

UIC-1 - ____8-0__

**WDW-3
WASTE**

Chavez, Carl J, EMNRD

From: Combs, Robert [Robert.Combs@hollyfrontier.com]
Sent: Wednesday, November 09, 2011 10:10 AM
To: Kim Flowers; Chavez, Carl J, EMNRD
Cc: Dave Small; Les Elliott; Strange, Aaron; Rhodes, Glen; Moore, Darrell
Subject: Request for waste disposal--excavation from Gaines injection well spill
Attachments: Profile form and C-138--gaines well spill 17 Mar 2011.pdf; 1110858 Gaines Wastewater Effluent Spill Final.pdf

Kim,
Please see the attached profile form, C-138 and analytical results for excavated soil from the WWTP effluent spill at one of our injection wells. 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:	Gaines well spill (3/17/11) excavation
ESTIMATED VOLUME:	35 yds
GENERATING PROCESS:	WWTP
REMARKS:	see attached ALS report, work order# 1110858
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:	11/9/2011

TELEPHONE NO.:



07-Nov-2011

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

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

Re: Gaines Wastewater Effluent Spill

Work Order: **1110858**

Dear Aaron,

ALS Environmental received 3 samples on 26-Oct-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 36.

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

Sincerely,

Electronically approved by: Mary K. Knowles

Patricia L. Lynch
Project Manager



Certificate No: T104704231-09A-TX

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

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ALS Environmental

Date: 07-Nov-11

Client: Navajo Refining Company
Project: Gaines Wastewater Effluent Spill
Work Order: 1110858

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1110858-01	Gaines-Background 32°46'15.32"N- 104°14'00.04"W	Soil		10/25/2011 10:10	10/26/2011 08:50	☐
1110858-02	Gaines-Bottom Hole 32°46'16.58"N- 104°13'59.59"W	Soil		10/25/2011 10:20	10/26/2011 08:50	☐
1110858-03	Gaines-Excavation Dirt	Solid		10/25/2011 10:28	10/26/2011 08:50	☐

Client: Navajo Refining Company
Project: Gaines Wastewater Effluent Spill
Work Order: 1110858

Case Narrative

Batch 56542, Metals, Sample 1110960-04 : MS/MSD is for an unrelated sample.

Batch 56542, Metals, Sample 1110960-04 : MS/MSD RPD is for an unrelated sample.

Batch 56542, Metals, Sample 1110960-04 : Duplicate RPD is for an unrelated sample.

Batch 56552, TCLP Metals, Sample 1110955-01 : 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: 07-Nov-11

Client: Navajo Refining Company

Project: Gaines Wastewater Effluent Spill

Work Order: 1110858

Sample ID: Gaines-Background 32°46'15.32"N-104°14'00.04"W

Lab ID: 1110858-01

Collection Date: 10/25/2011 10:10 AM

Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			SW8021B			Analyst: JFT
Benzene	ND		0.0010	mg/Kg	1	10/27/2011 03:11 PM
Toluene	ND		0.0010	mg/Kg	1	10/27/2011 03:11 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	10/27/2011 03:11 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	10/27/2011 03:11 PM
Surr: 4-Bromofluorobenzene	110		75-131	%REC	1	10/27/2011 03:11 PM
Surr: Trifluorotoluene	103		73-130	%REC	1	10/27/2011 03:11 PM
MERCURY - SW7471B			SW7471A			Prep Date: 10/31/2011 Analyst: JCJ
Mercury	ND		0.00357	mg/Kg	1	10/31/2011 03:33 PM
METALS			SW6020			Prep Date: 10/31/2011 Analyst: SKS
Aluminum	4.020		96.1	mg/Kg	100	10/31/2011 05:23 PM
Arsenic	1.92		0.480	mg/Kg	1	10/31/2011 03:01 PM
Barium	208		48.0	mg/Kg	100	10/31/2011 05:23 PM
Boron	6.73		4.80	mg/Kg	2	11/1/2011 01:58 PM
Cadmium	ND		0.480	mg/Kg	1	10/31/2011 03:01 PM
Chromium	3.88		0.480	mg/Kg	1	10/31/2011 03:01 PM
Copper	6.77		0.480	mg/Kg	1	10/31/2011 03:01 PM
Lead	7.29		0.480	mg/Kg	1	10/31/2011 03:01 PM
Manganese	135		0.480	mg/Kg	1	10/31/2011 03:01 PM
Molybdenum	ND		0.480	mg/Kg	1	10/31/2011 03:01 PM
Nickel	3.65		0.480	mg/Kg	1	10/31/2011 03:01 PM
Selenium	ND		0.480	mg/Kg	1	10/31/2011 03:01 PM
Silver	ND		0.480	mg/Kg	1	10/31/2011 03:01 PM
Zinc	9.94		0.480	mg/Kg	1	10/31/2011 03:01 PM
ANIONS - EPA 300.0 (1993)			E300			Prep Date: 10/28/2011 Analyst: RPM
Chloride	407		24.8	mg/Kg	5	10/28/2011 11:41 PM
Sulfate	9,860		248	mg/Kg	50	10/31/2011 08:59 PM
Surr: Selenate (surr)	107		85-115	%REC	50	10/31/2011 08:59 PM
Surr: Selenate (surr)	110		85-115	%REC	5	10/28/2011 11:41 PM

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

ALS Environmental

Date: 07-Nov-11

Client: Navajo Refining Company
Project: Gaines Wastewater Effluent Spill
Sample ID: Gaines-Bottom Hole 32°46'16.58"N-104°13'59.59"W
Collection Date: 10/25/2011 10:20 AM

Work Order: 1110858
Lab ID: 1110858-02
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX						
			SW8021B			Analyst: JFT
Benzene	ND		0.0010	mg/Kg	1	10/27/2011 02:19 PM
Toluene	ND		0.0010	mg/Kg	1	10/27/2011 02:19 PM
Ethylbenzene	ND		0.0010	mg/Kg	1	10/27/2011 02:19 PM
Xylenes, Total	ND		0.0030	mg/Kg	1	10/27/2011 02:19 PM
Surr: 4-Bromofluorobenzene	113		75-131	%REC	1	10/27/2011 02:19 PM
Surr: Trifluorotoluene	101		73-130	%REC	1	10/27/2011 02:19 PM
MERCURY - SW7471B						
			SW7471A			Prep Date: 10/31/2011 Analyst: JCJ
Mercury	0.00457		0.00361	mg/Kg	1	10/31/2011 03:35 PM
METALS						
			SW6020			Prep Date: 10/31/2011 Analyst: SKS
Aluminum	4,230		90.8	mg/Kg	100	10/31/2011 05:25 PM
Arsenic	1.89		0.454	mg/Kg	1	10/31/2011 03:03 PM
Barium	234		45.4	mg/Kg	100	10/31/2011 05:25 PM
Boron	6.44		4.54	mg/Kg	2	11/1/2011 02:01 PM
Cadmium	ND		0.454	mg/Kg	1	10/31/2011 03:03 PM
Chromium	3.60		0.454	mg/Kg	1	10/31/2011 03:03 PM
Copper	6.30		0.454	mg/Kg	1	10/31/2011 03:03 PM
Lead	6.89		0.454	mg/Kg	1	10/31/2011 03:03 PM
Manganese	55.3		0.454	mg/Kg	1	10/31/2011 03:03 PM
Molybdenum	ND		0.454	mg/Kg	1	10/31/2011 03:03 PM
Nickel	3.25		0.454	mg/Kg	1	10/31/2011 03:03 PM
Selenium	ND		0.454	mg/Kg	1	10/31/2011 03:03 PM
Silver	ND		0.454	mg/Kg	1	10/31/2011 03:03 PM
Zinc	9.25		0.454	mg/Kg	1	10/31/2011 03:03 PM
ANIONS - EPA 300.0 (1993)						
			E300			Prep Date: 10/28/2011 Analyst: RPM
Chloride	2,630		248	mg/Kg	50	10/29/2011 12:02 AM
Sulfate	896		248	mg/Kg	50	10/29/2011 12:02 AM
Surr: Selenate (surr)	100		85-115	%REC	50	10/29/2011 12:02 AM

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

ALS Environmental

Date: 07-Nov-11

Client: Navajo Refining Company

Project: Gaines Wastewater Effluent Spill

Work Order: 1110858

Sample ID: Gaines-Excavation Dirt

Lab ID: 1110858-03

Collection Date: 10/25/2011 10:28 AM

Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TCLP MERCURY						
Mercury	ND		SW7470 0.000200	mg/L	Prep Date: 10/31/2011 1	Analyst: JCJ 10/31/2011 03:15 PM
TCLP METALS						
Arsenic	ND		SW1311/6020 0.0500	mg/L	Prep Date: 10/31/2011 10	Analyst: ALR 10/31/2011 11:07 PM
Barium	0.312		0.0500	mg/L	10	10/31/2011 11:07 PM
Cadmium	ND		0.0200	mg/L	10	10/31/2011 11:07 PM
Chromium	ND		0.0500	mg/L	10	10/31/2011 11:07 PM
Lead	ND		0.0500	mg/L	10	10/31/2011 11:07 PM
Selenium	ND		0.0500	mg/L	10	10/31/2011 11:07 PM
Silver	ND		0.0500	mg/L	10	10/31/2011 11:07 PM
TCLP SEMIVOLATILES						
2,4,5-Trichlorophenol	ND		SW1311/8270 0.0050	mg/L	Prep Date: 10/31/2011 1	Analyst: ACN 11/2/2011 03:57 PM
2,4,6-Trichlorophenol	ND		0.0050	mg/L	1	11/2/2011 03:57 PM
2,4-Dinitrotoluene	ND		0.0050	mg/L	1	11/2/2011 03:57 PM
Cresols, Total	ND		0.015	mg/L	1	11/2/2011 03:57 PM
Hexachlorobenzene	ND		0.0050	mg/L	1	11/2/2011 03:57 PM
Hexachlorobutadiene	ND		0.0050	mg/L	1	11/2/2011 03:57 PM
Hexachloroethane	ND		0.0050	mg/L	1	11/2/2011 03:57 PM
Nitrobenzene	ND		0.0050	mg/L	1	11/2/2011 03:57 PM
Pentachlorophenol	ND		0.0050	mg/L	1	11/2/2011 03:57 PM
Pyridine	ND		0.0050	mg/L	1	11/2/2011 03:57 PM
Surr: 2,4,6-Tribromophenol	67.7		42-124	%REC	1	11/2/2011 03:57 PM
Surr: 2-Fluorobiphenyl	67.0		48-120	%REC	1	11/2/2011 03:57 PM
Surr: 2-Fluorophenol	64.7		20-120	%REC	1	11/2/2011 03:57 PM
Surr: 4-Terphenyl-d14	67.0		51-135	%REC	1	11/2/2011 03:57 PM
Surr: Nitrobenzene-d5	73.2		41-120	%REC	1	11/2/2011 03:57 PM
Surr: Phenol-d6	74.5		20-120	%REC	1	11/2/2011 03:57 PM
TCLP VOLATILES						
1,1-Dichloroethene	ND		SW1311/8260B 0.10	mg/L	Prep Date: 10/29/2011 20	Analyst: PC 11/1/2011 03:37 AM
1,2-Dichloroethane	ND		0.10	mg/L	20	11/1/2011 03:37 AM
1,4-Dichlorobenzene	ND		0.10	mg/L	20	11/1/2011 03:37 AM
2-Butanone	ND		0.20	mg/L	20	11/1/2011 03:37 AM
Benzene	ND		0.10	mg/L	20	11/1/2011 03:37 AM
Carbon tetrachloride	ND		0.10	mg/L	20	11/1/2011 03:37 AM
Chlorobenzene	ND		0.10	mg/L	20	11/1/2011 03:37 AM
Chloroform	ND		0.10	mg/L	20	11/1/2011 03:37 AM
Tetrachloroethene	ND		0.10	mg/L	20	11/1/2011 03:37 AM
Trichloroethene	ND		0.10	mg/L	20	11/1/2011 03:37 AM

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

ALS Environmental

Date: 07-Nov-11

Client: Navajo Refining Company

Project: Gaines Wastewater Effluent Spill

Work Order: 1110858

Sample ID: Gaines-Excavation Dirt

Lab ID: 1110858-03

Collection Date: 10/25/2011 10:28 AM

Matrix: SOLID

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Vinyl chloride	ND		0.040	mg/L	20	11/1/2011 03:37 AM
Surr: 1,2-Dichloroethane-d4	109		70-125	%REC	20	11/1/2011 03:37 AM
Surr: 4-Bromofluorobenzene	98.7		72-125	%REC	20	11/1/2011 03:37 AM
Surr: Dibromofluoromethane	101		71-125	%REC	20	11/1/2011 03:37 AM
Surr: Toluene-d8	105		75-125	%REC	20	11/1/2011 03:37 AM
REACTIVE CYANIDE			SW-846			Analyst: HN
Reactive Cyanide	ND		40.0	mg/Kg	1	11/2/2011 11:30 AM
REACTIVE SULFIDE			SW-846			Analyst: HN
Reactive Sulfide	ND		40.0	mg/Kg	1	11/2/2011 11:30 AM
IGNITABILITY			SW1030			Analyst: KAH
Ignitability, Solid	Negative			Burn Rate, mm/	1	10/31/2011 02:50 PM
PH			SW9045B			Analyst: TDW
pH	7.72		0.100	pH Units	1	10/31/2011 01:00 PM

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

ALS Environmental

Date: 07-Nov-11

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: R118392 Instrument ID BTEX3 Method: SW8021B

MBLK	Sample ID: BBLKS1-102711-R118392				Units: µg/Kg		Analysis Date: 10/27/2011 11:33 AM			
Client ID:	Run ID: BTEX3_111027A				SeqNo: 2576484		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	30.93	1.0	30	0	103	75-131	0			
Surr: Trifluorotoluene	28.89	1.0	30	0	96.3	73-130	0			

LCS	Sample ID: BLCSS1-102711-R118392					Units: µg/Kg		Analysis Date: 10/27/2011 10:51 AM		
Client ID:	Run ID: BTEX3_111027A				SeqNo: 2576483		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.88	1.0	20	0	89.4	74-129	0			
Toluene	18.7	1.0	20	0	93.5	75-128	0			
Ethylbenzene	17.47	1.0	20	0	87.3	73-127	0			
Xylenes, Total	55.03	3.0	60	0	91.7	74-127	0			
Surr: 4-Bromofluorobenzene	31.61	1.0	30	0	105	75-131	0			
Surr: Trifluorotoluene	29.65	1.0	30	0	98.8	73-130	0			

MS	Sample ID: 1110858-02AMS				Units: µg/Kg		Analysis Date: 10/27/2011 02:37 PM			
Client ID: Gaines-Bottom Hole 32°46'16.58"N-104°13'59.59"W		Run ID: BTEX3_111027A			SeqNo: 2576494		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.11	1.0	20	0	85.5	74-129	0			
Toluene	17.77	1.0	20	0	88.8	75-128	0			
Ethylbenzene	16.55	1.0	20	0	82.8	73-127	0			
Xylenes, Total	50.74	3.0	60	0	84.6	74-127	0			
Surr: 4-Bromofluorobenzene	34.7	1.0	30	0	116	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: 1110858
Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: R118392 Instrument ID BTEX3 Method: SW8021B

MSD Sample ID: 1110858-02AMSD Units: µg/Kg Analysis Date: 10/27/2011 02:54 PM

Client ID: Gaines-Bottom Hole Run ID: BTEX3_111027A SeqNo: 2576495 Prep Date: DF: 1
32°46'16.58"N-104°13'59.59"W

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.14	1.0	20	0	85.7	74-129	17.11	0.192	30	
Toluene	17.79	1.0	20	0	89	75-128	17.77	0.14	30	
Ethylbenzene	16.5	1.0	20	0	82.5	73-127	16.55	0.294	30	
Xylenes, Total	50.54	3.0	60	0	84.2	74-127	50.74	0.384	30	
Surr: 4-Bromofluorobenzene	34.05	1.0	30	0	114	75-131	34.7	1.89	30	
Surr: Trifluorotoluene	31.14	1.0	30	0	104	73-130	31.47	1.03	30	

The following samples were analyzed in this batch:

1110858-01A 1110858-02A

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

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: 56541 Instrument ID HG02 Method: SW7471A

MBLK Sample ID: GBLKS1-103111-56541 Units: µg/Kg Analysis Date: 10/31/2011 02:26 PM

Client ID: Run ID: HG02_111031A SeqNo: 2579850 Prep Date: 10/31/2011 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: GLCSS1-103111-56541 Units: µg/Kg Analysis Date: 10/31/2011 02:28 PM

Client ID: Run ID: HG02_111031A SeqNo: 2579851 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	328	3.3	333.3	0	98.4	85-115	0			

MS Sample ID: 1110885-04AMS Units: µg/Kg Analysis Date: 10/31/2011 02:40 PM

Client ID: Run ID: HG02_111031A SeqNo: 2579859 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	505.9	3.6	360.4	186.6	88.6	85-115	0			

MSD Sample ID: 1110885-04AMSD Units: µg/Kg Analysis Date: 10/31/2011 02:42 PM

Client ID: Run ID: HG02_111031A SeqNo: 2579860 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	490.1	3.5	352.1	186.6	86.2	85-115	505.9	3.17	20	

DUP Sample ID: 1110885-04ADUP Units: µg/Kg Analysis Date: 10/31/2011 02:35 PM

Client ID: Run ID: HG02_111031A SeqNo: 2579858 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	188.7	3.6	0	0	0		186.6	1.16	20	

The following samples were analyzed in this batch:

1110858-01A 1110858-02A

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

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: 56542 Instrument ID ICPMS05 Method: SW6020

MBLK Sample ID: MBLKS1-103111-56542 Units: mg/Kg Analysis Date: 10/31/2011 02:46 PM

Client ID: Run ID: ICPMS05_111031A SeqNo: 2579733 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.8074	1.0								J
Arsenic	ND	0.50								
Barium	ND	0.50								
Boron	ND	2.5								
Cadmium	ND	0.50								
Chromium	ND	0.50								
Copper	ND	0.50								
Lead	0.0518	0.50								J
Manganese	ND	0.50								
Molybdenum	ND	0.50								
Nickel	ND	0.50								
Selenium	ND	0.50								
Silver	ND	0.50								
Zinc	0.2631	0.50								J

LCS Sample ID: MLCSS1-103111-56542 Units: mg/Kg Analysis Date: 10/31/2011 05:04 PM

Client ID: Run ID: ICPMS03_111031A SeqNo: 2580070 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.569	0.50	10	0	95.7	80-120	0			
Barium	10.89	0.50	10	0	109	80-120	0			
Boron	47.87	2.5	50	0	95.7	80-120	0			
Cadmium	10.19	0.50	10	0	102	80-120	0			
Chromium	9.759	0.50	10	0	97.6	80-120	0			
Copper	10.13	0.50	10	0	101	80-120	0			
Lead	10.34	0.50	10	0	103	80-120	0			
Manganese	9.717	0.50	10	0	97.2	80-120	0			
Molybdenum	10.46	0.50	10	0	105	80-120	0			
Nickel	9.866	0.50	10	0	98.7	80-120	0			
Selenium	9.465	0.50	10	0	94.6	80-120	0			
Silver	10.17	0.50	10	0	102	80-120	0			
Zinc	9.882	0.50	10	0	98.8	80-120	0			

LCS Sample ID: MLCSS1-103111-56542 Units: mg/Kg Analysis Date: 11/2/2011 02:08 PM

Client ID: Run ID: ICPMS03_111102A SeqNo: 2582608 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	10.92	1.0	10	0	109	80-120	0			

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

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: 56542 Instrument ID ICPMS05 Method: SW6020

MS Sample ID: 1110960-04BMS Units: mg/Kg Analysis Date: 10/31/2011 05:45 PM

Client ID: Run ID: ICPMS05_111031A SeqNo: 2580304 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	3123	0.88	8.835	3928	-9120	75-125	0			SEO
Arsenic	7.603	0.44	8.835	1.051	74.2	75-125	0			S
Barium	67.05	0.44	8.835	48.44	211	75-125	0			SO
Boron	47.83	2.2	44.18	4.024	99.2	75-125	0			
Cadmium	8.527	0.44	8.835	0.0524	95.9	75-125	0			
Chromium	14.66	0.44	8.835	10.32	49.1	75-125	0			S
Copper	12.07	0.44	8.835	7.344	53.4	75-125	0			S
Lead	16.02	0.44	8.835	8.051	90.2	75-125	0			
Manganese	121.6	0.44	8.835	131.2	-109	75-125	0			SO
Molybdenum	7.78	0.44	8.835	0.4349	83.1	75-125	0			
Nickel	34.5	0.44	8.835	31.58	33	75-125	0			S
Selenium	6.893	0.44	8.835	0.3995	73.5	75-125	0			S
Silver	6.739	0.44	8.835	0	76.3	75-125	0			
Zinc	32.98	0.44	8.835	31.36	18.3	75-125	0			S

MSD Sample ID: 1110960-04BMSD Units: mg/Kg Analysis Date: 10/31/2011 05:48 PM

Client ID: Run ID: ICPMS05_111031A SeqNo: 2580305 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	2826	0.88	8.766	3928	-12600	75-125	3123	9.98	25	SEO
Arsenic	6.64	0.44	8.766	1.051	63.8	75-125	7.603	13.5	25	S
Barium	64.17	0.44	8.766	48.44	179	75-125	67.05	4.4	25	SO
Boron	50.72	2.2	43.83	4.024	107	75-125	47.83	5.87	25	
Cadmium	8.296	0.44	8.766	0.0524	94	75-125	8.527	2.74	25	
Chromium	11.5	0.44	8.766	10.32	13.4	75-125	14.66	24.2	25	S
Copper	9.688	0.44	8.766	7.344	26.7	75-125	12.07	21.9	25	S
Lead	16.07	0.44	8.766	8.051	91.4	75-125	16.02	0.316	25	
Manganese	104.1	0.44	8.766	131.2	-309	75-125	121.6	15.5	25	SO
Molybdenum	7.083	0.44	8.766	0.4349	75.8	75-125	7.78	9.37	25	
Nickel	25.9	0.44	8.766	31.58	-64.8	75-125	34.5	28.5	25	SR
Selenium	5.844	0.44	8.766	0.3995	62.1	75-125	6.893	16.5	25	S
Silver	6.287	0.44	8.766	0	71.7	75-125	6.739	6.93	25	S
Zinc	28.66	0.44	8.766	31.36	-30.8	75-125	32.98	14	25	S

DUP Sample ID: 1110960-04BDUP Units: mg/Kg Analysis Date: 10/31/2011 05:31 PM

Client ID: Run ID: ICPMS05_111031A SeqNo: 2580298 Prep Date: 10/31/2011 DF: 100

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	4558	89	0	0	0	0-0	5486	18.5	25	
Manganese	217.9	44	0	0	0	0-0	152.1	35.6	25	R

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

Client: Navajo Refining Company
Work Order: 1110858
Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **56542** Instrument ID **ICPMS05** Method: **SW6020**

DUP Sample ID: **1110960-04BDUP** Units: **mg/Kg** Analysis Date: **10/31/2011 05:43 PM**
 Client ID: Run ID: **ICPMS05_111031A** SeqNo: **2580303** Prep Date: **10/31/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	1.395	0.44	0	0	0	0-0	1.051	28.1	25	R
Barium	61.6	0.44	0	0	0	0-0	48.44	23.9	25	
Boron	3.933	2.2	0	0	0	0-0	4.024	2.29	25	
Cadmium	0.0617	0.44	0	0	0	0-0	0.0524	0	25	J
Chromium	16.9	0.44	0	0	0	0-0	10.32	48.3	25	R
Copper	7.073	0.44	0	0	0	0-0	7.344	3.75	25	
Lead	8.147	0.44	0	0	0	0-0	8.051	1.18	25	
Molybdenum	3.672	0.44	0	0	0	0-0	0.4349	158	25	R
Nickel	43.03	0.44	0	0	0	0-0	31.58	30.7	25	R
Selenium	0.4877	0.44	0	0	0	0-0	0.3995	19.9	25	
Silver	ND	0.44	0	0	0	0-0	0	0	25	
Zinc	39.13	0.44	0	0	0	0-0	31.36	22	25	

The following samples were analyzed in this batch:

1110858-01A 1110858-02A

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

Client: Navajo Refining Company
Work Order: 1110858
Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: 56544 Instrument ID Mercury Method: SW7470

MBLK Sample ID: GBLKW1-103111-56544 Units: mg/L Analysis Date: 10/31/2011 03:09 PM

Client ID: Run ID: MERCURY_111031A SeqNo: 2579933 Prep Date: 10/31/2011 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: GBLKT1-102811-56544 Units: mg/L Analysis Date: 10/31/2011 03:28 PM

Client ID: Run ID: MERCURY_111031A SeqNo: 2579941 Prep Date: 10/31/2011 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: GLCSW1-103111-56544 Units: mg/L Analysis Date: 10/31/2011 03:11 PM

Client ID: Run ID: MERCURY_111031A SeqNo: 2579934 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00522	0.00020	0.005	0	104	80-120	0			

MS Sample ID: 1110858-03AMS Units: mg/L Analysis Date: 10/31/2011 03:19 PM

Client ID: Gaines-Excavation Dirt Run ID: MERCURY_111031A SeqNo: 2579937 Prep Date: 10/31/2011 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	102	75-125	0			

MSD Sample ID: 1110858-03AMSD Units: mg/L Analysis Date: 10/31/2011 03:21 PM

Client ID: Gaines-Excavation Dirt Run ID: MERCURY_111031A SeqNo: 2579938 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00506	0.00020	0.005	0	101	75-125	0.0051	0.787	20	

DUP Sample ID: 1110858-03ADUP Units: mg/L Analysis Date: 10/31/2011 03:17 PM

Client ID: Gaines-Excavation Dirt Run ID: MERCURY_111031A SeqNo: 2579936 Prep Date: 10/31/2011 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: 1110858-03A

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

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: 56552 Instrument ID ICPMS03 Method: SW1311/6020

MBLK Sample ID: MBLKT1-102911-56552 Units: mg/L Analysis Date: 10/31/2011 09:36 PM

Client ID: Run ID: ICPMS03_111031A SeqNo: 2580503 Prep Date: 10/31/2011 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			
Barium	ND	0.050	0	0	0	0-0	0			
Cadmium	ND	0.020	0	0	0	0-0	0			
Chromium	ND	0.050	0	0	0	0-0	0			
Lead	ND	0.050	0	0	0	0-0	0			
Selenium	0.0202	0.050	0	0	0	0-0	0			J
Silver	ND	0.050	0	0	0	0-0	0			

MBLK Sample ID: MBLKT2-102911-56552 Units: mg/L Analysis Date: 10/31/2011 09:42 PM

Client ID: Run ID: ICPMS03_111031A SeqNo: 2580504 Prep Date: 10/31/2011 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			
Barium	ND	0.050	0	0	0	0-0	0			
Cadmium	ND	0.020	0	0	0	0-0	0			
Chromium	ND	0.050	0	0	0	0-0	0			
Lead	ND	0.050	0	0	0	0-0	0			
Selenium	ND	0.050	0	0	0	0-0	0			
Silver	ND	0.050	0	0	0	0-0	0			

MBLK Sample ID: MBLKW3-103111-56552 Units: mg/L Analysis Date: 10/31/2011 11:59 PM

Client ID: Run ID: ICPMS03_111031A SeqNo: 2580527 Prep Date: 10/31/2011 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	0.020								
Chromium	ND	0.050								
Lead	ND	0.050								
Selenium	0.01215	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: 1110858
Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **56552** Instrument ID **ICPMS03** Method: **SW1311/6020**

LCS Sample ID: **MLCSW3-103111-56552** Units: **mg/L** Analysis Date: **11/1/2011 12:05 AM**

Client ID: Run ID: **ICPMS03_111031A** SeqNo: **2580528** Prep Date: **10/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4856	0.050	0.5	0	97.1	80-120	0			
Barium	0.4988	0.050	0.5	0	99.8	80-120	0			
Cadmium	0.4997	0.020	0.5	0	99.9	80-120	0			
Chromium	0.4758	0.050	0.5	0	95.2	80-120	0			
Lead	0.5039	0.050	0.5	0	101	80-120	0			
Selenium	0.4716	0.050	0.5	0	94.3	80-120	0			
Silver	0.4818	0.050	0.5	0	96.4	80-120	0			

MS Sample ID: **1110955-01AMS** Units: **mg/L** Analysis Date: **10/31/2011 10:06 PM**

Client ID: Run ID: **ICPMS03_111031A** SeqNo: **2580508** Prep Date: **10/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.454	0.050	0.5	0.004442	89.9	75-125	0			
Barium	2.661	0.050	0.5	2.294	73.4	75-125	0			SD
Cadmium	0.4617	0.020	0.5	-0.004124	93.2	75-125	0			
Chromium	0.4306	0.050	0.5	-0.0006847	86.3	75-125	0			
Lead	0.4783	0.050	0.5	-0.001803	96	75-125	0			
Selenium	0.4521	0.050	0.5	0.01699	87	75-125	0			
Silver	0.4417	0.050	0.5	-0.004816	89.3	75-125	0			

MSD Sample ID: **1110955-01AMSD** Units: **mg/L** Analysis Date: **10/31/2011 10:12 PM**

Client ID: Run ID: **ICPMS03_111031A** SeqNo: **2580509** Prep Date: **10/31/2011** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.4845	0.050	0.5	0.004442	96	75-125	0.454	6.5	25	
Barium	2.838	0.050	0.5	2.294	109	75-125	2.661	6.44	25	C
Cadmium	0.4902	0.020	0.5	-0.004124	98.9	75-125	0.4617	5.99	25	
Chromium	0.4513	0.050	0.5	-0.0006847	90.4	75-125	0.4306	4.69	25	
Lead	0.5054	0.050	0.5	-0.001803	101	75-125	0.4783	5.51	25	
Selenium	0.4685	0.050	0.5	0.01699	90.3	75-125	0.4521	3.56	25	
Silver	0.4705	0.050	0.5	-0.004816	95.1	75-125	0.4417	6.31	25	

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

Client: Navajo Refining Company
Work Order: 1110858
Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: 56552 Instrument ID ICPMS03 Method: SW1311/6020

DUP Sample ID: 1110955-01ADUP Units: mg/L Analysis Date: 10/31/2011 09:54 PM

Client ID: Run ID: ICPMS03_111031A SeqNo: 2580506 Prep Date: 10/31/2011 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	0.004442	0	25	
Barium	2.297	0.050	0	0	0	0-0	2.294	0.131	25	
Cadmium	ND	0.020	0	0	0	0-0	-0.004124	0	25	
Chromium	ND	0.050	0	0	0	0-0	-0.0006847	0	25	
Lead	ND	0.050	0	0	0	0-0	-0.001803	0	25	
Selenium	0.01129	0.050	0	0	0	0-0	0.01699	0	25	J
Silver	ND	0.050	0	0	0	0-0	-0.004816	0	25	

The following samples were analyzed in this batch:

1110858-03A

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

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: 56565 Instrument ID SV-3 Method: SW1311/8270

MBLK Sample ID: SBLKT1-111031-56565 Units: µg/L Analysis Date: 11/1/2011 01:42 PM

Client ID: Run ID: SV-3_111101B SeqNo: 2581908 Prep Date: 10/31/2011 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	75.46	5.0	100	0	75.5	42-124	0			
Surr: 2-Fluorobiphenyl	81.72	5.0	100	0	81.7	48-120	0			
Surr: 2-Fluorophenol	77.12	5.0	100	0	77.1	20-120	0			
Surr: 4-Terphenyl-d14	75.09	5.0	100	0	75.1	51-135	0			
Surr: Nitrobenzene-d5	93.74	5.0	100	0	93.7	41-120	0			
Surr: Phenol-d6	73.1	5.0	100	0	73.1	20-120	0			

LCS Sample ID: SLCST1-111031-56565 Units: µg/L Analysis Date: 11/1/2011 02:06 PM

Client ID: Run ID: SV-3_111101B SeqNo: 2581910 Prep Date: 10/31/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	97.6	5.0	100	0	97.6	52-115	0			
2,4,6-Trichlorophenol	72.46	5.0	100	0	72.5	53-115	0			
2,4-Dinitrotoluene	46.27	5.0	50	0	92.5	56-115	0			
Cresols, Total	187.4	15	250	0	75	35-115	0			
Hexachlorobenzene	45.55	5.0	50	0	91.1	54-115	0			
Hexachlorobutadiene	46.4	5.0	50	0	92.8	51-115	0			
Hexachloroethane	46.51	5.0	50	0	93	54-115	0			
Nitrobenzene	46.51	5.0	50	0	93	40-124	0			
Pentachlorophenol	73.22	5.0	100	0	73.2	45-125	0			
Pyridine	34.79	5.0	50	0	69.6	34-115	0			
Surr: 2,4,6-Tribromophenol	73.57	5.0	100	0	73.6	42-124	0			
Surr: 2-Fluorobiphenyl	86.08	5.0	100	0	86.1	48-120	0			
Surr: 2-Fluorophenol	85.87	5.0	100	0	85.9	20-120	0			
Surr: 4-Terphenyl-d14	76.66	5.0	100	0	76.7	51-135	0			
Surr: Nitrobenzene-d5	84.84	5.0	100	0	84.8	41-120	0			
Surr: Phenol-d6	73.46	5.0	100	0	73.5	20-120	0			

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

Client: Navajo Refining Company
Work Order: 1110858
Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **56565** Instrument ID **SV-3** Method: **SW1311/8270**

LCSD Sample ID: **SLCSDT1-111031-56565** Units: **µg/L** Analysis Date: **11/1/2011 02:30 PM**

Client ID: Run ID: **SV-3_111101B** SeqNo: **2581911** Prep Date: **10/31/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	96	5.0	100	0	96	52-115	97.6	1.65	25	
2,4,6-Trichlorophenol	71.23	5.0	100	0	71.2	53-115	72.46	1.72	25	
2,4-Dinitrotoluene	47.85	5.0	50	0	95.7	56-115	46.27	3.37	25	
Cresols, Total	188.6	15	250	0	75.4	35-115	187.4	0.6	25	
Hexachlorobenzene	48.87	5.0	50	0	97.7	54-115	45.55	7.04	25	
Hexachlorobutadiene	46.99	5.0	50	0	94	51-115	46.4	1.28	25	
Hexachloroethane	47.51	5.0	50	0	95	54-115	46.51	2.12	25	
Nitrobenzene	49.77	5.0	50	0	99.5	40-124	46.51	6.78	25	
Pentachlorophenol	76.33	5.0	100	0	76.3	45-125	73.22	4.16	25	
Pyridine	37.79	5.0	50	0	75.6	34-115	34.79	8.26	25	
Surr: 2,4,6-Tribromophenol	73.46	5.0	100	0	73.5	42-124	73.57	0.146	25	
Surr: 2-Fluorobiphenyl	82.99	5.0	100	0	83	48-120	86.08	3.66	25	
Surr: 2-Fluorophenol	85.47	5.0	100	0	85.5	20-120	85.87	0.465	25	
Surr: 4-Terphenyl-d14	75.17	5.0	100	0	75.2	51-135	76.66	1.95	25	
Surr: Nitrobenzene-d5	90.05	5.0	100	0	90	41-120	84.84	5.95	25	
Surr: Phenol-d6	68.52	5.0	100	0	68.5	20-120	73.46	6.96	25	

The following samples were analyzed in this batch:

1110858-03A

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

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: R118592 Instrument ID VOA6 Method: SW1311/8260B

MBLK Sample ID: VBLKW-103111-R118592 Units: µg/L Analysis Date: 11/1/2011 01:52 AM

Client ID: Run ID: VOA6_111031H SeqNo: 2581131 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	55.64	5.0	50	0	111	70-125	0			
Surr: 4-Bromofluorobenzene	48.78	5.0	50	0	97.6	72.4-125	0			
Surr: Dibromofluoromethane	50.56	5.0	50	0	101	71.2-125	0			
Surr: Toluene-d8	52.54	5.0	50	0	105	75-125	0			

MBLK Sample ID: MBLKV1-102811-R118592 Units: µg/L Analysis Date: 11/1/2011 02:18 AM

Client ID: Run ID: VOA6_111031H SeqNo: 2581132 Prep Date: 10/29/2011 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	1059	100	1000	0	106	70-125	0			
Surr: 4-Bromofluorobenzene	991.9	100	1000	0	99.2	72.4-125	0			
Surr: Dibromofluoromethane	1005	100	1000	0	100	71.2-125	0			
Surr: Toluene-d8	1051	100	1000	0	105	75-125	0			

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

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: R118592 Instrument ID VOA6 Method: SW1311/8260B

LCS		Sample ID: VLCSW-103111-R118592				Units: µg/L		Analysis Date: 11/1/2011 12:59 AM		
Client ID:		Run ID: VOA6_111031H				SeqNo: 2581130		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	51.37	5.0	50	0	103	73-124	0			
1,2-Dichloroethane	56.66	5.0	50	0	113	76-120	0			
1,4-Dichlorobenzene	49.59	5.0	50	0	99.2	70-130	0			
2-Butanone	121	10	100	0	121	70-130	0			
Benzene	53.49	5.0	50	0	107	70-128	0			
Carbon tetrachloride	50.79	5.0	50	0	102	70-130	0			
Chlorobenzene	50.58	5.0	50	0	101	72-127	0			
Chloroform	50.72	5.0	50	0	101	70-130	0			
Tetrachloroethene	49.47	5.0	50	0	98.9	70-130	0			
Trichloroethene	48.9	5.0	50	0	97.8	72-129	0			
Vinyl chloride	45.65	2.0	50	0	91.3	70-130	0			
Surr: 1,2-Dichloroethane-d4	51.77	5.0	50	0	104	70-125	0			
Surr: 4-Bromofluorobenzene	51.83	5.0	50	0	104	72-125	0			
Surr: Dibromofluoromethane	48.91	5.0	50	0	97.8	71-125	0			
Surr: Toluene-d8	51.7	5.0	50	0	103	75-125	0			

MS		Sample ID: 1110858-03AMS				Units: µg/L		Analysis Date: 11/1/2011 04:03 AM		
Client ID: Gaines-Excavation Dirt		Run ID: VOA6_111031H				SeqNo: 2581136		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	931.6	100	1000	0	93.2	73-124	0			
1,2-Dichloroethane	1176	100	1000	0	118	76-120	0			
1,4-Dichlorobenzene	943.5	100	1000	0	94.4	70-130	0			
2-Butanone	2577	200	2000	0	129	70-130	0			
Benzene	1047	100	1000	0	105	70-128	0			
Carbon tetrachloride	888.5	100	1000	0	88.9	70-130	0			
Chlorobenzene	989.5	100	1000	0	99	72-127	0			
Chloroform	1041	100	1000	0	104	70-130	0			
Tetrachloroethene	865.6	100	1000	0	86.6	70-130	0			
Trichloroethene	915.6	100	1000	0	91.6	72-129	0			
Vinyl chloride	827.3	40	1000	0	82.7	70-130	0			
Surr: 1,2-Dichloroethane-d4	1070	100	1000	0	107	70-125	0			
Surr: 4-Bromofluorobenzene	1021	100	1000	0	102	72-125	0			
Surr: Dibromofluoromethane	1003	100	1000	0	100	71-125	0			
Surr: Toluene-d8	1025	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: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: R118592 Instrument ID VOA6 Method: SW1311/8260B

MSD		Sample ID: 1110858-03AMSD		Units: µg/L		Analysis Date: 11/1/2011 04:29 AM				
Client ID: Gaines-Excavation Dirt		Run ID: VOA6_111031H		SeqNo: 2581137		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	908.7	100	1000	0	90.9	73-124	931.6	2.49	20	
1,2-Dichloroethane	1120	100	1000	0	112	76-120	1176	4.89	20	
1,4-Dichlorobenzene	959.7	100	1000	0	96	70-130	943.5	1.7	20	
2-Butanone	2167	200	2000	0	108	70-130	2577	17.3	20	
Benzene	1026	100	1000	0	103	70-128	1047	2.04	20	
Carbon tetrachloride	871.8	100	1000	0	87.2	70-130	888.5	1.9	20	
Chlorobenzene	982.6	100	1000	0	98.3	72-127	989.5	0.698	20	
Chloroform	1031	100	1000	0	103	70-130	1041	0.909	20	
Tetrachloroethene	863.7	100	1000	0	86.4	70-130	865.6	0.213	20	
Trichloroethene	911	100	1000	0	91.1	72-129	915.6	0.504	20	
Vinyl chloride	842.8	40	1000	0	84.3	70-130	827.3	1.85	20	
Surr: 1,2-Dichloroethane-d4	1039	100	1000	0	104	70-125	1070	2.97	20	
Surr: 4-Bromofluorobenzene	998	100	1000	0	99.8	72-125	1021	2.33	20	
Surr: Dibromofluoromethane	991.4	100	1000	0	99.1	71-125	1003	1.21	20	
Surr: Toluene-d8	1026	100	1000	0	103	75-125	1025	0.0729	20	

The following samples were analyzed in this batch:

1110858-03A

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

Client: Navajo Refining Company
 Work Order: 1110858
 Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: 56508 Instrument ID ICS3000 Method: E300

MBLK Sample ID: WBLKS1-102811-56508 Units: mg/Kg Analysis Date: 10/30/2011 03:47 PM

Client ID: Run ID: ICS3000_111028A SeqNo: 2578611 Prep Date: 10/28/2011 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)	48.19	1.0	50	0	96.4	85-115	0			

LCS Sample ID: WLCSS1-102811-56508 Units: mg/Kg Analysis Date: 10/30/2011 04:08 PM

Client ID: Run ID: ICS3000_111028A SeqNo: 2578615 Prep Date: 10/28/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	189.4	5.0	200	0	94.7	90-110	0			
Sulfate	199.2	5.0	200	0	99.6	90-110	0			
Surr: Selenate (surr)	53.33	1.0	50	0	107	85-115	0			

LCSD Sample ID: WLCSDS1-102811-56508 Units: mg/Kg Analysis Date: 10/30/2011 04:29 PM

Client ID: Run ID: ICS3000_111028A SeqNo: 2578619 Prep Date: 10/28/2011 DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	187	5.0	200	0	93.5	90-110	189.4	1.3	20	
Sulfate	197.8	5.0	200	0	98.9	90-110	199.2	0.705	20	
Surr: Selenate (surr)	52.85	1.0	50	0	106	85-115	53.33	0.904	20	

MS Sample ID: 1110800-01AMS Units: mg/Kg Analysis Date: 10/28/2011 10:38 PM

Client ID: Run ID: ICS3000_111028A SeqNo: 2578578 Prep Date: 10/28/2011 DF: 100

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	15390	490	9842	5908	96.4	75-125	0			
Sulfate	9416	490	9842	56.53	95.1	75-125	0			
Surr: Selenate (surr)	5068	98	4921	0	103	80-120	0			

MSD Sample ID: 1110800-01AMSD Units: mg/Kg Analysis Date: 10/28/2011 10:59 PM

Client ID: Run ID: ICS3000_111028A SeqNo: 2578580 Prep Date: 10/28/2011 DF: 100

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	15110	490	9846	5908	93.5	75-125	15390	1.86	20	
Sulfate	9210	490	9846	56.53	93	75-125	9416	2.2	20	
Surr: Selenate (surr)	4979	98	4923	0	101	80-120	5068	1.76	20	

The following samples were analyzed in this batch:

1110858-01A 1110858-02A

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

Client: Navajo Refining Company
Work Order: 1110858
Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R118527** Instrument ID **WetChem** Method: **SW9045B**

LCS Sample ID: **WLCSW1-103111-R118527** Units: **pH Units** Analysis Date: **10/31/2011 01:00 PM**

Client ID: Run ID: **WETCHEM_111031H** SeqNo: **2579586** 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: **1110747-01ADUP** Units: **pH Units** Analysis Date: **10/31/2011 01:00 PM**

Client ID: Run ID: **WETCHEM_111031H** SeqNo: **2579660** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.1	0.10	0	0	0	0-0	7.16	0.842	20	

The following samples were analyzed in this batch:

1110858-03A

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

Client: Navajo Refining Company
Work Order: 1110858
Project: Gaines Wastewater Effluent Spill

QC BATCH REPORT

Batch ID: **R118546** Instrument ID **WetChem** Method: **SW1030**

DUP Sample ID: **1110789-01ADUP** Units: **Burn Rate, mm/se** Analysis Date: **10/31/2011 02:50 PM**

Client ID: Run ID: **WETCHEM_111031L** SeqNo: **2580015** 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:

1110858-03A

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

ALS Environmental

Date: 07-Nov-11

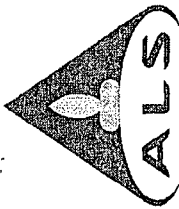
Client: Navajo Refining Company
Project: Gaines Wastewater Effluent Spill
WorkOrder: 1110858

**QUALIFIERS,
ACRONYMS, UNITS**

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

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

<u>Units Reported</u>	<u>Description</u>
Turn Rate, mm/sec	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
pH Units	



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

Chain of Custody Form

Page 1 of 1

1110858

NAVAJO REFINING: Navajo Refining Company
Project: Gaines Wastewater Effluent Spill



Customer Information				Project Information				Parameter request for Analysis											
Purchase Order	Project Name	Project Number	Project Name	Project Name	Project Name	Project Name	Project Name	A	B	C	D	E	F	G	H	I	J	Hold	
Work Order	Navajo Refining Company	Navajo Refining Company	Navajo Refining Company	Navajo Refining Company	Navajo Refining Company	Navajo Refining Company	Navajo Refining Company												
Send Report To	Aaron Strange	Invoice Attn: Aaron Strange	Address	501 East Main	City/State/Zip	Artesia, New Mexico 88210	Phone	(575) 748-3311	Fax	(575) 746-5451	e-Mail Address	A.Strange@hollyfrontier.com							
Address	P. O. Box 159																		
City/State/Zip	Artesia, New Mexico 88211-0159																		
Phone	(575) 748-3311																		
Fax	(575) 746-5451																		
e-Mail Address	A.Strange@hollyfrontier.com																		
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	Gaines - Background 32°46'15.32"N - 104°14'00.04"W	10/25/11	10:10	Solid	None	1	X	X	X										
2	Gaines - Bottom Hole 32°46'16.58"N - 104°13'59.59"W	10/25/11	10:20	Solid	None	1	X	X	X										
3	Gaines - Excavation Dirt	10/25/11	10:28	Solid	None	1				X	X	X	X						
4	Trip Blank					2													
5	Temperature Blank					1													
6																			
7																			
10																			

Sampler(s): Please Print & Sign <i>Aaron Strange</i>		Shipment Method: Federal Express		Required Turnaround Time: ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ Other ☐ 24 Hour		Results Due Date:	
Relinquished by: <i>Aaron Strange</i>		Received by: <i>[Signature]</i>		Notes:			
Date: 10-25-11 16:15		Time: 10:26		Cooler Temp:			
Relinquished by: <i>[Signature]</i>		Received by (Laboratory): <i>[Signature]</i>		QC Package: (Check Box Below)			
Date:		Time:		Level II: Standard QC		TRRP-Checklist	
Date:		Time:		Level III: Std QC + Raw Data		TRRP Level IV	
Date:		Time:		Level IV: SW846 CLP-Like			
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035		Other:					

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: **26-Oct-11 08:50**

Work Order: **1110858**

Received by: **PMG**

Checklist completed by Raymond N Gamba 26-Oct-11
eSignature Date

Reviewed by: Chris Bryson 28-Oct-11
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):	<u>2.1c</u> <u>002</u>		
Cooler(s)/Kit(s):	<u>4168</u>		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:	<u>-</u>		

Login Notes: Trip Blank logged in in previous work order (1110821); received in the same kit.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

ALS Group USA, Corp

Date: 04-Nov-11

Client: ALS Environmental

Project: 1110858

Work Order: 1110982

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1110982-01	1110858-03B	Solid		10/25/2011 10:28	10/28/2011 11:00	☐

Client: ALS Environmental
Project: 1110858
WorkOrder: 1110982

QUALIFIERS, ACRONYMS, UNITS

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

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
SD	Serial Dilution
TDL	Target Detection Limit

<u>Units Reported</u>	<u>Description</u>
mg/Kg	Milligrams per Kilogram

ALS Group USA, Corp

Date: 04-Nov-11

Client: ALS Environmental
Project: 1110858
Sample ID: 1110858-03B
Collection Date: 10/25/2011 10:28 AM

Work Order: 1110982
Lab ID: 1110982-01
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	11/2/2011 11:30 AM
SULFIDE, REACTIVE			SW7.3.4.2			Analyst: EE
Sulfide, Reactive	ND		40.0	mg/Kg	1	11/2/2011 11:30 AM

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

ALS Group USA, Corp

Date: 04-Nov-11

Client: ALS Environmental

Work Order: 1110982

Project: 1110858

QC BATCH REPORT

Batch ID: **R96989** Instrument ID **WETCHEM** Method: **SW7.3.4.2**

MBLK	Sample ID: WBLKW1-103111-R96989				Units: mg/Kg		Analysis Date: 10/31/2011 11:30 AM			
Client ID:	Run ID: WETCHEM_111031G				SeqNo: 1800803		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:

1110982-01A

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

Client: ALS Environmental
 Work Order: 1110982
 Project: 1110858

QC BATCH REPORT

Batch ID: R96990 Instrument ID WETCHEM Method: SW7.3.3.2

MBLK Sample ID: WBLKW1-103111-R96990 Units: mg/Kg Analysis Date: 10/31/2011 11:30 AM
 Client ID: Run ID: WETCHEM_111031H SeqNo: 1800811 Prep Date: DF: 1

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

LCS Sample ID: WLCSW1-103111-R96990 Units: mg/Kg Analysis Date: 10/31/2011 11:30 AM
 Client ID: Run ID: WETCHEM_111031H SeqNo: 1800812 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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Cyanide, Reactive 234.9 40 250 0 94 75-125 0

LCSD Sample ID: WLCSDW1-103111-R96990 Units: mg/Kg Analysis Date: 10/31/2011 11:30 AM
 Client ID: Run ID: WETCHEM_111031H SeqNo: 1800822 Prep Date: DF: 1

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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Cyanide, Reactive 249.6 40 250 0 99.8 75-125 234.9 6.06 35

MS Sample ID: 1110825-01A MS Units: mg/Kg Analysis Date: 10/31/2011 11:30 AM
 Client ID: Run ID: WETCHEM_111031H SeqNo: 1800816 Prep Date: DF: 1

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

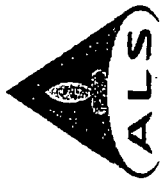
MSD Sample ID: 1110825-01A MSD Units: mg/Kg Analysis Date: 10/31/2011 11:30 AM
 Client ID: Run ID: WETCHEM_111031H SeqNo: 1800817 Prep Date: DF: 1

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

The following samples were analyzed in this batch: 1110982-01A

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



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

CHAIN-OF-CUSTODY RECORD

Date: 27-Oct-11
COC ID: 11140
Due Date 07-Nov-11

Page 1 of 1

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	Project Number	Project Name	A	B	C	D	E	F	G	H	I	J			
10-2122046	1110858	1110858	Reactive Cyanide (SW-846)													
Work Order			Reactive Sulfide (SW-846)													
Company Name	ALS Group USA, Corp.	Bill To Company	ALS Group USA, Corp.													
Send Report To	Patricia L. Lynch	Inv Attn	Accounts Payable													
Address	10450 Stanciliff Rd, Suite 210	Address	10450 Stanciliff Rd, Suite 210													
City/State/Zip	Houston, Texas 77099-4338	City/State/Zip	Houston, Texas 77099-4338													
Phone	(281) 530-5656	Phone	(281) 530-5656													
Fax	(281) 530-5887	Fax	(281) 530-5887													
eMail Address	pat.lynch@alsenviro.com	eMail CC	yvan.ty@alsglobal.com													
Sample ID	Matrix	Collection Date	24hr	25/Oct/2011 10:28	(1) 4OZGNEAT											
1110858-03B (Gaines-Excavation Dirt)	Solid			X	X											

Comments:

Please analyze for Reactive Cyanide and Reactive Sulfide. Report is due on 11/7/11. 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: 10/27/11	Received by:	Date/Time: 10/28/11	Cooler IDs: 6.00C	Report/QC Level: Std
Relinquished by:	Date/Time:	Received by:	Date/Time:		

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **ALS - HOUSTON**

Date/Time Received: **28-Oct-11 11:00**

Work Order: **1110982**

Received by: **JB**

Checklist completed by Jessica Bacon
eSignature

28-Oct-11
Date

Reviewed by: Bill Carey
eSignature

28-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):	<u>6.0 C</u>		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

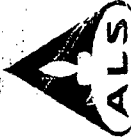
Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

 ALS Laboratory Group 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 630 5656 Fax. +1 281 630 5087	CUSTODY SEAL		Seal Broken By:
	Date: 10-27-11 Name: J. C. G. R. A. Company: ALS 495.	Time:	Date:

 ALS Laboratory Group 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 630 5656 Fax. +1 281 630 5087	CUSTODY SEAL		Date:
	Date: 10-27-11 Name: J. C. G. R. A. Company: ALS 495.	Time:	Date:

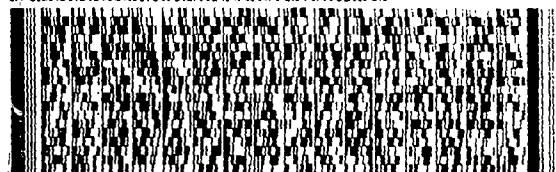
ORIGIN ID: SGRA (281) 530-5656
 SHIPPING DEPT
 ALS LABORATORY GROUP
 10450 STANCLIFF
 SUITE 210
 HOUSTON, TX 77099
 UNITED STATES US

SHIP DATE: 27OCT11
 ACTWGT: 21.5 LB
 CAO: 300130/CAFE2509

BILL SENDER

TO LES ARNOLD
 ALS ENVIRONMENTAL
 3352 128TH AVE.

HOLLAND MI 49424
 (281) 530-5656
 REF: (SUBCONTRACT) PMG

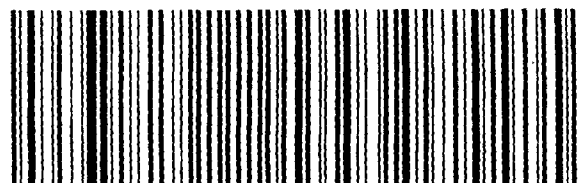


TRK# 4340 2167 2139
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FRI - 28 OCT A
 PRIORITY OVERNIGHT

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 MI-US GR



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