS Project Manager:

ALS Work Order #: 1007422

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	T-433	A	TCLP VOAS
Work Order		Project Number		B	TCLP SemiVOAS
Company Name	Navajo Refining	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCT
Address	501 E Main	Address		E	
				F	
City/State/Zip	Artesia NM 88210	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	T-433 Leak/soil	7-13-10	1504	S	NO	1	X	X	X	X							
2	T-433 Bottoms/soil	7-1310	1509	S	NO	1	X	X	X	X							
3	Temp Blank																
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: Fed Ex

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

Results Due Date:

Relinquished by: Aaron Strange	Date: 7-13-10	Time: 1615	Received by:	Notes:	
Relinquished by:	Date:	Time:	Received by (Laboratory): 7/14/10 0100	Cooler ID	Cooler Temp
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

From: Strange, Aaron [aaron.strange@hollycorp.com]
Sent: Wednesday, June 23, 2010 4:08 PM
To: Kim Flowers; Chavez, Carl J, EMNRD
Subject: Request for waste approval
Attachments: T-57 Frac Tank Containment.pdf; Fire Water Line Soil.pdf

Kim,

Please see the attached requests for waste approval.

Thanks,

Aaron Strange
Environmental Technician, Senior
Environmental Department
Navajo Refining Co, LLC
Artesia NM
Off: (575) 746-5468
Cell: (575) 703-5057

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CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Contaminated soil with plastic

ESTIMATED VOLUME: 120 yds

GENERATING PROCESS: Temporary berm used for T-57 Frac Tank Containment.

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: Aaron Strange
SIGNATURE

NAME: Aaron Strange
PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 6-23-2010

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Navajo Refining Co.

2. Originating Site:
Artesia Plant

3. Location of Material (Street Address, City, State or ULSTR):
501 E Main Artesia NM

4. Source and Description of Waste:
Berm used for temporary secondary containment for T-57 Frac Tanks. The waste consists of soil and plastic liner.

Estimated Volume 120 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Laboratory Group

Date: *14-Jun-10*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1006141
Sample ID: T-57 Frac Tank Containment
Lab ID: 1006141-01
Collection Date: 6/3/2010 11:00 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/9/2010**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/9/2010 08:49 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/8/2010**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	6/9/2010 07:43 AM
Barium	**0.267**		**0.0500**	**mg/L**	10	6/9/2010 07:43 AM
Cadmium	ND		0.0500	mg/L	10	6/9/2010 07:43 AM
Chromium	ND		0.0500	mg/L	10	6/9/2010 07:43 AM
Lead	ND		0.0500	mg/L	10	6/9/2010 07:43 AM
Selenium	ND		0.0500	mg/L	10	6/9/2010 07:43 AM
Silver	ND		0.0500	mg/L	10	6/9/2010 07:43 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/9/2010**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 10:23 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 10:23 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/9/2010 10:23 PM
Cresols, Total	ND		15	µg/L	1	6/9/2010 10:23 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/9/2010 10:23 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/9/2010 10:23 PM
Hexachloroethane	ND		5.0	µg/L	1	6/9/2010 10:23 PM
Nitrobenzene	ND		5.0	µg/L	1	6/9/2010 10:23 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/9/2010 10:23 PM
Pyridine	ND		5.0	µg/L	1	6/9/2010 10:23 PM
Surr: 2,4,6-Tribromophenol	*66.6*		*42-124*	*%REC*	1	6/9/2010 10:23 PM
Surr: 2-Fluorobiphenyl	*65.1*		*48-120*	*%REC*	1	6/9/2010 10:23 PM
Surr: 2-Fluorophenol	*70.0*		*20-120*	*%REC*	1	6/9/2010 10:23 PM
Surr: 4-Terphenyl-d14	*63.5*		*51-135*	*%REC*	1	6/9/2010 10:23 PM
Surr: Nitrobenzene-d5	*66.1*		*41-120*	*%REC*	1	6/9/2010 10:23 PM
Surr: Phenol-d6	*60.1*		*20-120*	*%REC*	1	6/9/2010 10:23 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/7/2010**	Analyst: **HLBW**
1,1-Dichloroethene	ND		100	µg/L	20	6/11/2010 04:39 PM
1,2-Dichloroethane	ND		100	µg/L	20	6/11/2010 04:39 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	6/11/2010 04:39 PM
2-Butanone	ND		200	µg/L	20	6/11/2010 04:39 PM
Benzene	ND		100	µg/L	20	6/11/2010 04:39 PM
Carbon tetrachloride	ND		100	µg/L	20	6/11/2010 04:39 PM
Chlorobenzene	ND		100	µg/L	20	6/11/2010 04:39 PM
Chloroform	ND		100	µg/L	20	6/11/2010 04:39 PM
Tetrachloroethene	ND		100	µg/L	20	6/11/2010 04:39 PM
Trichloroethene	ND		100	µg/L	20	6/11/2010 04:39 PM

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

ALS Laboratory Group

Date: *14-Jun-10*

Client: Navajo Refining Company
Project: Disposal
Work Order: 1006141
Sample ID: T-57 Frac Tank Containment
Lab ID: 1006141-01
Collection Date: 6/3/2010 11:00 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	6/11/2010 04:39 PM
Surr: 1,2-Dichloroethane-d4	*105*		*70-125*	*%REC*	20	6/11/2010 04:39 PM
Surr: 4-Bromofluorobenzene	*106*		*72-125*	*%REC*	20	6/11/2010 04:39 PM
Surr: Dibromofluoromethane	*99.2*		*71-125*	*%REC*	20	6/11/2010 04:39 PM
Surr: Toluene-d8	*108*		*75-125*	*%REC*	20	6/11/2010 04:39 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/8/2010 12:00 PM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/8/2010 12:00 PM
IGNITABILITY			**SW1030**			Analyst: **JLC**
Ignitability, Solid	**Negative**			**no unit**	1	6/10/2010 12:00 PM
PH			**SW9045B**			Analyst: **TDW**
pH	**7.56**		**0.100**	**pH Units**	1	6/7/2010 03:00 PM

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

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

Chain of Custody Form

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

ALS Project Manager:

ALS Work Order #: 100614

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Disposal	A	TCLP VOAS
Work Order		Project Number		B	TCLP SemiVOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To	Aaron Strange	Invoice Attn		D	RCI
Address	PO Box 159	Address		E	
				F	
City/State/Zip	Artesia NM 88211	City/State/Zip		G	
Phone	575-748-3311	Phone		H	
Fax	575-746-5451	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	T-57 FracTank Containment	6-3-10	11:00	S	NO	1	X	X	X	X							
2	Temp Blank																
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Relinquished by:	Date: 6-3-10	Time: 1615	Received by:	Notes:
Relinquished by:	Date:	Time:	Received by (Laboratory): 6-4-10 0955	Cooler ID / Cooler Temp
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	QC Package: (Check One Box Below)

☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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

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CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

COMPANY / GENERATOR: Navajo Refining Co.

ADDRESS: 501 E Main Artesia NM 88210

GENERATING SITE: Artesia Plant

COUNTY Eddy STATE NM

TYPE OF WASTE: Excavated Soil/Contanimated Soil

ESTIMATED VOLUME: 1,000 yds

GENERATING PROCESS: Excavated Soil from new and Repaired Fire Water Lines.

REMARKS:

NMOCD FACILITY: CRI

TRUCKING COMPANY: S Brothers

As a condition of acceptance for disposal, I hereby certify that this waste is A non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: [signature] SIGNATURE

NAME: Aaron Strang PRINTED

ADDRESS: 501 E Main Artesia NM 88210

DATE: 6-23-2010

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Navajo Refining Co.

2. Originating Site:
Artesia Plant

3. Location of Material (Street Address, City, State or ULSTR):
501 E Main Artesia NM

4. Source and Description of Waste:
Excavated soil from new and repaired fire water lines.

Estimated Volume 1000 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Aaron Strange, representative or authorized agent for Navajo Refining Co. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. *Transporter:*
S Brothers

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Sample ID: Sulfur Rack Fire Water Line
Collection Date: 6/3/2010 01:05 PM

Work Order: 1006153
Lab ID: 1006153-01
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/14/2010**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/14/2010 06:19 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/8/2010**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	6/9/2010 07:49 AM
Barium	**0.152**		**0.0500**	**mg/L**	10	6/9/2010 07:49 AM
Cadmium	ND		0.0500	mg/L	10	6/9/2010 07:49 AM
Chromium	ND		0.0500	mg/L	10	6/9/2010 07:49 AM
Lead	ND		0.0500	mg/L	10	6/9/2010 07:49 AM
Selenium	ND		0.0500	mg/L	10	6/9/2010 07:49 AM
Silver	ND		0.0500	mg/L	10	6/9/2010 07:49 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/9/2010**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 10:44 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 10:44 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/9/2010 10:44 PM
Cresols, Total	ND		15	µg/L	1	6/9/2010 10:44 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/9/2010 10:44 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/9/2010 10:44 PM
Hexachloroethane	ND		5.0	µg/L	1	6/9/2010 10:44 PM
Nitrobenzene	ND		5.0	µg/L	1	6/9/2010 10:44 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/9/2010 10:44 PM
Pyridine	ND		5.0	µg/L	1	6/9/2010 10:44 PM
Surr: 2,4,6-Tribromophenol	*71.1*		*42-124*	*%REC*	1	6/9/2010 10:44 PM
Surr: 2-Fluorobiphenyl	*63.5*		*48-120*	*%REC*	1	6/9/2010 10:44 PM
Surr: 2-Fluorophenol	*62.7*		*20-120*	*%REC*	1	6/9/2010 10:44 PM
Surr: 4-Terphenyl-d14	*54.4*		*51-135*	*%REC*	1	6/9/2010 10:44 PM
Surr: Nitrobenzene-d5	*55.0*		*41-120*	*%REC*	1	6/9/2010 10:44 PM
Surr: Phenol-d6	*56.0*		*20-120*	*%REC*	1	6/9/2010 10:44 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/7/2010**	Analyst: **AKP**
1,1-Dichloroethene	ND		100	µg/L	20	6/15/2010 05:12 PM
1,2-Dichloroethane	ND		100	µg/L	20	6/15/2010 05:12 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	6/15/2010 05:12 PM
2-Butanone	ND		200	µg/L	20	6/15/2010 05:12 PM
Benzene	ND		100	µg/L	20	6/15/2010 05:12 PM
Carbon tetrachloride	ND		100	µg/L	20	6/15/2010 05:12 PM
Chlorobenzene	ND		100	µg/L	20	6/15/2010 05:12 PM
Chloroform	ND		100	µg/L	20	6/15/2010 05:12 PM
Tetrachloroethene	ND		100	µg/L	20	6/15/2010 05:12 PM
Trichloroethene	ND		100	µg/L	20	6/15/2010 05:12 PM

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

Client: Navajo Refining Company
Project: Disposal/Fire Water Line **Work Order:** 1006153
Sample ID: Sulfur Rack Fire Water Line **Lab ID:** 1006153-01
Collection Date: 6/3/2010 01:05 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	6/15/2010 05:12 PM
Surr: 1,2-Dichloroethane-d4	*102*		*70-125*	*%REC*	20	6/15/2010 05:12 PM
Surr: 4-Bromofluorobenzene	*98.2*		*72-125*	*%REC*	20	6/15/2010 05:12 PM
Surr: Dibromofluoromethane	*97.0*		*71-125*	*%REC*	20	6/15/2010 05:12 PM
Surr: Toluene-d8	*98.5*		*75-125*	*%REC*	20	6/15/2010 05:12 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
IGNITABILITY			**SW1030**			Analyst: **JLC**
Ignitability, Solid	**Negative**			**no unit**	1	6/10/2010 12:00 PM
PH			**SW9045B**			Analyst: **IAB**
pH	**8.08**		**0.100**	**pH Units**	1	6/14/2010 03:00 PM

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

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Sample ID: SRU2 Fire Water Line
Collection Date: 6/3/2010 01:23 PM

Work Order: 1006153
Lab ID: 1006153-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/14/2010**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/14/2010 06:21 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/8/2010**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	6/9/2010 07:55 AM
Barium	**0.252**		**0.0500**	**mg/L**	10	6/9/2010 07:55 AM
Cadmium	ND		0.0500	mg/L	10	6/9/2010 07:55 AM
Chromium	ND		0.0500	mg/L	10	6/9/2010 07:55 AM
Lead	ND		0.0500	mg/L	10	6/9/2010 07:55 AM
Selenium	ND		0.0500	mg/L	10	6/9/2010 07:55 AM
Silver	ND		0.0500	mg/L	10	6/9/2010 07:55 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/9/2010**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 11:06 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 11:06 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/9/2010 11:06 PM
Cresols, Total	ND		15	µg/L	1	6/9/2010 11:06 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/9/2010 11:06 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/9/2010 11:06 PM
Hexachloroethane	ND		5.0	µg/L	1	6/9/2010 11:06 PM
Nitrobenzene	ND		5.0	µg/L	1	6/9/2010 11:06 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/9/2010 11:06 PM
Pyridine	ND		5.0	µg/L	1	6/9/2010 11:06 PM
Surr: 2,4,6-Tribromophenol	*68.3*		*42-124*	*%REC*	1	6/9/2010 11:06 PM
Surr: 2-Fluorobiphenyl	*74.7*		*48-120*	*%REC*	1	6/9/2010 11:06 PM
Surr: 2-Fluorophenol	*64.2*		*20-120*	*%REC*	1	6/9/2010 11:06 PM
Surr: 4-Terphenyl-d14	*73.1*		*51-135*	*%REC*	1	6/9/2010 11:06 PM
Surr: Nitrobenzene-d5	*63.5*		*41-120*	*%REC*	1	6/9/2010 11:06 PM
Surr: Phenol-d6	*69.9*		*20-120*	*%REC*	1	6/9/2010 11:06 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/7/2010**	Analyst: **AKP**
1,1-Dichloroethene	ND		100	µg/L	20	6/15/2010 05:39 PM
1,2-Dichloroethane	ND		100	µg/L	20	6/15/2010 05:39 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	6/15/2010 05:39 PM
2-Butanone	ND		200	µg/L	20	6/15/2010 05:39 PM
Benzene	ND		100	µg/L	20	6/15/2010 05:39 PM
Carbon tetrachloride	ND		100	µg/L	20	6/15/2010 05:39 PM
Chlorobenzene	ND		100	µg/L	20	6/15/2010 05:39 PM
Chloroform	ND		100	µg/L	20	6/15/2010 05:39 PM
Tetrachloroethene	ND		100	µg/L	20	6/15/2010 05:39 PM
Trichloroethene	ND		100	µg/L	20	6/15/2010 05:39 PM

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

Client: Navajo Refining Company
Project: Disposal/Fire Water Line **Work Order:** 1006153
Sample ID: SRU2 Fire Water Line **Lab ID:** 1006153-02
Collection Date: 6/3/2010 01:23 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	6/15/2010 05:39 PM
Surr: 1,2-Dichloroethane-d4	*108*		*70-125*	*%REC*	20	6/15/2010 05:39 PM
Surr: 4-Bromofluorobenzene	*99.0*		*72-125*	*%REC*	20	6/15/2010 05:39 PM
Surr: Dibromofluoromethane	*97.6*		*71-125*	*%REC*	20	6/15/2010 05:39 PM
Surr: Toluene-d8	*99.6*		*75-125*	*%REC*	20	6/15/2010 05:39 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
IGNITABILITY			**SW1030**			Analyst: **JLC**
Ignitability, Solid	**Negative**			**no unit**	1	6/10/2010 12:00 PM
PH			**SW9045B**			Analyst: **IAB**
pH	**8.74**		**0.100**	**pH Units**	1	6/14/2010 03:00 PM

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

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Sample ID: PNM Ware house Fire Water Line
Collection Date: 6/3/2010 01:30 PM

Work Order: 1006153
Lab ID: 1006153-03
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/14/2010**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/14/2010 06:23 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/8/2010**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	6/9/2010 08:01 AM
Barium	**0.270**		**0.0500**	**mg/L**	10	6/9/2010 08:01 AM
Cadmium	ND		0.0500	mg/L	10	6/9/2010 08:01 AM
Chromium	ND		0.0500	mg/L	10	6/9/2010 08:01 AM
Lead	ND		0.0500	mg/L	10	6/9/2010 08:01 AM
Selenium	ND		0.0500	mg/L	10	6/9/2010 08:01 AM
Silver	ND		0.0500	mg/L	10	6/9/2010 08:01 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/9/2010**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 11:27 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 11:27 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/9/2010 11:27 PM
Cresols, Total	ND		15	µg/L	1	6/9/2010 11:27 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/9/2010 11:27 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/9/2010 11:27 PM
Hexachloroethane	ND		5.0	µg/L	1	6/9/2010 11:27 PM
Nitrobenzene	ND		5.0	µg/L	1	6/9/2010 11:27 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/9/2010 11:27 PM
Pyridine	ND		5.0	µg/L	1	6/9/2010 11:27 PM
Surr: 2,4,6-Tribromophenol	*55.1*		*42-124*	*%REC*	1	6/9/2010 11:27 PM
Surr: 2-Fluorobiphenyl	*61.0*		*48-120*	*%REC*	1	6/9/2010 11:27 PM
Surr: 2-Fluorophenol	*65.5*		*20-120*	*%REC*	1	6/9/2010 11:27 PM
Surr: 4-Terphenyl-d14	*60.7*		*51-135*	*%REC*	1	6/9/2010 11:27 PM
Surr: Nitrobenzene-d5	*59.7*		*41-120*	*%REC*	1	6/9/2010 11:27 PM
Surr: Phenol-d6	*57.1*		*20-120*	*%REC*	1	6/9/2010 11:27 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/7/2010**	Analyst: **AKP**
1,1-Dichloroethene	ND		100	µg/L	20	6/15/2010 06:06 PM
1,2-Dichloroethane	ND		100	µg/L	20	6/15/2010 06:06 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	6/15/2010 06:06 PM
2-Butanone	ND		200	µg/L	20	6/15/2010 06:06 PM
Benzene	ND		100	µg/L	20	6/15/2010 06:06 PM
Carbon tetrachloride	ND		100	µg/L	20	6/15/2010 06:06 PM
Chlorobenzene	ND		100	µg/L	20	6/15/2010 06:06 PM
Chloroform	ND		100	µg/L	20	6/15/2010 06:06 PM
Tetrachloroethene	ND		100	µg/L	20	6/15/2010 06:06 PM
Trichloroethene	ND		100	µg/L	20	6/15/2010 06:06 PM

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

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Work Order: 1006153
Sample ID: PNM Ware house Fire Water Line
Lab ID: 1006153-03
Collection Date: 6/3/2010 01:30 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	6/15/2010 06:06 PM
Surr: 1,2-Dichloroethane-d4	*102*		*70-125*	*%REC*	20	6/15/2010 06:06 PM
Surr: 4-Bromofluorobenzene	*97.3*		*72-125*	*%REC*	20	6/15/2010 06:06 PM
Surr: Dibromofluoromethane	*95.9*		*71-125*	*%REC*	20	6/15/2010 06:06 PM
Surr: Toluene-d8	*99.3*		*75-125*	*%REC*	20	6/15/2010 06:06 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
IGNITABILITY			**SW1030**			Analyst: **JLC**
Ignitability, Solid	**Negative**			**no unit**	1	6/10/2010 12:00 PM
PH			**SW9045B**			Analyst: **IAB**
pH	**8.55**		**0.100**	**pH Units**	1	6/14/2010 03:00 PM

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

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Sample ID: MHU Fire Water Line
Collection Date: 6/3/2010 01:39 PM

Work Order: 1006153
Lab ID: 1006153-04
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/14/2010**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/14/2010 06:25 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/8/2010**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	6/9/2010 08:07 AM
Barium	**0.212**		**0.0500**	**mg/L**	10	6/9/2010 08:07 AM
Cadmium	ND		0.0500	mg/L	10	6/9/2010 08:07 AM
Chromium	ND		0.0500	mg/L	10	6/9/2010 08:07 AM
Lead	ND		0.0500	mg/L	10	6/9/2010 08:07 AM
Selenium	ND		0.0500	mg/L	10	6/9/2010 08:07 AM
Silver	ND		0.0500	mg/L	10	6/9/2010 08:07 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/9/2010**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 11:49 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/9/2010 11:49 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/9/2010 11:49 PM
Cresols, Total	ND		15	µg/L	1	6/9/2010 11:49 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/9/2010 11:49 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/9/2010 11:49 PM
Hexachloroethane	ND		5.0	µg/L	1	6/9/2010 11:49 PM
Nitrobenzene	ND		5.0	µg/L	1	6/9/2010 11:49 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/9/2010 11:49 PM
Pyridine	ND		5.0	µg/L	1	6/9/2010 11:49 PM
Surr: 2,4,6-Tribromophenol	*66.3*		*42-124*	*%REC*	1	6/9/2010 11:49 PM
Surr: 2-Fluorobiphenyl	*62.1*		*48-120*	*%REC*	1	6/9/2010 11:49 PM
Surr: 2-Fluorophenol	*58.6*		*20-120*	*%REC*	1	6/9/2010 11:49 PM
Surr: 4-Terphenyl-d14	*62.9*		*51-135*	*%REC*	1	6/9/2010 11:49 PM
Surr: Nitrobenzene-d5	*64.4*		*41-120*	*%REC*	1	6/9/2010 11:49 PM
Surr: Phenol-d6	*58.4*		*20-120*	*%REC*	1	6/9/2010 11:49 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/7/2010**	Analyst: **AKP**
1,1-Dichloroethene	ND		100	µg/L	20	6/15/2010 06:33 PM
1,2-Dichloroethane	ND		100	µg/L	20	6/15/2010 06:33 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	6/15/2010 06:33 PM
2-Butanone	ND		200	µg/L	20	6/15/2010 06:33 PM
Benzene	ND		100	µg/L	20	6/15/2010 06:33 PM
Carbon tetrachloride	ND		100	µg/L	20	6/15/2010 06:33 PM
Chlorobenzene	ND		100	µg/L	20	6/15/2010 06:33 PM
Chloroform	ND		100	µg/L	20	6/15/2010 06:33 PM
Tetrachloroethene	ND		100	µg/L	20	6/15/2010 06:33 PM
Trichloroethene	ND		100	µg/L	20	6/15/2010 06:33 PM

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

Client: Navajo Refining Company
Project: Disposal/Fire Water Line **Work Order:** 1006153
Sample ID: MHU Fire Water Line **Lab ID:** 1006153-04
Collection Date: 6/3/2010 01:39 PM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	6/15/2010 06:33 PM
Surr: 1,2-Dichloroethane-d4	*100*		*70-125*	*%REC*	20	6/15/2010 06:33 PM
Surr: 4-Bromofluorobenzene	*97.1*		*72-125*	*%REC*	20	6/15/2010 06:33 PM
Surr: Dibromofluoromethane	*93.4*		*71-125*	*%REC*	20	6/15/2010 06:33 PM
Surr: Toluene-d8	*100*		*75-125*	*%REC*	20	6/15/2010 06:33 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
IGNITABILITY			**SW1030**			Analyst: **JLC**
Ignitability, Solid	**Negative**			**no unit**	1	6/10/2010 12:00 PM
PH			**SW9045B**			Analyst: **IAB**
pH	**8.04**		**0.100**	**pH Units**	1	6/14/2010 03:00 PM

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

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Sample ID: Freeman/PG Rack Fire Water Line
Collection Date: 6/3/2010 01:46 PM

Work Order: 1006153
Lab ID: 1006153-05
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/14/2010**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/14/2010 06:26 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/8/2010**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	6/9/2010 08:14 AM
Barium	**0.274**		**0.0500**	**mg/L**	10	6/9/2010 08:14 AM
Cadmium	ND		0.0500	mg/L	10	6/9/2010 08:14 AM
Chromium	ND		0.0500	mg/L	10	6/9/2010 08:14 AM
Lead	ND		0.0500	mg/L	10	6/9/2010 08:14 AM
Selenium	ND		0.0500	mg/L	10	6/9/2010 08:14 AM
Silver	ND		0.0500	mg/L	10	6/9/2010 08:14 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/9/2010**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/10/2010 05:51 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/10/2010 05:51 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/10/2010 05:51 PM
Cresols, Total	ND		15	µg/L	1	6/10/2010 05:51 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/10/2010 05:51 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/10/2010 05:51 PM
Hexachloroethane	ND		5.0	µg/L	1	6/10/2010 05:51 PM
Nitrobenzene	ND		5.0	µg/L	1	6/10/2010 05:51 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/10/2010 05:51 PM
Pyridine	ND		5.0	µg/L	1	6/10/2010 05:51 PM
Surr: 2,4,6-Tribromophenol	*69.7*		*42-124*	*%REC*	1	6/10/2010 05:51 PM
Surr: 2-Fluorobiphenyl	*74.8*		*48-120*	*%REC*	1	6/10/2010 05:51 PM
Surr: 2-Fluorophenol	*55.8*		*20-120*	*%REC*	1	6/10/2010 05:51 PM
Surr: 4-Terphenyl-d14	*64.8*		*51-135*	*%REC*	1	6/10/2010 05:51 PM
Surr: Nitrobenzene-d5	*73.0*		*41-120*	*%REC*	1	6/10/2010 05:51 PM
Surr: Phenol-d6	*63.0*		*20-120*	*%REC*	1	6/10/2010 05:51 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/7/2010**	Analyst: **AKP**
1,1-Dichloroethene	ND		100	µg/L	20	6/15/2010 07:00 PM
1,2-Dichloroethane	ND		100	µg/L	20	6/15/2010 07:00 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	6/15/2010 07:00 PM
2-Butanone	ND		200	µg/L	20	6/15/2010 07:00 PM
Benzene	ND		100	µg/L	20	6/15/2010 07:00 PM
Carbon tetrachloride	ND		100	µg/L	20	6/15/2010 07:00 PM
Chlorobenzene	ND		100	µg/L	20	6/15/2010 07:00 PM
Chloroform	ND		100	µg/L	20	6/15/2010 07:00 PM
Tetrachloroethene	ND		100	µg/L	20	6/15/2010 07:00 PM
Trichloroethene	ND		100	µg/L	20	6/15/2010 07:00 PM

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

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Work Order: 1006153
Sample ID: Freeman/PG Rack Fire Water Line
Lab ID: 1006153-05
Collection Date: 6/3/2010 01:46 PM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	6/15/2010 07:00 PM
Surr: 1,2-Dichloroethane-d4	*110*		*70-125*	*%REC*	20	6/15/2010 07:00 PM
Surr: 4-Bromofluorobenzene	*98.8*		*72-125*	*%REC*	20	6/15/2010 07:00 PM
Surr: Dibromofluoromethane	*98.2*		*71-125*	*%REC*	20	6/15/2010 07:00 PM
Surr: Toluene-d8	*101*		*75-125*	*%REC*	20	6/15/2010 07:00 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
IGNITABILITY			**SW1030**			Analyst: **JLC**
Ignitability, Solid	**Negative**			**no unit**	1	6/10/2010 12:00 PM
PH			**SW9045B**			Analyst: **IAB**
pH	**8.34**		**0.100**	**pH Units**	1	6/14/2010 03:00 PM

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

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Sample ID: RO Unit Fire Water Line
Collection Date: 6/3/2010 02:12 PM

Work Order: 1006153
Lab ID: 1006153-06
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY			**SW7470**		Prep Date: **6/14/2010**	Analyst: **JCJ**
Mercury	ND		0.000200	mg/L	1	6/14/2010 06:33 PM
TCLP METALS			**SW1311/6020**		Prep Date: **6/8/2010**	Analyst: **SKS**
Arsenic	ND		0.0500	mg/L	10	6/9/2010 08:20 AM
Barium	**0.162**		**0.0500**	**mg/L**	10	6/9/2010 08:20 AM
Cadmium	ND		0.0500	mg/L	10	6/9/2010 08:20 AM
Chromium	ND		0.0500	mg/L	10	6/9/2010 08:20 AM
Lead	ND		0.0500	mg/L	10	6/9/2010 08:20 AM
Selenium	ND		0.0500	mg/L	10	6/9/2010 08:20 AM
Silver	ND		0.0500	mg/L	10	6/9/2010 08:20 AM
TCLP SEMIVOLATILES			**SW1311/8270**		Prep Date: **6/9/2010**	Analyst: **ACN**
2,4,5-Trichlorophenol	ND		5.0	µg/L	1	6/10/2010 06:13 PM
2,4,6-Trichlorophenol	ND		5.0	µg/L	1	6/10/2010 06:13 PM
2,4-Dinitrotoluene	ND		5.0	µg/L	1	6/10/2010 06:13 PM
Cresols, Total	ND		15	µg/L	1	6/10/2010 06:13 PM
Hexachlorobenzene	ND		5.0	µg/L	1	6/10/2010 06:13 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	6/10/2010 06:13 PM
Hexachloroethane	ND		5.0	µg/L	1	6/10/2010 06:13 PM
Nitrobenzene	ND		5.0	µg/L	1	6/10/2010 06:13 PM
Pentachlorophenol	ND		5.0	µg/L	1	6/10/2010 06:13 PM
Pyridine	ND		5.0	µg/L	1	6/10/2010 06:13 PM
Surr: 2,4,6-Tribromophenol	*63.5*		*42-124*	*%REC*	1	6/10/2010 06:13 PM
Surr: 2-Fluorobiphenyl	*54.8*		*48-120*	*%REC*	1	6/10/2010 06:13 PM
Surr: 2-Fluorophenol	*52.4*		*20-120*	*%REC*	1	6/10/2010 06:13 PM
Surr: 4-Terphenyl-d14	*60.7*		*51-135*	*%REC*	1	6/10/2010 06:13 PM
Surr: Nitrobenzene-d5	*64.5*		*41-120*	*%REC*	1	6/10/2010 06:13 PM
Surr: Phenol-d6	*59.1*		*20-120*	*%REC*	1	6/10/2010 06:13 PM
TCLP VOLATILES			**SW1311/8260B**		Prep Date: **6/7/2010**	Analyst: **AKP**
1,1-Dichloroethene	ND		100	µg/L	20	6/15/2010 07:27 PM
1,2-Dichloroethane	ND		100	µg/L	20	6/15/2010 07:27 PM
1,4-Dichlorobenzene	ND		100	µg/L	20	6/15/2010 07:27 PM
2-Butanone	ND		200	µg/L	20	6/15/2010 07:27 PM
Benzene	ND		100	µg/L	20	6/15/2010 07:27 PM
Carbon tetrachloride	ND		100	µg/L	20	6/15/2010 07:27 PM
Chlorobenzene	ND		100	µg/L	20	6/15/2010 07:27 PM
Chloroform	ND		100	µg/L	20	6/15/2010 07:27 PM
Tetrachloroethene	ND		100	µg/L	20	6/15/2010 07:27 PM
Trichloroethene	ND		100	µg/L	20	6/15/2010 07:27 PM

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

ALS Laboratory Group

Date: *17-Jun-10*

Client: Navajo Refining Company
Project: Disposal/Fire Water Line
Sample ID: RO Unit Fire Water Line
Collection Date: 6/3/2010 02:12 PM

Work Order: 1006153
Lab ID: 1006153-06
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		100	µg/L	20	6/15/2010 07:27 PM
Surr: 1,2-Dichloroethane-d4	*102*		*70-125*	*%REC*	20	6/15/2010 07:27 PM
Surr: 4-Bromofluorobenzene	*98.8*		*72-125*	*%REC*	20	6/15/2010 07:27 PM
Surr: Dibromofluoromethane	*94.0*		*71-125*	*%REC*	20	6/15/2010 07:27 PM
Surr: Toluene-d8	*99.4*		*75-125*	*%REC*	20	6/15/2010 07:27 PM
REACTIVE CYANIDE			**SW-846**			Analyst: **HN**
Reactive Cyanide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
REACTIVE SULFIDE			**SW-846**			Analyst: **HN**
Reactive Sulfide	ND		40.0	mg/Kg	1	6/14/2010 09:00 AM
IGNITABILITY			**SW1030**			Analyst: **JLC**
Ignitability, Solid	**Negative**			**no unit**	1	6/10/2010 12:00 PM
PH			**SW9045B**			Analyst: **IAB**
pH	**8.14**		**0.100**	**pH Units**	1	6/14/2010 03:00 PM

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

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

Chain of Custody Form

Page 1 of 1

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

ALS Project Manager: | ALS Work Order #: 100673

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Disposal/Fire Water Line	A	TCLP VOAS
Work Order		Project Number		B	TCLP SemiVOAS
Company Name	Navajo Refining Co.	Bill To Company		C	TCLP Metals
Send Report To		Invoice Attn		D	RCI
Address		Address		E	
				F	
City/State/Zip		City/State/Zip		G	
Phone		Phone		H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Sulfur Rack Fire Water Line	6-3-10	1305	S	NO	1	X	X	X	X							
2	SAU2 Fire Water Line		1323			1	X	X	X	X							
3	PWM Warehouse Fire Water Line		1330			1	X	X	X	X							
4	MHU Fire Water Line		1339			1	X	X	X	X							
5	Freeman/PG Rack Fire Water Line		1346			1	X	X	X	X							
6	RO Unit Fire Water Line		1412			1	X	X	X	X							
7	Temp Blank																
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Aaron Strange

Shipment Method: FedEx

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

Results Due Date:

Relinquished by: Aaron Strange Date: 6-3-10 Time: 16:15

Relinquished by: Date: Time:

Received by: Received by (Laboratory): 06-04-10 0855

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes:

Cooler ID | Cooler Temp

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

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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