

GW - 1

**MONITORING
REPORTS**

DATE:

2004



Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Frances Dr.
Santa Fe, New Mexico 87505

Certified Mail: 7099 3220 0010 2242 5181

December 16, 2004

Re: **River Samples & River Terrace Analysis**

Dear Mr. Price,

Giant Refining Company – Bloomfield Refinery conducted river sampling events per the “Monitoring and Contingency Plan”. Enclosed in this packet is the hardcopy of the analysis of samples taken from November 3, 2004. There was not an exceedance of any WQCC standard or EPA maximum contaminant level during the monitoring event.

River samples were pulled again on December 7, 2004. The downstream sample point will be analyzed for all the constituents mentioned in the “Monitoring and Contingency Plan” from August 2004. The analysis will be forwarded on to you when it is completed.

Hope Monzeglio of NMED verbally requested hard copies of the analytical data that was summarized in the “River Terrace Investigation” letter from November 24, 2004. Please find that information enclosed with this packet.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Cindy Hurtado".

Cindy Hurtado

Cc: Hope Monzeglio – NMED
Denny Foust – OCD
Bob Wilkinson - USEPA
Randy Schmaltz – Giant Refining

PHONE

505-632-8013

FAX

505-632-3911

50 ROAD 4990
P.O. BOX 159
BLOOMFIELD
NEW MEXICO
87413

COVER LETTER

November 23, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: River Sampling November 2004

Order No.: 0411071

Dear Cindy Hurtado:

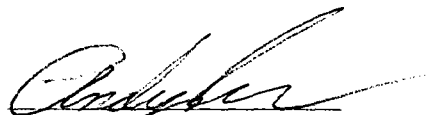
Hall Environmental Analysis Laboratory received 5 samples on 11/4/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411071
 Project: River Sampling November 2004
 Lab ID: 0411071-01

Client Sample ID: River-Upstream
 Collection Date: 11/3/2004 2:00:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS Analyst: MAP						
Fluoride	0.23	0.10		mg/L	1	11/5/2004 4:06:09 PM
Chloride	4.5	0.10		mg/L	1	11/4/2004 6:39:20 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/4/2004 6:39:20 PM
Bromide	ND	0.10		mg/L	1	11/4/2004 6:39:20 PM
Nitrogen, Nitrate (As N)	0.10	0.10		mg/L	1	11/4/2004 6:39:20 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/4/2004 6:39:20 PM
Sulfate	100	2.5		mg/L	5	11/5/2004 4:22:57 PM
EPA METHOD 310.1: ALKALINITY Analyst: MAP						
Alkalinity, Total (As CaCO3)	120	2.0		mg/L CaCO3	2	11/17/2004
Carbonate	ND	2.0		mg/L CaCO3	2	11/17/2004
Bicarbonate	120	2.0		mg/L CaCO3	2	11/17/2004
EPA METHOD 8015B: DIESEL RANGE Analyst: JMP						
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/9/2004 6:56:05 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/9/2004 6:56:05 PM
Surr: DNOP	119	58-140		%REC	1	11/9/2004 6:56:05 PM
EPA METHOD 8015B: GASOLINE RANGE Analyst: NSB						
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/10/2004 3:17:21 PM
Surr: BFB	104	74-118		%REC	1	11/10/2004 3:17:21 PM
EPA METHOD 8021B: VOLATILES Analyst: NSB						
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/10/2004 3:17:21 PM
Benzene	ND	0.50		µg/L	1	11/10/2004 3:17:21 PM
Toluene	ND	0.50		µg/L	1	11/10/2004 3:17:21 PM
Ethylbenzene	ND	0.50		µg/L	1	11/10/2004 3:17:21 PM
Xylenes, Total	ND	0.50		µg/L	1	11/10/2004 3:17:21 PM
Surr: 4-Bromofluorobenzene	95.2	74-118		%REC	1	11/10/2004 3:17:21 PM
EPA METHOD 8270C: SEMIVOLATILES Analyst: GAB						
Acenaphthene	ND	10		µg/L	1	11/12/2004
Acenaphthylene	ND	10		µg/L	1	11/12/2004
Aniline	ND	10		µg/L	1	11/12/2004
Anthracene	ND	10		µg/L	1	11/12/2004
Azobenzene	ND	10		µg/L	1	11/12/2004
Benz(a)anthracene	ND	15		µg/L	1	11/12/2004
Benzo(a)pyrene	ND	10		µg/L	1	11/12/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	11/12/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/12/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	11/12/2004
Benzoic acid	ND	50		µg/L	1	11/12/2004
Benzyl alcohol	ND	20		µg/L	1	11/12/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining

Client Sample ID: River-Upstream

Lab Order: 0411071

Collection Date: 11/3/2004 2:00:00 PM

Project: River Sampling November 2004

Lab ID: 0411071-01

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/12/2004
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/12/2004
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/12/2004
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/12/2004
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/12/2004
Butyl benzyl phthalate	ND	15		µg/L	1	11/12/2004
Carbazole	ND	10		µg/L	1	11/12/2004
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/12/2004
4-Chloroaniline	ND	20		µg/L	1	11/12/2004
2-Chloronaphthalene	ND	10		µg/L	1	11/12/2004
2-Chlorophenol	ND	10		µg/L	1	11/12/2004
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/12/2004
Chrysene	ND	15		µg/L	1	11/12/2004
Di-n-butyl phthalate	ND	10		µg/L	1	11/12/2004
Di-n-octyl phthalate	ND	15		µg/L	1	11/12/2004
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/12/2004
Dibenzofuran	ND	10		µg/L	1	11/12/2004
1,2-Dichlorobenzene	ND	10		µg/L	1	11/12/2004
1,3-Dichlorobenzene	ND	10		µg/L	1	11/12/2004
1,4-Dichlorobenzene	ND	10		µg/L	1	11/12/2004
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/12/2004
Diethyl phthalate	ND	10		µg/L	1	11/12/2004
Dimethyl phthalate	ND	10		µg/L	1	11/12/2004
2,4-Dichlorophenol	ND	10		µg/L	1	11/12/2004
2,4-Dimethylphenol	ND	10		µg/L	1	11/12/2004
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/12/2004
2,4-Dinitrophenol	ND	50		µg/L	1	11/12/2004
2,4-Dinitrotoluene	ND	10		µg/L	1	11/12/2004
2,6-Dinitrotoluene	ND	10		µg/L	1	11/12/2004
Fluoranthene	ND	10		µg/L	1	11/12/2004
Fluorene	ND	10		µg/L	1	11/12/2004
Hexachlorobenzene	ND	10		µg/L	1	11/12/2004
Hexachlorobutadiene	ND	10		µg/L	1	11/12/2004
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/12/2004
Hexachloroethane	ND	10		µg/L	1	11/12/2004
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/12/2004
Isophorone	ND	10		µg/L	1	11/12/2004
2-Methylnaphthalene	ND	10		µg/L	1	11/12/2004
2-Methylphenol	ND	15		µg/L	1	11/12/2004
3+4-Methylphenol	ND	10		µg/L	1	11/12/2004
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/12/2004
N-Nitrosodimethylamine	ND	10		µg/L	1	11/12/2004

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level 2 / 40

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining **Client Sample ID:** River-Upstream
Lab Order: 0411071 **Collection Date:** 11/3/2004 2:00:00 PM
Project: River Sampling November 2004
Lab ID: 0411071-01 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/12/2004
Naphthalene	ND	10		µg/L	1	11/12/2004
2-Nitroaniline	ND	50		µg/L	1	11/12/2004
3-Nitroaniline	ND	50		µg/L	1	11/12/2004
4-Nitroaniline	ND	20		µg/L	1	11/12/2004
Nitrobenzene	ND	10		µg/L	1	11/12/2004
2-Nitrophenol	ND	15		µg/L	1	11/12/2004
4-Nitrophenol	ND	50		µg/L	1	11/12/2004
Pentachlorophenol	ND	50		µg/L	1	11/12/2004
Phenanthrene	ND	10		µg/L	1	11/12/2004
Phenol	ND	10		µg/L	1	11/12/2004
Pyrene	ND	15		µg/L	1	11/12/2004
Pyridine	ND	30		µg/L	1	11/12/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/12/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/12/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/12/2004
Surr: 2,4,6-Tribromophenol	20.4	16.6-115		%REC	1	11/12/2004
Surr: 2-Fluorobiphenyl	67.3	37-95.7		%REC	1	11/12/2004
Surr: 2-Fluorophenol	38.2	9.54-89.8		%REC	1	11/12/2004
Surr: 4-Terphenyl-d14	74.9	47.9-115		%REC	1	11/12/2004
Surr: Nitrobenzene-d5	64.7	38-106		%REC	1	11/12/2004
Surr: Phenol-d6	38.9	10.7-63.4		%REC	1	11/12/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: MAP
Specific Conductance	360	0.010		µmhos/cm	1	11/16/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	11/8/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/16/2004 11:52:55 AM
Barium	0.076	0.0020		mg/L	1	11/16/2004 11:52:55 AM
Cadmium	ND	0.0020		mg/L	1	11/16/2004 11:52:55 AM
Calcium	43	1.0		mg/L	1	11/16/2004 11:52:55 AM
Chromium	ND	0.0060		mg/L	1	11/16/2004 11:52:55 AM
Copper	ND	0.0060		mg/L	1	11/16/2004 11:52:55 AM
Iron	0.021	0.020		mg/L	1	11/16/2004 11:52:55 AM
Lead	ND	0.0050		mg/L	1	11/16/2004 11:52:55 AM
Magnesium	7.6	1.0		mg/L	1	11/16/2004 11:52:55 AM
Manganese	0.012	0.0020		mg/L	1	11/16/2004 11:52:55 AM
Potassium	2.1	1.0		mg/L	1	11/16/2004 11:52:55 AM
Selenium	ND	0.050		mg/L	1	11/16/2004 11:52:55 AM
Silver	ND	0.0050		mg/L	1	11/16/2004 11:52:55 AM
Sodium	31	1.0		mg/L	1	11/16/2004 11:52:55 AM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
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 B - Analyte detected in the associated Method Blank E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411071
 Project: River Sampling November 2004
 Lab ID: 0411071-01

Client Sample ID: River-Upstream
 Collection Date: 11/3/2004 2:00:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	11/16/2004 11:52:55 AM
Zinc	0.012	0.0050		mg/L	1	11/16/2004 11:52:55 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/9/2004 10:24:09 AM
Barium	0.086	0.020		mg/L	1	11/9/2004 10:24:09 AM
Cadmium	ND	0.0020		mg/L	1	11/9/2004 10:24:09 AM
Chromium	ND	0.0060		mg/L	1	11/9/2004 10:24:09 AM
Lead	ND	0.0050		mg/L	1	11/9/2004 10:24:09 AM
Selenium	ND	0.050		mg/L	1	11/9/2004 10:24:09 AM
Silver	ND	0.0050		mg/L	1	11/9/2004 10:24:09 AM
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	280	50		mg/L	1	11/8/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411071
 Project: River Sampling November 2004
 Lab ID: 0411071-02

Client Sample ID: River N of MW #45
 Collection Date: 11/3/2004 12:40:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.25	0.10		mg/L	1	11/5/2004 5:13:22 PM
Chloride	5.0	0.10		mg/L	1	11/4/2004 7:46:33 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/4/2004 7:46:33 PM
Bromide	ND	0.10		mg/L	1	11/4/2004 7:46:33 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/4/2004 7:46:33 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/4/2004 7:46:33 PM
Sulfate	110	2.5		mg/L	5	11/5/2004 5:30:10 PM
EPA METHOD 310.1: ALKALINITY						Analyst: MAP
Alkalinity, Total (As CaCO3)	110	2.0		mg/L CaCO3	2	11/17/2004
Carbonate	ND	2.0		mg/L CaCO3	2	11/17/2004
Bicarbonate	110	2.0		mg/L CaCO3	2	11/17/2004
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/9/2004 7:25:38 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/9/2004 7:25:38 PM
Surr: DNOP	125	58-140		%REC	1	11/9/2004 7:25:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/10/2004 12:47:33 PM
Surr: BFB	106	74-118		%REC	1	11/10/2004 12:47:33 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/10/2004 12:47:33 PM
Benzene	ND	0.50		µg/L	1	11/10/2004 12:47:33 PM
Toluene	ND	0.50		µg/L	1	11/10/2004 12:47:33 PM
Ethylbenzene	ND	0.50		µg/L	1	11/10/2004 12:47:33 PM
Xylenes, Total	ND	0.50		µg/L	1	11/10/2004 12:47:33 PM
Surr: 4-Bromofluorobenzene	96.6	74-118		%REC	1	11/10/2004 12:47:33 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	11/12/2004
Acenaphthylene	ND	10		µg/L	1	11/12/2004
Aniline	ND	10		µg/L	1	11/12/2004
Anthracene	ND	10		µg/L	1	11/12/2004
Azobenzene	ND	10		µg/L	1	11/12/2004
Benz(a)anthracene	ND	15		µg/L	1	11/12/2004
Benzo(a)pyrene	ND	10		µg/L	1	11/12/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	11/12/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/12/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	11/12/2004
Benzoic acid	ND	50		µg/L	1	11/12/2004
Benzyl alcohol	ND	20		µg/L	1	11/12/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

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

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411071
 Project: River Sampling November 2004
 Lab ID: 0411071-02

Client Sample ID: River N of MW #45
 Collection Date: 11/3/2004 12:40:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/12/2004
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/12/2004
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/12/2004
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/12/2004
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/12/2004
Butyl benzyl phthalate	ND	15		µg/L	1	11/12/2004
Carbazole	ND	10		µg/L	1	11/12/2004
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/12/2004
4-Chloroaniline	ND	20		µg/L	1	11/12/2004
2-Chloronaphthalene	ND	10		µg/L	1	11/12/2004
2-Chlorophenol	ND	10		µg/L	1	11/12/2004
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/12/2004
Chrysene	ND	15		µg/L	1	11/12/2004
Di-n-butyl phthalate	ND	10		µg/L	1	11/12/2004
Di-n-octyl phthalate	ND	15		µg/L	1	11/12/2004
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/12/2004
Dibenzofuran	ND	10		µg/L	1	11/12/2004
1,2-Dichlorobenzene	ND	10		µg/L	1	11/12/2004
1,3-Dichlorobenzene	ND	10		µg/L	1	11/12/2004
1,4-Dichlorobenzene	ND	10		µg/L	1	11/12/2004
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/12/2004
Diethyl phthalate	ND	10		µg/L	1	11/12/2004
Dimethyl phthalate	ND	10		µg/L	1	11/12/2004
2,4-Dichlorophenol	ND	10		µg/L	1	11/12/2004
2,4-Dimethylphenol	ND	10		µg/L	1	11/12/2004
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/12/2004
2,4-Dinitrophenol	ND	50		µg/L	1	11/12/2004
2,4-Dinitrotoluene	ND	10		µg/L	1	11/12/2004
2,6-Dinitrotoluene	ND	10		µg/L	1	11/12/2004
Fluoranthene	ND	10		µg/L	1	11/12/2004
Fluorene	ND	10		µg/L	1	11/12/2004
Hexachlorobenzene	ND	10		µg/L	1	11/12/2004
Hexachlorobutadiene	ND	10		µg/L	1	11/12/2004
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/12/2004
Hexachloroethane	ND	10		µg/L	1	11/12/2004
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/12/2004
Isophorone	ND	10		µg/L	1	11/12/2004
2-Methylnaphthalene	ND	10		µg/L	1	11/12/2004
2-Methylphenol	ND	15		µg/L	1	11/12/2004
3+4-Methylphenol	ND	10		µg/L	1	11/12/2004
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/12/2004
N-Nitrosodimethylamine	ND	10		µg/L	1	11/12/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411071
 Project: River Sampling November 2004
 Lab ID: 0411071-02

Client Sample ID: River N of MW #45
 Collection Date: 11/3/2004 12:40:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/12/2004
Naphthalene	ND	10		µg/L	1	11/12/2004
2-Nitroaniline	ND	50		µg/L	1	11/12/2004
3-Nitroaniline	ND	50		µg/L	1	11/12/2004
4-Nitroaniline	ND	20		µg/L	1	11/12/2004
Nitrobenzene	ND	10		µg/L	1	11/12/2004
2-Nitrophenol	ND	15		µg/L	1	11/12/2004
4-Nitrophenol	ND	50		µg/L	1	11/12/2004
Pentachlorophenol	ND	50		µg/L	1	11/12/2004
Phenanthrene	ND	10		µg/L	1	11/12/2004
Phenol	ND	10		µg/L	1	11/12/2004
Pyrene	ND	15		µg/L	1	11/12/2004
Pyridine	ND	30		µg/L	1	11/12/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/12/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/12/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/12/2004
Surr: 2,4,6-Tribromophenol	6.84	16.6-115	S	%REC	1	11/12/2004
Surr: 2-Fluorobiphenyl	61.1	37-95.7		%REC	1	11/12/2004
Surr: 2-Fluorophenol	14.9	9.54-89.8		%REC	1	11/12/2004
Surr: 4-Terphenyl-d14	65.8	47.9-115		%REC	1	11/12/2004
Surr: Nitrobenzene-d5	54.9	38-106		%REC	1	11/12/2004
Surr: Phenol-d6	28.6	10.7-63.4		%REC	1	11/12/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: MAP
Specific Conductance	370	0.010		µmhos/cm	1	11/16/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	11/8/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/16/2004 12:03:06 PM
Barium	0.073	0.0020		mg/L	1	11/16/2004 12:03:06 PM
Cadmium	ND	0.0020		mg/L	1	11/16/2004 12:03:06 PM
Calcium	44	1.0		mg/L	1	11/16/2004 12:03:06 PM
Chromium	ND	0.0060		mg/L	1	11/16/2004 12:03:06 PM
Copper	ND	0.0060		mg/L	1	11/16/2004 12:03:06 PM
Iron	ND	0.020		mg/L	1	11/16/2004 12:03:06 PM
Lead	0.0071	0.0050		mg/L	1	11/16/2004 12:03:06 PM
Magnesium	7.8	1.0		mg/L	1	11/16/2004 12:03:06 PM
Manganese	0.017	0.0020		mg/L	1	11/16/2004 12:03:06 PM
Potassium	2.0	1.0		mg/L	1	11/16/2004 12:03:06 PM
Selenium	ND	0.050		mg/L	1	11/16/2004 12:03:06 PM
Silver	ND	0.0050		mg/L	1	11/16/2004 12:03:06 PM
Sodium	31	1.0		mg/L	1	11/16/2004 12:03:06 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411071
 Project: River Sampling November 2004
 Lab ID: 0411071-02

Client Sample ID: River N of MW #45
 Collection Date: 11/3/2004 12:40:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	11/16/2004 12:03:06 PM
Zinc	0.011	0.0050		mg/L	1	11/16/2004 12:03:06 PM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/9/2004 10:34:30 AM
Barium	0.10	0.020		mg/L	1	11/9/2004 10:34:30 AM
Cadmium	ND	0.0020		mg/L	1	11/9/2004 10:34:30 AM
Chromium	ND	0.0060		mg/L	1	11/9/2004 10:34:30 AM
Lead	ND	0.0050		mg/L	1	11/9/2004 10:34:30 AM
Selenium	ND	0.050		mg/L	1	11/9/2004 10:34:30 AM
Silver	ND	0.0050		mg/L	1	11/9/2004 10:34:30 AM
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	290	50		mg/L	1	11/8/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411071
 Project: River Sampling November 2004
 Lab ID: 0411071-03

Client Sample ID: River-N of MW #46
 Collection Date: 11/3/2004 1:30:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.24	0.10		mg/L	1	11/5/2004 5:46:59 PM
Chloride	4.7	0.10		mg/L	1	11/4/2004 8:03:21 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/4/2004 8:03:21 PM
Bromide	ND	0.10		mg/L	1	11/4/2004 8:03:21 PM
Nitrogen, Nitrate (As N)	0.11	0.10		mg/L	1	11/4/2004 8:03:21 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/4/2004 8:03:21 PM
Sulfate	110	2.5		mg/L	5	11/5/2004 6:03:47 PM
EPA METHOD 310.1: ALKALINITY						Analyst: MAP
Alkalinity, Total (As CaCO3)	110	2.0		mg/L CaCO3	2	11/17/2004
Carbonate	ND	2.0		mg/L CaCO3	2	11/17/2004
Bicarbonate	110	2.0		mg/L CaCO3	2	11/17/2004
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/9/2004 7:55:17 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/9/2004 7:55:17 PM
Surr: DNOP	129	58-140		%REC	1	11/9/2004 7:55:17 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/10/2004 1:17:24 PM
Surr: BFB	105	74-118		%REC	1	11/10/2004 1:17:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/10/2004 1:17:24 PM
Benzene	ND	0.50		µg/L	1	11/10/2004 1:17:24 PM
Toluene	ND	0.50		µg/L	1	11/10/2004 1:17:24 PM
Ethylbenzene	ND	0.50		µg/L	1	11/10/2004 1:17:24 PM
Xylenes, Total	ND	0.50		µg/L	1	11/10/2004 1:17:24 PM
Surr: 4-Bromofluorobenzene	96.8	74-118		%REC	1	11/10/2004 1:17:24 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	11/19/2004
Acenaphthylene	ND	10		µg/L	1	11/19/2004
Aniline	ND	10		µg/L	1	11/19/2004
Anthracene	ND	10		µg/L	1	11/19/2004
Azobenzene	ND	10		µg/L	1	11/19/2004
Benz(a)anthracene	ND	15		µg/L	1	11/19/2004
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2004
Benzoic acid	ND	50		µg/L	1	11/19/2004
Benzyl alcohol	ND	20		µg/L	1	11/19/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining

Client Sample ID: River-N of MW #46

Lab Order: 0411071

Collection Date: 11/3/2004 1:30:00 PM

Project: River Sampling November 2004

Lab ID: 0411071-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2004
Bis(2-chloroethyl)ether	ND	15		µg/L	1	11/19/2004
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	11/19/2004
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	11/19/2004
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2004
Butyl benzyl phthalate	ND	15		µg/L	1	11/19/2004
Carbazole	ND	10		µg/L	1	11/19/2004
4-Chloro-3-methylphenol	ND	20		µg/L	1	11/19/2004
4-Chloroaniline	ND	20		µg/L	1	11/19/2004
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2004
2-Chlorophenol	ND	10		µg/L	1	11/19/2004
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	11/19/2004
Chrysene	ND	15		µg/L	1	11/19/2004
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2004
Di-n-octyl phthalate	ND	15		µg/L	1	11/19/2004
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2004
Dibenzofuran	ND	10		µg/L	1	11/19/2004
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2004
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2004
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2004
3,3'-Dichlorobenzidine	ND	15		µg/L	1	11/19/2004
Diethyl phthalate	ND	10		µg/L	1	11/19/2004
Dimethyl phthalate	ND	10		µg/L	1	11/19/2004
2,4-Dichlorophenol	ND	10		µg/L	1	11/19/2004
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2004
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	11/19/2004
2,4-Dinitrophenol	ND	50		µg/L	1	11/19/2004
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2004
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2004
Fluoranthene	ND	10		µg/L	1	11/19/2004
Fluorene	ND	10		µg/L	1	11/19/2004
Hexachlorobenzene	ND	10		µg/L	1	11/19/2004
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2004
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2004
Hexachloroethane	ND	10		µg/L	1	11/19/2004
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2004
Isophorone	ND	10		µg/L	1	11/19/2004
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2004
2-Methylphenol	ND	15		µg/L	1	11/19/2004
3+4-Methylphenol	ND	10		µg/L	1	11/19/2004
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2004
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2004

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level 10 / 40

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining **Client Sample ID:** River-N of MW #46
Lab Order: 0411071 **Collection Date:** 11/3/2004 1:30:00 PM
Project: River Sampling November 2004
Lab ID: 0411071-03 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2004
Naphthalene	ND	10		µg/L	1	11/19/2004
2-Nitroaniline	ND	50		µg/L	1	11/19/2004
3-Nitroaniline	ND	50		µg/L	1	11/19/2004
4-Nitroaniline	ND	20		µg/L	1	11/19/2004
Nitrobenzene	ND	10		µg/L	1	11/19/2004
2-Nitrophenol	ND	15		µg/L	1	11/19/2004
4-Nitrophenol	ND	50		µg/L	1	11/19/2004
Pentachlorophenol	ND	50		µg/L	1	11/19/2004
Phenanthrene	ND	10		µg/L	1	11/19/2004
Phenol	ND	10		µg/L	1	11/19/2004
Pyrene	ND	15		µg/L	1	11/19/2004
Pyridine	ND	30		µg/L	1	11/19/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	11/19/2004
Surr: 2,4,6-Tribromophenol	39.0	16.6-115		%REC	1	11/19/2004
Surr: 2-Fluorobiphenyl	77.6	37-95.7		%REC	1	11/19/2004
Surr: 2-Fluorophenol	67.3	9.54-89.8		%REC	1	11/19/2004
Surr: 4-Terphenyl-d14	95.8	47.9-115		%REC	1	11/19/2004
Surr: Nitrobenzene-d5	71.2	38-106		%REC	1	11/19/2004
Surr: Phenol-d6	45.3	10.7-63.4		%REC	1	11/19/2004

EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: MAP

Specific Conductance	370	0.010		µmhos/cm	1	11/16/2004
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EPA METHOD 7470: MERCURY

Analyst: CMC

Mercury	ND	0.00020		mg/L	1	11/8/2004
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EPA METHOD 6010C: DISSOLVED METALS

Analyst: NMO

Arsenic	ND	0.020		mg/L	1	11/16/2004 12:05:32 PM
Barium	0.075	0.0020		mg/L	1	11/16/2004 12:05:32 PM
Cadmium	ND	0.0020		mg/L	1	11/16/2004 12:05:32 PM
Calcium	43	1.0		mg/L	1	11/16/2004 12:05:32 PM
Chromium	ND	0.0060		mg/L	1	11/16/2004 12:05:32 PM
Copper	ND	0.0060		mg/L	1	11/16/2004 12:05:32 PM
Iron	0.030	0.020		mg/L	1	11/16/2004 12:05:32 PM
Lead	ND	0.0050		mg/L	1	11/16/2004 12:05:32 PM
Magnesium	7.6	1.0		mg/L	1	11/16/2004 12:05:32 PM
Manganese	0.011	0.0020		mg/L	1	11/16/2004 12:05:32 PM
Potassium	2.0	1.0		mg/L	1	11/16/2004 12:05:32 PM
Selenium	ND	0.050		mg/L	1	11/16/2004 12:05:32 PM
Silver	ND	0.0050		mg/L	1	11/16/2004 12:05:32 PM
Sodium	30	1.0		mg/L	1	11/16/2004 12:05:32 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level 11 / 40

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining

Client Sample ID: River-N of MW #46

Lab Order: 0411071

Collection Date: 11/3/2004 1:30:00 PM

Project: River Sampling November 2004

Lab ID: 0411071-03

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Uranium	ND	0.10		mg/L	1	11/16/2004 12:05:32 PM
Zinc	0.017	0.0050		mg/L	1	11/16/2004 12:05:32 PM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/9/2004 10:36:57 AM
Barium	0.088	0.020		mg/L	1	11/9/2004 10:36:57 AM
Cadmium	ND	0.0020		mg/L	1	11/9/2004 10:36:57 AM
Chromium	ND	0.0060		mg/L	1	11/9/2004 10:36:57 AM
Lead	ND	0.0050		mg/L	1	11/9/2004 10:36:57 AM
Selenium	ND	0.050		mg/L	1	11/9/2004 10:36:57 AM
Silver	ND	0.0050		mg/L	1	11/9/2004 10:36:57 AM
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	290	50		mg/L	1	11/8/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining

Client Sample ID: River Downstream

Lab Order: 0411071

Collection Date: 11/3/2004 2:20:00 PM

Project: River Sampling November 2004

Lab ID: 0411071-04

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/9/2004 8:24:56 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/9/2004 8:24:56 PM
Surr: DNOP	120	58-140		%REC	1	11/9/2004 8:24:56 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/10/2004 1:47:19 PM
Surr: BFB	99.7	74-118		%REC	1	11/10/2004 1:47:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/10/2004 1:47:19 PM
Benzene	ND	0.50		µg/L	1	11/10/2004 1:47:19 PM
Toluene	ND	0.50		µg/L	1	11/10/2004 1:47:19 PM
Ethylbenzene	ND	0.50		µg/L	1	11/10/2004 1:47:19 PM
Xylenes, Total	ND	0.50		µg/L	1	11/10/2004 1:47:19 PM
Surr: 4-Bromofluorobenzene	94.9	74-118		%REC	1	11/10/2004 1:47:19 PM

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level 13 / 40

Hall Environmental Analysis Laboratory

Date: 29-Nov-04

CLIENT: San Juan Refining **Client Sample ID:** Trip Blank
Lab Order: 0411071 **Collection Date:**
Project: River Sampling November 2004
Lab ID: 0411071-05 **Matrix:** TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/9/2004 8:54:29 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/9/2004 8:54:29 PM
Surr: DNOP	126	58-140		%REC	1	11/9/2004 8:54:29 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/10/2004 2:17:18 PM
Surr: BFB	107	74-118		%REC	1	11/10/2004 2:17:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/10/2004 2:17:18 PM
Benzene	ND	0.50		µg/L	1	11/10/2004 2:17:18 PM
Toluene	ND	0.50		µg/L	1	11/10/2004 2:17:18 PM
Ethylbenzene	ND	0.50		µg/L	1	11/10/2004 2:17:18 PM
Xylenes, Total	ND	0.50		µg/L	1	11/10/2004 2:17:18 PM
Surr: 4-Bromofluorobenzene	95.2	74-118		%REC	1	11/10/2004 2:17:18 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 23-Nov-04

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

Sample ID: MBLK Batch ID: R13680 Test Code: E300 Units: mg/L Analysis Date: 11/4/2004 12:12:59 PM Prep Date

Client ID: LC_041104A Run ID: LC_041104A SeqNo: 317758

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Bromide	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID: MBLK Batch ID: R13680 Test Code: E300 Units: mg/L Analysis Date: 11/4/2004 6:05:43 PM Prep Date

Client ID: LC_041104A Run ID: LC_041104A SeqNo: 317774

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Bromide	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411071
 Project: River Sampling November 2004

Sample ID	MBLK	Batch ID:	R13687	Test Code:	E300	Units:	mg/L	Analysis Date	11/5/2004 1:51:44 PM	Prep Date	
Client ID:		Run ID:	LC_041105A	SeqNo:	318112						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Bromide	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID	MBLK	Batch ID:	R13687	Test Code:	E300	Units:	mg/L	Analysis Date	11/5/2004 8:35:02 PM	Prep Date	
Client ID:		Run ID:	LC_041105A	SeqNo:	318136						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Bromide	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID	MBLK	Batch ID:	R13818	Test Code:	E310.1	Units:	mg/L CaCO3	Analysis Date	11/17/2004	Prep Date	
Client ID:		Run ID:	WC_041117A	SeqNo:	321303						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	2									
Carbonate	ND	2									
Bicarbonate	ND	2									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411071
 Project: River Sampling November 2004

Sample ID MB-6834 Batch ID: 6834 Test Code: SW8015 Units: mg/L Analysis Date 11/9/2004 5:27:23 PM Prep Date 11/9/2004
 Client ID: FID(17A)_2_041108A SeqNo: 319025
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
 Diesel Range Organics (DRO) ND 1
 Motor Oil Range Organics (MIRO) ND 5
 Surr: DNOP 1.212 0 1 0 121 58 140 0

Sample ID Reagent Blank 5m Batch ID: R13733 Test Code: SW8015 Units: mg/L Analysis Date 11/10/2004 9:25:14 AM Prep Date
 Client ID: PIDFID_041110A SeqNo: 319234
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
 Gasoline Range Organics (GRO) ND 0.05
 Surr: BFB 20.22 0 20 0 101 74 118 0

Sample ID Reagent Blank 5m Batch ID: R13733 Test Code: SW8021 Units: µg/L Analysis Date 11/10/2004 9:25:14 AM Prep Date
 Client ID: PIDFID_041110A SeqNo: 319233
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
 Methyl tert-butyl ether (MTBE) ND 2.5
 Benzene ND 0.5
 Toluene ND 0.5
 Ethylbenzene ND 0.5
 Xylenes, Total ND 0.5
 Surr: 4-Bromofluorobenzene 18.24 0 20 0 91.2 74 118 0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

Sample ID mb-6803 Batch ID: 6803 Test Code: SW8270C Units: µg/L Analysis Date 11/12/2004 Prep Date 11/5/2004

Client ID: Run ID: ELMO_041112A SeqNo: 320161

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Aniline	ND	10									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Benzoic acid	ND	50									
Benzyl alcohol	ND	20									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	15									
Bis(2-chloroisopropyl)ether	ND	15									
Bis(2-ethylhexyl)phthalate	ND	15									
4-Bromophenyl phenyl ether	ND	10									
Butyl benzyl phthalate	ND	15									
Carbazole	ND	10									
4-Chloro-3-methylphenol	ND	20									
4-Chloroaniline	ND	20									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
4-Chlorophenyl phenyl ether	ND	15									
Chrysene	ND	15									
Di-n-butyl phthalate	ND	10									
Di-n-octyl phthalate	ND	15									
Dibenz(a,h)anthracene	ND	10									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

Dibenzofuran	ND	10
1,2-Dichlorobenzene	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
3,3'-Dichlorobenzidine	ND	15
Diethyl phthalate	ND	10
Dimethyl phthalate	ND	10
2,4-Dichlorophenol	ND	10
2,4-Dimethylphenol	ND	10
4,6-Dinitro-2-methylphenol	ND	50
2,4-Dinitrophenol	ND	50
2,4-Dinitrotoluene	ND	10
2,6-Dinitrotoluene	ND	10
Fluoranthene	ND	10
Fluorene	ND	10
Hexachlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Isophorone	ND	10
2-Methylnaphthalene	ND	10
2-Methylphenol	ND	15
3+4-Methylphenol	ND	10
N-Nitrosodi-n-propylamine	ND	10
N-Nitrosodimethylamine	ND	10
N-Nitrosodiphenylamine	ND	10
Naphthalene	ND	10
2-Nitroaniline	ND	50
3-Nitroaniline	ND	50
4-Nitroaniline	ND	20
Nitrobenzene	ND	10
2-Nitrophenol	ND	15

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
Work Order: 0411071
Project: River Sampling November 2004

Compound	Reporting Limit	Concentration	Recovery	Acceptance	Recovery	Acceptance
4-Nitrophenol	ND	50				
Pentachlorophenol	ND	50				
Phenanthrene	ND	10				
Phenol	ND	10				
Pyrene	ND	15				
Pyridine	ND	30				
1,2,4-Trichlorobenzene	ND	10				
2,4,5-Trichlorophenol	ND	10				
2,4,6-Trichlorophenol	ND	15				
Surr: 2,4,6-Tribromophenol	182.5	0	200	0	91.2	16.6
Surr: 2-Fluorobiphenyl	86.24	0	100	0	86.2	37
Surr: 2-Fluorophenol	171.2	0	200	0	85.6	9.54
Surr: 4-Terphenyl-d14	99.04	0	100	0	99.0	51.2
Surr: Nitrobenzene-d5	83.98	0	100	0	84.0	38
Surr: Phenol-d6	118.5	0	200	0	59.3	10.7
					115	
					95.7	
					89.8	
					125	
					106	
					63.4	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411071
 Project: River Sampling November 2004

Sample ID mb-6918 Batch ID: 6918 Test Code: SW8270C Units: µg/L Prep Date 11/18/2004

Analysis Date 11/19/2004

SeqNo: 322336

Run ID: ELMO_041119A

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Aniline	ND	10									
Anthracene	ND	10									
Azobenzene	ND	10									
Benzo(a)anthracene	ND	15									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Benzoic acid	ND	50									
Benzyl alcohol	ND	20									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	15									
Bis(2-chloroisopropyl)ether	ND	15									
Bis(2-ethylhexyl)phthalate	ND	15									
4-Bromophenyl phenyl ether	ND	10									
Butyl benzyl phthalate	ND	15									
Carbazole	ND	10									
4-Chloro-3-methylphenol	ND	20									
4-Chloroaniline	ND	20									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
4-Chlorophenyl phenyl ether	ND	15									
Chrysene	ND	15									
Di-n-butyl phthalate	ND	10									
Di-n-octyl phthalate	ND	15									
Dibenz(a,h)anthracene	ND	10									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

Dibenzofuran	ND	10
1,2-Dichlorobenzene	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
3,3'-Dichlorobenzidine	ND	15
Diethyl phthalate	ND	10
Dimethyl phthalate	ND	10
2,4-Dichlorophenol	ND	10
2,4-Dimethylphenol	ND	10
4,6-Dinitro-2-methylphenol	ND	50
2,4-Dinitrophenol	ND	50
2,4-Dinitrotoluene	ND	10
2,6-Dinitrotoluene	ND	10
Fluoranthene	ND	10
Fluorene	ND	10
Hexachlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Isophorone	ND	10
2-Methylnaphthalene	ND	10
2-Methylphenol	ND	15
3+4-Methylphenol	ND	10
N-Nitrosodi-n-propylamine	ND	10
N-Nitrosodimethylamine	ND	10
N-Nitrosodiphenylamine	ND	10
Naphthalene	ND	10
2-Nitroaniline	ND	50
3-Nitroaniline	ND	50
4-Nitroaniline	ND	20
Nitrobenzene	ND	10
2-Nitrophenol	ND	15

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

Sample ID	MB-6819	Batch ID: 6819	Test Code: SW7470	Units: mg/L	Analysis Date 11/8/2004	Prep Date 11/8/2004					
Client ID:	MI-LA254_041108A	Run ID:	SeqNo: 318408								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00005025	0.0002									J
4-Nitrophenol	ND	50									
Pentachlorophenol	ND	50									
Phenanthrene	ND	10									
Phenol	ND	10									
Pyrene	ND	15									
Pyridine	ND	30									
1,2,4-Trichlorobenzene	ND	10									
2,4,5-Trichlorophenol	ND	10									
2,4,6-Trichlorophenol	ND	15									
Surr: 2,4,6-Tribromophenol	146.5	0	200	0	73.3	16.6	115	0			S
Surr: 2-Fluorobiphenyl	100.4	0	100	0	100	37	95.7	0			S
Surr: 2-Fluorophenol	192.5	0	200	0	96.3	9.54	89.8	0			
Surr: 4-Terphenyl-d14	105	0	100	0	105	51.2	125	0			
Surr: Nitrobenzene-d5	92.86	0	100	0	92.9	38	106	0			
Surr: Phenol-d6	137.8	0	200	0	68.9	10.7	63.4	0			S

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
 Work Order: 0411071
 Project: River Sampling November 2004

Sample ID MB Batch ID: R13803 Test Code: SW6010A Units: mg/L Analysis Date 11/16/2004 11:26:44 A Prep Date
 Client ID: ICP_041116B Run ID: PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.002									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Copper	ND	0.006									
Iron	ND	0.02									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	0.000152	0.002									J
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									
Uranium	ND	0.1									
Zinc	ND	0.005									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0411071
Project: River Sampling November 2004

Sample ID MB Batch ID: R13803 Test Code: SW6010A Units: mg/L Analysis Date 11/16/2004 1:53:57 PM Prep Date
Client ID: Run ID: ICP_041116B SeqNo: 320799

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									J
Barium	0.0002371	0.002									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Copper	ND	0.006									
Iron	ND	0.02									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	0.0001535	0.002									J
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									
Uranium	ND	0.1									
Zinc	ND	0.005									

Sample ID MB-6822 Batch ID: 6822 Test Code: SW6010A Units: mg/L Analysis Date 11/9/2004 10:01:12 AM Prep Date 11/8/2004
Client ID: Run ID: ICP_041109B SeqNo: 318774

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	0.0008085	0.002									J
Chromium	ND	0.006									
Lead	ND	0.005									
Selenium	ND	0.05									
Silver	ND	0.005									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0411071
Project: River Sampling November 2004

Sample ID MB-6807 **Batch ID:** 6807 **Test Code:** E160.1 **Units:** mg/L **Analysis Date** 11/8/2004 **Prep Date** 11/5/2004
Client ID: WC_041108A **SeqNo:** 318325
Analyte **Result** **PQL** **SPK value** **SPK Ref Val** **%REC** **LowLimit** **HighLimit** **RPD Ref Val** **%RPD** **RPDLimit** **Qual**
Total Dissolved Solids ND 50

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

QC SUMMARY REPORT
Sample Duplicate

CLIENT: San Juan Refining
Work Order: 0411071
Project: River Sampling November 2004

Sample ID	0411071-01C DUP	Batch ID:	R13680	Test Code:	E300	Units:	mg/L	Analysis Date	11/4/2004 6:56:08 PM	Prep Date	
Client ID:	River Upstream	Run ID:	LC_041104A	SeqNo:	317777						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.501	0.1	0	0	0	0	0	4.492	0.192	20	
Nitrogen, Nitrite (As N)	ND	0.1	0	0	0	0	0	0	0	20	
Bromide	ND	0.1	0	0	0	0	0	0	0	20	
Nitrogen, Nitrate (As N)	0.1509	0.1	0	0	0	0	0	0.1036	37.2	20	R
Phosphorus, Orthophosphate (As P)	ND	0.5	0	0	0	0	0	0	0	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantification limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 23-Nov-04

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID	0411071-01C MS	Batch ID:	R13680	Test Code:	E300	Units:	mg/L	Analysis Date	11/4/2004 7:12:56 PM	Prep Date	
Client ID:	River Upstream	Run ID:	LC_041104A	PQL	SPK value	SPK Ref Val		SeqNo:	317778		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	8.667	0.1	5	4.492	83.5	80	120	0			
Nitrogen, Nitrite (As N)	0.8433	0.1	1	0	84.3	80	120	0			
Bromide	2.282	0.1	2.5	0	91.3	80	120	0			
Nitrogen, Nitrate (As N)	2.23	0.1	2.5	0.1036	85.1	80	120	0			
Phosphorus, Orthophosphate (As P)	4.35	0.5	5	0	87.0	80	120	0			

Sample ID	0411071-01C MSD	Batch ID:	R13680	Test Code:	E300	Units:	mg/L	Analysis Date	11/4/2004 7:29:44 PM	Prep Date	
Client ID:	River Upstream	Run ID:	LC_041104A	PQL	SPK value	SPK Ref Val		SeqNo:	317779		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	8.49	0.1	5	4.492	80.0	80	120	8.667	2.06	20	S
Nitrogen, Nitrite (As N)	0.8863	0.1	1	0	88.6	80	120	0.8433	4.97	20	
Bromide	2.278	0.1	2.5	0	91.1	80	120	2.282	0.151	20	
Nitrogen, Nitrate (As N)	2.271	0.1	2.5	0.1036	86.7	80	120	2.23	1.81	20	
Phosphorus, Orthophosphate (As P)	4.352	0.5	5	0	87.0	80	120	4.35	0.0473	20	

Sample ID	0411071-02a ms	Batch ID:	SW8015	Test Code:	SW8015	Units:	mg/L	Analysis Date	11/10/2004 5:16:46 PM	Prep Date	
Client ID:	River N of MW #4	Run ID:	PIDFID_041110A	PQL	SPK value	SPK Ref Val		SeqNo:	319262		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5346	0.05	0.5	0	107	80.3	116	0			
Surr: BFB	26.65	0	25	0	107	74	118	0			

Qualifiers:

ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0411071
Project: River Sampling November 2004

Sample ID: 0411071-02a msd Batch ID: R13733 Test Code: SW8015 Units: mg/L Analysis Date: 11/10/2004 5:46:36 PM Prep Date
Client ID: River N of MW #4 Run ID: PIDFID_041110A SeqNo: 319263
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5604	0.05	0.5	0	112	80.3	116	0.5346	4.71	8.39	
Surr: BFB	26.57	0	25	0	106	74	118	26.65	0.331	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Date: 23-Nov-04

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

Sample ID	LCS	Batch ID: R13680	Test Code: E300	Units: mg/L	Analysis Date	11/4/2004 12:29:47 PM	Prep Date				
Client ID:		Run ID: LC_041104A	SPK value	SPK Ref Val	SeqNo:	317759					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4523	0.1	0.5	0	90.5	90	110	0			
Chloride	4.585	0.1	5	0	91.7	90	110	0			
Nitrogen, Nitrite (As N)	0.9396	0.1	1	0	94.0	90	110	0			
Bromide	2.353	0.1	2.5	0	94.1	90	110	0			
Nitrogen, Nitrate (As N)	2.36	0.1	2.5	0	94.4	90	110	0			
Phosphorus, Orthophosphate (As P)	4.675	0.5	5	0	93.5	90	110	0			
Sulfate	9.198	0.5	10	0	92.0	90	110	0			

Sample ID	LCS	Batch ID: R13680	Test Code: E300	Units: mg/L	Analysis Date	11/4/2004 6:22:31 PM	Prep Date				
Client ID:		Run ID: LC_041104A	SPK value	SPK Ref Val	SeqNo:	317775					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.563	0.1	5	0	91.3	90	110	0			
Nitrogen, Nitrite (As N)	0.9254	0.1	1	0	92.5	90	110	0			
Bromide	2.348	0.1	2.5	0	93.9	90	110	0			
Nitrogen, Nitrate (As N)	2.384	0.1	2.5	0	95.4	90	110	0			
Phosphorus, Orthophosphate (As P)	4.55	0.5	5	0	91.0	90	110	0			
Sulfate	9.5	0.5	10	0	95.0	90	110	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0411071
Project: River Sampling November 2004

Sample ID	LCS	Batch ID: R13687	Test Code: E300	Units: mg/L	Analysis Date	11/5/2004 2:08:33 PM	Prep Date				
Client ID:		Run ID: LC_041105A	SeqNo: 318113								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4535	0.1	0.5	0	90.7	90	110	0			
Chloride	4.564	0.1	5	0	91.3	90	110	0			
Nitrogen, Nitrite (As N)	0.9098	0.1	1	0	91.0	90	110	0			
Bromide	2.307	0.1	2.5	0	92.3	90	110	0			
Nitrogen, Nitrate (As N)	2.314	0.1	2.5	0	92.6	90	110	0			
Phosphorus, Orthophosphate (As P)	4.605	0.5	5	0	92.1	90	110	0			
Sulfate	9.429	0.5	10	0	94.3	90	110	0			

Sample ID	LCS	Batch ID: R13687	Test Code: E300	Units: mg/L	Analysis Date	11/5/2004 8:51:50 PM	Prep Date				
Client ID:		Run ID: LC_041105A	SeqNo: 318137								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4516	0.1	0.5	0	90.3	90	110	0			
Nitrogen, Nitrite (As N)	0.934	0.1	1	0	93.4	90	110	0			
Bromide	2.295	0.1	2.5	0	91.8	90	110	0			
Nitrogen, Nitrate (As N)	2.291	0.1	2.5	0	91.7	90	110	0			
Sulfate	9.176	0.5	10	0	91.8	90	110	0			

Sample ID	LCS-6834	Batch ID: 6834	Test Code: SW8015	Units: mg/L	Analysis Date	11/9/2004 5:56:58 PM	Prep Date				
Client ID:		Run ID: FID(17A)_2_041108A	SeqNo: 319026								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.13	1	5	0	123	81.2	149	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0411071
Project: River Sampling November 2004

Sample ID **LCSD-6834** Batch ID: **6834** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/9/2004 6:26:33 PM** Prep Date **11/9/2004**
Client ID: Run ID: **FID(17A)_2_041108A** SeqNo: **319027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.613	1	5	0	132	81.2	149	6.13	7.59	23	

Sample ID **GRO std 2.50ug** Batch ID: **R13733** Test Code: **SW8015** Units: **mg/L** Analysis Date **11/10/2004 8:45:14 PM** Prep Date
Client ID: Run ID: **PIDFID_041110A** SeqNo: **319264**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5066	0.05	0.5	0	101	80.3	116	0			

Sample ID **BTEX std 100ng** Batch ID: **R13733** Test Code: **SW8021** Units: **µg/L** Analysis Date **11/11/2004 4:11:23 AM** Prep Date
Client ID: Run ID: **PIDFID_041110A** SeqNo: **319255**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	41.68	2.5	40	0	104	54.9	142	0			
Benzene	21.02	0.5	20	0	105	81.3	121	0			
Toluene	21.32	0.5	20	0	107	84.9	118	0			
Ethylbenzene	21.36	0.5	20	0	107	53.8	149	0			
Xylenes, Total	63.95	0.5	60	0	107	83.1	122	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: San Juan Refining
 Work Order: 0411071
 Project: River Sampling November 2004

QC SUMMARY REPORT
 Laboratory Control Spike - generic

Sample ID	Batch ID: 6803	Test Code: SW8270C	Units: µg/L	Analysis Date	Prep Date						
Client ID:	Run ID: ELMO_041112A	SeqNo: 320163									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	73.42	10	100	0	73.4	11	123	0			
4-Chloro-3-methylphenol	178.4	20	200	0	89.2	15.4	119	0			
2-Chlorophenol	185	10	200	0	92.5	12.2	122	0			
1,4-Dichlorobenzene	69.4	10	100	0	69.4	16.9	100	0			
2,4-Dinitrotoluene	84.28	10	100	0	84.3	13	138	0			
N-Nitrosodi-n-propylamine	77.04	10	100	0	77.0	9.93	122	0			
4-Nitrophenol	98.54	50	200	0	49.3	-20.5	87.4	0			
Pentachlorophenol	166.6	50	200	0	83.3	-0.355	114	0			
Phenol	95.98	10	200	0	48.0	7.53	73.1	0			
Pyrene	80.68	15	100	0	80.7	12.6	140	0			
1,2,4-Trichlorobenzene	74.02	10	100	0	74.0	17.4	98.7	0			

Sample ID	Batch ID: 6803	Test Code: SW8270C	Units: µg/L	Analysis Date	Prep Date						
Client ID:	Run ID: ELMO_041112A	SeqNo: 320165									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	74.2	10	100	0	74.2	11	123	73.42	1.06	30.5	
4-Chloro-3-methylphenol	170.5	20	200	0	85.3	15.4	119	178.4	4.54	28.6	
2-Chlorophenol	179.6	10	200	0	89.8	12.2	122	185	2.92	107	
1,4-Dichlorobenzene	76.76	10	100	0	76.8	16.9	100	69.4	10.1	62.1	
2,4-Dinitrotoluene	79.4	10	100	0	79.4	13	138	84.28	5.96	14.7	
N-Nitrosodi-n-propylamine	71.68	10	100	0	71.7	9.93	122	77.04	7.21	30.3	
4-Nitrophenol	93.12	50	200	0	46.6	12.5	87.4	98.54	5.66	36.3	
Pentachlorophenol	137	50	200	0	68.5	3.55	114	166.6	19.5	49	
Phenol	88.24	10	200	0	44.1	7.53	73.1	95.98	8.40	52.4	
Pyrene	75.34	15	100	0	75.3	12.6	140	80.68	6.85	16.3	
1,2,4-Trichlorobenzene	79.84	10	100	0	79.8	17.4	98.7	74.02	7.57	36.4	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

Sample ID Ics-6918 Batch ID: 6918 Test Code: SW8270C Units: µg/L Analysis Date 11/19/2004 Prep Date 11/18/2004

Client ID: ELMO_041119A Run ID: PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	89.72	10	100	0	89.7	11	123	0			
4-Chloro-3-methylphenol	209.6	20	200	0	105	15.4	119	0			
2-Chlorophenol	225.1	10	200	0	113	12.2	122	0			
1,4-Dichlorobenzene	87.74	10	100	0	87.7	16.9	100	0			
2,4-Dinitrotoluene	83.52	10	100	0	83.5	13	138	0			
N-Nitrosodi-n-propylamine	92.16	10	100	0	92.2	9.93	122	0			J
4-Nitrophenol	30.82	50	200	0	15.4	-20.5	87.4	0			
Pentachlorophenol	59.98	50	200	0	30.0	-0.355	114	0			
Phenol	112.6	10	200	0	56.3	7.53	73.1	0			
Pyrene	95.56	15	100	0	95.6	12.6	140	0			
1,2,4-Trichlorobenzene	88.76	10	100	0	88.8	17.4	98.7	0			

Sample ID Icsd-6918 Batch ID: 6918 Test Code: SW8270C Units: µg/L Analysis Date 11/19/2004 Prep Date 11/18/2004

Client ID: ELMO_041119A Run ID: PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	79.98	10	100	0	80.0	11	123	89.72	11.5	30.5	
4-Chloro-3-methylphenol	167.7	20	200	0	83.9	15.4	119	209.6	22.2	28.6	
2-Chlorophenol	194.6	10	200	0	97.3	12.2	122	225.1	14.6	107	
1,4-Dichlorobenzene	85.98	10	100	0	86.0	16.9	100	87.74	2.03	62.1	
2,4-Dinitrotoluene	79.94	10	100	0	79.9	13	138	83.52	4.38	14.7	
N-Nitrosodi-n-propylamine	73.18	10	100	0	73.2	9.93	122	92.16	23.0	30.3	R
4-Nitrophenol	76.72	50	200	0	38.4	12.5	87.4	30.82	85.4	36.3	R
Pentachlorophenol	136.5	50	200	0	68.3	3.55	114	59.98	77.9	49	R
Phenol	97.82	10	200	0	48.9	7.53	73.1	112.6	14.1	52.4	
Pyrene	82.12	15	100	0	82.1	12.6	140	95.56	15.1	16.3	
1,2,4-Trichlorobenzene	82.88	10	100	0	82.9	17.4	98.7	88.76	6.85	36.4	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0411071
 Project: River Sampling November 2004

Sample ID	LCS-6819	Batch ID:	6819	Test Code:	SW7470	Units:	mg/L	Analysis Date	11/8/2004	Prep Date	11/8/2004
Client ID:		Run ID:	MI-LA254_041108A	SeqNo:	318409						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00508	0.0002	0.005	0.00005025	101	75.2	134	0			

Sample ID	LCS-6819	Batch ID:	6819	Test Code:	SW7470	Units:	mg/L	Analysis Date	11/8/2004	Prep Date	11/8/2004
Client ID:		Run ID:	MI-LA254_041108A	SeqNo:	318410						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005232	0.0002	0.005	0.00005025	104	75.2	134	0.00508	2.96	0	

Sample ID	LCS	Batch ID:	R13803	Test Code:	SW6010A	Units:	mg/L	Analysis Date	11/16/2004	11:29:28 A	Prep Date
Client ID:		Run ID:	ICP_041116B	SeqNo:	320759						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4772	0.02	0.5	0	95.4	80	120	0			
Barium	0.4847	0.002	0.5	0	96.9	80	120	0			
Cadmium	0.49	0.002	0.5	0	98.0	80	120	0			
Calcium	46.15	1	50.5	0	91.4	80	120	0			
Chromium	0.4868	0.006	0.5	0	97.4	80	120	0			
Copper	0.4853	0.006	0.5	0	97.1	80	120	0			
Iron	0.5126	0.02	0.5	0	103	80	120	0			
Lead	0.4886	0.005	0.5	0	97.7	80	120	0			
Magnesium	47.29	1	50.5	0	93.6	80	120	0			
Manganese	0.4904	0.002	0.5	0.000152	98.1	80	120	0			
Potassium	49.17	1	55	0	89.4	80	120	0			
Selenium	0.4562	0.05	0.5	0	91.2	80	120	0			
Silver	0.5039	0.005	0.5	0	101	80	120	0			
Sodium	53.91	1	50.5	0	107	80	120	0			
Uranium	4.83	0.1	5	0	96.6	80	120	0			
Zinc	0.5822	0.005	0.5	0	116	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

Sample ID LCSD Batch ID: R13803 Test Code: SW6010A Units: mg/L Analysis Date 11/16/2004 11:32:04 A Prep Date

Client ID: Run ID: ICP_041116B SeqNo: 320760

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5243	0.02	0.5	0	105	80	120	0.4772	9.40	20	
Barium	0.504	0.002	0.5	0	101	80	120	0.4847	3.90	20	
Cadmium	0.5301	0.002	0.5	0	106	80	120	0.49	7.87	20	
Calcium	49.32	1	50.5	0	97.7	80	120	46.15	6.63	20	
Chromium	0.5279	0.006	0.5	0	106	80	120	0.4868	8.10	20	
Copper	0.5057	0.006	0.5	0	101	80	120	0.4853	4.11	20	
Iron	0.531	0.02	0.5	0	106	80	120	0.5126	3.52	20	
Lead	0.5282	0.005	0.5	0	106	80	120	0.4886	7.79	20	
Magnesium	50.61	1	50.5	0	100	80	120	47.29	6.79	20	
Manganese	0.5115	0.002	0.5	0.000152	102	80	120	0.4904	4.21	20	
Potassium	52.83	1	55	0	96.1	80	120	49.17	7.18	20	
Selenium	0.4902	0.05	0.5	0	98.0	80	120	0.4562	7.18	20	
Silver	0.521	0.005	0.5	0	104	80	120	0.5039	3.35	20	
Sodium	57.72	1	50.5	0	114	80	120	53.91	6.82	20	
Uranium	5.008	0.1	5	0	100	80	120	4.83	3.62	20	
Zinc	0.5067	0.005	0.5	0	101	80	120	0.5822	13.9	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
7

QC SUMMARY REPORT
Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0411071
Project: River Sampling November 2004

Sample ID: LCS **Batch ID:** R13803 **Test Code:** SW6010A **Units:** mg/L **Analysis Date:** 11/16/2004 1:56:37 PM **Prep Date:**
Client ID: ICP_041116B **Run ID:** **SeqNo:** 320800

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5574	0.02	0.5	0	111	80	120	0		120	0
Barium	0.5225	0.002	0.5	0.0002371	104	80	120	0		120	0
Cadmium	0.5453	0.002	0.5	0	109	80	120	0		120	0
Calcium	42.59	1	50.5	0	84.3	80	120	0		120	0
Chromium	0.5376	0.006	0.5	0	108	80	120	0		120	0
Copper	0.5155	0.006	0.5	0	103	80	120	0		120	0
Iron	0.5447	0.02	0.5	0	109	80	120	0		120	0
Lead	0.5575	0.005	0.5	0	112	80	120	0		120	0
Magnesium	43.67	1	50.5	0	86.5	80	120	0		120	0
Manganese	0.5319	0.002	0.5	0.0001535	106	80	120	0		120	0
Potassium	46.83	1	55	0	85.1	80	120	0		120	0
Selenium	0.5321	0.05	0.5	0	106	80	120	0		120	0
Silver	0.5509	0.005	0.5	0	110	80	120	0		120	0
Sodium	50.71	1	50.5	0	100	80	120	0		120	0
Uranium	4.912	0.1	5	0	98.2	80	120	0		120	0
Zinc	0.534	0.005	0.5	0	107	80	120	0		120	0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: San Juan Refining

Work Order: 0411071

Project: River Sampling November 2004

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID	LCS-6822	Batch ID: R13803	Test Code: SW6010A	Units: mg/L	Analysis Date	11/16/2004 1:58:36 PM	Prep Date		
Client ID:	Run ID:	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit	SeqNo: 320801		
Analyte	Result				%REC	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5632	0.02	0.5	0	113	0.5574	1.03	20	
Barium	0.5413	0.002	0.5	0.0002371	108	0.5225	3.55	20	
Cadmium	0.5599	0.002	0.5	0	112	0.5453	2.64	20	
Calcium	46.64	1	50.5	0	92.4	42.59	9.09	20	
Chromium	0.5536	0.006	0.5	0	111	0.5376	2.93	20	
Copper	0.5384	0.006	0.5	0	108	0.5155	4.35	20	
Iron	0.5766	0.02	0.5	0	115	0.5447	5.68	20	
Lead	0.5705	0.005	0.5	0	114	0.5575	2.29	20	
Magnesium	47.51	1	50.5	0	94.1	43.67	8.41	20	
Manganese	0.5499	0.002	0.5	0.0001535	110	0.5319	3.33	20	
Potassium	50.64	1	55	0	92.1	46.83	7.82	20	
Selenium	0.5465	0.05	0.5	0	109	0.5321	2.68	20	
Silver	0.5675	0.005	0.5	0	113	0.5509	2.96	20	
Sodium	54.47	1	50.5	0	108	50.71	7.15	20	
Uranium	4.998	0.1	5	0	100	4.912	1.73	20	
Zinc	0.5668	0.005	0.5	0	113	0.534	5.96	20	

Sample ID	LCS-6822	Batch ID: 6822	Test Code: SW6010A	Units: mg/L	Analysis Date	11/9/2004 10:03:53 AM	Prep Date	11/8/2004	
Client ID:	Run ID:	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit	SeqNo: 318775		
Analyte	Result				%REC	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5183	0.02	0.5	0	104	0	0	20	
Barium	0.5186	0.02	0.5	0	104	0	0	20	
Cadmium	0.5188	0.002	0.5	0.0006085	104	0	0	20	
Chromium	0.5249	0.006	0.5	0	105	0	0	20	
Lead	0.5338	0.005	0.5	0	107	0	0	20	
Selenium	0.4685	0.05	0.5	0	93.7	0	0	20	
Silver	0.5608	0.005	0.5	0	112	0	0	20	

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0411071
 Project: River Sampling November 2004

Sample ID	Batch ID	Test Code	Units	mg/L	Analysis Date	11/9/2004 10:06:11 AM	Prep Date	11/8/2004	
Client ID:	Run ID:	QCP	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPDLimit	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPDLimit	Qual
Arsenic	0.529	0.02	0.5	0	106	80	120	20	2.05
Barium	0.5009	0.02	0.5	0	100	80	120	20	3.49
Cadmium	0.5018	0.002	0.5	0.0008085	100	80	120	20	3.34
Chromium	0.5041	0.006	0.5	0	101	80	120	20	4.06
Lead	0.5143	0.005	0.5	0	103	80	120	20	3.73
Selenium	0.4493	0.05	0.5	0	89.9	80	120	20	4.18
Silver	0.5432	0.005	0.5	0	109	80	120	20	3.19

Sample ID	Batch ID	Test Code	Units	mg/L	Analysis Date	11/8/2004	Prep Date	11/5/2004	
Client ID:	Run ID:	QCP	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPDLimit	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPDLimit	Qual
Total Dissolved Solids	1033	50	1000	0	103	80	120	0	0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

11/4/2004

Work Order Number 0411071

Received by AMG

Checklist completed by Bonzalis 11/4/04
Signature Date

Matrix Carrier name UPS

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- 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
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes No N/A

Container/Temp Blank temperature? 1° *4° C ± 2 Acceptable*
If given sufficient time to cool.

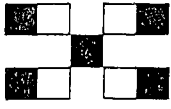
COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____



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CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refining
 Accreditation Applied: NELAC USACE
 Other: River Sampling - November 2004
 Project Name: River Sampling - November 2004
 Project #: _____
 Project Manager: _____
 Sampler: Cindy Hurtado
 Sample Temperature: 1

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HCl ₂	HNO ₃	
11-03-04	2pm	H ₂ O	River-Upstream	2-VOA	X		0111071
				1-VOA	X		
				1-500ml	X		
				1-125ml		XFA Head	
				1-125ml		H ₂ SO ₄	
				1-liter			
				1-liter		Amber	

Date: 11-03-04 Time: 3:50p
 Relinquished By: (Signature) Cindy Hurtado
 Relinquished By: (Signature) _____
 Remarks: Samples 11/4/04
1613

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B MOD (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals Totals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)	WACC-Dissolved Metals	NO ₃ Back up	Gen Chem Cations/Anion	Air Bubbles or Headspace (Y or N)
X		X					X						X			

CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refining

Address: #50 CR 4990

Bloomfield, NM
87413

Phone #: 505-632-4161

Fax #: 505-632-3711

QA/QC Package:
Std Level 4

Other:

Project Name: River Sampling -
November 2004

Project #:

Project Manager:

Sampler: Cindy Hurtado

Sample Temperature:

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
11/03/04	1240p	H ₂ O	River - N of MW ⁴ s	2-VOA	X		0411071
				2-VOA	X		
				1-500ml	X		
				1-125ml	X	Filtered	
				1-125ml		H ₂ SO ₄	
				1-500ml			
				1-liter		Amber	

Date: 11-03-04
Time: 3:15 pm

Relinquished By: (Signature)
Cindy Hurtado

Relinquished By: (Signature)
Cindy Hurtado

Received By: (Signature)
D. Gonzalez

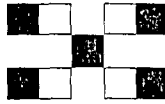
Received By: (Signature)
11/4/04
11613

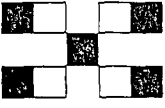
Remarks:

ANALYSIS REQUEST

BTEX + MTBE + TPH (Gasoline Only)	BTEX + MTBE + TPH (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	PCRA 8 Metals Totals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	WACC - Dissolved Metals	NO ₃ Backgr	(Spm Chan Amms) Cottons	Air Bubbles or Headspace (Y or N)
X	X					X					X	X	X	

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com





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CHAIN-OF-CUSTODY RECORD

Client: San Juan Refining
 Address: #50 CR 4990
Bloomfield, NM
87413
 Phone #: 505-632-4161
 Fax #: 505-632-3911

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					H ₂ O ₂	HNO ₃	
11/30/04	1200p	H ₂ O	River-N of MW #46	3-VOA	X		0411071
				1-500	X		3
				1-125	XFF lead		3
				1-125	H ₂ SO ₄		3
				1-Liter			3
				1-Liter	Amber		3

Date: 11/30/04 Time: 3:50p
 Relinquished By: (Signature) Cindy Hurtado
 Date: 11/30/04 Time: 1613
 Relinquished By: (Signature) Georgina-11/04/04

ANALYSIS REQUEST

Analysis	Requested	Completed
BTEX + MTBE + TPH (Gasoline Only)	X	
BTEX + MTBE + TPH (Gas/Diesel)	X	
TPH (Method 418.1)		
EDB (Method 504.1)		
EDC (Method 8021)		
8310 (PNA or PAH)		
RCRA 8 Metals Totals	X	
Cations (Na, K, Ca, Mg)		
Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)		
8081 Pesticides / PCB's (8082)		
8260 (VDA)		
8270 (Semi-VDA)		
WACC-Dissolved Metals	X	
NO ₃ Backup	X	
San Juan Cations/Anions	X	
Air Bubbles or Headspace (Y or N)		

Remarks:

CHAIN-OF-CUSTODY RECORD

Client: SAN JUAN Refining

Address: #50 CR 4990
Bloomfield, NM
87413

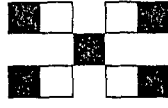
Phone #: 505-632-4161
 Fax #: 505-632-3911

Date: 11-03-04 Time: 2:00pm Matrix: H2O Sample I.D. No.: River-Down Stream TB

Sampler: Cindy Hurtado
 Sample Temperature: 70
 Number/Volume: 3-VOA
 Preservative: H₂O₂ HNO₃ HEAL No. 0411071

BTEX + MTBE + TPH (Gasoline Only) X
 BTEX + MTBE + TMB's (8021) X
 TPH Method 8015B MOD (Gas/Diesel) X
 TPH (Method 418.1) X
 EDB (Method 504.1) X
 EDC (Method 8021) X
 8310 (PNA or PAH) X
 RCRA 8 Metals X
 Cations (Na, K, Ca, Mg) X
 Anions (F, Cl, NO₃, NO₂, PO₄, SO₄) X
 8081 Pesticides / PCB's (8082) X
 8260 (VDA) X
 8270 (Semi-VOA) X
 Air Bubbles or Headspace (Y or N) X

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 www.hallenvironmental.com



ANALYSIS REQUEST

Date: 11-03-04 Time: 3:50pm Relinquished By: (Signature) Cindy Hurtado
 Date: 11-03-04 Time: 1:40 Relinquished By: (Signature) Cindy Hurtado
 Remarks: 1613



COVER LETTER

November 16, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: MW #48 - Water

Order No.: 0411032

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 1 sample on 11/2/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411032
 Project: MW #48 - Water
 Lab ID: 0411032-01

Client Sample ID: MW #48
 Collection Date: 11/1/2004 10:00:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.54	0.10		mg/L	1	11/2/2004 7:20:06 PM
Chloride	120	1.0		mg/L	10	11/3/2004 5:09:05 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/2/2004 7:20:06 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/2/2004 7:20:06 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/2/2004 7:20:06 PM
Sulfate	250	5.0		mg/L	10	11/3/2004 5:09:05 PM
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	1.5	1.0		mg/L	1	11/4/2004 11:17:56 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 11:17:56 PM
Surr: DNOP	125	58-140		%REC	1	11/4/2004 11:17:56 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	51	10		mg/L	200	11/4/2004 11:02:23 AM
Surr: BFB	110	74-118		%REC	200	11/4/2004 11:02:23 AM
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	890	100		µg/L	100	11/3/2004
Toluene	ND	100		µg/L	100	11/3/2004
Ethylbenzene	3700	100		µg/L	100	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	100	11/3/2004
1,2,4-Trimethylbenzene	7300	100		µg/L	100	11/3/2004
1,3,5-Trimethylbenzene	2000	100		µg/L	100	11/3/2004
1,2-Dichloroethane (EDC)	ND	100		µg/L	100	11/3/2004
1,2-Dibromoethane (EDB)	ND	100		µg/L	100	11/3/2004
Naphthalene	1300	200		µg/L	100	11/3/2004
1-Methylnaphthalene	ND	400		µg/L	100	11/3/2004
2-Methylnaphthalene	560	400		µg/L	100	11/3/2004
Acetone	ND	1000		µg/L	100	11/3/2004
Bromobenzene	ND	100		µg/L	100	11/3/2004
Bromochloromethane	ND	100		µg/L	100	11/3/2004
Bromodichloromethane	ND	100		µg/L	100	11/3/2004
Bromoform	ND	100		µg/L	100	11/3/2004
Bromomethane	ND	200		µg/L	100	11/3/2004
2-Butanone	ND	1000		µg/L	100	11/3/2004
Carbon disulfide	ND	1000		µg/L	100	11/3/2004
Carbon Tetrachloride	ND	100		µg/L	100	11/3/2004
Chlorobenzene	ND	100		µg/L	100	11/3/2004
Chloroethane	ND	200		µg/L	100	11/3/2004
Chloroform	ND	100		µg/L	100	11/3/2004
Chloromethane	ND	100		µg/L	100	11/3/2004
2-Chlorotoluene	ND	100		µg/L	100	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411032
 Project: MW #48 - Water
 Lab ID: 0411032-01

Client Sample ID: MW #48
 Collection Date: 11/1/2004 10:00:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
4-Chlorotoluene	ND	100		µg/L	100	11/3/2004
cis-1,2-DCE	ND	100		µg/L	100	11/3/2004
cis-1,3-Dichloropropene	ND	100		µg/L	100	11/3/2004
1,2-Dibromo-3-chloropropane	ND	200		µg/L	100	11/3/2004
Dibromochloromethane	ND	100		µg/L	100	11/3/2004
Dibromomethane	ND	200		µg/L	100	11/3/2004
1,2-Dichlorobenzene	ND	100		µg/L	100	11/3/2004
1,3-Dichlorobenzene	ND	100		µg/L	100	11/3/2004
1,4-Dichlorobenzene	ND	100		µg/L	100	11/3/2004
Dichlorodifluoromethane	ND	100		µg/L	100	11/3/2004
1,1-Dichloroethane	ND	100		µg/L	100	11/3/2004
1,1-Dichloroethene	ND	100		µg/L	100	11/3/2004
1,2-Dichloropropane	ND	100		µg/L	100	11/3/2004
1,3-Dichloropropane	ND	100		µg/L	100	11/3/2004
2,2-Dichloropropane	ND	100		µg/L	100	11/3/2004
1,1-Dichloropropene	ND	100		µg/L	100	11/3/2004
Hexachlorobutadiene	ND	100		µg/L	100	11/3/2004
2-Hexanone	ND	1000		µg/L	100	11/3/2004
Isopropylbenzene	270	100		µg/L	100	11/3/2004
4-Isopropyltoluene	ND	100		µg/L	100	11/3/2004
4-Methyl-2-pentanone	ND	1000		µg/L	100	11/3/2004
Methylene Chloride	ND	300		µg/L	100	11/3/2004
n-Butylbenzene	ND	100		µg/L	100	11/3/2004
n-Propylbenzene	700	100		µg/L	100	11/3/2004
sec-Butylbenzene	ND	100		µg/L	100	11/3/2004
Styrene	ND	100		µg/L	100	11/3/2004
tert-Butylbenzene	ND	100		µg/L	100	11/3/2004
1,1,1,2-Tetrachloroethane	ND	100		µg/L	100	11/3/2004
1,1,2,2-Tetrachloroethane	ND	100		µg/L	100	11/3/2004
Tetrachloroethene (PCE)	ND	100		µg/L	100	11/3/2004
trans-1,2-DCE	ND	100		µg/L	100	11/3/2004
trans-1,3-Dichloropropene	ND	100		µg/L	100	11/3/2004
1,2,3-Trichlorobenzene	ND	100		µg/L	100	11/3/2004
1,2,4-Trichlorobenzene	ND	100		µg/L	100	11/3/2004
1,1,1-Trichloroethane	ND	100		µg/L	100	11/3/2004
1,1,2-Trichloroethane	ND	100		µg/L	100	11/3/2004
Trichloroethene (TCE)	ND	100		µg/L	100	11/3/2004
Trichlorofluoromethane	ND	100		µg/L	100	11/3/2004
1,2,3-Trichloropropane	ND	200		µg/L	100	11/3/2004
Vinyl chloride	ND	100		µg/L	100	11/3/2004
Xylenes, Total	24000	250		µg/L	250	11/4/2004
Surr: 1,2-Dichloroethane-d4	98.8	70.6-124		%REC	100	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
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 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411032
 Project: MW #48 - Water
 Lab ID: 0411032-01

Client Sample ID: MW #48
 Collection Date: 11/1/2004 10:00:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 4-Bromofluorobenzene	103	76.4-130		%REC	100	11/3/2004
Surr: Dibromofluoromethane	92.3	67.2-131		%REC	100	11/3/2004
Surr: Toluene-d8	108	82.1-123		%REC	100	11/3/2004
EPA METHOD 8310: PAHS						Analyst: BL
Naphthalene	560	25		µg/L	10	11/15/2004 4:01:02 PM
1-Methylnaphthalene	160	2.5		µg/L	1	11/12/2004 2:52:53 PM
2-Methylnaphthalene	250	25		µg/L	10	11/15/2004 4:01:02 PM
Acenaphthylene	ND	2.5		µg/L	1	11/12/2004 2:52:53 PM
Acenaphthene	ND	2.5		µg/L	1	11/12/2004 2:52:53 PM
Fluorene	1.0	0.80		µg/L	1	11/12/2004 2:52:53 PM
Phenanthrene	5.9	0.60		µg/L	1	11/12/2004 2:52:53 PM
Anthracene	ND	0.60		µg/L	1	11/12/2004 2:52:53 PM
Fluoranthene	ND	0.30		µg/L	1	11/12/2004 2:52:53 PM
Pyrene	ND	0.30		µg/L	1	11/12/2004 2:52:53 PM
Benz(a)anthracene	ND	0.020		µg/L	1	11/12/2004 2:52:53 PM
Chrysene	ND	0.20		µg/L	1	11/12/2004 2:52:53 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	11/12/2004 2:52:53 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	11/12/2004 2:52:53 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	11/12/2004 2:52:53 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	11/12/2004 2:52:53 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	11/12/2004 2:52:53 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	11/12/2004 2:52:53 PM
Surr: Benzo(e)pyrene	95.8	54-102		%REC	1	11/12/2004 2:52:53 PM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: MAP
Specific Conductance	2700	0.010		µmhos/cm	1	11/4/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	11/3/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/11/2004 10:07:01 AM
Barium	0.21	0.0020		mg/L	1	11/10/2004 3:52:19 PM
Cadmium	ND	0.0020		mg/L	1	11/10/2004 3:52:19 PM
Chromium	ND	0.0060		mg/L	1	11/10/2004 3:52:19 PM
Copper	ND	0.0060		mg/L	1	11/10/2004 3:52:19 PM
Iron	0.16	0.020		mg/L	1	11/10/2004 3:52:19 PM
Lead	0.014	0.0050		mg/L	1	11/10/2004 3:52:19 PM
Manganese	0.55	0.0020		mg/L	1	11/10/2004 3:52:19 PM
Selenium	ND	0.050		mg/L	1	11/10/2004 3:52:19 PM
Silver	ND	0.0050		mg/L	1	11/10/2004 3:52:19 PM
Uranium	ND	0.10		mg/L	1	11/10/2004 3:52:19 PM
Zinc	0.026	0.0050		mg/L	1	11/10/2004 3:52:19 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411032
 Project: MW #48 - Water
 Lab ID: 0411032-01

Client Sample ID: MW #48
 Collection Date: 11/1/2004 10:00:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/5/2004 9:24:41 AM
Barium	0.32	0.020		mg/L	1	11/5/2004 9:24:41 AM
Cadmium	ND	0.0020		mg/L	1	11/5/2004 9:24:41 AM
Calcium	130	1.0		mg/L	1	11/5/2004 9:24:41 AM
Chromium	0.0092	0.0060		mg/L	1	11/5/2004 9:24:41 AM
Iron	19	0.50		mg/L	10	11/5/2004 10:45:03 AM
Lead	0.023	0.0050		mg/L	1	11/5/2004 9:24:41 AM
Magnesium	22	1.0		mg/L	1	11/5/2004 9:24:41 AM
Manganese	2.4	0.0020		mg/L	1	11/5/2004 9:24:41 AM
Potassium	6.9	1.0		mg/L	1	11/5/2004 9:24:41 AM
Selenium	ND	0.050		mg/L	1	11/5/2004 9:24:41 AM
Silver	ND	0.0050		mg/L	1	11/5/2004 9:24:41 AM
Sodium	400	10		mg/L	10	11/5/2004 10:45:03 AM
Uranium	ND	0.10		mg/L	1	11/5/2004 9:24:41 AM
Zinc	0.056	0.050		mg/L	1	11/5/2004 9:24:41 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.88	0.010		pH units	1	11/15/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	1500	50		mg/L	1	11/4/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Work Order: 0411032
 Project: MW #48 - Water

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R13648	Test Code: E300	Units: mg/L	Analysis Date 11/2/2004 5:05:40 PM	Prep Date					
Client ID:		Run ID: LC_041102A	SeqNo: 317113								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID	MBLK	Batch ID: R13660	Test Code: E300	Units: mg/L	Analysis Date 11/3/2004 3:11:32 PM	Prep Date					
Client ID:		Run ID: LC_041103A	SeqNo: 317351								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID	MB-6798	Batch ID: 6798	Test Code: SW8015	Units: mg/L	Analysis Date 11/4/2004 9:49:28 PM	Prep Date 11/4/2004					
Client ID:		Run ID: FID(17A) 2_041102A	SeqNo: 317894								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MIRO)	ND	5									
Surr: DNOP	1.173	0	1	0	117	58	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0411032
Project: MW #48 - Water

Sample ID: Reagent Blank 5m Batch ID: R13678 Test Code: SW8015 Units: mg/L Analysis Date: 11/4/2004 9:00:28 AM Prep Date: 11/8/2004
Client ID: PIDFID_041104A SeqNo: 317803

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	20.09	0	20	0	100	74	118	0			

Sample ID: MB-6812 Batch ID: 6812 Test Code: SW8310 Units: µg/L Analysis Date: 11/12/2004 12:28:53 P Prep Date: 11/8/2004
Client ID: HUGO_041112A SeqNo: 320127

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5									
1-Methylnaphthalene	ND	2.5									
2-Methylnaphthalene	ND	2.5									
Acenaphthylene	ND	2.5									
Acenaphthene	ND	2.5									
Fluorene	ND	0.8									
Phenanthrene	ND	0.6									
Anthracene	ND	0.6									
Fluoranthene	ND	0.3									
Pyrene	ND	0.3									
Benz(a)anthracene	ND	0.02									
Chrysene	ND	0.2									
Benzo(b)fluoranthene	ND	0.05									
Benzo(k)fluoranthene	ND	0.02									
Benzo(a)pyrene	ND	0.02									
Dibenz(a,h)anthracene	0.03	0.04									J
Benzo(g,h,i)perylene	ND	0.03									
Indeno(1,2,3-cd)pyrene	ND	0.08									
Surr: Benzo(e)pyrene	9.47	0	10	0	94.7	54	102	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0411032
Project: MW #48 - Water

Sample ID MB-6788 Batch ID: 6788 Test Code: SW7470 Units: mg/L Analysis Date 11/3/2004 Prep Date 11/3/2004
Client ID: MI-LA254_041103A Run ID: 317316 SeqNo: 317316

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury ND 0.0002

Sample ID MB Batch ID: R13737 Test Code: SW6010A Units: mg/L Analysis Date 11/10/2004 2:28:19 PM Prep Date
Client ID: ICP_041110B Run ID: 319298 SeqNo: 319298

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic ND 0.02
Barium ND 0.002
Cadmium ND 0.002
Chromium ND 0.006
Copper ND 0.006
Iron ND 0.02
Lead ND 0.005
Manganese ND 0.002
Selenium ND 0.05
Silver ND 0.005
Uranium ND 0.1
Zinc ND 0.005

Sample ID MB Batch ID: R13737 Test Code: SW6010A Units: mg/L Analysis Date 11/11/2004 9:56:32 AM Prep Date
Client ID: ICP_041110B Run ID: 319467 SeqNo: 319467

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic ND 2.5

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0411032
Project: MW #48 - Water

Sample ID MB-6796 Batch ID: 6796 Test Code: SW6010A Units: mg/L Analysis Date 11/5/2004 10:42:40 AM Prep Date 11/4/2004
Client ID: ICP_041105A Run ID: 318411 SeqNo: 318411

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Iron	ND	0.05									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	ND	0.002									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									
Uranium	ND	0.1									
Zinc	ND	0.05									

Sample ID MB-6786 Batch ID: 6786 Test Code: E160.1 Units: mg/L Analysis Date 11/4/2004 Prep Date 11/3/2004
Client ID: WC_041104B Run ID: 317665 SeqNo: 317665

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Work Order: 0411032
 Project: MW #48 - Water

QC SUMMARY REPORT

Method Blank

Sample ID 5mL rb Batch ID: R13663 Test Code: SW8260B Units: µg/L Analysis Date 11/3/2004 Prep Date
 Client ID: NEPTUNE_041103A Run ID: 317437 SeqNo: 317437

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411032
 Project: MW #48 - Water

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0411032
Project: MW #48 - Water

Compound	Reporting Limit	Detected	Accepted	Outside	Recovery	Reporting Limit	Detected	Accepted	Outside	Recovery
1,1,2-Trichloroethane	ND	1	0	0	99.7	68.4	127	0	0	0
Trichloroethene (TCE)	ND	1	0	0	95.6	70.4	126	0	0	0
Trichlorofluoromethane	ND	1	0	0	93.3	70.2	126	0	0	0
1,2,3-Trichloropropane	ND	2	0	0	110	73.5	129	0	0	0
Vinyl chloride	ND	1	0	0						
Xylenes, Total	9.97	0	10	0						
Surr: 1,2-Dichloroethane-d4	9.564	0	10	0						
Surr: 4-Bromofluorobenzene	9.33	0	10	0						
Surr: Dibromofluoromethane	11	0	10	0						
Surr: Toluene-d8		0	10	0						

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Work Order: 0411032
 Project: MW #48 - Water

QC SUMMARY REPORT

Sample Duplicate

Sample ID	0411032-01C DUP	Batch ID:	R13676	Test Code:	E120.1	Units:	µmhos/cm	Analysis Date	11/4/2004	Prep Date	
Client ID:	MW #48	Run ID:	WC_041104C	SeqNo:	317692						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit
Specific Conductance		2660	0.01	0	0	0	0	0	2720	2.23	20

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

QC SUMMARY REPORT
Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0411032
Project: MW #48 - Water

Sample ID	LCS	Batch ID: R13660	Test Code: E300	Units: mg/L	Analysis Date 11/3/2004 3:28:21 PM	Prep Date					
Client ID:		Run ID: LC_041103A	SeqNo: 317352								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4533	0.1	0.5	0	90.7	90	110	0			
Chloride	4.733	0.1	5	0	94.7	90	110	0			
Nitrogen, Nitrite (As N)	0.9034	0.1	1	0	90.3	90	110	0			
Nitrogen, Nitrate (As N)	2.416	0.1	2.5	0	96.6	90	110	0			
Phosphorus, Orthophosphate (As P)	4.755	0.5	5	0	95.1	90	110	0			
Sulfate	9.77	0.5	10	0	97.7	90	110	0			

Sample ID	LCS-6798	Batch ID: 6798	Test Code: SW8015	Units: mg/L	Analysis Date 11/4/2004 10:18:50 PM	Prep Date 11/4/2004					
Client ID:		Run ID: FID(17A)2_041102A	SeqNo: 317895								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.105	1	5	0	102	81.2	149	0			

Sample ID	LCSD-6798	Batch ID: 6798	Test Code: SW8015	Units: mg/L	Analysis Date 11/4/2004 10:48:25 PM	Prep Date 11/4/2004					
Client ID:		Run ID: FID(17A)2_041102A	SeqNo: 317896								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.85	1	5	0	97.0	81.2	149	5.105	5.11	23	

Sample ID	GRO std 2.5ug	Batch ID: R136678	Test Code: SW8015	Units: mg/L	Analysis Date 11/4/2004 6:41:39 PM	Prep Date					
Client ID:		Run ID: PIDFID_041104A	SeqNo: 317842								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5026	0.05	0.5	0	101	80.3	116	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0411032
Project: MW #48 - Water

Sample ID: GRO std 2.5ug Batch ID: R13678 Test Code: SW8015 Units: mg/L Analysis Date: 11/5/2004 2:10:38 AM Prep Date:
Client ID: Run ID: PIDFID_041104A SeqNo: 317843

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Gasoline Range Organics (GRO) 0.526 0.05 0.5 0 105 80.3 116 0.5026 4.55 8.39

Sample ID: 100ng Ics Batch ID: R13663 Test Code: SW8260B Units: µg/L Analysis Date: 11/3/2004 Prep Date:
Client ID: Run ID: NEPTUNE_041103A SeqNo: 317438

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene 19.91 1 20 0 99.6 75.3 128 0
Toluene 20.13 1 20 0 101 77.8 122 0
Chlorobenzene 20.32 1 20 0 102 76.2 130 0
1,1-Dichloroethene 17.87 1 20 0 89.4 70.2 119 0
Trichloroethene (TCE) 19.27 1 20 0 96.4 76.9 130 0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0411032
Project: MW #48 - Water

Sample ID LCS-6812 Batch ID: 6812 Test Code: SW8310 Units: µg/L Analysis Date 11/12/2004 1:16:54 PM Prep Date 11/8/2004
Client ID: HUGO_041112A Run ID: HUGO_041112A SeqNo: 320128

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	26.51	2.5	40	0	66.3	20.939	111.211	0			
1-Methylnaphthalene	29.13	2.5	40.1	0	72.6	22.016	110.385	0			
2-Methylnaphthalene	28.77	2.5	40	0	71.9	21.098	111.261	0			
Acenaphthylene	28.66	2.5	40.1	0	71.5	23.852	116.857	0			
Acenaphthene	30.19	2.5	40	0	75.5	27.524	111.73	0			
Fluorene	2.96	0.8	4.01	0	73.8	31.046	113.32	0			
Phenanthrene	1.71	0.6	2.01	0	85.1	42.279	115.749	0			
Anthracene	1.65	0.6	2.01	0	82.1	43.767	118.693	0			
Fluoranthene	3.4	0.3	4.01	0	84.8	55.334	117.461	0			
Pyrene	3.55	0.3	4.01	0	88.5	57.722	120.832	0			
Benz(a)anthracene	0.35	0.02	0.401	0	87.3	70.18	113.452	0			
Chrysene	1.73	0.2	2.01	0	86.1	43.942	141.404	0			
Benzo(b)fluoranthene	0.34	0.05	0.38	0	89.5	71.192	103.368	0			
Benzo(k)fluoranthene	0.23	0.02	0.25	0	92.0	75.336	107.209	0			
Benzo(a)pyrene	0.23	0.02	0.251	0	91.6	74.556	100.742	0			
Dibenz(a,h)anthracene	0.47	0.04	0.501	0.03	87.8	80.693	106.931	0			
Benzo(g,h,i)perylene	0.45	0.03	0.5	0	90.0	55.168	135.014	0			
Indeno(1,2,3-cd)pyrene	0.847	0.08	1.002	0	84.5	79.328	104.794	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
3

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining

Work Order: 0411032

Project: MW #48 - Water

Sample ID: LCS-D-6812 Batch ID: 6812 Test Code: SW8310 Units: µg/L Analysis Date: 11/12/2004 2:04:54 PM Prep Date: 11/8/2004

Client ID: HUGO_041112A Run ID: HUGO_041112A SeqNo: 320129

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	28.7	2.5	40	0	71.8	20.939	111.211	26.51	7.93	32.1	
1-Methylnaphthalene	30.87	2.5	40.1	0	77.0	22.016	110.385	29.13	5.80	32.7	
2-Methylnaphthalene	31.61	2.5	40	0	79.0	21.098	111.261	28.77	9.41	34	
Acenaphthylene	32.12	2.5	40.1	0	80.1	23.852	116.857	28.66	11.4	38.8	
Acenaphthene	33.5	2.5	40	0	83.8	27.524	111.73	30.19	10.4	38.6	
Fluorene	3.25	0.8	4.01	0	81.0	31.046	113.32	2.96	9.34	39.3	
Phenanthrene	1.94	0.6	2.01	0	96.5	42.279	115.749	1.71	12.6	25	
Anthracene	1.83	0.6	2.01	0	91.0	43.767	118.693	1.65	10.3	23.9	
Fluoranthene	3.82	0.3	4.01	0	95.3	55.334	117.461	3.4	11.6	15.7	
Pyrene	4.02	0.3	4.01	0	100	57.722	120.832	3.55	12.4	15.3	
Benz(a)anthracene	0.39	0.02	0.401	0	97.3	70.18	113.452	0.35	10.8	11.9	
Chrysene	1.94	0.2	2.01	0	96.5	43.942	141.404	1.73	11.4	16.6	
Benzo(b)fluoranthene	0.37	0.05	0.38	0	97.4	71.192	103.368	0.34	8.45	21.7	
Benzo(k)fluoranthene	0.24	0.02	0.25	0	96.0	75.336	107.209	0.23	4.26	19.4	
Benzo(a)pyrene	0.25	0.02	0.251	0	99.6	74.556	100.742	0.23	8.33	16.7	
Dibenz(a,h)anthracene	0.5	0.04	0.501	0.03	93.8	80.693	106.931	0.47	6.19	17.3	
Benzo(g,h,i)perylene	0.49	0.03	0.5	0	98.0	55.168	135.014	0.45	8.51	11.8	
Indeno(1,2,3-cd)pyrene	0.876	0.08	1.002	0	87.4	79.328	104.794	0.847	3.37	17.7	

Sample ID	Batch ID	Test Code	SW7470	Units	mg/L	Analysis Date	11/3/2004	Prep Date	11/3/2004		
Client ID:		Run ID:	MI-LA254_041103A			SeqNo:	317317				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005238	0.0002	0.005	0	105	75.2	134	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0411032
 Project: MW #48 - Water

Sample ID: LCS-6788 Batch ID: 6788 Test Code: SW7470 Units: mg/L Analysis Date: 11/3/2004 Prep Date: 11/3/2004
 Client ID: Run ID: MI-LA254_041103A SeqNo: 317330
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
 Mercury 0.005238 0.0002 0.005 0 105 75.2 134 0.005238 0 0 0

Sample ID	LCS	Batch ID	R13737	Test Code	SW6010A	Units	mg/L	Analysis Date	11/10/2004 2:31:01 PM	Prep Date	
Client ID:		Run ID:	ICP_041110B	SeqNo:	319299						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4881	0.02	0.5	0	97.6	80	120	0			
Barium	0.4859	0.002	0.5	0	97.2	80	120	0			
Cadmium	0.4988	0.002	0.5	0	99.8	80	120	0			
Chromium	0.4886	0.006	0.5	0	97.7	80	120	0			
Copper	0.482	0.006	0.5	0	96.4	80	120	0			
Iron	0.5185	0.02	0.5	0	104	80	120	0			
Lead	0.4960	0.005	0.5	0	99.4	80	120	0			
Manganese	0.4972	0.002	0.5	0	99.4	80	120	0			
Selenium	0.4652	0.05	0.5	0	93.0	80	120	0			
Silver	0.5064	0.005	0.5	0	101	80	120	0			
Uranium	4.804	0.1	5	0	98.1	80	120	0			
Zinc	0.4785	0.005	0.5	0	95.7	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0411032
Project: MW #48 - Water

Sample ID	LCSD	Batch ID: R13737	Test Code: SW6010A	Units: mg/L	Analysis Date	11/10/2004 2:33:34 PM	Prep Date				
Client ID:		Run ID: ICP_041110B	SeqNo: 319300								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5001	0.02	0.5	0	100	80	120	0.4881	2.42	20	
Barium	0.4954	0.002	0.5	0	99.1	80	120	0.4859	1.95	20	
Cadmium	0.5109	0.002	0.5	0	102	80	120	0.4988	2.39	20	
Chromium	0.5026	0.006	0.5	0	101	80	120	0.4886	2.83	20	
Copper	0.4911	0.006	0.5	0	98.2	80	120	0.482	1.87	20	
Iron	0.5246	0.02	0.5	0	105	80	120	0.5185	1.16	20	
Lead	0.5083	0.005	0.5	0	102	80	120	0.4969	2.28	20	
Manganese	0.5008	0.002	0.5	0	100	80	120	0.4972	0.715	20	
Selenium	0.4814	0.05	0.5	0	96.3	80	120	0.4652	3.43	20	
Silver	0.5037	0.005	0.5	0	101	80	120	0.5064	0.531	20	
Uranium	4.912	0.1	5	0	98.2	80	120	4.904	0.171	20	
Zinc	0.4904	0.005	0.5	0	98.1	80	120	0.4785	2.45	20	

Sample ID	LCS	Batch ID: R13737	Test Code: SW6010A	Units: mg/L	Analysis Date	11/11/2004 9:58:37 AM	Prep Date				
Client ID:		Run ID: ICP_041110B	SeqNo: 319468								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4805	0.02	0.5	0	96.1	80	120	0			

Sample ID	LCSD	Batch ID: R13737	Test Code: SW6010A	Units: mg/L	Analysis Date	11/11/2004 12:00:43 A	Prep Date				
Client ID:		Run ID: ICP_041110B	SeqNo: 319469								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5024	0.02	0.5	0	100	80	120	0.4805	4.44	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining

Work Order: 0411032

Project: MW #48 - Water

Sample ID LCS-6796

Batch ID: 6796

Test Code: SW6010A

Units: mg/L

Analysis Date 11/5/2004 9:11:41 AM

Prep Date 11/4/2004

Client ID: Run ID: ICP_041105A PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4951	0.02	0.5	0	99.0	80	120	0			
Barium	0.4857	0.02	0.5	0	97.1	80	120	0			
Cadmium	0.4953	0.002	0.5	0.0006448	98.9	80	120	0			
Calcium	47.73	1	50	0	95.5	80	120	0			
Chromium	0.4915	0.006	0.5	0	98.3	80	120	0			
Iron	0.4884	0.05	0.5	0	97.7	80	120	0			
Lead	0.4985	0.005	0.5	0	99.3	80	120	0			
Magnesium	48.35	1	50	0	96.7	80	120	0			
Manganese	0.4811	0.002	0.5	0	96.2	80	120	0			
Potassium	51.1	1	50	0	102	80	120	0			
Selenium	0.4682	0.05	0.5	0	93.6	80	120	0			
Silver	0.5536	0.005	0.5	0.007271	109	80	120	0			
Sodium	54.62	1	50	0	109	80	120	0			
Uranium	4.649	0.1	5	0	93.0	80	120	0			
Zinc	0.4739	0.05	0.5	0	94.8	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
 Work Order: 0411032
 Project: MW #48 - Water

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

Sample ID: LCS-6796 Batch ID: 6796 Test Code: SW5010A Units: mg/L Analysis Date: 11/5/2004 9:14:14 AM Prep Date: 11/4/2004
 Client ID: Run ID: ICP_041105A SeqNo: 317909

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5078	0.02	0.5	0	102	80	120	0.4951	2.55	20	
Barium	0.4894	0.02	0.5	0	97.9	80	120	0.4857	0.761	20	
Cadmium	0.4967	0.002	0.5	0.0006448	99.2	80	120	0.4953	0.294	20	
Calcium	48.21	1	50	0	96.4	80	120	47.73	0.996	20	
Chromium	0.4937	0.006	0.5	0	98.7	80	120	0.4915	0.442	20	
Iron	0.4794	0.05	0.5	0	95.9	80	120	0.4884	1.87	20	
Lead	0.4987	0.005	0.5	0	99.7	80	120	0.4965	0.431	20	
Magnesium	48.56	1	50	0	97.1	80	120	48.35	0.432	20	
Manganese	0.4832	0.002	0.5	0	96.6	80	120	0.4811	0.437	20	
Potassium	51.37	1	50	0	103	80	120	51.1	0.527	20	
Selenium	0.4727	0.05	0.5	0	94.5	80	120	0.4682	0.954	20	
Silver	0.5457	0.005	0.5	0.007271	108	80	120	0.5536	1.44	20	
Sodium	54.83	1	50	0	110	80	120	54.62	0.377	20	
Uranium	4.683	0.1	5	0	93.7	80	120	4.649	0.731	20	
Zinc	0.479	0.05	0.5	0	95.8	80	120	0.4739	1.07	20	

Sample ID: LCS-6786 Batch ID: 6786 Test Code: E160.1 Units: mg/L Analysis Date: 11/4/2004 Prep Date: 11/3/2004
 Client ID: Run ID: WC_041104B SeqNo: 317666

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	1024	50	1000	0	102	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

11/2/2004

Work Order Number 0411032

Received by AT

Checklist completed by

[Signature]

Date

11/2/04

Matrix

Carrier name Greyhound

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- 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
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes No N/A
- Container/Temp Blank temperature? 1° 4° C ± 2 Acceptable
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

Client: SAN JUAN Refining

Address: #50 Rd 4990
Bloomfield, NM
87413

Phone #: 505-632-4161
 Fax #: 505-632-3911

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					H ₂ O ₂	HNO ₃	
11/01/04	10AM	H ₂ O	MW #48	3-VOL	X		111032-1
				1-liter			Amber
				1-250	X		Filled
				1-500	X		
				1-500			H ₂ O ₂
				1-250			

Date: 11/01/04 Time: 2pm
 Date: 11/01/04 Time: 2pm
 Relinquished By: (Signature) Cindy Hurtado
 Relinquished By: (Signature) Cindy Hurtado

Remarks: 11/2/04
Cindy Hurtado 11/2/04
 Remarks: 11/2/04
Cindy Hurtado 11/2/04

Accreditation Applied:
 NELAC USACE

Other: MW #48- water
 Project Name: MW #48- water

Project #: _____
 Project Manager: _____

Sampler: Cindy Hurtado
 Sample Temperature: _____



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkins NE, Suite D
 Albuquerque, New Mexico 87109
 Tel. 505.345.3975 Fax 505.345.4107
 www.hallenvironmental.com

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B MOD (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	B310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)	WACC Metals - Dissolved	WACC Metals - Total	TR, EC, PH	Air Bubbles or Headspace (Y or N)
X		X				X					X					
									X				X			
								X	X							
								X	X							

Remarks: BTEX, M TBE, & TPH by 8260 Rerch / AT
due by 11/05/04 (Friday)
11/5/04

COVER LETTER

November 17, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: MW #48 - Water

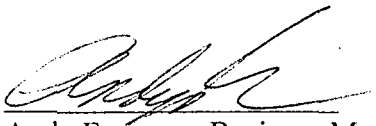
Order No.: 0411032

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 1 sample on 11/2/2004 for the analyses presented in the following report.

This report is an addendum to the report dated November 16, 2004. Additional metals have been added to this report. Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
Lab Order: 0411032
Project: MW #48 - Water
Lab ID: 0411032-01

Client Sample ID: MW #48
Collection Date: 11/1/2004 10:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.54	0.10		mg/L	1	11/2/2004 7:20:06 PM
Chloride	120	1.0		mg/L	10	11/3/2004 5:09:05 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/2/2004 7:20:06 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/2/2004 7:20:06 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/2/2004 7:20:06 PM
Sulfate	250	5.0		mg/L	10	11/3/2004 5:09:05 PM
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	1.5	1.0		mg/L	1	11/4/2004 11:17:56 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 11:17:56 PM
Surr: DNOP	125	58-140		%REC	1	11/4/2004 11:17:56 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	51	10		mg/L	200	11/4/2004 11:02:23 AM
Surr: BFB	110	74-118		%REC	200	11/4/2004 11:02:23 AM
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	890	100		µg/L	100	11/3/2004
Toluene	ND	100		µg/L	100	11/3/2004
Ethylbenzene	3700	100		µg/L	100	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	100		µg/L	100	11/3/2004
1,2,4-Trimethylbenzene	7300	100		µg/L	100	11/3/2004
1,3,5-Trimethylbenzene	2000	100		µg/L	100	11/3/2004
1,2-Dichloroethane (EDC)	ND	100		µg/L	100	11/3/2004
1,2-Dibromoethane (EDB)	ND	100		µg/L	100	11/3/2004
Naphthalene	1300	200		µg/L	100	11/3/2004
1-Methylnaphthalene	ND	400		µg/L	100	11/3/2004
2-Methylnaphthalene	560	400		µg/L	100	11/3/2004
Acetone	ND	1000		µg/L	100	11/3/2004
Bromobenzene	ND	100		µg/L	100	11/3/2004
Bromochloromethane	ND	100		µg/L	100	11/3/2004
Bromodichloromethane	ND	100		µg/L	100	11/3/2004
Bromoform	ND	100		µg/L	100	11/3/2004
Bromomethane	ND	200		µg/L	100	11/3/2004
2-Butanone	ND	1000		µg/L	100	11/3/2004
Carbon disulfide	ND	1000		µg/L	100	11/3/2004
Carbon Tetrachloride	ND	100		µg/L	100	11/3/2004
Chlorobenzene	ND	100		µg/L	100	11/3/2004
Chloroethane	ND	200		µg/L	100	11/3/2004
Chloroform	ND	100		µg/L	100	11/3/2004
Chloromethane	ND	100		µg/L	100	11/3/2004
2-Chlorotoluene	ND	100		µg/L	100	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
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 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
Lab Order: 0411032
Project: MW #48 - Water
Lab ID: 0411032-01

Client Sample ID: MW #48
Collection Date: 11/1/2004 10:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
4-Chlorotoluene	ND	100		µg/L	100	11/3/2004
cis-1,2-DCE	ND	100		µg/L	100	11/3/2004
cis-1,3-Dichloropropene	ND	100		µg/L	100	11/3/2004
1,2-Dibromo-3-chloropropane	ND	200		µg/L	100	11/3/2004
Dibromochloromethane	ND	100		µg/L	100	11/3/2004
Dibromomethane	ND	200		µg/L	100	11/3/2004
1,2-Dichlorobenzene	ND	100		µg/L	100	11/3/2004
1,3-Dichlorobenzene	ND	100		µg/L	100	11/3/2004
1,4-Dichlorobenzene	ND	100		µg/L	100	11/3/2004
Dichlorodifluoromethane	ND	100		µg/L	100	11/3/2004
1,1-Dichloroethane	ND	100		µg/L	100	11/3/2004
1,1-Dichloroethene	ND	100		µg/L	100	11/3/2004
1,2-Dichloropropane	ND	100		µg/L	100	11/3/2004
1,3-Dichloropropane	ND	100		µg/L	100	11/3/2004
2,2-Dichloropropane	ND	100		µg/L	100	11/3/2004
1,1-Dichloropropene	ND	100		µg/L	100	11/3/2004
Hexachlorobutadiene	ND	100		µg/L	100	11/3/2004
2-Hexanone	ND	1000		µg/L	100	11/3/2004
Isopropylbenzene	270	100		µg/L	100	11/3/2004
4-Isopropyltoluene	ND	100		µg/L	100	11/3/2004
4-Methyl-2-pentanone	ND	1000		µg/L	100	11/3/2004
Methylene Chloride	ND	300		µg/L	100	11/3/2004
n-Butylbenzene	ND	100		µg/L	100	11/3/2004
n-Propylbenzene	700	100		µg/L	100	11/3/2004
sec-Butylbenzene	ND	100		µg/L	100	11/3/2004
Styrene	ND	100		µg/L	100	11/3/2004
tert-Butylbenzene	ND	100		µg/L	100	11/3/2004
1,1,1,2-Tetrachloroethane	ND	100		µg/L	100	11/3/2004
1,1,1,2,2-Tetrachloroethane	ND	100		µg/L	100	11/3/2004
Tetrachloroethene (PCE)	ND	100		µg/L	100	11/3/2004
trans-1,2-DCE	ND	100		µg/L	100	11/3/2004
trans-1,3-Dichloropropene	ND	100		µg/L	100	11/3/2004
1,2,3-Trichlorobenzene	ND	100		µg/L	100	11/3/2004
1,2,4-Trichlorobenzene	ND	100		µg/L	100	11/3/2004
1,1,1-Trichloroethane	ND	100		µg/L	100	11/3/2004
1,1,2-Trichloroethane	ND	100		µg/L	100	11/3/2004
Trichloroethene (TCE)	ND	100		µg/L	100	11/3/2004
Trichlorofluoromethane	ND	100		µg/L	100	11/3/2004
1,2,3-Trichloropropane	ND	200		µg/L	100	11/3/2004
Vinyl chloride	ND	100		µg/L	100	11/3/2004
Xylenes, Total	24000	250		µg/L	250	11/4/2004
Surr: 1,2-Dichloroethane-d4	98.8	70.6-124		%REC	100	11/3/2004

Qualifiers:
 ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
Lab Order: 0411032
Project: MW #48 - Water
Lab ID: 0411032-01

Client Sample ID: MW #48
Collection Date: 11/1/2004 10:00:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 4-Bromofluorobenzene	103	76.4-130		%REC	100	11/3/2004
Surr: Dibromofluoromethane	92.3	67.2-131		%REC	100	11/3/2004
Surr: Toluene-d8	108	82.1-123		%REC	100	11/3/2004

EPA METHOD 8310: PAHS

Analyst: **BL**

Naphthalene	560	25		µg/L	10	11/15/2004 4:01:02 PM
1-Methylnaphthalene	160	2.5		µg/L	1	11/12/2004 2:52:53 PM
2-Methylnaphthalene	250	25		µg/L	10	11/15/2004 4:01:02 PM
Acenaphthylene	ND	2.5		µg/L	1	11/12/2004 2:52:53 PM
Acenaphthene	ND	2.5		µg/L	1	11/12/2004 2:52:53 PM
Fluorene	1.0	0.80		µg/L	1	11/12/2004 2:52:53 PM
Phenanthrene	5.9	0.60		µg/L	1	11/12/2004 2:52:53 PM
Anthracene	ND	0.60		µg/L	1	11/12/2004 2:52:53 PM
Fluoranthene	ND	0.30		µg/L	1	11/12/2004 2:52:53 PM
Pyrene	ND	0.30		µg/L	1	11/12/2004 2:52:53 PM
Benz(a)anthracene	ND	0.020		µg/L	1	11/12/2004 2:52:53 PM
Chrysene	ND	0.20		µg/L	1	11/12/2004 2:52:53 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	11/12/2004 2:52:53 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	11/12/2004 2:52:53 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	11/12/2004 2:52:53 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	11/12/2004 2:52:53 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	11/12/2004 2:52:53 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	11/12/2004 2:52:53 PM
Surr: Benzo(e)pyrene	95.8	54-102		%REC	1	11/12/2004 2:52:53 PM

EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: **MAP**

Specific Conductance	2700	0.010		µmhos/cm	1	11/4/2004
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EPA METHOD 7470: MERCURY

Analyst: **CMC**

Mercury	ND	0.00020		mg/L	1	11/3/2004
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EPA METHOD 6010C: DISSOLVED METALS

Analyst: **NMO**

Arsenic	ND	0.020		mg/L	1	11/11/2004 10:07:01 AM
Barium	0.21	0.0020		mg/L	1	11/10/2004 3:52:19 PM
Cadmium	ND	0.0020		mg/L	1	11/10/2004 3:52:19 PM
Calcium	110	1.0		mg/L	1	11/10/2004 3:52:19 PM
Chromium	ND	0.0060		mg/L	1	11/10/2004 3:52:19 PM
Copper	ND	0.0060		mg/L	1	11/10/2004 3:52:19 PM
Iron	0.16	0.020		mg/L	1	11/10/2004 3:52:19 PM
Lead	0.014	0.0050		mg/L	1	11/10/2004 3:52:19 PM
Magnesium	23	1.0		mg/L	1	11/10/2004 3:52:19 PM
Manganese	0.55	0.0020		mg/L	1	11/10/2004 3:52:19 PM
Potassium	6.9	1.0		mg/L	1	11/10/2004 3:52:19 PM
Selenium	ND	0.050		mg/L	1	11/10/2004 3:52:19 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411032
 Project: MW #48 - Water
 Lab ID: 0411032-01

Client Sample ID: MW #48
 Collection Date: 11/1/2004 10:00:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Silver	ND	0.0050		mg/L	1	11/10/2004 3:52:19 PM
Sodium	420	10		mg/L	10	11/16/2004 3:04:30 PM
Uranium	ND	0.10		mg/L	1	11/10/2004 3:52:19 PM
Zinc	0.026	0.0050		mg/L	1	11/10/2004 3:52:19 PM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/5/2004 9:24:41 AM
Barium	0.32	0.020		mg/L	1	11/5/2004 9:24:41 AM
Cadmium	ND	0.0020		mg/L	1	11/5/2004 9:24:41 AM
Calcium	130	1.0		mg/L	1	11/5/2004 9:24:41 AM
Chromium	0.0092	0.0060		mg/L	1	11/5/2004 9:24:41 AM
Copper	ND	0.0060		mg/L	1	11/16/2004 3:20:38 PM
Iron	19	0.50		mg/L	10	11/5/2004 10:45:03 AM
Lead	0.023	0.0050		mg/L	1	11/5/2004 9:24:41 AM
Magnesium	22	1.0		mg/L	1	11/5/2004 9:24:41 AM
Manganese	2.4	0.0020		mg/L	1	11/5/2004 9:24:41 AM
Potassium	6.9	1.0		mg/L	1	11/5/2004 9:24:41 AM
Selenium	ND	0.050		mg/L	1	11/5/2004 9:24:41 AM
Silver	ND	0.0050		mg/L	1	11/5/2004 9:24:41 AM
Sodium	400	10		mg/L	10	11/5/2004 10:45:03 AM
Uranium	ND	0.10		mg/L	1	11/5/2004 9:24:41 AM
Zinc	0.056	0.050		mg/L	1	11/5/2004 9:24:41 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.88	0.010		pH units	1	11/15/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	1500	50		mg/L	1	11/4/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

COVER LETTER

November 05, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: MW#48 - Soil

Order No.: 0410290

Dear Cindy Hurtado:

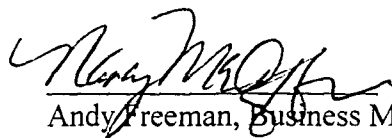
Hall Environmental Analysis Laboratory received 3 samples on 10/29/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 05-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0410290
 Project: MW#48 - Soil
 Lab ID: 0410290-01

Client Sample ID: MW#48-5'-6.5'
 Collection Date: 10/28/2004 2:30:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	140	10		mg/Kg	1	11/3/2004 2:33:18 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/3/2004 2:33:18 PM
Surr: DNOP	105	60-124		%REC	1	11/3/2004 2:33:18 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1500	250		mg/Kg	50	11/3/2004 3:40:52 PM
Surr: BFB	112	74-118		%REC	50	11/3/2004 3:40:52 PM
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	1.0		mg/Kg	20	11/3/2004
Toluene	ND	1.0		mg/Kg	20	11/3/2004
Ethylbenzene	6.9	1.0		mg/Kg	20	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	20	11/3/2004
1,2,4-Trimethylbenzene	85	1.0		mg/Kg	20	11/3/2004
1,3,5-Trimethylbenzene	30	1.0		mg/Kg	20	11/3/2004
1,2-Dichloroethane (EDC)	ND	1.0		mg/Kg	20	11/3/2004
1,2-Dibromoethane (EDB)	ND	1.0		mg/Kg	20	11/3/2004
Naphthalene	14	2.0		mg/Kg	20	11/3/2004
1-Methylnaphthalene	10	4.0		mg/Kg	20	11/3/2004
2-Methylnaphthalene	18	4.0		mg/Kg	20	11/3/2004
Acetone	ND	40		mg/Kg	20	11/3/2004
Bromobenzene	ND	1.0		mg/Kg	20	11/3/2004
Bromochloromethane	ND	1.0		mg/Kg	20	11/3/2004
Bromodichloromethane	ND	1.0		mg/Kg	20	11/3/2004
Bromoform	ND	1.0		mg/Kg	20	11/3/2004
Bromomethane	ND	2.0		mg/Kg	20	11/3/2004
2-Butanone	ND	20		mg/Kg	20	11/3/2004
Carbon disulfide	ND	10		mg/Kg	20	11/3/2004
Carbon tetrachloride	ND	2.0		mg/Kg	20	11/3/2004
Chlorobenzene	ND	1.0		mg/Kg	20	11/3/2004
Chloroethane	ND	2.0		mg/Kg	20	11/3/2004
Chloroform	ND	1.0		mg/Kg	20	11/3/2004
Chloromethane	ND	1.0		mg/Kg	20	11/3/2004
2-Chlorotoluene	ND	1.0		mg/Kg	20	11/3/2004
4-Chlorotoluene	ND	1.0		mg/Kg	20	11/3/2004
cis-1,2-DCE	ND	1.0		mg/Kg	20	11/3/2004
cis-1,3-Dichloropropene	ND	1.0		mg/Kg	20	11/3/2004
1,2-Dibromo-3-chloropropane	ND	2.0		mg/Kg	20	11/3/2004
Dibromochloromethane	ND	1.0		mg/Kg	20	11/3/2004
Dibromomethane	ND	2.0		mg/Kg	20	11/3/2004
1,2-Dichlorobenzene	ND	1.0		mg/Kg	20	11/3/2004
1,3-Dichlorobenzene	ND	1.0		mg/Kg	20	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 05-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0410290
 Project: MW#48 - Soil
 Lab ID: 0410290-01

Client Sample ID: MW#48-5'-6.5'
 Collection Date: 10/28/2004 2:30:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	1.0		mg/Kg	20	11/3/2004
Dichlorodifluoromethane	ND	1.0		mg/Kg	20	11/3/2004
1,1-Dichloroethane	ND	1.0		mg/Kg	20	11/3/2004
1,1-Dichloroethene	ND	1.0		mg/Kg	20	11/3/2004
1,2-Dichloropropane	ND	1.0		mg/Kg	20	11/3/2004
1,3-Dichloropropane	ND	1.0		mg/Kg	20	11/3/2004
2,2-Dichloropropane	ND	1.0		mg/Kg	20	11/3/2004
1,1-Dichloropropene	ND	1.0		mg/Kg	20	11/3/2004
Hexachlorobutadiene	ND	1.0		mg/Kg	20	11/3/2004
2-Hexanone	ND	10		mg/Kg	20	11/3/2004
Isopropylbenzene	1.1	1.0		mg/Kg	20	11/3/2004
4-Isopropyltoluene	1.4	1.0		mg/Kg	20	11/3/2004
4-Methyl-2-pentanone	ND	10		mg/Kg	20	11/3/2004
Methylene chloride	ND	3.0		mg/Kg	20	11/3/2004
n-Butylbenzene	32	1.0		mg/Kg	20	11/3/2004
n-Propylbenzene	5.9	1.0		mg/Kg	20	11/3/2004
sec-Butylbenzene	2.0	1.0		mg/Kg	20	11/3/2004
Styrene	ND	1.0		mg/Kg	20	11/3/2004
tert-Butylbenzene	ND	1.0		mg/Kg	20	11/3/2004
1,1,1,2-Tetrachloroethane	ND	1.0		mg/Kg	20	11/3/2004
1,1,2,2-Tetrachloroethane	ND	1.0		mg/Kg	20	11/3/2004
Tetrachloroethene (PCE)	ND	1.0		mg/Kg	20	11/3/2004
trans-1,2-DCE	ND	1.0		mg/Kg	20	11/3/2004
trans-1,3-Dichloropropene	ND	1.0		mg/Kg	20	11/3/2004
1,2,3-Trichlorobenzene	ND	1.0		mg/Kg	20	11/3/2004
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	20	11/3/2004
1,1,1-Trichloroethane	ND	1.0		mg/Kg	20	11/3/2004
1,1,2-Trichloroethane	ND	1.0		mg/Kg	20	11/3/2004
Trichloroethene (TCE)	ND	1.0		mg/Kg	20	11/3/2004
Trichlorofluoromethane	ND	1.0		mg/Kg	20	11/3/2004
1,2,3-Trichloropropane	ND	2.0		mg/Kg	20	11/3/2004
Vinyl chloride	ND	1.0		mg/Kg	20	11/3/2004
Xylenes, Total	110	1.0		mg/Kg	20	11/3/2004
Surr: 1,2-Dichloroethane-d4	100	68.4-123		%REC	20	11/3/2004
Surr: 4-Bromofluorobenzene	100	70-119		%REC	20	11/3/2004
Surr: Dibromofluoromethane	99.1	76.8-123		%REC	20	11/3/2004
Surr: Toluene-d8	98.2	75.9-118		%REC	20	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 05-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0410290
 Project: MW#48 - Soil
 Lab ID: 0410290-02

Client Sample ID: MW#48-10-11.5'
 Collection Date: 10/28/2004 2:30:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/3/2004 3:02:55 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/3/2004 3:02:55 PM
Surr: DNOP	107	60-124		%REC	1	11/3/2004 3:02:55 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	55	10		mg/Kg	2	11/3/2004 4:10:41 PM
Surr: BFB	112	74-118		%REC	2	11/3/2004 4:10:41 PM
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	0.050		mg/Kg	1	11/3/2004
Toluene	ND	0.050		mg/Kg	1	11/3/2004
Ethylbenzene	0.70	0.050		mg/Kg	1	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/3/2004
1,2,4-Trimethylbenzene	2.6	0.050		mg/Kg	1	11/3/2004
1,3,5-Trimethylbenzene	0.75	0.050		mg/Kg	1	11/3/2004
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/3/2004
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/3/2004
Naphthalene	0.24	0.10		mg/Kg	1	11/3/2004
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/3/2004
2-Methylnaphthalene	0.27	0.20		mg/Kg	1	11/3/2004
Acetone	ND	2.0		mg/Kg	1	11/3/2004
Bromobenzene	ND	0.050		mg/Kg	1	11/3/2004
Bromochloromethane	ND	0.050		mg/Kg	1	11/3/2004
Bromodichloromethane	ND	0.050		mg/Kg	1	11/3/2004
Bromoform	ND	0.050		mg/Kg	1	11/3/2004
Bromomethane	ND	0.10		mg/Kg	1	11/3/2004
2-Butanone	ND	1.0		mg/Kg	1	11/3/2004
Carbon disulfide	ND	0.50		mg/Kg	1	11/3/2004
Carbon tetrachloride	ND	0.10		mg/Kg	1	11/3/2004
Chlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
Chloroethane	ND	0.10		mg/Kg	1	11/3/2004
Chloroform	ND	0.050		mg/Kg	1	11/3/2004
Chloromethane	ND	0.050		mg/Kg	1	11/3/2004
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/3/2004
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/3/2004
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/3/2004
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/3/2004
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/3/2004
Dibromochloromethane	ND	0.050		mg/Kg	1	11/3/2004
Dibromomethane	ND	0.10		mg/Kg	1	11/3/2004
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 05-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0410290
 Project: MW#48 - Soil
 Lab ID: 0410290-02

Client Sample ID: MW#48-10-11.5'
 Collection Date: 10/28/2004 2:30:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/3/2004
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/3/2004
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/3/2004
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/3/2004
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/3/2004
2,2-Dichloropropane	ND	0.050		mg/Kg	1	11/3/2004
1,1-Dichloropropene	ND	0.050		mg/Kg	1	11/3/2004
Hexachlorobutadiene	ND	0.050		mg/Kg	1	11/3/2004
2-Hexanone	ND	0.50		mg/Kg	1	11/3/2004
Isopropylbenzene	0.089	0.050		mg/Kg	1	11/3/2004
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/3/2004
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/3/2004
Methylene chloride	ND	0.15		mg/Kg	1	11/3/2004
n-Butylbenzene	0.74	0.050		mg/Kg	1	11/3/2004
n-Propylbenzene	0.41	0.050		mg/Kg	1	11/3/2004
sec-Butylbenzene	0.079	0.050		mg/Kg	1	11/3/2004
Styrene	ND	0.050		mg/Kg	1	11/3/2004
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/3/2004
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/3/2004
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/3/2004
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/3/2004
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/3/2004
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/3/2004
1,2,3-Trichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/3/2004
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/3/2004
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/3/2004
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/3/2004
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/3/2004
Vinyl chloride	ND	0.050		mg/Kg	1	11/3/2004
Xylenes, Total	4.5	0.050		mg/Kg	1	11/3/2004
Surr: 1,2-Dichloroethane-d4	96.1	68.4-123		%REC	1	11/3/2004
Surr: 4-Bromofluorobenzene	105	70-119		%REC	1	11/3/2004
Surr: Dibromofluoromethane	101	76.8-123		%REC	1	11/3/2004
Surr: Toluene-d8	98.0	75.9-118		%REC	1	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 05-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0410290
 Project: MW#48 - Soil
 Lab ID: 0410290-03

Client Sample ID: MW#48-Total Depth
 Collection Date: 10/28/2004 2:30:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/3/2004 3:32:32 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/3/2004 3:32:32 PM
Surr: DNOP	106	60-124		%REC	1	11/3/2004 3:32:32 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	20	5.0		mg/Kg	1	11/3/2004 4:40:27 PM
Surr: BFB	114	74-118		%REC	1	11/3/2004 4:40:27 PM
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	0.050		mg/Kg	1	11/3/2004
Toluene	ND	0.050		mg/Kg	1	11/3/2004
Ethylbenzene	0.12	0.050		mg/Kg	1	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/3/2004
1,2,4-Trimethylbenzene	1.1	0.050		mg/Kg	1	11/3/2004
1,3,5-Trimethylbenzene	0.30	0.050		mg/Kg	1	11/3/2004
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/3/2004
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/3/2004
Naphthalene	0.16	0.10		mg/Kg	1	11/3/2004
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/3/2004
2-Methylnaphthalene	0.20	0.20		mg/Kg	1	11/3/2004
Acetone	ND	2.0		mg/Kg	1	11/3/2004
Bromobenzene	ND	0.050		mg/Kg	1	11/3/2004
Bromochloromethane	ND	0.050		mg/Kg	1	11/3/2004
Bromodichloromethane	ND	0.050		mg/Kg	1	11/3/2004
Bromoform	ND	0.050		mg/Kg	1	11/3/2004
Bromomethane	ND	0.10		mg/Kg	1	11/3/2004
2-Butanone	ND	1.0		mg/Kg	1	11/3/2004
Carbon disulfide	ND	0.50		mg/Kg	1	11/3/2004
Carbon tetrachloride	ND	0.10		mg/Kg	1	11/3/2004
Chlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
Chloroethane	ND	0.10		mg/Kg	1	11/3/2004
Chloroform	ND	0.050		mg/Kg	1	11/3/2004
Chloromethane	ND	0.050		mg/Kg	1	11/3/2004
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/3/2004
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/3/2004
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/3/2004
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/3/2004
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/3/2004
Dibromochloromethane	ND	0.050		mg/Kg	1	11/3/2004
Dibromomethane	ND	0.10		mg/Kg	1	11/3/2004
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 05-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0410290
 Project: MW#48 - Soil
 Lab ID: 0410290-03

Client Sample ID: MW#48-Total Depth
 Collection Date: 10/28/2004 2:30:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/3/2004
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/3/2004
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/3/2004
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/3/2004
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/3/2004
2,2-Dichloropropane	ND	0.050		mg/Kg	1	11/3/2004
1,1-Dichloropropene	ND	0.050		mg/Kg	1	11/3/2004
Hexachlorobutadiene	ND	0.050		mg/Kg	1	11/3/2004
2-Hexanone	ND	0.50		mg/Kg	1	11/3/2004
Isopropylbenzene	ND	0.050		mg/Kg	1	11/3/2004
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/3/2004
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/3/2004
Methylene chloride	ND	0.15		mg/Kg	1	11/3/2004
n-Butylbenzene	0.43	0.050		mg/Kg	1	11/3/2004
n-Propylbenzene	0.12	0.050		mg/Kg	1	11/3/2004
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/3/2004
Styrene	ND	0.050		mg/Kg	1	11/3/2004
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/3/2004
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/3/2004
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/3/2004
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/3/2004
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/3/2004
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/3/2004
1,2,3-Trichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/3/2004
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/3/2004
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/3/2004
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/3/2004
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/3/2004
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/3/2004
Vinyl chloride	ND	0.050		mg/Kg	1	11/3/2004
Xylenes, Total	0.78	0.050		mg/Kg	1	11/3/2004
Surr: 1,2-Dichloroethane-d4	97.7	68.4-123		%REC	1	11/3/2004
Surr: 4-Bromofluorobenzene	102	70-119		%REC	1	11/3/2004
Surr: Dibromofluoromethane	101	76.8-123		%REC	1	11/3/2004
Surr: Toluene-d8	98.7	75.9-118		%REC	1	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 05-Nov-04

CLIENT: San Juan Refining
 Work Order: 0410290
 Project: MW#48 - Soil

QC SUMMARY REPORT

Method Blank

Sample ID MB-6782 Batch ID: 6782 Test Code: SW8015 Units: mg/Kg Analysis Date 11/3/2004 11:34:52 AM Prep Date 11/2/2004
 Client ID: Run ID: FID(17A) 2_041102A SeqNo: 317279

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	6.631	0	10	0	66.3	60	124	0			

Sample ID MB-6768 Batch ID: 6768 Test Code: SW8015 Units: mg/Kg Analysis Date 11/3/2004 2:41:12 PM Prep Date 11/1/2004
 Client ID: Run ID: PIDFID_041103A SeqNo: 317530

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5									
Surr: BFB	1040	0	1000	0	104	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0410290
 Project: MW#48 - Soil

Sample ID MB-6768 Batch ID: 6768 Test Code: SW8260B Units: mg/Kg Analysis Date 11/3/2004 Prep Date 11/1/2004
 Client ID: THOR_041102A Run ID: THOR_041102A SeqNo: 317252

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.05									
Toluene	ND	0.05									
Ethylbenzene	ND	0.05									
Methyl tert-butyl ether (MTBE)	ND	0.05									
1,2,4-Trimethylbenzene	ND	0.05									
1,3,5-Trimethylbenzene	ND	0.05									
1,2-Dichloroethane (EDC)	ND	0.05									
1,2-Dibromoethane (EDB)	ND	0.05									
Naphthalene	ND	0.1									
1-Methylnaphthalene	ND	0.2									
2-Methylnaphthalene	ND	0.2									
Acetone	ND	2									
Bromobenzene	ND	0.05									
Bromochloromethane	ND	0.05									
Bromodichloromethane	ND	0.05									
Bromoform	ND	0.05									
Bromomethane	0.0309	0.1									J
2-Butanone	ND	1									
Carbon disulfide	ND	0.5									
Carbon tetrachloride	ND	0.1									
Chlorobenzene	ND	0.05									
Chloroethane	ND	0.1									
Chloroform	ND	0.05									
Chloromethane	ND	0.05									
2-Chlorotoluene	ND	0.05									
4-Chlorotoluene	ND	0.05									
cis-1,2-DCE	ND	0.05									
cis-1,3-Dichloropropene	ND	0.05									

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0410290

Project: MW#48 - Soil

1,2-Dibromo-3-chloropropane	ND	0.1
Dibromochloromethane	ND	0.05
Dibromomethane	ND	0.1
1,2-Dichlorobenzene	ND	0.05
1,3-Dichlorobenzene	ND	0.05
1,4-Dichlorobenzene	ND	0.05
Dichlorodifluoromethane	ND	0.05
1,1-Dichloroethane	ND	0.05
1,1-Dichloroethene	ND	0.05
1,2-Dichloropropane	ND	0.05
1,3-Dichloropropane	ND	0.05
2,2-Dichloropropane	ND	0.05
1,1-Dichloropropene	ND	0.05
Hexachlorobutadiene	ND	0.05
2-Hexanone	ND	0.5
Isopropylbenzene	ND	0.05
4-Isopropyltoluene	ND	0.05
4-Methyl-2-pentanone	ND	0.5
Methylene chloride	ND	0.15
n-Butylbenzene	ND	0.05
n-Propylbenzene	ND	0.05
sec-Butylbenzene	ND	0.05
Styrene	ND	0.05
tert-Butylbenzene	ND	0.05
1,1,1,2-Tetrachloroethane	ND	0.05
1,1,2,2-Tetrachloroethane	ND	0.05
Tetrachloroethene (PCE)	ND	0.05
trans-1,2-DCE	ND	0.05
trans-1,3-Dichloropropene	ND	0.05
1,2,3-Trichlorobenzene	ND	0.05
1,2,4-Trichlorobenzene	ND	0.05
1,1,1-Trichloroethane	ND	0.05
1,1,2-Trichloroethane	ND	0.05

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 3

CLIENT: San Juan Refining

Work Order: 0410290

Project: MW#48 - Soil

QC SUMMARY REPORT

Method Blank

Trichloroethene (TCE)	ND	0.05							
Trichlorofluoromethane	ND	0.05							
1,2,3-Trichloropropane	ND	0.1							
Vinyl chloride	ND	0.05							
Xylenes, Total	ND	0.05							
Surr: 1,2-Dichloroethane-d4	0.4405	0	0.5	0	88.1	68.4	123	0	0
Surr: 4-Bromofluorobenzene	0.4993	0	0.5	0	99.9	70	119	0	0
Surr: Dibromofluoromethane	0.5739	0	0.5	0	115	76.8	123	0	0
Surr: Toluene-d8	0.4458	0	0.5	0	89.2	75.9	118	0	0

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 05-Nov-04

CLIENT: San Juan Refining
Work Order: 0410290
Project: MW#48 - Soil

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS-6782	Batch ID:	6782	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	11/3/2004 1:04:24 PM	Prep Date	11/2/2004
Client ID:		Run ID:	FID(17A) 2_041102A					SeqNo:	317287		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44.02	10	50	0	88.0	67.4	117	0			

Sample ID	LCS-6782	Batch ID:	6782	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	11/3/2004 1:34:01 PM	Prep Date	11/2/2004
Client ID:		Run ID:	FID(17A) 2_041102A					SeqNo:	317288		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43.06	10	50	0	86.1	67.4	117	44.02	2.20	17.4	

Sample ID	LCS-6768	Batch ID:	6768	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	11/3/2004 3:10:58 PM	Prep Date	11/1/2004
Client ID:		Run ID:	PIDFID_041103A					SeqNo:	317532		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28.15	5	25	0	113	73.8	120	0			

Sample ID	lcs-6768	Batch ID:	6768	Test Code:	SW8260B	Units:	mg/Kg	Analysis Date	11/3/2004	Prep Date	11/1/2004
Client ID:		Run ID:	THOR_041102A					SeqNo:	317253		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.013	0.05	1	0	101	75.3	121	0			
Toluene	0.9318	0.05	1	0	93.2	65.5	123	0			
Chlorobenzene	1.023	0.05	1	0	102	78.3	124	0			
1,1-Dichloroethene	1.117	0.05	1	0	112	72.5	125	0			
Trichloroethene (TCE)	0.8402	0.05	1	0	84.0	70.8	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0410290
Project: MW#48 - Soil

Sample ID	Icsd-6768	Batch ID: 6768	Test Code: SW8260B	Units: mg/Kg	Analysis Date 11/3/2004	Prep Date 11/1/2004					
Client ID:	Run ID:	PQL	SPK value	SPK Ref Val	SeqNo: 317254						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.009	0.05	1	0	101	65.6	124	1.013	0.366	20	
Toluene	0.931	0.05	1	0	93.1	78.1	117	0.9318	0.0859	20	
Chlorobenzene	0.998	0.05	1	0	99.8	80.7	119	1.023	2.51	20	
1,1-Dichloroethene	1.05	0.05	1	0	105	72.5	125	1.117	6.22	20	
Trichloroethene (TCE)	0.8786	0.05	1	0	87.9	74	125	0.8402	4.47	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

10/29/2004

Work Order Number 0410290

Received by AT

Checklist completed by



Signature

Date

10/29/04

Matrix

Carrier name UPS

- | | | | | |
|---|--|------------------------------|---|--------------------------------------|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> | |
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> | Not Shipped <input type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Water - VOA vials have zero headspace? | No VOA vials submitted <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> | |

Container/Temp Blank temperature?

3°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

Client: San Juan Refining

Address: #50 CR 4990
Bloomfield, NM
87413

Phone #: 505-632-4161
 Fax #: 505-632-3911

Date: 10-28-04 Time: 2:30pm Matrix: Soil Sample I.D. No.: MW#48-5-642

Date: 10-28-04 Time: 3:30pm Matrix: Soil Sample I.D. No.: MW#48-10-1142

Date: 10-28-04 Time: 3:30pm Matrix: Soil Sample I.D. No.: MW#48-Total Depth 1-40y

Accreditation Applied:
 NELAC USACE

Other:

Project Name:

MW #48-Soil

Project #:

Project Manager:

Sampler: Cindy Hurtado

Sample Temperature: 30

Number/Volume	Preservative		HEAL No.
	H ₂ O ₂	HNO ₃	
<u>1-40y</u>			<u>0410296-1</u>
<u>1-40y</u>			<u>-2</u>
<u>1-40y</u>			<u>-3</u>

Date: 10-28-04 Time: 3:30pm Relinquished By: (Signature) Cindy Hurtado

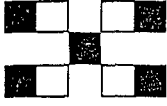
Date: 10-28-04 Time: 3:30pm Relinquished By: (Signature) Cindy Hurtado

Remarks:

10/28/04

Remarks:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkins NE, Suite D
 Albuquerque, New Mexico 87109
 Tel. 505.345.3975 Fax 505.345.4107
 www.hallenvironmental.com



ANALYSIS REQUEST

BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B MOD (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)	Air Bubbles or Headspace (Y or N)
	X									X		
	X									X		
	X									X		

Remarks:

COVER LETTER

November 16, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: MW #49-Water

Order No.: 0411033

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 2 samples on 11/2/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-01

Client Sample ID: MW #49
 Collection Date: 11/1/2004 11:15:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.48	0.10		mg/L	1	11/2/2004 7:36:54 PM
Chloride	130	1.0		mg/L	10	11/3/2004 5:25:53 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/2/2004 7:36:54 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/2/2004 7:36:54 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/2/2004 7:36:54 PM
Sulfate	280	5.0		mg/L	10	11/3/2004 5:25:53 PM
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/4/2004 11:48:19 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 11:48:19 PM
Surr: DNOP	87.0	58-140		%REC	1	11/4/2004 11:48:19 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.8	0.50		mg/L	10	11/4/2004 11:32:01 AM
Surr: BFB	110	74-118		%REC	10	11/4/2004 11:32:01 AM
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	ND	10		µg/L	10	11/3/2004
Toluene	ND	10		µg/L	10	11/3/2004
Ethylbenzene	15	10		µg/L	10	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/3/2004
1,2,4-Trimethylbenzene	370	10		µg/L	10	11/3/2004
1,3,5-Trimethylbenzene	72	10		µg/L	10	11/3/2004
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/3/2004
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/3/2004
Naphthalene	39	20		µg/L	10	11/3/2004
1-Methylnaphthalene	ND	40		µg/L	10	11/3/2004
2-Methylnaphthalene	ND	40		µg/L	10	11/3/2004
Acetone	ND	100		µg/L	10	11/3/2004
Bromobenzene	ND	10		µg/L	10	11/3/2004
Bromochloromethane	ND	10		µg/L	10	11/3/2004
Bromodichloromethane	ND	10		µg/L	10	11/3/2004
Bromoform	ND	10		µg/L	10	11/3/2004
Bromomethane	ND	20		µg/L	10	11/3/2004
2-Butanone	ND	100		µg/L	10	11/3/2004
Carbon disulfide	ND	100		µg/L	10	11/3/2004
Carbon Tetrachloride	ND	10		µg/L	10	11/3/2004
Chlorobenzene	ND	10		µg/L	10	11/3/2004
Chloroethane	ND	20		µg/L	10	11/3/2004
Chloroform	ND	10		µg/L	10	11/3/2004
Chloromethane	ND	10		µg/L	10	11/3/2004
2-Chlorotoluene	ND	10		µg/L	10	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-01

Client Sample ID: MW #49
 Collection Date: 11/1/2004 11:15:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
4-Chlorotoluene	ND	10		µg/L	10	11/3/2004
cis-1,2-DCE	ND	10		µg/L	10	11/3/2004
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/3/2004
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/3/2004
Dibromochloromethane	ND	10		µg/L	10	11/3/2004
Dibromomethane	ND	20		µg/L	10	11/3/2004
1,2-Dichlorobenzene	ND	10		µg/L	10	11/3/2004
1,3-Dichlorobenzene	ND	10		µg/L	10	11/3/2004
1,4-Dichlorobenzene	ND	10		µg/L	10	11/3/2004
Dichlorodifluoromethane	ND	10		µg/L	10	11/3/2004
1,1-Dichloroethane	ND	10		µg/L	10	11/3/2004
1,1-Dichloroethene	ND	10		µg/L	10	11/3/2004
1,2-Dichloropropane	ND	10		µg/L	10	11/3/2004
1,3-Dichloropropane	ND	10		µg/L	10	11/3/2004
2,2-Dichloropropane	ND	10		µg/L	10	11/3/2004
1,1-Dichloropropene	ND	10		µg/L	10	11/3/2004
Hexachlorobutadiene	ND	10		µg/L	10	11/3/2004
2-Hexanone	ND	100		µg/L	10	11/3/2004
Isopropylbenzene	31	10		µg/L	10	11/3/2004
4-Isopropyltoluene	47	10		µg/L	10	11/3/2004
4-Methyl-2-pentanone	ND	100		µg/L	10	11/3/2004
Methylene Chloride	ND	30		µg/L	10	11/3/2004
n-Butylbenzene	ND	10		µg/L	10	11/3/2004
n-Propylbenzene	65	10		µg/L	10	11/3/2004
sec-Butylbenzene	13	10		µg/L	10	11/3/2004
Styrene	ND	10		µg/L	10	11/3/2004
tert-Butylbenzene	ND	10		µg/L	10	11/3/2004
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/3/2004
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/3/2004
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/3/2004
trans-1,2-DCE	ND	10		µg/L	10	11/3/2004
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/3/2004
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/3/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/3/2004
1,1,1-Trichloroethane	ND	10		µg/L	10	11/3/2004
1,1,2-Trichloroethane	ND	10		µg/L	10	11/3/2004
Trichloroethene (TCE)	ND	10		µg/L	10	11/3/2004
Trichlorofluoromethane	ND	10		µg/L	10	11/3/2004
1,2,3-Trichloropropane	ND	20		µg/L	10	11/3/2004
Vinyl chloride	ND	10		µg/L	10	11/3/2004
Xylenes, Total	320	10		µg/L	10	11/3/2004
Surr: 1,2-Dichloroethane-d4	100	70.6-124		%REC	10	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
Lab Order: 0411033
Project: MW #49-Water
Lab ID: 0411033-01

Client Sample ID: MW #49
Collection Date: 11/1/2004 11:15:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 4-Bromofluorobenzene	97.8	76.4-130		%REC	10	11/3/2004
Surr: Dibromofluoromethane	90.7	67.2-131		%REC	10	11/3/2004
Surr: Toluene-d8	110	82.1-123		%REC	10	11/3/2004

EPA METHOD 8310: PAHS

Analyst: **BL**

Naphthalene	6.7	2.5		µg/L	1	11/12/2004 3:40:53 PM
1-Methylnaphthalene	10	2.5		µg/L	1	11/12/2004 3:40:53 PM
2-Methylnaphthalene	6.0	2.5		µg/L	1	11/12/2004 3:40:53 PM
Acenaphthylene	ND	2.5		µg/L	1	11/12/2004 3:40:53 PM
Acenaphthene	ND	2.5		µg/L	1	11/12/2004 3:40:53 PM
Fluorene	ND	0.80		µg/L	1	11/12/2004 3:40:53 PM
Phenanthrene	ND	0.60		µg/L	1	11/12/2004 3:40:53 PM
Anthracene	ND	0.60		µg/L	1	11/12/2004 3:40:53 PM
Fluoranthene	ND	0.30		µg/L	1	11/12/2004 3:40:53 PM
Pyrene	ND	0.30		µg/L	1	11/12/2004 3:40:53 PM
Benz(a)anthracene	ND	0.020		µg/L	1	11/12/2004 3:40:53 PM
Chrysene	ND	0.20		µg/L	1	11/12/2004 3:40:53 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	11/12/2004 3:40:53 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	11/12/2004 3:40:53 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	11/12/2004 3:40:53 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	11/12/2004 3:40:53 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	11/12/2004 3:40:53 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	11/12/2004 3:40:53 PM
Surr: Benzo(e)pyrene	89.0	54-102		%REC	1	11/12/2004 3:40:53 PM

EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: **MAP**

Specific Conductance	1900	0.010		µmhos/cm	1	11/4/2004
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EPA METHOD 7470: MERCURY

Analyst: **CMC**

Mercury	0.00034	0.00020		mg/L	1	11/8/2004
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EPA METHOD 6010C: DISSOLVED METALS

Analyst: **NMO**

Arsenic	ND	0.020		mg/L	1	11/11/2004 10:09:05 AM
Barium	0.30	0.0020		mg/L	1	11/10/2004 3:55:50 PM
Cadmium	ND	0.0020		mg/L	1	11/10/2004 3:55:50 PM
Chromium	ND	0.0060		mg/L	1	11/10/2004 3:55:50 PM
Copper	ND	0.0060		mg/L	1	11/10/2004 3:55:50 PM
Iron	0.18	0.020		mg/L	1	11/10/2004 3:55:50 PM
Lead	ND	0.0050		mg/L	1	11/10/2004 3:55:50 PM
Manganese	2.1	0.0020		mg/L	1	11/10/2004 3:55:50 PM
Selenium	ND	0.050		mg/L	1	11/10/2004 3:55:50 PM
Silver	ND	0.0050		mg/L	1	11/10/2004 3:55:50 PM
Uranium	ND	0.10		mg/L	1	11/10/2004 3:55:50 PM
Zinc	0.0089	0.0050		mg/L	1	11/10/2004 3:55:50 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-01

Client Sample ID: MW #49
 Collection Date: 11/1/2004 11:15:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/5/2004 9:28:03 AM
Barium	0.48	0.020		mg/L	1	11/5/2004 9:28:03 AM
Cadmium	ND	0.0020		mg/L	1	11/5/2004 9:28:03 AM
Calcium	160	1.0		mg/L	1	11/5/2004 9:28:03 AM
Chromium	ND	0.0060		mg/L	1	11/5/2004 9:28:03 AM
Iron	19	0.50		mg/L	10	11/5/2004 10:47:18 AM
Lead	0.014	0.0050		mg/L	1	11/5/2004 9:28:03 AM
Magnesium	31	1.0		mg/L	1	11/5/2004 9:28:03 AM
Manganese	4.4	0.0020		mg/L	1	11/5/2004 9:28:03 AM
Potassium	7.9	1.0		mg/L	1	11/5/2004 9:28:03 AM
Selenium	ND	0.050		mg/L	1	11/5/2004 9:28:03 AM
Silver	ND	0.0050		mg/L	1	11/5/2004 9:28:03 AM
Sodium	330	10		mg/L	10	11/5/2004 10:47:18 AM
Uranium	ND	0.10		mg/L	1	11/5/2004 9:28:03 AM
Zinc	0.061	0.050		mg/L	1	11/5/2004 9:28:03 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.73	0.010		pH units	1	11/15/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	1400	50		mg/L	1	11/4/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-02

Client Sample ID: Trip Blank
 Collection Date:
 Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/4/2004 12:01:43 PM
Surr: BFB	97.0	74-118		%REC	1	11/4/2004 12:01:43 PM
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	ND	1.0		µg/L	1	11/3/2004
Toluene	ND	1.0		µg/L	1	11/3/2004
Ethylbenzene	ND	1.0		µg/L	1	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/3/2004
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/3/2004
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/3/2004
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/3/2004
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/3/2004
Naphthalene	ND	2.0		µg/L	1	11/3/2004
1-Methylnaphthalene	ND	4.0		µg/L	1	11/3/2004
2-Methylnaphthalene	ND	4.0		µg/L	1	11/3/2004
Acetone	ND	10		µg/L	1	11/3/2004
Bromobenzene	ND	1.0		µg/L	1	11/3/2004
Bromochloromethane	ND	1.0		µg/L	1	11/3/2004
Bromodichloromethane	ND	1.0		µg/L	1	11/3/2004
Bromoform	ND	1.0		µg/L	1	11/3/2004
Bromomethane	ND	2.0		µg/L	1	11/3/2004
2-Butanone	ND	10		µg/L	1	11/3/2004
Carbon disulfide	ND	10		µg/L	1	11/3/2004
Carbon Tetrachloride	ND	1.0		µg/L	1	11/3/2004
Chlorobenzene	ND	1.0		µg/L	1	11/3/2004
Chloroethane	ND	2.0		µg/L	1	11/3/2004
Chloroform	ND	1.0		µg/L	1	11/3/2004
Chloromethane	ND	1.0		µg/L	1	11/3/2004
2-Chlorotoluene	ND	1.0		µg/L	1	11/3/2004
4-Chlorotoluene	ND	1.0		µg/L	1	11/3/2004
cis-1,2-DCE	ND	1.0		µg/L	1	11/3/2004
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/3/2004
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/3/2004
Dibromochloromethane	ND	1.0		µg/L	1	11/3/2004
Dibromomethane	ND	2.0		µg/L	1	11/3/2004
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/3/2004
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/3/2004
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/3/2004
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/3/2004
1,1-Dichloroethane	ND	1.0		µg/L	1	11/3/2004
1,1-Dichloroethene	ND	1.0		µg/L	1	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-02

Client Sample ID: Trip Blank
 Collection Date:
 Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichloropropane	ND	1.0		µg/L	1	11/3/2004
1,3-Dichloropropane	ND	1.0		µg/L	1	11/3/2004
2,2-Dichloropropane	ND	1.0		µg/L	1	11/3/2004
1,1-Dichloropropene	ND	1.0		µg/L	1	11/3/2004
Hexachlorobutadiene	ND	1.0		µg/L	1	11/3/2004
2-Hexanone	ND	10		µg/L	1	11/3/2004
Isopropylbenzene	ND	1.0		µg/L	1	11/3/2004
4-Isopropyltoluene	ND	1.0		µg/L	1	11/3/2004
4-Methyl-2-pentanone	ND	10		µg/L	1	11/3/2004
Methylene Chloride	ND	3.0		µg/L	1	11/3/2004
n-Butylbenzene	ND	1.0		µg/L	1	11/3/2004
n-Propylbenzene	ND	1.0		µg/L	1	11/3/2004
sec-Butylbenzene	ND	1.0		µg/L	1	11/3/2004
Styrene	ND	1.0		µg/L	1	11/3/2004
tert-Butylbenzene	ND	1.0		µg/L	1	11/3/2004
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/3/2004
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	11/3/2004
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/3/2004
trans-1,2-DCE	ND	1.0		µg/L	1	11/3/2004
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/3/2004
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/3/2004
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/3/2004
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/3/2004
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/3/2004
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/3/2004
Trichlorofluoromethane	ND	1.0		µg/L	1	11/3/2004
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/3/2004
Vinyl chloride	ND	1.0		µg/L	1	11/3/2004
Xylenes, Total	ND	1.0		µg/L	1	11/3/2004
Surr: 1,2-Dichloroethane-d4	100	70.6-124		%REC	1	11/3/2004
Surr: 4-Bromofluorobenzene	98.6	76.4-130		%REC	1	11/3/2004
Surr: Dibromofluoromethane	93.1	67.2-131		%REC	1	11/3/2004
Surr: Toluene-d8	109	82.1-123		%REC	1	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

CLIENT: San Juan Refining
Work Order: 0411033
Project: MW #49-Water

QC SUMMARY REPORT

Method Blank

Sample ID	MBLK	Batch ID: R13648	Test Code: E300	Units: mg/L	Analysis Date 11/2/2004 5:05:40 PM	Prep Date					
Client ID:		Run ID: LC_041102A			SeqNo: 317113						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND		0.1								
Chloride	ND		0.1								
Nitrogen, Nitrite (As N)	ND		0.1								
Nitrogen, Nitrate (As N)	ND		0.1								
Phosphorus, Orthophosphate (As P)	ND		0.5								
Sulfate	ND		0.5								

Sample ID	MBLK	Batch ID: R13660	Test Code: E300	Units: mg/L	Analysis Date 11/3/2004 3:11:32 PM	Prep Date					
Client ID:		Run ID: LC_041103A			SeqNo: 317351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND		0.1								
Chloride	ND		0.1								
Nitrogen, Nitrite (As N)	ND		0.1								
Nitrogen, Nitrate (As N)	ND		0.1								
Phosphorus, Orthophosphate (As P)	ND		0.5								
Sulfate	ND		0.5								

Sample ID	MB-6798	Batch ID: 6798	Test Code: SW8015	Units: mg/L	Analysis Date 11/4/2004 9:49:28 PM	Prep Date 11/4/2004					
Client ID:		Run ID: FID(17A) 2_041102A			SeqNo: 317894						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND		1								
Motor Oil Range Organics (MRO)	ND		5								
Surr: DNOP	1.173		0		117	58	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
Work Order: 0411033
Project: MW #49-Water

Sample ID: Reagent Blank 5m Batch ID: R13678 Test Code: SW8015 Units: mg/L Analysis Date: 11/4/2004 9:00:28 AM Prep Date:

Client ID: Run ID: PIDFID_041104A SeqNo: 317803

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05		0	100	74	118	0			
Surr: BFB	20.09	0	20	0							

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0411033

Project: MW #49-Water

Sample ID 5mL rb Batch ID: R13663 Test Code: SW8260B Units: µg/L Analysis Date 11/3/2004 Prep Date

Client ID: Run ID: NEPTUNE_041103A SeqNo: 317437

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									
cis-1,3-Dichloropropene	ND	1									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411033
 Project: MW #49-Water

1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1
1,1,2-Trichloroethane	ND	1

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411033
 Project: MW #49-Water

Analyte	Result	PQL	SPK value	SPK Ref Val	Units: µg/L	Test Code: SW8310	Batch ID: 6812	Sample ID MB-6812
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.97	0	10	0				
Surr: 4-Bromofluorobenzene	9.564	0	10	0				
Surr: Dibromofluoromethane	9.33	0	10	0				
Surr: Toluene-d8	11	0	10	0				

Analysis Date 11/12/2004 12:28:53 P Prep Date 11/8/2004
 SeqNo: 320127

Analyte	Result	PQL	SPK value	SPK Ref Val	Units: µg/L	Test Code: SW8310	Batch ID: 6812	Sample ID MB-6812	Analysis Date	Prep Date	SeqNo	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	2.5															
1-Methylnaphthalene	ND	2.5															
2-Methylnaphthalene	ND	2.5															
Acenaphthylene	ND	2.5															
Acenaphthene	ND	2.5															
Fluorene	ND	0.8															
Phenanthrene	ND	0.6															
Anthracene	ND	0.6															
Fluoranthene	ND	0.3															
Pyrene	ND	0.3															
Benz(a)anthracene	ND	0.02															
Chrysene	ND	0.2															
Benzo(b)fluoranthene	ND	0.05															
Benzo(k)fluoranthene	ND	0.02															
Benzo(e)pyrene	ND	0.02															
Dibenz(a,h)anthracene	0.03	0.04															J
Benzo(g,h,i)perylene	ND	0.03															
Indeno(1,2,3-cd)pyrene	ND	0.08															
Surr: Benzo(e)pyrene	9.47	0	10	0								54	102	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0411033
Project: MW #49- Water

Sample ID **MB-6819** Batch ID: **6819** Test Code: **SW7470** Units: mg/L Analysis Date **11/8/2004** Prep Date **11/8/2004**
Client ID: Run ID: **MI-LA254_041108A** SeqNo: **318408**

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury 0.00005025 0.0002

Sample ID **MB** Batch ID: **R13737** Test Code: **SW6010A** Units: mg/L Analysis Date **11/10/2004 2:28:19 PM** Prep Date
Client ID: Run ID: **ICP_041110B** SeqNo: **319298**

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic ND 0.02
Barium ND 0.002
Cadmium ND 0.002
Chromium ND 0.006
Copper ND 0.006
Iron ND 0.02
Lead ND 0.005
Manganese ND 0.002
Selenium ND 0.05
Silver ND 0.005
Uranium ND 0.1
Zinc ND 0.005

Sample ID **MB** Batch ID: **R13737** Test Code: **SW6010A** Units: mg/L Analysis Date **11/11/2004 9:56:32 AM** Prep Date
Client ID: Run ID: **ICP_041110B** SeqNo: **319467**

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic ND 2.5

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411033
 Project: MW #49-Water

Sample ID MB-6796 Batch ID: 6796 Test Code: SW6010A Units: mg/L Analysis Date 11/5/2004 10:42:40 AM Prep Date 11/4/2004
 Client ID: Run ID: ICP_041105A SeqNo: 318411

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Iron	ND	0.05									
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	ND	0.002									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	ND	1									
Uranium	ND	0.1									
Zinc	ND	0.05									

Sample ID MB-6786 Batch ID: 6786 Test Code: E160.1 Units: mg/L Analysis Date 11/4/2004 Prep Date 11/3/2004
 Client ID: Run ID: WC_041104B SeqNo: 317665

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Date: 16-Nov-04

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0411033
 Project: MW #49-Water

Sample ID	LCS	Batch ID: R13660	Test Code: E300	Units: mg/L	Analysis Date	11/3/2004 3:28:21 PM	Prep Date				
Client ID:		Run ID: LC_041103A	SeqNo:	317352							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4533	0.1	0.5	0	90.7	90	110	0			
Chloride	4.733	0.1	5	0	94.7	90	110	0			
Nitrogen, Nitrite (As N)	0.9034	0.1	1	0	90.3	90	110	0			
Nitrogen, Nitrate (As N)	2.416	0.1	2.5	0	96.6	90	110	0			
Phosphorus, Orthophosphate (As P)	4.755	0.5	5	0	95.1	90	110	0			
Sulfate	9.77	0.5	10	0	97.7	90	110	0			

Sample ID	LCS-6798	Batch ID: 6798	Test Code: SW8015	Units: mg/L	Analysis Date	11/4/2004 10:18:50 PM	Prep Date				
Client ID:		Run ID: FID(17A)_2_041102A	SeqNo:	317895							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.105	1	5	0	102	81.2	149	0			

Sample ID	LCSD-6798	Batch ID: 6798	Test Code: SW8015	Units: mg/L	Analysis Date	11/4/2004 10:48:25 PM	Prep Date				
Client ID:		Run ID: FID(17A)_2_041102A	SeqNo:	317896							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.85	1	5	0	97.0	81.2	149	5.105	5.11	23	

Sample ID	GRO std 2.5ug	Batch ID: R13678	Test Code: SW8015	Units: mg/L	Analysis Date	11/4/2004 6:41:39 PM	Prep Date				
Client ID:		Run ID: PIDFID_041104A	SeqNo:	317842							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5026	0.05	0.5	0	101	80.3	116	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0411033
Project: MW #49-Water

Sample ID: GRO std 2.5ug **Batch ID:** R13678 **Test Code:** SW8015 **Units:** mg/L **Analysis Date:** 11/5/2004 2:10:38 AM **Prep Date:**
Client ID: **Run ID:** PIDFID_041104A **SeqNo:** 317843

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)											
Sample ID	100mg lcs										
Batch ID:	R13663										
Test Code:	SW8260B										
Client ID:	NEPTUNE_041103A										
Run ID:											
SeqNo:											
Analysis Date:	11/3/2004										
Prep Date:											

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.91	1	20	0	99.6	75.3	128	0			
Toluene	20.13	1	20	0	101	77.8	122	0			
Chlorobenzene	20.32	1	20	0	102	76.2	130	0			
1,1-Dichloroethene	17.87	1	20	0	89.4	70.2	119	0			
Trichloroethene (TCE)	19.27	1	20	0	96.4	76.9	130	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0411033
 Project: MW #49- Water

Sample ID LCS-6812 Batch ID: 6812 Test Code: SW8310 Units: µg/L Analysis Date 11/12/2004 1:16:54 PM Prep Date 11/8/2004
 Client ID: HUGO_041112A Run ID: HUGO_041112A SeqNo: 320128

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	26.51	2.5	40	0	66.3	20.939	111.211	0			
1-Methylnaphthalene	29.13	2.5	40.1	0	72.6	22.016	110.385	0			
2-Methylnaphthalene	28.77	2.5	40	0	71.9	21.098	111.261	0			
Acenaphthylene	28.66	2.5	40.1	0	71.5	23.852	116.857	0			
Acenaphthene	30.19	2.5	40	0	75.5	27.524	111.73	0			
Fluorene	2.96	0.8	4.01	0	73.8	31.046	113.32	0			
Phenanthrene	1.71	0.6	2.01	0	85.1	42.279	115.749	0			
Anthracene	1.65	0.6	2.01	0	82.1	43.767	118.693	0			
Fluoranthene	3.4	0.3	4.01	0	84.8	55.334	117.461	0			
Pyrene	3.55	0.3	4.01	0	88.5	57.722	120.832	0			
Benz(a)anthracene	0.35	0.02	0.401	0	87.3	70.18	113.452	0			
Chrysene	1.73	0.2	2.01	0	86.1	43.942	141.404	0			
Benzo(b)fluoranthene	0.34	0.05	0.38	0	89.5	71.192	103.368	0			
Benzo(k)fluoranthene	0.23	0.02	0.25	0	92.0	75.336	107.209	0			
Benzo(a)pyrene	0.23	0.02	0.251	0	91.6	74.556	100.742	0			
Dibenz(a,h)anthracene	0.47	0.04	0.501	0.03	87.8	80.693	106.931	0			
Benzo(g,h,i)perylene	0.45	0.03	0.5	0	90.0	55.168	135.014	0			
Indeno(1,2,3-cd)pyrene	0.847	0.08	1.002	0	84.5	79.328	104.794	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0411033
Project: MW #49- Water

Sample ID: LCSD-6812 Batch ID: 6812 Test Code: SW8310 Units: µg/L Analysis Date: 11/12/2004 2:04:54 PM Prep Date: 11/8/2004
Client ID: HUGO_041112A Run ID: SeqNo: 320129

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	28.7	2.5	40	0	71.8	20.939	111.211	26.51	7.93	32.1	
1-Methylnaphthalene	30.87	2.5	40.1	0	77.0	22.016	110.385	29.13	5.80	32.7	
2-Methylnaphthalene	31.61	2.5	40	0	79.0	21.098	111.261	28.77	9.41	34	
Acenaphthylene	32.12	2.5	40.1	0	80.1	23.852	116.857	28.66	11.4	38.8	
Acenaphthene	33.5	2.5	40	0	83.8	27.524	111.73	30.19	10.4	38.6	
Fluorene	3.25	0.8	4.01	0	81.0	31.046	113.32	2.96	9.34	39.3	
Phenanthrene	1.94	0.6	2.01	0	96.5	42.279	115.749	1.71	12.6	25	
Anthracene	1.83	0.6	2.01	0	91.0	43.767	118.693	1.65	10.3	23.9	
Fluoranthene	3.82	0.3	4.01	0	95.3	55.334	117.461	3.4	11.6	15.7	
Pyrene	4.02	0.3	4.01	0	100	57.722	120.832	3.55	12.4	15.3	
Benz(a)anthracene	0.39	0.02	0.401	0	97.3	70.18	113.452	0.35	10.8	119	
Chrysene	1.94	0.2	2.01	0	96.5	43.942	141.404	1.73	11.4	16.6	
Benzo(b)fluoranthene	0.37	0.05	0.38	0	97.4	71.192	103.368	0.34	8.45	21.7	
Benzo(k)fluoranthene	0.24	0.02	0.25	0	96.0	75.336	107.209	0.23	4.26	19.4	
Benzo(a)pyrene	0.25	0.02	0.251	0	99.6	74.556	100.742	0.23	8.33	16.7	
Dibenz(a,h)anthracene	0.5	0.04	0.501	0.03	93.8	80.693	106.931	0.47	6.19	17.3	
Benzo(g,h,i)perylene	0.49	0.03	0.5	0	98.0	55.168	135.014	0.45	8.51	118	
Indeno(1,2,3-cd)pyrene	0.876	0.08	1.002	0	87.4	79.328	104.794	0.847	3.37	17.7	

Sample ID	Batch ID	Test Code	Units	Analysis Date	Prep Date
LCSD-6819	6819	SW7470	mg/L	11/8/2004	11/8/2004
Client ID:		MI-LA254_041108A		SeqNo: 318409	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00508	0.0002	0.005	0.00005025	101	75.2	134	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0411033
 Project: MW #49-Water

Sample ID	LCSD-6819	Batch ID:	6819	Test Code:	SW7470	Units:	mg/L	Analysis Date	11/8/2004	Prep Date	11/8/2004			
Client ID:		Run ID:	MI-LA254_041108A	SeqNo:	318410									
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.005232		0.0002	0.005	0.00005025		104	75.2	134	0.00508	2.96	0	

Sample ID	LCS	Batch ID:	R13737	Test Code:	SW6010A	Units:	mg/L	Analysis Date	11/10/2004 2:31:01 PM	Prep Date	11/10/2004 2:31:01 PM			
Client ID:		Run ID:	ICP_041110B	SeqNo:	319299									
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		0.4881		0.02	0.5	0		97.6	80	120	0			
Barium		0.4859		0.002	0.5	0		97.2	80	120	0			
Cadmium		0.4988		0.002	0.5	0		99.8	80	120	0			
Chromium		0.4886		0.006	0.5	0		97.7	80	120	0			
Copper		0.482		0.006	0.5	0		96.4	80	120	0			
Iron		0.5185		0.02	0.5	0		104	80	120	0			
Lead		0.4969		0.005	0.5	0		99.4	80	120	0			
Manganese		0.4972		0.002	0.5	0		99.4	80	120	0			
Selenium		0.4652		0.05	0.5	0		93.0	80	120	0			
Silver		0.5064		0.005	0.5	0		101	80	120	0			
Uranium		4.904		0.1	5	0		98.1	80	120	0			
Zinc		0.4785		0.005	0.5	0		95.7	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0411033
 Project: MW #49-Water

Sample ID	LCSD	Batch ID: R13737	Test Code: SW6010A	Units: mg/L	Analysis Date	11/10/2004 2:33:34 PM	Prep Date					
Client ID:		Run ID: ICP_041110B	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result										
Arsenic		0.5001	0.02	0.5	0	100	80	120	0.4881	2.42	20	
Barium		0.4954	0.002	0.5	0	99.1	80	120	0.4859	1.95	20	
Cadmium		0.5109	0.002	0.5	0	102	80	120	0.4988	2.39	20	
Chromium		0.5026	0.006	0.5	0	101	80	120	0.4886	2.83	20	
Copper		0.4911	0.006	0.5	0	98.2	80	120	0.482	1.87	20	
Iron		0.5246	0.02	0.5	0	105	80	120	0.5185	1.16	20	
Lead		0.5083	0.005	0.5	0	102	80	120	0.4969	2.28	20	
Manganese		0.5008	0.002	0.5	0	100	80	120	0.4972	0.715	20	
Selenium		0.4814	0.05	0.5	0	96.3	80	120	0.4652	3.43	20	
Silver		0.5037	0.005	0.5	0	101	80	120	0.5064	0.531	20	
Uranium		4.912	0.1	5	0	98.2	80	120	4.904	0.171	20	
Zinc		0.4904	0.005	0.5	0	98.1	80	120	0.4785	2.45	20	

Sample ID	LCS	Batch ID: R13737	Test Code: SW6010A	Units: mg/L	Analysis Date	11/11/2004 9:58:37 AM	Prep Date					
Client ID:		Run ID: ICP_041110B	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result										
Arsenic		0.4805	0.02	0.5	0	96.1	80	120	0			

Sample ID	LCSD	Batch ID: R13737	Test Code: SW6010A	Units: mg/L	Analysis Date	11/11/2004 10:00:43 A	Prep Date					
Client ID:		Run ID: ICP_041110B	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte		Result										
Arsenic		0.5024	0.02	0.5	0	100	80	120	0.4805	4.44	20	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining

Work Order: 0411033

Project: MW #49-Water

Sample ID LCS-6796 Batch ID: 6796 Test Code: SW6010A Units: mg/L Analysis Date 11/5/2004 9:11:41 AM Prep Date 11/4/2004

Client ID: Run ID: ICP_041105A SeqNo: 317908

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4951	0.02	0.5	0	99.0	80	120	0			
Barium	0.4857	0.02	0.5	0	97.1	80	120	0			
Cadmium	0.4953	0.002	0.5	0.0006448	98.9	80	120	0			
Calcium	47.73	1	50	0	95.5	80	120	0			
Chromium	0.4915	0.006	0.5	0	98.3	80	120	0			
Iron	0.4884	0.05	0.5	0	97.7	80	120	0			
Lead	0.4965	0.005	0.5	0	99.3	80	120	0			
Magnesium	48.35	1	50	0	96.7	80	120	0			
Manganese	0.4811	0.002	0.5	0	96.2	80	120	0			
Potassium	51.1	1	50	0	102	80	120	0			
Selenium	0.4682	0.05	0.5	0	93.6	80	120	0			
Silver	0.5536	0.005	0.5	0.007271	109	80	120	0			
Sodium	54.62	1	50	0	109	80	120	0			
Uranium	4.649	0.1	5	0	93.0	80	120	0			
Zinc	0.4739	0.05	0.5	0	94.8	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0411033
 Project: MW #49-Water

Sample ID	LCSD-6796	Batch ID: 6796	Test Code: SW6010A	Units: mg/L	Analysis Date	11/5/2004 9:14:14 AM	Prep Date	11/4/2004			
Client ID:			Run ID: ICP_041105A		SeqNo:	317909					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5078	0.02	0.5	0	102	80	120	0.4951	2.55	20	
Barium	0.4894	0.02	0.5	0	97.9	80	120	0.4857	0.761	20	
Cadmium	0.4967	0.002	0.5	0.0006448	99.2	80	120	0.4953	0.294	20	
Calcium	48.21	1	50	0	96.4	80	120	47.73	0.996	20	
Chromium	0.4937	0.006	0.5	0	98.7	80	120	0.4915	0.442	20	
Iron	0.4794	0.05	0.5	0	95.9	80	120	0.4884	1.87	20	
Lead	0.4987	0.005	0.5	0	99.7	80	120	0.4965	0.431	20	
Magnesium	48.56	1	50	0	97.1	80	120	48.35	0.432	20	
Manganese	0.4832	0.002	0.5	0	96.6	80	120	0.4811	0.437	20	
Potassium	51.37	1	50	0	103	80	120	51.1	0.527	20	
Selenium	0.4727	0.05	0.5	0	94.5	80	120	0.4682	0.954	20	
Silver	0.5457	0.005	0.5	0.007271	108	80	120	0.5536	1.44	20	
Sodium	54.83	1	50	0	110	80	120	54.62	0.377	20	
Uranium	4.683	0.1	5	0	93.7	80	120	4.649	0.731	20	
Zinc	0.479	0.05	0.5	0	95.8	80	120	0.4739	1.07	20	

Sample ID	LCS-6786	Batch ID: 6786	Test Code: E160.1	Units: mg/L	Analysis Date	11/4/2004	Prep Date	11/3/2004			
Client ID:			Run ID: WC_041104B		SeqNo:	317666					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	1024	50	1000	0	102	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

11/2/2004

Work Order Number 0411033

Received by AT

Checklist completed by

Signature

[Handwritten Signature]

Date

11/2/04

Matrix

Carrier name Greyhound

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- 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
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes No N/A

Container/Temp Blank temperature? 1° 4° C ± 2 Acceptable
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refining
Project Name: MW #49 - Water

Address: 450 Rd 4990

Bloomfield, NM

87413

Phone #: 505-632-4161

Fax #: 505-632-3911

Accreditation Applied:

NELAC USACE

Other:

Project Manager:

Sampler: Cindy Hurtado

Sample Temperature: / °C

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					H ₂ O ₂	HNO ₃	
11-01-04	1115A	H ₂ O	MW #49	3-VOA	X		DF/11033-1
				1-liter			Amber
				1-250	X		Filtered
				1-500	X		
				1-500			H ₂ SO ₄
				1-250			-2

Date: 11-01-04

Time: 1115A

Relinquished By: (Signature) Cindy Hurtado

Remarks: Steve Spivey 11/2/04

Date:

Time:

Relinquished By: (Signature)

Remarks:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B MOD (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Cations (Na, K, Ca, Mg)	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / PCB's (8082)	8260 (VOA)	8270 (Semi-VOA)	WRC Metals - dissolved	WRC Metals - Total	TDS, EC, PH	Air Bubbles or Headspace (Y or N)
X	X	X				X					X		X	X		

Remarks:

BTEX, MTBE, & TPH Per CH 8260
DUE 11/05/04 (FRIDAY)
Geo 1A20

COVER LETTER

November 17, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: MW #49-Water

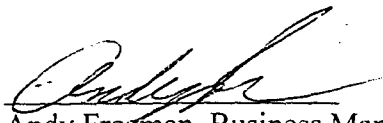
Order No.: 0411033

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 2 samples on 11/2/2004 for the analyses presented in the following report.

This report is an addendum to the report dated November 16, 2004. Additional metals have been added to this report. Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-01

Client Sample ID: MW #49
 Collection Date: 11/1/2004 11:15:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.48	0.10		mg/L	1	11/2/2004 7:36:54 PM
Chloride	130	1.0		mg/L	10	11/3/2004 5:25:53 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/2/2004 7:36:54 PM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/2/2004 7:36:54 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/2/2004 7:36:54 PM
Sulfate	280	5.0		mg/L	10	11/3/2004 5:25:53 PM
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/4/2004 11:48:19 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 11:48:19 PM
Surr: DNOP	87.0	58-140		%REC	1	11/4/2004 11:48:19 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.8	0.50		mg/L	10	11/4/2004 11:32:01 AM
Surr: BFB	110	74-118		%REC	10	11/4/2004 11:32:01 AM
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	ND	10		µg/L	10	11/3/2004
Toluene	ND	10		µg/L	10	11/3/2004
Ethylbenzene	15	10		µg/L	10	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/3/2004
1,2,4-Trimethylbenzene	370	10		µg/L	10	11/3/2004
1,3,5-Trimethylbenzene	72	10		µg/L	10	11/3/2004
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/3/2004
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/3/2004
Naphthalene	39	20		µg/L	10	11/3/2004
1-Methylnaphthalene	ND	40		µg/L	10	11/3/2004
2-Methylnaphthalene	ND	40		µg/L	10	11/3/2004
Acetone	ND	100		µg/L	10	11/3/2004
Bromobenzene	ND	10		µg/L	10	11/3/2004
Bromochloromethane	ND	10		µg/L	10	11/3/2004
Bromodichloromethane	ND	10		µg/L	10	11/3/2004
Bromoform	ND	10		µg/L	10	11/3/2004
Bromomethane	ND	20		µg/L	10	11/3/2004
2-Butanone	ND	100		µg/L	10	11/3/2004
Carbon disulfide	ND	100		µg/L	10	11/3/2004
Carbon Tetrachloride	ND	10		µg/L	10	11/3/2004
Chlorobenzene	ND	10		µg/L	10	11/3/2004
Chloroethane	ND	20		µg/L	10	11/3/2004
Chloroform	ND	10		µg/L	10	11/3/2004
Chloromethane	ND	10		µg/L	10	11/3/2004
2-Chlorotoluene	ND	10		µg/L	10	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-01

Client Sample ID: MW #49
 Collection Date: 11/1/2004 11:15:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
4-Chlorotoluene	ND	10		µg/L	10	11/3/2004
cis-1,2-DCE	ND	10		µg/L	10	11/3/2004
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/3/2004
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/3/2004
Dibromochloromethane	ND	10		µg/L	10	11/3/2004
Dibromomethane	ND	20		µg/L	10	11/3/2004
1,2-Dichlorobenzene	ND	10		µg/L	10	11/3/2004
1,3-Dichlorobenzene	ND	10		µg/L	10	11/3/2004
1,4-Dichlorobenzene	ND	10		µg/L	10	11/3/2004
Dichlorodifluoromethane	ND	10		µg/L	10	11/3/2004
1,1-Dichloroethane	ND	10		µg/L	10	11/3/2004
1,1-Dichloroethene	ND	10		µg/L	10	11/3/2004
1,2-Dichloropropane	ND	10		µg/L	10	11/3/2004
1,3-Dichloropropane	ND	10		µg/L	10	11/3/2004
2,2-Dichloropropane	ND	10		µg/L	10	11/3/2004
1,1-Dichloropropene	ND	10		µg/L	10	11/3/2004
Hexachlorobutadiene	ND	10		µg/L	10	11/3/2004
2-Hexanone	ND	100		µg/L	10	11/3/2004
Isopropylbenzene	31	10		µg/L	10	11/3/2004
4-Isopropyltoluene	47	10		µg/L	10	11/3/2004
4-Methyl-2-pentanone	ND	100		µg/L	10	11/3/2004
Methylene Chloride	ND	30		µg/L	10	11/3/2004
n-Butylbenzene	ND	10		µg/L	10	11/3/2004
n-Propylbenzene	65	10		µg/L	10	11/3/2004
sec-Butylbenzene	13	10		µg/L	10	11/3/2004
Styrene	ND	10		µg/L	10	11/3/2004
tert-Butylbenzene	ND	10		µg/L	10	11/3/2004
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/3/2004
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	11/3/2004
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/3/2004
trans-1,2-DCE	ND	10		µg/L	10	11/3/2004
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/3/2004
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/3/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/3/2004
1,1,1-Trichloroethane	ND	10		µg/L	10	11/3/2004
1,1,2-Trichloroethane	ND	10		µg/L	10	11/3/2004
Trichloroethene (TCE)	ND	10		µg/L	10	11/3/2004
Trichlorofluoromethane	ND	10		µg/L	10	11/3/2004
1,2,3-Trichloropropane	ND	20		µg/L	10	11/3/2004
Vinyl chloride	ND	10		µg/L	10	11/3/2004
Xylenes, Total	320	10		µg/L	10	11/3/2004
Surr: 1,2-Dichloroethane-d4	100	70.6-124		%REC	10	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
Lab Order: 0411033
Project: MW #49-Water
Lab ID: 0411033-01

Client Sample ID: MW #49
Collection Date: 11/1/2004 11:15:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Surr: 4-Bromofluorobenzene	97.8	76.4-130		%REC	10	11/3/2004
Surr: Dibromofluoromethane	90.7	67.2-131		%REC	10	11/3/2004
Surr: Toluene-d8	110	82.1-123		%REC	10	11/3/2004

EPA METHOD 8310: PAHS

Analyst: BL

Naphthalene	6.7	2.5		µg/L	1	11/12/2004 3:40:53 PM
1-Methylnaphthalene	10	2.5		µg/L	1	11/12/2004 3:40:53 PM
2-Methylnaphthalene	6.0	2.5		µg/L	1	11/12/2004 3:40:53 PM
Acenaphthylene	ND	2.5		µg/L	1	11/12/2004 3:40:53 PM
Acenaphthene	ND	2.5		µg/L	1	11/12/2004 3:40:53 PM
Fluorene	ND	0.80		µg/L	1	11/12/2004 3:40:53 PM
Phenanthrene	ND	0.60		µg/L	1	11/12/2004 3:40:53 PM
Anthracene	ND	0.60		µg/L	1	11/12/2004 3:40:53 PM
Fluoranthene	ND	0.30		µg/L	1	11/12/2004 3:40:53 PM
Pyrene	ND	0.30		µg/L	1	11/12/2004 3:40:53 PM
Benz(a)anthracene	ND	0.020		µg/L	1	11/12/2004 3:40:53 PM
Chrysene	ND	0.20		µg/L	1	11/12/2004 3:40:53 PM
Benzo(b)fluoranthene	ND	0.050		µg/L	1	11/12/2004 3:40:53 PM
Benzo(k)fluoranthene	ND	0.020		µg/L	1	11/12/2004 3:40:53 PM
Benzo(a)pyrene	ND	0.020		µg/L	1	11/12/2004 3:40:53 PM
Dibenz(a,h)anthracene	ND	0.040		µg/L	1	11/12/2004 3:40:53 PM
Benzo(g,h,i)perylene	ND	0.030		µg/L	1	11/12/2004 3:40:53 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	11/12/2004 3:40:53 PM
Surr: Benzo(e)pyrene	89.0	54-102		%REC	1	11/12/2004 3:40:53 PM

EPA 120.1: SPECIFIC CONDUCTANCE

Analyst: MAP

Specific Conductance	1900	0.010		µmhos/cm	1	11/4/2004
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EPA METHOD 7470: MERCURY

Analyst: CMC

Mercury	0.00034	0.00020		mg/L	1	11/8/2004
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EPA METHOD 6010C: DISSOLVED METALS

Analyst: NMO

Arsenic	ND	0.020		mg/L	1	11/11/2004 10:09:05 AM
Barium	0.30	0.0020		mg/L	1	11/10/2004 3:55:50 PM
Cadmium	ND	0.0020		mg/L	1	11/10/2004 3:55:50 PM
Calcium	140	1.0		mg/L	1	11/10/2004 3:55:50 PM
Chromium	ND	0.0060		mg/L	1	11/10/2004 3:55:50 PM
Copper	ND	0.0060		mg/L	1	11/10/2004 3:55:50 PM
Iron	0.18	0.020		mg/L	1	11/10/2004 3:55:50 PM
Lead	ND	0.0050		mg/L	1	11/10/2004 3:55:50 PM
Magnesium	33	1.0		mg/L	1	11/10/2004 3:55:50 PM
Manganese	2.1	0.0020		mg/L	1	11/10/2004 3:55:50 PM
Potassium	7.4	1.0		mg/L	1	11/10/2004 3:55:50 PM
Selenium	ND	0.050		mg/L	1	11/10/2004 3:55:50 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-01

Client Sample ID: MW #49
 Collection Date: 11/1/2004 11:15:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Silver	ND	0.0050		mg/L	1	11/10/2004 3:55:50 PM
Sodium	340	10		mg/L	10	11/16/2004 3:23:50 PM
Uranium	ND	0.10		mg/L	1	11/10/2004 3:55:50 PM
Zinc	0.0089	0.0050		mg/L	1	11/10/2004 3:55:50 PM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	11/5/2004 9:28:03 AM
Barium	0.48	0.020		mg/L	1	11/5/2004 9:28:03 AM
Cadmium	ND	0.0020		mg/L	1	11/5/2004 9:28:03 AM
Calcium	160	1.0		mg/L	1	11/5/2004 9:28:03 AM
Chromium	ND	0.0060		mg/L	1	11/5/2004 9:28:03 AM
Copper	ND	0.0060		mg/L	1	11/16/2004 3:18:10 PM
Iron	19	0.50		mg/L	10	11/5/2004 10:47:18 AM
Lead	0.014	0.0050		mg/L	1	11/5/2004 9:28:03 AM
Magnesium	31	1.0		mg/L	1	11/5/2004 9:28:03 AM
Manganese	4.4	0.0020		mg/L	1	11/5/2004 9:28:03 AM
Potassium	7.9	1.0		mg/L	1	11/5/2004 9:28:03 AM
Selenium	ND	0.050		mg/L	1	11/5/2004 9:28:03 AM
Silver	ND	0.0050		mg/L	1	11/5/2004 9:28:03 AM
Sodium	330	10		mg/L	10	11/5/2004 10:47:18 AM
Uranium	ND	0.10		mg/L	1	11/5/2004 9:28:03 AM
Zinc	0.061	0.050		mg/L	1	11/5/2004 9:28:03 AM
EPA METHOD 150.1: PH						Analyst: MAP
pH	7.73	0.010		pH units	1	11/15/2004
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	1400	50		mg/L	1	11/4/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-02

Client Sample ID: Trip Blank
 Collection Date:

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/4/2004 12:01:43 PM
Surr: BFB	97.0	74-118		%REC	1	11/4/2004 12:01:43 PM
EPA METHOD 8260B: VOLATILES						Analyst: KTM
Benzene	ND	1.0		µg/L	1	11/3/2004
Toluene	ND	1.0		µg/L	1	11/3/2004
Ethylbenzene	ND	1.0		µg/L	1	11/3/2004
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/3/2004
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/3/2004
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/3/2004
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/3/2004
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/3/2004
Naphthalene	ND	2.0		µg/L	1	11/3/2004
1-Methylnaphthalene	ND	4.0		µg/L	1	11/3/2004
2-Methylnaphthalene	ND	4.0		µg/L	1	11/3/2004
Acetone	ND	10		µg/L	1	11/3/2004
Bromobenzene	ND	1.0		µg/L	1	11/3/2004
Bromochloromethane	ND	1.0		µg/L	1	11/3/2004
Bromodichloromethane	ND	1.0		µg/L	1	11/3/2004
Bromoform	ND	1.0		µg/L	1	11/3/2004
Bromomethane	ND	2.0		µg/L	1	11/3/2004
2-Butanone	ND	10		µg/L	1	11/3/2004
Carbon disulfide	ND	10		µg/L	1	11/3/2004
Carbon Tetrachloride	ND	1.0		µg/L	1	11/3/2004
Chlorobenzene	ND	1.0		µg/L	1	11/3/2004
Chloroethane	ND	2.0		µg/L	1	11/3/2004
Chloroform	ND	1.0		µg/L	1	11/3/2004
Chloromethane	ND	1.0		µg/L	1	11/3/2004
2-Chlorotoluene	ND	1.0		µg/L	1	11/3/2004
4-Chlorotoluene	ND	1.0		µg/L	1	11/3/2004
cis-1,2-DCE	ND	1.0		µg/L	1	11/3/2004
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/3/2004
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/3/2004
Dibromochloromethane	ND	1.0		µg/L	1	11/3/2004
Dibromomethane	ND	2.0		µg/L	1	11/3/2004
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/3/2004
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/3/2004
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/3/2004
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/3/2004
1,1-Dichloroethane	ND	1.0		µg/L	1	11/3/2004
1,1-Dichloroethene	ND	1.0		µg/L	1	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 17-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411033
 Project: MW #49-Water
 Lab ID: 0411033-02

Client Sample ID: Trip Blank
 Collection Date:

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,2-Dichloropropane	ND	1.0		µg/L	1	11/3/2004
1,3-Dichloropropane	ND	1.0		µg/L	1	11/3/2004
2,2-Dichloropropane	ND	1.0		µg/L	1	11/3/2004
1,1-Dichloropropene	ND	1.0		µg/L	1	11/3/2004
Hexachlorobutadiene	ND	1.0		µg/L	1	11/3/2004
2-Hexanone	ND	10		µg/L	1	11/3/2004
Isopropylbenzene	ND	1.0		µg/L	1	11/3/2004
4-Isopropyltoluene	ND	1.0		µg/L	1	11/3/2004
4-Methyl-2-pentanone	ND	10		µg/L	1	11/3/2004
Methylene Chloride	ND	3.0		µg/L	1	11/3/2004
n-Butylbenzene	ND	1.0		µg/L	1	11/3/2004
n-Propylbenzene	ND	1.0		µg/L	1	11/3/2004
sec-Butylbenzene	ND	1.0		µg/L	1	11/3/2004
Styrene	ND	1.0		µg/L	1	11/3/2004
tert-Butylbenzene	ND	1.0		µg/L	1	11/3/2004
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/3/2004
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	11/3/2004
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/3/2004
trans-1,2-DCE	ND	1.0		µg/L	1	11/3/2004
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/3/2004
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/3/2004
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/3/2004
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/3/2004
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/3/2004
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/3/2004
Trichlorofluoromethane	ND	1.0		µg/L	1	11/3/2004
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/3/2004
Vinyl chloride	ND	1.0		µg/L	1	11/3/2004
Xylenes, Total	ND	1.0		µg/L	1	11/3/2004
Surr: 1,2-Dichloroethane-d4	100	70.6-124		%REC	1	11/3/2004
Surr: 4-Bromofluorobenzene	98.6	76.4-130		%REC	1	11/3/2004
Surr: Dibromofluoromethane	93.1	67.2-131		%REC	1	11/3/2004
Surr: Toluene-d8	109	82.1-123		%REC	1	11/3/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

COVER LETTER

November 09, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: MW#49 - Soil

Order No.: 0411034

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 3 samples on 11/2/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 09-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411034
 Project: MW#49 - Soil
 Lab ID: 0411034-01

Client Sample ID: MW#49 5'-6.5'
 Collection Date: 10/28/2004 5:00:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	39	10		mg/Kg	1	11/4/2004 12:27:05 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/4/2004 12:27:05 AM
Surr: DNOP	104	60-124		%REC	1	11/4/2004 12:27:05 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	550	25		mg/Kg	5	11/4/2004 2:43:29 PM
Surr: BFB	117	74-118		%REC	5	11/4/2004 2:43:29 PM
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	0.25		mg/Kg	5	11/5/2004
Toluene	ND	0.25		mg/Kg	5	11/5/2004
Ethylbenzene	0.35	0.25		mg/Kg	5	11/5/2004
Methyl tert-butyl ether (MTBE)	ND	0.25		mg/Kg	5	11/5/2004
1,2,4-Trimethylbenzene	42	1.0		mg/Kg	20	11/8/2004
1,3,5-Trimethylbenzene	1.1	0.25		mg/Kg	5	11/5/2004
1,2-Dichloroethane (EDC)	ND	0.25		mg/Kg	5	11/5/2004
1,2-Dibromoethane (EDB)	ND	0.25		mg/Kg	5	11/5/2004
Naphthalene	0.90	0.50		mg/Kg	5	11/5/2004
1-Methylnaphthalene	4.3	1.0		mg/Kg	5	11/5/2004
2-Methylnaphthalene	ND	1.0		mg/Kg	5	11/5/2004
Acetone	ND	10		mg/Kg	5	11/5/2004
Bromobenzene	ND	0.25		mg/Kg	5	11/5/2004
Bromochloromethane	ND	0.25		mg/Kg	5	11/5/2004
Bromodichloromethane	ND	0.25		mg/Kg	5	11/5/2004
Bromoform	ND	0.25		mg/Kg	5	11/5/2004
Bromomethane	ND	0.50		mg/Kg	5	11/5/2004
2-Butanone	ND	5.0		mg/Kg	5	11/5/2004
Carbon disulfide	ND	2.5		mg/Kg	5	11/5/2004
Carbon tetrachloride	ND	0.50		mg/Kg	5	11/5/2004
Chlorobenzene	ND	0.25		mg/Kg	5	11/5/2004
Chloroethane	ND	0.50		mg/Kg	5	11/5/2004
Chloroform	ND	0.25		mg/Kg	5	11/5/2004
Chloromethane	ND	0.25		mg/Kg	5	11/5/2004
2-Chlorotoluene	ND	0.25		mg/Kg	5	11/5/2004
4-Chlorotoluene	ND	0.25		mg/Kg	5	11/5/2004
cis-1,2-DCE	ND	0.25		mg/Kg	5	11/5/2004
cis-1,3-Dichloropropene	ND	0.25		mg/Kg	5	11/5/2004
1,2-Dibromo-3-chloropropane	ND	0.50		mg/Kg	5	11/5/2004
Dibromochloromethane	ND	0.25		mg/Kg	5	11/5/2004
Dibromomethane	ND	0.50		mg/Kg	5	11/5/2004
1,2-Dichlorobenzene	ND	0.25		mg/Kg	5	11/5/2004
1,3-Dichlorobenzene	ND	0.25		mg/Kg	5	11/5/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 09-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411034
 Project: MW#49 - Soil
 Lab ID: 0411034-01

Client Sample ID: MW#49 5'-6.5'
 Collection Date: 10/28/2004 5:00:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	0.25		mg/Kg	5	11/5/2004
Dichlorodifluoromethane	ND	0.25		mg/Kg	5	11/5/2004
1,1-Dichloroethane	ND	0.25		mg/Kg	5	11/5/2004
1,1-Dichloroethene	ND	0.25		mg/Kg	5	11/5/2004
1,2-Dichloropropane	ND	0.25		mg/Kg	5	11/5/2004
1,3-Dichloropropane	ND	0.25		mg/Kg	5	11/5/2004
2,2-Dichloropropane	ND	0.25		mg/Kg	5	11/5/2004
1,1-Dichloropropene	ND	0.25		mg/Kg	5	11/5/2004
Hexachlorobutadiene	ND	0.25		mg/Kg	5	11/5/2004
2-Hexanone	ND	2.5		mg/Kg	5	11/5/2004
Isopropylbenzene	1.0	0.25		mg/Kg	5	11/5/2004
4-Isopropyltoluene	4.0	0.25		mg/Kg	5	11/5/2004
4-Methyl-2-pentanone	ND	2.5		mg/Kg	5	11/5/2004
Methylene chloride	ND	0.75		mg/Kg	5	11/5/2004
n-Butylbenzene	4.0	0.25		mg/Kg	5	11/5/2004
n-Propylbenzene	5.0	0.25		mg/Kg	5	11/5/2004
sec-Butylbenzene	1.9	0.25		mg/Kg	5	11/5/2004
Styrene	ND	0.25		mg/Kg	5	11/5/2004
tert-Butylbenzene	ND	0.25		mg/Kg	5	11/5/2004
1,1,1,2-Tetrachloroethane	ND	0.25		mg/Kg	5	11/5/2004
1,1,2,2-Tetrachloroethane	ND	0.25		mg/Kg	5	11/5/2004
Tetrachloroethene (PCE)	ND	0.25		mg/Kg	5	11/5/2004
trans-1,2-DCE	ND	0.25		mg/Kg	5	11/5/2004
trans-1,3-Dichloropropene	ND	0.25		mg/Kg	5	11/5/2004
1,2,3-Trichlorobenzene	ND	0.25		mg/Kg	5	11/5/2004
1,2,4-Trichlorobenzene	ND	0.25		mg/Kg	5	11/5/2004
1,1,1-Trichloroethane	ND	0.25		mg/Kg	5	11/5/2004
1,1,2-Trichloroethane	ND	0.25		mg/Kg	5	11/5/2004
Trichloroethene (TCE)	ND	0.25		mg/Kg	5	11/5/2004
Trichlorofluoromethane	ND	0.25		mg/Kg	5	11/5/2004
1,2,3-Trichloropropane	ND	0.50		mg/Kg	5	11/5/2004
Vinyl chloride	ND	0.25		mg/Kg	5	11/5/2004
Xylenes, Total	2.4	0.25		mg/Kg	5	11/5/2004
Surr: 1,2-Dichloroethane-d4	103	68.4-123		%REC	5	11/5/2004
Surr: 4-Bromofluorobenzene	107	70-119		%REC	5	11/5/2004
Surr: Dibromofluoromethane	105	76.8-123		%REC	5	11/5/2004
Surr: Toluene-d8	90.1	75.9-118		%REC	5	11/5/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 09-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411034
 Project: MW#49 - Soil
 Lab ID: 0411034-02

Client Sample ID: MW#49 10'-11.5'
 Collection Date: 10/28/2004 5:00:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/4/2004 12:57:27 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/4/2004 12:57:27 AM
Surr: DNOP	69.1	60-124		%REC	1	11/4/2004 12:57:27 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	110	5.0		mg/Kg	1	11/4/2004 3:13:13 PM
Surr: BFB	126	74-118	S	%REC	1	11/4/2004 3:13:13 PM
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	0.050		mg/Kg	1	11/5/2004
Toluene	ND	0.050		mg/Kg	1	11/5/2004
Ethylbenzene	0.13	0.050		mg/Kg	1	11/5/2004
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/5/2004
1,2,4-Trimethylbenzene	9.1	0.50		mg/Kg	10	11/8/2004
1,3,5-Trimethylbenzene	1.1	0.050		mg/Kg	1	11/5/2004
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/5/2004
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/5/2004
Naphthalene	0.45	0.10		mg/Kg	1	11/5/2004
1-Methylnaphthalene	0.62	0.20		mg/Kg	1	11/5/2004
2-Methylnaphthalene	0.49	0.20		mg/Kg	1	11/5/2004
Acetone	ND	2.0		mg/Kg	1	11/5/2004
Bromobenzene	ND	0.050		mg/Kg	1	11/5/2004
Bromochloromethane	ND	0.050		mg/Kg	1	11/5/2004
Bromodichloromethane	ND	0.050		mg/Kg	1	11/5/2004
Bromoform	ND	0.050		mg/Kg	1	11/5/2004
Bromomethane	ND	0.10		mg/Kg	1	11/5/2004
2-Butanone	ND	1.0		mg/Kg	1	11/5/2004
Carbon disulfide	ND	0.50		mg/Kg	1	11/5/2004
Carbon tetrachloride	ND	0.10		mg/Kg	1	11/5/2004
Chlorobenzene	ND	0.050		mg/Kg	1	11/5/2004
Chloroethane	ND	0.10		mg/Kg	1	11/5/2004
Chloroform	ND	0.050		mg/Kg	1	11/5/2004
Chloromethane	ND	0.050		mg/Kg	1	11/5/2004
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/5/2004
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/5/2004
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/5/2004
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/5/2004
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/5/2004
Dibromochloromethane	ND	0.050		mg/Kg	1	11/5/2004
Dibromomethane	ND	0.10		mg/Kg	1	11/5/2004
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/5/2004
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/5/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 09-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411034
 Project: MW#49 - Soil
 Lab ID: 0411034-02

Client Sample ID: MW#49 10'-11.5'
 Collection Date: 10/28/2004 5:00:00 PM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/5/2004
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/5/2004
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/5/2004
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/5/2004
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/5/2004
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/5/2004
2,2-Dichloropropane	ND	0.050		mg/Kg	1	11/5/2004
1,1-Dichloropropene	ND	0.050		mg/Kg	1	11/5/2004
Hexachlorobutadiene	ND	0.050		mg/Kg	1	11/5/2004
2-Hexanone	ND	0.50		mg/Kg	1	11/5/2004
Isopropylbenzene	0.24	0.050		mg/Kg	1	11/5/2004
4-Isopropyltoluene	1.2	0.050		mg/Kg	1	11/5/2004
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/5/2004
Methylene chloride	ND	0.15		mg/Kg	1	11/5/2004
n-Butylbenzene	2.0	0.050		mg/Kg	1	11/5/2004
n-Propylbenzene	1.2	0.050		mg/Kg	1	11/5/2004
sec-Butylbenzene	0.34	0.050		mg/Kg	1	11/5/2004
Styrene	ND	0.050		mg/Kg	1	11/5/2004
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/5/2004
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/5/2004
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/5/2004
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/5/2004
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/5/2004
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/5/2004
1,2,3-Trichlorobenzene	ND	0.050		mg/Kg	1	11/5/2004
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/5/2004
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/5/2004
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/5/2004
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/5/2004
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/5/2004
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/5/2004
Vinyl chloride	ND	0.050		mg/Kg	1	11/5/2004
Xylenes, Total	2.3	0.050		mg/Kg	1	11/5/2004
Surr: 1,2-Dichloroethane-d4	99.4	68.4-123		%REC	1	11/5/2004
Surr: 4-Bromofluorobenzene	112	70-119		%REC	1	11/5/2004
Surr: Dibromofluoromethane	105	76.8-123		%REC	1	11/5/2004
Surr: Toluene-d8	94.1	75.9-118		%REC	1	11/5/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

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

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 09-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411034
 Project: MW#49 - Soil
 Lab ID: 0411034-03

Client Sample ID: MW#49 15'-16.5'
 Collection Date: 10/28/2004 5:00:00 PM

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/4/2004 1:27:48 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/4/2004 1:27:48 AM
Surr: DNOP	66.1	60-124		%REC	1	11/4/2004 1:27:48 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/4/2004 3:42:58 PM
Surr: BFB	107	74-118		%REC	1	11/4/2004 3:42:58 PM
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	0.050		mg/Kg	1	11/8/2004
Toluene	ND	0.050		mg/Kg	1	11/8/2004
Ethylbenzene	ND	0.050		mg/Kg	1	11/8/2004
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/8/2004
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/8/2004
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/8/2004
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/8/2004
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/8/2004
Naphthalene	ND	0.10		mg/Kg	1	11/8/2004
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/8/2004
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/8/2004
Acetone	ND	2.0		mg/Kg	1	11/8/2004
Bromobenzene	ND	0.050		mg/Kg	1	11/8/2004
Bromochloromethane	ND	0.050		mg/Kg	1	11/8/2004
Bromodichloromethane	ND	0.050		mg/Kg	1	11/8/2004
Bromoform	ND	0.050		mg/Kg	1	11/8/2004
Bromomethane	ND	0.10		mg/Kg	1	11/8/2004
2-Butanone	ND	1.0		mg/Kg	1	11/8/2004
Carbon disulfide	ND	0.50		mg/Kg	1	11/8/2004
Carbon tetrachloride	ND	0.10		mg/Kg	1	11/8/2004
Chlorobenzene	ND	0.050		mg/Kg	1	11/8/2004
Chloroethane	ND	0.10		mg/Kg	1	11/8/2004
Chloroform	ND	0.050		mg/Kg	1	11/8/2004
Chloromethane	ND	0.050		mg/Kg	1	11/8/2004
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/8/2004
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/8/2004
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/8/2004
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/8/2004
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/8/2004
Dibromochloromethane	ND	0.050		mg/Kg	1	11/8/2004
Dibromomethane	ND	0.10		mg/Kg	1	11/8/2004
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/8/2004
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/8/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 09-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0411034
 Project: MW#49 - Soil
 Lab ID: 0411034-03

Client Sample ID: MW#49 15'-16.5'
 Collection Date: 10/28/2004 5:00:00 PM
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/8/2004
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/8/2004
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/8/2004
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/8/2004
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/8/2004
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/8/2004
2,2-Dichloropropane	ND	0.050		mg/Kg	1	11/8/2004
1,1-Dichloropropene	ND	0.050		mg/Kg	1	11/8/2004
Hexachlorobutadiene	ND	0.050		mg/Kg	1	11/8/2004
2-Hexanone	ND	0.50		mg/Kg	1	11/8/2004
Isopropylbenzene	ND	0.050		mg/Kg	1	11/8/2004
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/8/2004
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/8/2004
Methylene chloride	ND	0.15		mg/Kg	1	11/8/2004
n-Butylbenzene	ND	0.050		mg/Kg	1	11/8/2004
n-Propylbenzene	ND	0.050		mg/Kg	1	11/8/2004
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/8/2004
Styrene	ND	0.050		mg/Kg	1	11/8/2004
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/8/2004
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/8/2004
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/8/2004
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/8/2004
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/8/2004
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/8/2004
1,2,3-Trichlorobenzene	ND	0.050		mg/Kg	1	11/8/2004
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/8/2004
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/8/2004
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/8/2004
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/8/2004
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/8/2004
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/8/2004
Vinyl chloride	ND	0.050		mg/Kg	1	11/8/2004
Xylenes, Total	ND	0.050		mg/Kg	1	11/8/2004
Surr: 1,2-Dichloroethane-d4	93.6	68.4-123		%REC	1	11/8/2004
Surr: 4-Bromofluorobenzene	101	70-119		%REC	1	11/8/2004
Surr: Dibromofluoromethane	98.5	76.8-123		%REC	1	11/8/2004
Surr: Toluene-d8	95.2	75.9-118		%REC	1	11/8/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank

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

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 09-Nov-04

CLIENT: San Juan Refining
 Work Order: 0411034
 Project: MW#49 - Soil
QC SUMMARY REPORT
 Method Blank

Sample ID	MB-6792	Batch ID:	6792	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	11/3/2004 8:29:24 PM	Prep Date	11/3/2004
Client ID:		Run ID:	FID(17A) 2_041102A <th>SeqNo:</th> <td>317337</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	SeqNo:	317337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10	0	10	0	100	60	124	0			

Sample ID	MB-6783	Batch ID:	6783	Test Code:	SW8015	Units:	mg/Kg	Analysis Date	11/4/2004 12:37:04 AM	Prep Date	11/3/2004
Client ID:		Run ID:	PIDFID_041103A	SeqNo:	317555						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5									
Surr: BFB	1036	0	1000	0	104	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411034
 Project: MW#49 - Soil

Sample ID mb-6783 Batch ID: 6783 Test Code: SW8260B Units: mg/Kg Analysis Date 11/5/2004 Prep Date 11/3/2004

Client ID: THOR_041104B Run ID: 318236 SeqNo: 318236

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.05									
Toluene	ND	0.05									
Ethylbenzene	ND	0.05									
Methyl tert-butyl ether (MTBE)	ND	0.05									
1,2,4-Trimethylbenzene	ND	0.05									
1,3,5-Trimethylbenzene	ND	0.05									
1,2-Dichloroethane (EDC)	ND	0.05									
1,2-Dibromoethane (EDB)	ND	0.05									
Naphthalene	ND	0.1									
1-Methylnaphthalene	ND	0.2									
2-Methylnaphthalene	ND	0.2									
Acetone	ND	2									
Bromobenzene	ND	0.05									
Bromochloromethane	ND	0.05									
Bromodichloromethane	ND	0.05									
Bromoform	ND	0.05									
Bromomethane	ND	0.1									
2-Butanone	ND	1									
Carbon disulfide	ND	0.5									
Carbon tetrachloride	ND	0.1									
Chlorobenzene	ND	0.05									
Chloroethane	ND	0.1									
Chloroform	ND	0.05									
Chloromethane	ND	0.05									
2-Chlorotoluene	ND	0.05									
4-Chlorotoluene	ND	0.05									
cis-1,2-DCE	ND	0.05									
cis-1,3-Dichloropropene	ND	0.05									

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0411034
Project: MW#49 - Soil

1,2-Dibromo-3-chloropropane	ND	0.1
Dibromochloromethane	ND	0.05
Dibromomethane	ND	0.1
1,2-Dichlorobenzene	ND	0.05
1,3-Dichlorobenzene	ND	0.05
1,4-Dichlorobenzene	ND	0.05
Dichlorodifluoromethane	ND	0.05
1,1-Dichloroethane	ND	0.05
1,1-Dichloroethene	ND	0.05
1,2-Dichloropropane	ND	0.05
1,3-Dichloropropane	ND	0.05
2,2-Dichloropropane	ND	0.05
1,1-Dichloropropene	ND	0.05
Hexachlorobutadiene	ND	0.05
2-Hexanone	ND	0.5
Isopropylbenzene	ND	0.05
4-Isopropyltoluene	ND	0.05
4-Methyl-2-pentanone	ND	0.5
Methylene chloride	0.0113	0.15
n-Butylbenzene	ND	0.05
n-Propylbenzene	ND	0.05
sec-Butylbenzene	ND	0.05
Styrene	ND	0.05
tert-Butylbenzene	ND	0.05
1,1,1,2-Tetrachloroethane	ND	0.05
1,1,2,2-Tetrachloroethane	ND	0.05
Tetrachloroethene (PCE)	ND	0.05
trans-1,2-DCE	ND	0.05
trans-1,3-Dichloropropene	ND	0.05
1,2,3-Trichlorobenzene	ND	0.05
1,2,4-Trichlorobenzene	ND	0.05
1,1,1-Trichloroethane	ND	0.05
1,1,2-Trichloroethane	ND	0.05

J

Qualifiers: ND - Not Detected at the Reporting Limit
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0411034
 Project: MW#49 - Soil

Trichloroethene (TCE)	ND	0.05							
Trichlorofluoromethane	ND	0.05							
1,2,3-Trichloropropane	ND	0.1							
Vinyl chloride	ND	0.05							
Xylenes, Total	ND	0.05							
Surr: 1,2-Dichloroethane-d4	0.5011	0	0.5	0	100	68.4	123	0	
Surr: 4-Bromofluorobenzene	0.5024	0	0.5	0	100	70	119	0	
Surr: Dibromofluoromethane	0.5016	0	0.5	0	100	76.8	123	0	
Surr: Toluene-d8	0.4901	0	0.5	0	98.0	75.9	118	0	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

QC SUMMARY REPORT

Sample Matrix Spike

CLIENT: San Juan Refining
 Work Order: 0411034
 Project: MW#49 - Soil

Sample ID 0411034-03a msd Batch ID: 6783 Test Code: SW8260B Units: mg/Kg Analysis Date 11/5/2004 Prep Date 11/3/2004
 Client ID: MW#49 15'-16.5' Run ID: THOR_041104B SeqNo: 318238

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.969	0.05	1	0	96.9	75	125	0			
Toluene	0.8921	0.05	1	0	89.2	72.9	125	0			
Chlorobenzene	0.9591	0.05	1	0	95.9	78.3	125	0			
1,1-Dichloroethene	0.9673	0.05	1	0	96.7	72.5	125	0			
Trichloroethene (TCE)	0.8801	0.05	1	0	88.0	72.5	125	0			
Surr: 1,2-Dichloroethane-d4	0.4847	0	0.5	0	96.9	68.4	123	0			
Surr: 4-Bromofluorobenzene	0.5083	0	0.5	0	102	70	119	0			
Surr: Dibromofluoromethane	0.507	0	0.5	0	101	76.8	123	0			
Surr: Toluene-d8	0.4716	0	0.5	0	94.3	75.9	118	0			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.9918	0.05	1	0	99.2	75	125	0.969	2.33	20	
Toluene	0.8822	0.05	1	0	88.2	72.9	125	0.8921	1.12	20	
Chlorobenzene	0.9519	0.05	1	0	95.2	78.3	125	0.9591	0.754	20	
1,1-Dichloroethene	0.9877	0.05	1	0	98.8	72.5	125	0.9673	2.09	20	
Trichloroethene (TCE)	0.9167	0.05	1	0	91.7	72.5	125	0.8801	4.07	20	
Surr: 1,2-Dichloroethane-d4	0.4911	0	0.5	0	98.2	68.4	123	0.4847	1.31	0	
Surr: 4-Bromofluorobenzene	0.4944	0	0.5	0	98.9	70	119	0.5083	2.77	0	
Surr: Dibromofluoromethane	0.5121	0	0.5	0	102	76.8	123	0.507	1.00	0	
Surr: Toluene-d8	0.4716	0	0.5	0	94.3	75.9	118	0.4716	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 09-Nov-04

CLIENT: San Juan Refining
Work Order: 0411034
Project: MW#49 - Soil

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS-6792** Batch ID: **6792** Test Code: **SW8015** Units: mg/Kg Analysis Date **11/3/2004 10:28:29 PM** Prep Date **11/3/2004**
 Client ID: Run ID: **FID(17A) 2_041102A** SeqNo: **317342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47.37	10	50	0	94.7	67.4	117	0			

Sample ID **LCSD-6792** Batch ID: **6792** Test Code: **SW8015** Units: mg/Kg Analysis Date **11/3/2004 10:57:49 PM** Prep Date **11/3/2004**
 Client ID: Run ID: **FID(17A) 2_041102A** SeqNo: **317343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48.28	10	50	0	96.6	67.4	117	47.37	1.90	17.4	

Sample ID **LCS-6783** Batch ID: **6783** Test Code: **SW8015** Units: mg/Kg Analysis Date **11/4/2004 1:06:45 AM** Prep Date **11/3/2004**
 Client ID: Run ID: **PIDFID_041103A** SeqNo: **317556**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27.35	5	25	0	109	73.8	120	0			

Sample ID **GRO std 2.5ug** Batch ID: **6783** Test Code: **SW8015** Units: mg/Kg Analysis Date **11/5/2004 2:10:38 AM** Prep Date
 Client ID: Run ID: **PIDFID_041104A** SeqNo: **317860**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26.3	5	25	0	105	73.8	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0411034
 Project: MW#49 - Soil

Prep Date 11/3/2004

Analysis Date 11/5/2004

Test Code: SW8260B Units: mg/Kg

SeqNo: 318237

Run ID: THOR_041104B

Batch ID: 6783

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.001	0.05	1	0	100	75.3	121	0			0
Toluene	0.9563	0.05	1	0	95.6	65.5	123	0			0
Chlorobenzene	1.031	0.05	1	0	103	78.3	124	0			0
1,1-Dichloroethene	1.017	0.05	1	0	102	72.5	125	0			0
Trichloroethene (TCE)	0.9027	0.05	1	0	90.3	70.8	118	0			0

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

11/2/2004

Work Order Number 0411034

Received by AT

Checklist completed by

[Handwritten Signature]
Signature

11/2/04
Date

Matrix

Carrier name Greyhound

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- 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
- Water - VOA vials have zero headspace? Yes No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes No N/A

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refining

Address: #50 Rd 4990

Bloomfield, NM

07413

Phone #: 505-632-4161

Fax #: 505-632-3911

QA/QC Package:
 Std Level 4 Other:

Project Name:

MW #49-Soil

Project #:

Project Manager:

Sampler: Endy Huizado / Precision Engineering
 Sample Temperature:

Number/Volume	Preservative		HEAL No.
	HgCl ₂	HNO ₃	
<u>1-40ml</u>			<u>0411034-1</u>
<u>1-40ml</u>			<u>2</u>
<u>1-40ml</u>			<u>3</u>

Date	Time	Matrix	Sample I.D. No.
<u>10-28-04</u>	<u>5pm</u>	<u>Soil</u>	<u>MW #49 5-65'</u>
<u>7</u>	<u>7</u>	<u>7</u>	<u>MW #49 10-11.5'</u>
<u>7</u>	<u>7</u>	<u>7</u>	<u>MW #49 15-16.5'</u>

Date: 11/01/04 Time: 2pm
 Relinquished By: (Signature) Endy Huizado
 Relinquished By: (Signature)

Received By: (Signature) 11/11/04
 Received By: (Signature)

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)	8081 Pesticides / PCB's (8082)	8260X (VDA)	8270 (Semi-VDA)	Air Bubbles or Headspace (Y or N)
		X								X		
		X								X		
		X								X		

Remarks:



COVER LETTER

November 08, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: River Terrace-Temp Piezometers

Order No.: 0410291

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 8 samples on 10/29/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in cursive script, appearing to read "Andy Freeman".

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT:	San Juan Refining	Client Sample ID:	TP#1
Lab Order:	0410291	Collection Date:	10/28/2004 11:10:00 AM
Project:	River Terrace-Temp Piezometers		
Lab ID:	0410291-01	Matrix:	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: JMP
Diesel Range Organics (DRO)	6.1	1.0		mg/L	1	11/4/2004 3:51:46 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 3:51:46 PM
Surr: DNOP	80.6	58-140		%REC	1	11/4/2004 3:51:46 PM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	140	25		mg/L	500	11/2/2004 1:16:18 PM
Surr: BFB	105	74-118		%REC	500	11/2/2004 1:16:18 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	11/1/2004 9:04:33 PM
Benzene	1200	50		µg/L	100	11/1/2004 9:04:33 PM
Toluene	340	50		µg/L	100	11/1/2004 9:04:33 PM
Ethylbenzene	5200	250		µg/L	500	11/2/2004 1:16:18 PM
Xylenes, Total	39000	250		µg/L	500	11/2/2004 1:16:18 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	300	11/2/2004 1:16:18 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT: San Juan Refining Client Sample ID: TP#2
 Lab Order: 0410291 Collection Date: 10/28/2004 11:30:00 AM
 Project: River Terrace-Temp Piezometers
 Lab ID: 0410291-02 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	1.3	1.0		mg/L	1	11/4/2004 4:22:09 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 4:22:09 PM
Surr: DNOP	83.7	58-140		%REC	1	11/4/2004 4:22:09 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	92	5.0		mg/L	100	11/1/2004 9:34:28 PM
Surr: BFB	109	74-118		%REC	100	11/1/2004 9:34:28 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	11/1/2004 9:34:28 PM
Benzene	3100	50		µg/L	100	11/1/2004 9:34:28 PM
Toluene	8200	50		µg/L	100	11/1/2004 9:34:28 PM
Ethylbenzene	4200	50		µg/L	100	11/1/2004 9:34:28 PM
Xylenes, Total	27000	250		µg/L	100	11/2/2004 1:43:01 PM
Surr: 4-Bromofluorobenzene	103	74-118		%REC	100	11/1/2004 9:34:28 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT:	San Juan Refining	Client Sample ID:	TP#3
Lab Order:	0410291	Collection Date:	10/28/2004 11:45:00 AM
Project:	River Terrace-Temp Piezometers		
Lab ID:	0410291-03	Matrix:	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/4/2004 4:52:18 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 4:52:18 PM
Surr: DNOP	85.4	58-140		%REC	1	11/4/2004 4:52:18 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.8	0.050		mg/L	1	11/1/2004 10:04:18 PM
Surr: BFB	116	74-118		%REC	1	11/1/2004 10:04:18 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/1/2004 10:04:18 PM
Benzene	3.5	0.50		µg/L	1	11/1/2004 10:04:18 PM
Toluene	23	0.50		µg/L	1	11/1/2004 10:04:18 PM
Ethylbenzene	51	5.0		µg/L	10	11/2/2004 2:15:46 PM
Xylenes, Total	310	5.0		µg/L	10	11/2/2004 2:15:46 PM
Surr: 4-Bromofluorobenzene	104	74-118		%REC	10	11/2/2004 2:15:46 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT: San Juan Refining Client Sample ID: TP#4
 Lab Order: 0410291 Collection Date: 10/28/2004 12:00:00 PM
 Project: River Terrace-Temp Piezometers
 Lab ID: 0410291-04 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	1.3	1.0		mg/L	1	11/4/2004 5:21:33 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 5:21:33 PM
Surr: DNOP	127	58-140		%REC	1	11/4/2004 5:21:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	22	1.0		mg/L	20	11/2/2004 2:45:31 PM
Surr: BFB	110	74-118		%REC	20	11/2/2004 2:45:31 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	20	11/2/2004 2:45:31 PM
Benzene	ND	10		µg/L	20	11/2/2004 2:45:31 PM
Toluene	ND	10		µg/L	20	11/2/2004 2:45:31 PM
Ethylbenzene	810	10		µg/L	20	11/2/2004 2:45:31 PM
Xylenes, Total	1600	10		µg/L	20	11/2/2004 2:45:31 PM
Surr: 4-Bromofluorobenzene	106	74-118		%REC	20	11/2/2004 2:45:31 PM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT:	San Juan Refining	Client Sample ID:	TP#5
Lab Order:	0410291	Collection Date:	10/28/2004 12:20:00 PM
Project:	River Terrace-Temp Piezometers	Matrix:	AQUEOUS
Lab ID:	0410291-05		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/l	1	11/4/2004 5:51:37 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 5:51:37 PM
Surr: DNOP	73.4	58-140		%REC	1	11/4/2004 5:51:37 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	67	5.0		mg/L	100	11/1/2004 11:03:57 PM
Surr: BFB	114	74-118		%REC	100	11/1/2004 11:03:57 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	11/1/2004 11:03:57 PM
Benzene	280	100		µg/L	200	11/2/2004 4:14:43 PM
Toluene	ND	100		µg/L	200	11/2/2004 4:14:43 PM
Ethylbenzene	2200	100		µg/L	200	11/2/2004 4:14:43 PM
Xylenes, Total	21000	100		µg/L	200	11/2/2004 4:14:43 PM
Surr: 4-Bromofluorobenzene	106	74-118		%REC	200	11/2/2004 4:14:43 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT: San Juan Refining
 Lab Order: 0410291
 Project: River Terrace-Temp Piezometers
 Lab ID: 0410291-06

Client Sample ID: TP#6
 Collection Date: 10/28/2004 12:35:00 PM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/4/2004 7:50:53 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 7:50:53 PM
Surr: DNOP	84.0	58-140		%REC	1	11/4/2004 7:50:53 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	13	1.0		mg/L	20	11/2/2004 4:44:24 PM
Surr: BFB	111	74-118		%REC	20	11/2/2004 4:44:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	20	11/2/2004 4:44:24 PM
Benzene	98	10		µg/L	20	11/2/2004 4:44:24 PM
Toluene	ND	10		µg/L	20	11/2/2004 4:44:24 PM
Ethylbenzene	1100	10		µg/L	20	11/2/2004 4:44:24 PM
Xylenes, Total	3900	10		µg/L	20	11/2/2004 4:44:24 PM
Surr: 4-Bromofluorobenzene	107	74-118		%REC	20	11/2/2004 4:44:24 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT: San Juan Refining Client Sample ID: TP#7
 Lab Order: 0410291 Collection Date: 10/28/2004 1:05:00 PM
 Project: River Terrace-Temp Piezometers
 Lab ID: 0410291-07 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/4/2004 8:20:12 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 8:20:12 PM
Surr: DNOP	128	58-140		%REC	1	11/4/2004 8:20:12 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.7	0.050		mg/L	1	11/2/2004 12:03:53 AM
Surr: BFB	105	74-118		%REC	1	11/2/2004 12:03:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/2/2004 12:03:53 AM
Benzene	5.5	0.50		µg/L	1	11/2/2004 12:03:53 AM
Toluene	ND	0.50		µg/L	1	11/2/2004 12:03:53 AM
Ethylbenzene	15	0.50		µg/L	1	11/2/2004 12:03:53 AM
Xylenes, Total	220	2.5		µg/L	5	11/2/2004 5:14:28 PM
Surr: 4-Bromofluorobenzene	101	74-118		%REC	1	11/2/2004 12:03:53 AM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT:	San Juan Refining	Client Sample ID:	TP#8
Lab Order:	0410291	Collection Date:	10/28/2004 12:55:00 PM
Project:	River Terrace-Temp Piezometers		
Lab ID:	0410291-08	Matrix:	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	4.4	1.0		mg/L	1	11/4/2004 8:50:15 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/4/2004 8:50:15 PM
Surr: DNOP	94.1	58-140		%REC	1	11/4/2004 8:50:15 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	89	10		mg/L	200	11/2/2004 12:34:09 AM
Surr: BFB	113	74-118		%REC	200	11/2/2004 12:34:09 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	500		µg/L	200	11/2/2004 12:34:09 AM
Benzene	870	100		µg/L	200	11/2/2004 12:34:09 AM
Toluene	340	100		µg/L	200	11/2/2004 12:34:09 AM
Ethylbenzene	3100	100		µg/L	200	11/2/2004 12:34:09 AM
Xylenes, Total	33000	100		µg/L	200	11/2/2004 12:34:09 AM
Surr: 4-Bromofluorobenzene	104	74-118		%REC	200	11/2/2004 12:34:09 AM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

CLIENT: San Juan Refining
 Work Order: 0410291
 Project: River Terrace-Temp Piezometers
QC SUMMARY REPORT
 Method Blank

Sample ID MB-6772 Batch ID: 6772 Test Code: SW8015 Units: mg/L Analysis Date 11/4/2004 2:23:05 PM Prep Date 11/2/2004
 Client ID: FID(17A)2_041102A Run ID: FID(17A)2_041102A SeqNo: 317724

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.223	0	1	0	122	58	140	0			

Sample ID Reagent Blank 5m Batch ID: R13632 Test Code: SW8015 Units: mg/L Analysis Date 11/1/2004 7:59:13 AM Prep Date
 Client ID: PIDFID_041101A Run ID: PIDFID_041101A SeqNo: 316672

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	21.69	0	20	0	108	74	118	0			

Sample ID Reagent Blank 5m Batch ID: R13645 Test Code: SW8015 Units: mg/L Analysis Date 11/2/2004 9:17:05 AM Prep Date
 Client ID: PIDFID_041102A Run ID: PIDFID_041102A SeqNo: 316982

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	20.81	0	20	0	104	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits D - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0410291
Project: River Terrace-Temp Piezometers

Sample ID	Reagent Blank 5m	Batch ID: R13632	Test Code: SW8021	Units: µg/L	Analysis Date 11/11/2004 7:59:13 AM	Prep Date				
Client ID:	Run ID: PIDFID_041101A	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result				%REC					
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	0.5								
Toluene	ND	0.5								
Ethylbenzene	ND	0.5								
Xylenes, Total	ND	0.5								
Surr: 4-Bromofluorobenzene	21.15	0	20	0	106	74	118	0		

Sample ID	Reagent Blank 5m	Batch ID: R13645	Test Code: SW8021	Units: µg/L	Analysis Date 11/22/2004 9:17:05 AM	Prep Date				
Client ID:	Run ID: PIDFID_041102A	PQL	SPK value	SPK Ref Val	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result				%REC					
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	0.5								
Toluene	ND	0.5								
Ethylbenzene	ND	0.5								
Xylenes, Total	ND	0.5								
Surr: 4-Bromofluorobenzene	20.55	0	20	0	103	74	118	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 08-Nov-04

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0410291
 Project: River Terrace-Temp Piezometers

Sample ID LCS-6772 Batch ID: 6772 Test Code: SW8015 Units: mg/L Analysis Date 11/4/2004 2:52:24 PM Prep Date 11/2/2004
 Client ID: Run ID: FID(17A)_2_041102A SeqNo: 317725

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.634	1	5	0	113	81.2	149	0			

Sample ID LCSD-6772 Batch ID: 6772 Test Code: SW8015 Units: mg/L Analysis Date 11/4/2004 3:21:42 PM Prep Date 11/2/2004
 Client ID: Run ID: FID(17A)_2_041102A SeqNo: 317726

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.958	1	5	0	99.2	81.2	149	5.634	12.8	23	

Sample ID GRO std 2.5ug Batch ID: R13632 Test Code: SW8015 Units: mg/L Analysis Date 11/2/2004 2:03:18 AM Prep Date
 Client ID: Run ID: PIDFID_041101A SeqNo: 316780

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5166	0.05	0.5	0	103	80.3	116	0			

Sample ID GRO std 2.5ug Batch ID: R13645 Test Code: SW8015 Units: mg/L Analysis Date 11/2/2004 7:13:49 PM Prep Date
 Client ID: Run ID: PIDFID_041102A SeqNo: 316986

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.489	0.05	0.5	0	97.8	80.3	116	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0410291
Project: River Terrace-Temp Piezometers

Sample ID	BTEX std 100ng	Batch ID: R13632	Test Code: SW8021	Units: µg/L	Analysis Date	11/1/2004 8:58:56 AM	Prep Date				
Client ID:	Run ID:	PIDFID_041101A	SeqNo:	316761	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	40.16	2.5	40	0	100	54.9	142	0			
Benzene	20.01	0.5	20	0	100	81.3	121	0			
Toluene	20.57	0.5	20	0	103	84.9	118	0			
Ethylbenzene	20.82	0.5	20	0	104	53.8	149	0			
Xylenes, Total	62.36	0.5	60	0	104	83.1	122	0			

Sample ID	BTEX std 100ng	Batch ID: R13632	Test Code: SW8021	Units: µg/L	Analysis Date	11/1/2004 7:05:39 PM	Prep Date				
Client ID:	Run ID:	PIDFID_041101A	SeqNo:	316762	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	41.49	2.5	40	0	104	54.9	142	40.16	3.27	28	
Benzene	18.45	0.5	20	0	92.2	81.3	121	20.01	8.11	27	
Toluene	18.72	0.5	20	0	93.6	84.9	118	20.57	9.41	19	
Ethylbenzene	18.54	0.5	20	0	92.7	53.8	149	20.82	11.6	15	
Xylenes, Total	56.7	0.5	60	0	94.5	83.1	122	62.36	9.51	13	

Sample ID	BTEX std 100ng	Batch ID: R13645	Test Code: SW8021	Units: µg/L	Analysis Date	11/2/2004 8:13:14 PM	Prep Date				
Client ID:	Run ID:	PIDFID_041102A	SeqNo:	317033	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	43.38	2.5	40	0	108	54.9	142	0			
Benzene	19.92	0.5	20	0	99.6	81.3	121	0			
Toluene	19.73	0.5	20	0	98.7	84.9	118	0			
Ethylbenzene	20.23	0.5	20	0	101	53.8	149	0			
Xylenes, Total	60.84	0.5	60	0	101	83.1	122	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

10/29/2004

Work Order Number 0410291

Received by AT

Checklist completed by

[Handwritten Signature]

Signature

10/29/04

Date

Matrix

Carrier name UPS

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- 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
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes No N/A

Container/Temp Blank temperature? 3° 4° C ± 2 Acceptable
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

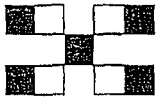
CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refinery
 Address: #50 Rd 4990
Bloomfield, NM 87413
 Project Name: River Terrace -
Temporary Piezometers
 Project #: _____
 Project Manager: _____
 Sampler: Cindy Hurtado
 Sample Temperature: 3.0

Accreditation Applied:
 NELAC USAOE

Other:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkins NE, Suite D
 Albuquerque, New Mexico 87109
 Tel. 505.345.3975 Fax 505.345.4107
 www.hallenvironmental.com



ANALYSIS REQUEST

BTEX + MTBE + TPB (Gasoline Only)	X	TPH Method 8015B MOD (Gas/Diesel)	X	TPH (Method 418.1)		EDB (Method 504.1)		EDC (Method 8021)		8310 (PNA or PAH)		PCRA 8 Metals		Cations (Na, K, Ca, Mg)		Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)		8081 Pesticides / PCB's (8082)		8260 (VDA)		8270 (Semi-VDA)		Air Bubbles or Headspace (Y or N)
	X		X																					

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.	
					H ₂ Cl ₂	HNO ₃		
10-28-04	1100AM	H ₂ O	TP #1	3-VDA	X		2410291-1	
	1130Am		TP #2	}			-2	
	1145Am		TP #3					-3
	12N		TP #4					-4
	1220P		TP #5					-5
	1235P		TP #6					-6
	105Pm		TP #7					-7
	1255Pm		TP #8		3-VDA	X		-8

Date: 10-28-04 Time: 3:30
 Relinquished By: (Signature) Cindy Hurtado
 Relinquished By: (Signature) _____
 Date: _____ Time: _____
 Remarks: _____

Date: _____ Time: _____
 Relinquished By: (Signature) _____
 Relinquished By: (Signature) _____
 Date: _____ Time: _____
 Remarks: _____



Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Frances Dr.
Santa Fe, New Mexico 87505

Certified Mail: 7099 3220 0010 2242 5129

October 8, 2004

Re: **RIVER SAMPLES**

Dear Mr. Price,

Giant Refining Company – Bloomfield Refinery conducted river sampling events per the “Monitoring and Contingency Plan”. Enclosed in this packet are the hardcopies of the analysis of samples taken from August 14, September 7, and September 30, 2004 as well as a map of those sampling locations.

Please note that in the first event, a sampling location was identified as “Draw MW #47”. This should have been labeled as “North of MW #46” and will be identified as such in future events.

River samples were pulled again on October 7, 2004 and the analysis will be forwarded on to you when it is completed.

Please contact me if you have any questions.

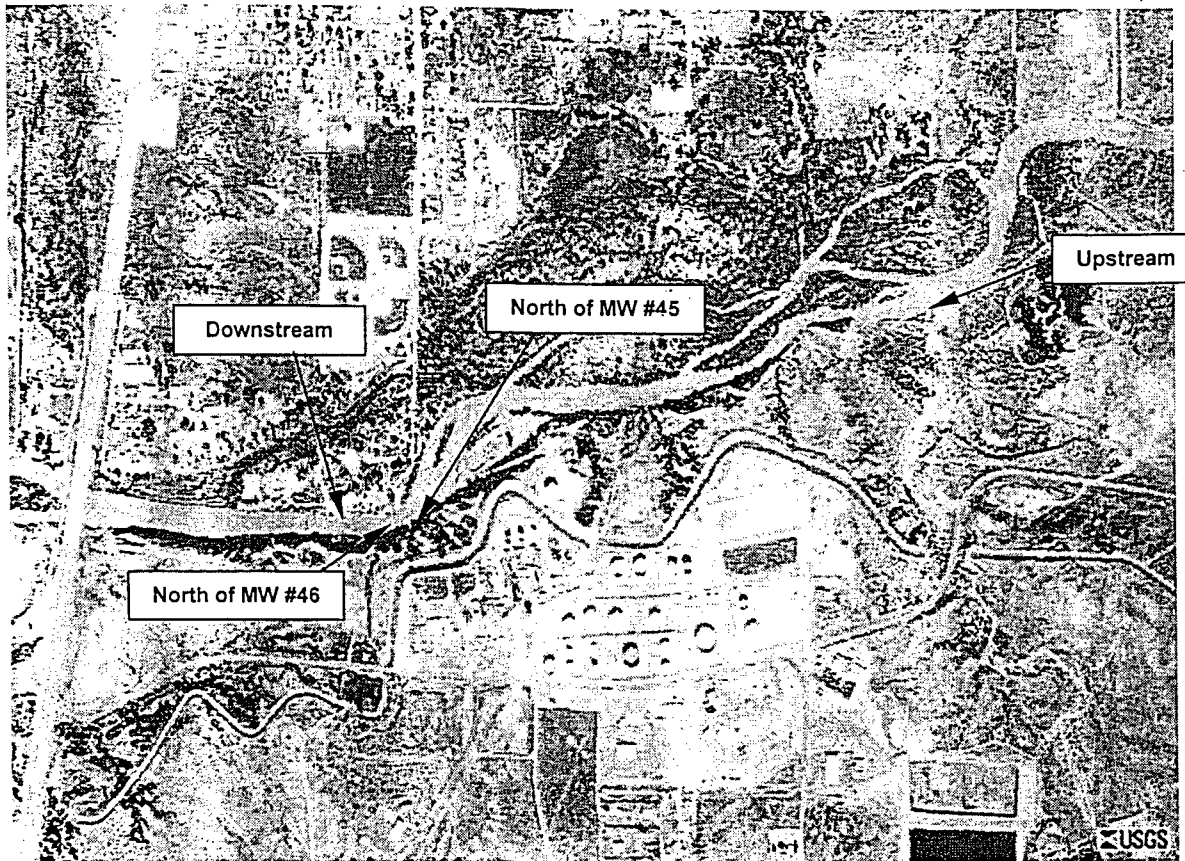
Sincerely,


Cindy Hurtado

Cc: Hope Monzeglio – NMED
Denny Foust - OCD
Randy Schmaltz – Giant Refining

PHONE
505-632-8013
FAX
505-632-3911

50 ROAD 4990
P.O. BOX 159
BLOOMFIELD
NEW MEXICO
87413



San Juan River Sampling Points

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

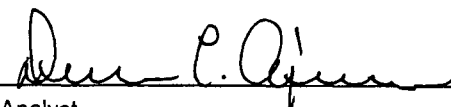
Client:	Giant	Project #:	96012-028
Sample ID:	009	Date Reported:	08-19-04
Laboratory Number:	30065	Date Sampled:	08-16-04
Chain of Custody No:	12756	Date Received:	08-16-04
Sample Matrix:	Water	Date Extracted:	08-19-04
Preservative:	Cool	Date Analyzed:	08-19-04
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

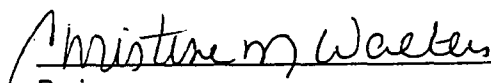
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	0.3	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	0.3	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846. USEPA, December 1996.

Comments: **Outfall Area Draw MW #47.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Giant	Project #:	96012-028
Sample ID:	009	Date Reported:	08-19-04
Chain of Custody:	12756	Date Sampled:	08-16-04
Laboratory Number:	30065	Date Received:	08-16-04
Sample Matrix:	Water	Date Analyzed:	08-19-04
Preservative:	Cool	Analysis Requested:	BTEX-MTBE
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Methyl-t-butly Ether	ND	1	0.2
Benzene	6.3	1	0.2
Toluene	85.4	1	0.2
Ethylbenzene	29.0	1	0.2
p,m-Xylene	95.8	1	0.2
o-Xylene	14.9	1	0.1

Total BTEX 231


ND - Parameter not detected at the stated detection limit.

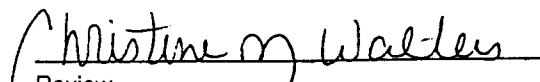
Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	98 %
	1,4-difluorobenzene	98 %
	4-bromochlorobenzene	98 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: Outfall Area Draw MW #47.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

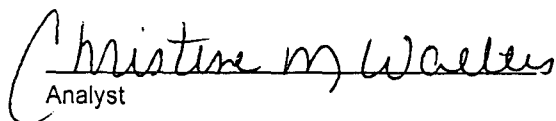
CATION / ANION ANALYSIS

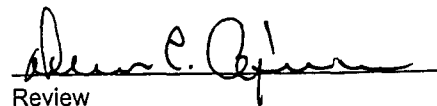
Client:	Giant	Project #:	96012-028
Sample ID:	009	Date Reported:	08-19-04
Laboratory Number:	30065	Date Sampled:	08-16-04
Chain of Custody:	12756	Date Received:	08-16-04
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-17-04
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		Units
pH	7.48	s.u.		
Conductivity @ 25° C	402	umhos/cm		
Total Dissolved Solids @ 180C	228	mg/L		
Total Dissolved Solids (Calc)	248	mg/L		
SAR	1.1	ratio		
Total Alkalinity as CaCO3	87.2	mg/L		
Total Hardness as CaCO3	132	mg/L		
Bicarbonate as HCO3	87.2	mg/L	1.43	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.2	mg/L	0.00	meq/L
Nitrite Nitrogen	0.004	mg/L	0.00	meq/L
Chloride	23.2	mg/L	0.65	meq/L
Fluoride	0.18	mg/L	0.01	meq/L
Phosphate	0.4	mg/L	0.01	meq/L
Sulfate	91.0	mg/L	1.89	meq/L
Iron	0.010	mg/L	0.00	meq/L
Calcium	41.6	mg/L	2.08	meq/L
Magnesium	6.93	mg/L	0.57	meq/L
Potassium	1.65	mg/L	0.04	meq/L
Sodium	30.2	mg/L	1.31	meq/L
Cations			4.00	meq/L
Anions			4.00	meq/L
Cation/Anion Difference			0.03%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: Outfall Area Draw of MW #47.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Giant	Project #:	96012-028
Sample ID:	009	Date Reported:	08-18-04
Laboratory Number:	30065	Date Sampled:	08-14-04
Chain of Custody:	12756	Date Received:	08-14-04
Sample Matrix:	Water	Date Analyzed:	08-18-04
Preservative:	Cool	Date Digested:	08-17-04
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	0.001	0.001	5.0
Barium	0.027	0.001	100
Cadmium	ND	0.001	1.0
Chromium	ND	0.001	5.0
Lead	ND	0.001	5.0
Mercury	ND	0.001	0.2
Selenium	ND	0.001	1.0
Silver	ND	0.001	5.0

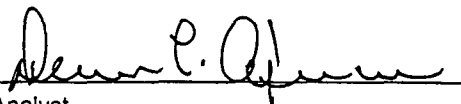
ND - Parameter not detected at the stated detection limit.

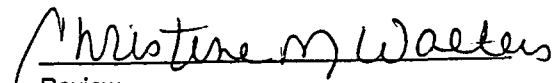
References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.
SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: Outfall Area Draw MW #47.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-19-TPH QA/QC	Date Reported:	08-19-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-19-04
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept. Range
Gasoline Range C5 - C10	02-19-04	1.8591E-002	1.8572E-002	0.10%	0 - 15%
Diesel Range C10 - C28	02-19-04	1.5507E-002	1.5476E-002	0.20%	0 - 15%

Blank Conc. (mg/L)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

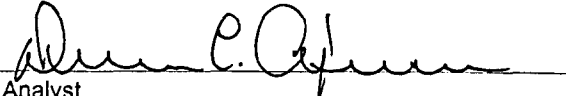
Duplicate Conc. (mg/L)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	0.3	0.3	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

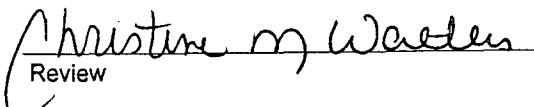
Spike Conc. (mg/L)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	0.3	250	250	99.9%	75 - 125%
Diesel Range C10 - C28	ND	250	250	100.0%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	08-19-BTEX QA/QC	Date Reported:	08-19-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-19-04
Condition:	N/A	Analysis:	BTEX-MTBE

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff.	Blank Conc	Detect Limit
Methyl-t-butly Ether	7.7846E-001	7.7924E-001	0.10%	ND	0.2
Benzene	2.8990E-001	2.9048E-001	0.20%	ND	0.2
Toluene	2.546CE-002	2.5465E-002	0.02%	ND	0.2
Ethylbenzene	3.8451E-002	3.8528E-002	0.20%	ND	0.2
p,m-Xylene	3.298E-002	3.2995E-002	0.02%	ND	0.2
o-Xylene	3.3333E-002	3.3433E-002	0.30%	ND	0.1

Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit
Methyl-t-butly Ether	ND	ND	0.0%	0 - 30%
Benzene	6.3	6.4	1.6%	0 - 30%
Toluene	85.4	86.8	1.6%	0 - 30%
Ethylbenzene	29.0	28.7	1.0%	0 - 30%
p,m-Xylene	95.8	95.9	0.1%	0 - 30%
o-Xylene	14.9	14.7	1.3%	0 - 30%

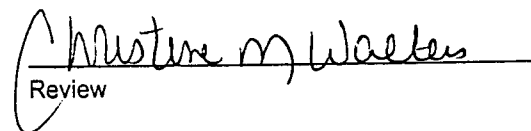
Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Methyl-t-butly Ether	ND	50.0	50.0	100.0%	80 - 120
Benzene	6.3	50.0	56.2	99.8%	39 - 150
Toluene	85.4	50.0	135	99.4%	46 - 148
Ethylbenzene	29.0	50.0	78.9	99.9%	32 - 160
p,m-Xylene	95.8	100	195	99.8%	46 - 148
o-Xylene	14.9	50.0	64.8	99.8%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS Quality Control / Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-18-TM QA/QC	Date Reported:	08-18-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	Total RCRA Metals	Date Analyzed:	08-18-04
Condition:	N/A	Date Digested:	08-17-04

Blank & Duplicate Conc. (mg/L)	Instrument Blank (mg/L)	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	0.001	0.001	0.0%	0% - 30%
Barium	ND	ND	0.001	0.027	0.027	0.0%	0% - 30%
Cadmium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Chromium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.001	ND	ND	0.0%	0% - 30%

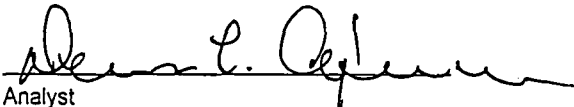
Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.500	0.001	0.500	99.8%	80% - 120%
Barium	0.500	0.027	0.527	100.0%	80% - 120%
Cadmium	0.500	ND	0.500	100.0%	80% - 120%
Chromium	0.500	ND	0.500	100.0%	80% - 120%
Lead	0.500	ND	0.499	99.8%	80% - 120%
Mercury	0.050	ND	0.050	100.0%	80% - 120%
Selenium	0.500	ND	0.499	99.8%	80% - 120%
Silver	0.500	ND	0.500	100.0%	80% - 120%

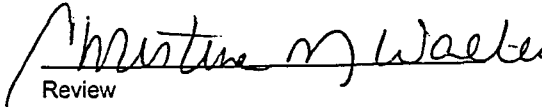
ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.
SW-843, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

CHAIN OF CUSTODY RECORD

12756

Pg 1 of 2

Client / Project Name		Project Location		ANALYSIS / PARAMETERS						Remarks				
Giant		outfall area		No. of Containers		General Chemistry	TPH	2015	BTX/MTBE	2001	WQCC/MSM			
Morgan K. 11:00		96612-028												
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers									
001	8-14-04	08:45	300057	Soil	1	X							Topsoil spill	
002	11	08:20	300058	Soil	1	X							Middle of spill Lower middle of spill	
003	11	09:45	300059	Soil	1	X							Above soil containment	
004	11	05:50	300060	Soil	1	X							Below soil containment	
005	11	09:55	300061	Soil	1	X							S. of MW #47	
006	11	11:40	300062	Soil	1	X							N. of MW #47	
007	11	14:40	300063	Soil	1	X							N. of MW #45	
008	11	12:50	300064	Soil	1	X							Draw MW #47	
009	11	11:20	300065	H ₂ O	2	X							Draw MW #45	
010	11	11:40	300066	H ₂ O	2	X								
Relinquished by: (Signature)			Date		Time		Received by: (Signature)		Date		Time			
Morgan K. 11:00			8/14/04		15:30		M. Waalen		8/14/04		15:30			
Relinquished by: (Signature)			Date		Time		Received by: (Signature)		Date		Time			
			8/14/04											

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt

Y N N/A

Received Intact

Cool - Ice/Blue Ice

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

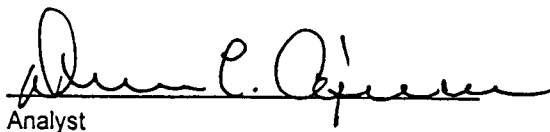
Client:	Giant	Project #:	96012-028
Sample ID:	011	Date Reported:	08-19-04
Laboratory Number:	30067	Date Sampled:	08-16-04
Chain of Custody No:	12756	Date Received:	08-16-04
Sample Matrix:	Water	Date Extracted:	08-19-04
Preservative:	Cool	Date Analyzed:	08-19-04
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

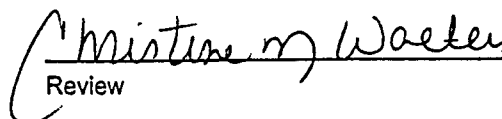
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Outfall Area Up Stream of Plant.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Giant	Project #:	96012-028
Sample ID:	011	Date Reported:	08-19-04
Chain of Custody:	12756	Date Sampled:	08-16-04
Laboratory Number:	30067	Date Received:	08-16-04
Sample Matrix:	Water	Date Analyzed:	08-19-04
Preservative:	Cool	Analysis Requested:	BTEX-MTBE
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Methyl-t-butyl Ether	ND	1	0.2
Benzene	ND	1	0.2
Toluene	ND	1	0.2
Ethylbenzene	ND	1	0.2
p,m-Xylene	ND	1	0.2
o-Xylene	ND	1	0.1
Total BTEX	ND		

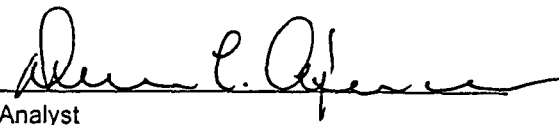
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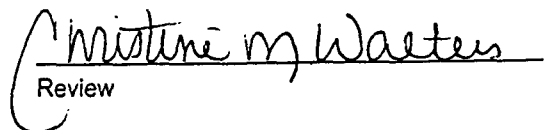
Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	98 %
	1,4-difluorobenzene	98 %
	4-bromochlorobenzene	98 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: Outfall Area Up Stream of Plant.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Giant	Project #:	96012-028
Sample ID:	011	Date Reported:	08-19-04
Laboratory Number:	30067	Date Sampled:	08-16-04
Chain of Custody:	12756	Date Received:	08-16-04
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-17-04
Condition:	Cool & Intact		

Parameter	Analytical Result	Units	Units
pH	7.87	s.u.	
Conductivity @ 25° C	391	umhos/cm	
Total Dissolved Solids @ 180C	242	mg/L	
Total Dissolved Solids (Calc)	255	mg/L	
SAR	1.4	ratio	
Total Alkalinity as CaCO3	86.0	mg/L	
Total Hardness as CaCO3	123	mg/L	

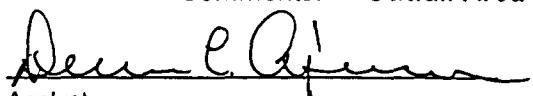
Bicarbonate as HCO3	86.0	mg/L	1.41	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.2	mg/L	0.00	meq/L
Nitrite Nitrogen	0.007	mg/L	0.00	meq/L
Chloride	23.2	mg/L	0.65	meq/L
Fluoride	0.45	mg/L	0.02	meq/L
Phosphate	0.2	mg/L	0.01	meq/L
Sulfate	95.5	mg/L	1.99	meq/L
Iron	0.001	mg/L	0.00	meq/L
Calcium	39.2	mg/L	1.96	meq/L
Magnesium	6.15	mg/L	0.51	meq/L
Potassium	1.25	mg/L	0.03	meq/L
Sodium	36.6	mg/L	1.59	meq/L

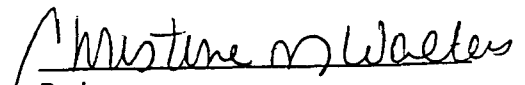
Cations 4.09 meq/L
Anions 4.09 meq/L

Cation/Anion Difference 0.01%

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: Outfall Area Up Stream of Plant.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Giant	Project #:	96012-028
Sample ID:	011	Date Reported:	08-18-04
Laboratory Number:	30067	Date Sampled:	08-14-04
Chain of Custody:	12756	Date Received:	08-14-04
Sample Matrix:	Water	Date Analyzed:	08-18-04
Preservative:	Cool	Date Digested:	08-17-04
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	ND	0.001	5.0
Barium	0.005	0.001	100
Cadmium	ND	0.001	1.0
Chromium	ND	0.001	5.0
Lead	ND	0.001	5.0
Mercury	ND	0.001	0.2
Selenium	ND	0.001	1.0
Silver	ND	0.001	5.0

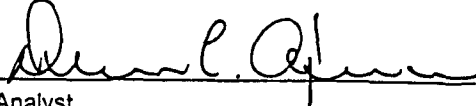
ND - Parameter not detected at the stated detection limit.

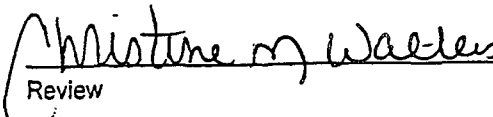
References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.
SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Outfall Area Up Stream of Plant.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-19-TPH QA/QC	Date Reported:	08-19-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-19-04
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept Range
Gasoline Range C5 - C10	02-19-04	1.8591E-002	1.8572E-002	0.10%	0 - 15%
Diesel Range C10 - C28	02-19-04	1.5507E-002	1.5476E-002	0.20%	0 - 15%

Blank Conc. (mg/L)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

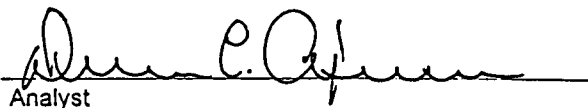
Duplicate Conc. (mg/L)	Sample	Duplicate	% Difference	Accept Range
Gasoline Range C5 - C10	0.3	0.3	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

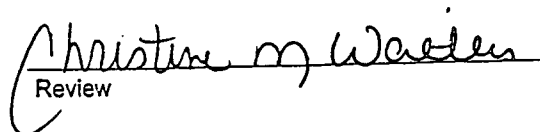
Spike Conc. (mg/L)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
Gasoline Range C5 - C10	0.3	250	250	99.9%	75 - 125%
Diesel Range C10 - C28	ND	250	250	100.0%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	08-19-BTEX QA/QC	Date Reported:	08-19-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-19-04
Condition:	N/A	Analysis:	BTEX-MTBE

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF	%Diff.	Blank Conc	Detect Limit
Methyl-t-butly Ether	7.7846E-001	7.7924E-001	0.10%	ND	0.2
Benzene	2.8990E-001	2.9048E-001	0.20%	ND	0.2
Toluene	2.5460E-002	2.5465E-002	0.02%	ND	0.2
Ethylbenzene	3.8451E-002	3.8528E-002	0.20%	ND	0.2
p,m-Xylene	3.2988E-002	3.2995E-002	0.02%	ND	0.2
o-Xylene	3.3333E-002	3.3433E-002	0.30%	ND	0.1

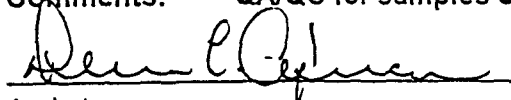
Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit
Methyl-t-butly Ether	ND	ND	0.0%	0 - 30%
Benzene	6.3	6.4	1.6%	0 - 30%
Toluene	85.4	86.8	1.6%	0 - 30%
Ethylbenzene	29.0	28.7	1.0%	0 - 30%
p,m-Xylene	95.8	95.9	0.1%	0 - 30%
o-Xylene	14.9	14.7	1.3%	0 - 30%

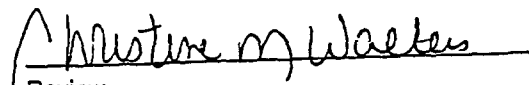
Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Methyl-t-butly Ether	ND	50.0	50.0	100.0%	80 - 120
Benzene	6.3	50.0	56.2	99.8%	39 - 150
Toluene	85.4	50.0	135	99.4%	46 - 148
Ethylbenzene	29.0	50.0	78.9	99.9%	32 - 160
p,m-Xylene	95.8	100	195	99.8%	46 - 148
o-Xylene	14.9	50.0	64.8	99.8%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS Quality Control / Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-18-TM QA/QC	Date Reported:	08-18-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	Total RCRA Metals	Date Analyzed:	08-18-04
Condition:	N/A	Date Digested:	08-17-04

Blank & Duplicate Conc. (mg/L)	Instrument Blank (mg/L)	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	0.001	0.001	0.0%	0% - 30%
Barium	ND	ND	0.001	0.027	0.027	0.0%	0% - 30%
Cadmium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Chromium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.001	ND	ND	0.0%	0% - 30%

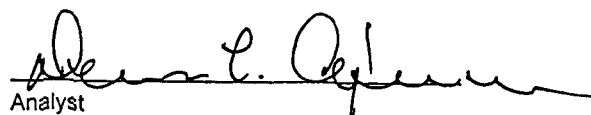
Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.500	0.001	0.500	99.8%	80% - 120%
Barium	0.500	0.027	0.527	100.0%	80% - 120%
Cadmium	0.500	ND	0.500	100.0%	80% - 120%
Chromium	0.500	ND	0.500	100.0%	80% - 120%
Lead	0.500	ND	0.499	99.8%	80% - 120%
Mercury	0.050	ND	0.050	100.0%	80% - 120%
Selenium	0.500	ND	0.499	99.8%	80% - 120%
Silver	0.500	ND	0.500	100.0%	80% - 120%

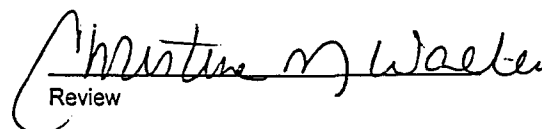
ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.
SW-843, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

CHAIN OF CUSTODY RECORD

12756

Pg 1 of 2

Client / Project Name		Project Location		ANALYSIS / PARAMETERS						Remarks			
Giant		outfall area											
Sampler: <i>Morgan Kill</i>		Client No. <i>96612-028</i>											
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	General Chemistry	TPH	DOIS	BTEX/MSA	1001	Heavy Metals	Remarks	
001	8-14-04	08:45	30057	Soil	1	X						Topsoil spill	
002	11	08:20	30058	Soil	1	X						Middle of spill Lower middle of spill	
003	11	09:45	30059	Soil	1	X						Above soil container below soil container	
004	11	09:50	30060	Soil	1	X						Below soil container	
005	11	09:55	30061	Soil	1	X						SOFAN #47	
006	11	10:42	30062	Soil	1	X						SOFAN #47	
007	11	14:40	30063	Soil	1	X						ALOFAN #47	
008	11	12:50	30064	Soil	1	X						N. of NW #45	
009	11	11:20	30065	H ₂ O	2	X						Draw NW #47	
010	11	10:40	30066	H ₂ O	2	X						Draw NW #45	
Relinquished by: (Signature) <i>Morgan Kill</i>				Date	Time	Received by: (Signature) <i>Matthew M. Walter</i>						Date	Time
Relinquished by: (Signature)				8/14/04	15:30	Received by: (Signature)						8/14/04	
Relinquished by: (Signature)						Received by: (Signature)							

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt		
Received Intact	Y	N
Cool - Ice/Blue Ice	Y	N

CHAIN OF CUSTODY RECORD

12757
Pg 2 of 2

Client / Project Name			Project Location			ANALYSIS / PARAMETERS					Remarks			
Giant			OFF FILL AREAS											
Sampler: Morgan Kill: 62			Client No. 96012-028											
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	Parameter 1	Parameter 2	Parameter 3	Parameter 4	Parameter 5	Remarks			
011	8/14/04	10:20	30067	H2O	2	X	X	X	X		UP stream of 5th plant			
Relinquished by: (Signature) <i>Morgan Kill: 62</i>			Date 8-14-04			Time 15:30			Received by: (Signature) <i>Wistar M</i>			Date 8/14/04		
Relinquished by: (Signature)			Date			Time			Received by: (Signature)			Date		
Relinquished by: (Signature)			Date			Time			Received by: (Signature)			Date		
<p style="text-align: center;">ENVIROTECH INC.</p> <p style="text-align: center;">5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 632-0615</p>												Sample Receipt		
Received Intact												Y		
Cool - Ice/Blue Ice												N		
												N/A		

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

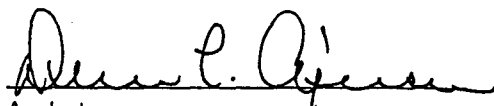
Client:	Giant	Project #:	96012-028
Sample ID:	010	Date Reported:	08-19-04
Laboratory Number:	30066	Date Sampled:	08-16-04
Chain of Custody No:	12756	Date Received:	08-16-04
Sample Matrix:	Water	Date Extracted:	08-19-04
Preservative:	Cool	Date Analyzed:	08-19-04
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

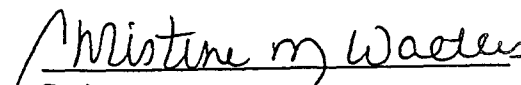
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	0.2	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	0.2	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Outfall Area Draw MW #45.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Giant	Project #:	96012-028
Sample ID:	010	Date Reported:	08-19-04
Chain of Custody:	12756	Date Sampled:	08-16-04
Laboratory Number:	30066	Date Received:	08-16-04
Sample Matrix:	Water	Date Analyzed:	08-19-04
Preservative:	Cool	Analysis Requested:	BTEX-MTBE
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Methyl-t-butyl Ether	ND	1	0.2
Benzene	9.7	1	0.2
Toluene	61.4	1	0.2
Ethylbenzene	22.0	1	0.2
p,m-Xylene	68.0	1	0.2
o-Xylene	13.3	1	0.1

Total BTEX 174

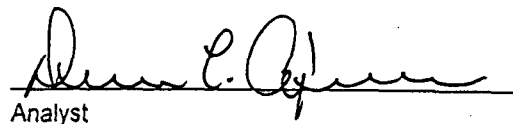
ND - Parameter not detected at the stated detection limit.

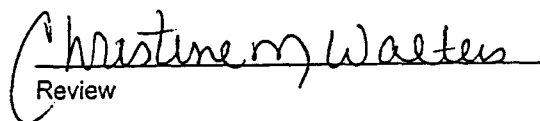
Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	98 %
	1,4-difluorobenzene	98 %
	4-bromochlorobenzene	98 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: Outfall Area Draw MW #45.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Giant	Project #:	96012-028
Sample ID:	010	Date Reported:	08-19-04
Laboratory Number:	30066	Date Sampled:	08-16-04
Chain of Custody:	12756	Date Received:	08-16-04
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	08-17-04
Condition:	Cool & Intact		

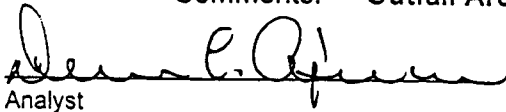
Parameter	Analytical Result	Units	Units
pH	7.75	s.u.	
Conductivity @ 25° C	398	umhos/cm	
Total Dissolved Solids @ 180C	244	mg/L	
Total Dissolved Solids (Calc)	254	mg/L	
SAR	1.4	ratio	
Total Alkalinity as CaCO3	89.2	mg/L	
Total Hardness as CaCO3	126	mg/L	
Bicarbonate as HCO3	89.2	mg/L	1.46 meq/L
Carbonate as CO3	<0.1	mg/L	0.00 meq/L
Hydroxide as OH	<0.1	mg/L	0.00 meq/L
Nitrate Nitrogen	0.2	mg/L	0.00 meq/L
Nitrite Nitrogen	0.003	mg/L	0.00 meq/L
Chloride	26.4	mg/L	0.74 meq/L
Fluoride	0.60	mg/L	0.03 meq/L
Phosphate	0.2	mg/L	0.01 meq/L
Sulfate	89.0	mg/L	1.85 meq/L
Iron	0.009	mg/L	0.00 meq/L
Calcium	39.5	mg/L	1.97 meq/L
Magnesium	6.54	mg/L	0.54 meq/L
Potassium	1.40	mg/L	0.04 meq/L
Sodium	35.8	mg/L	1.56 meq/L

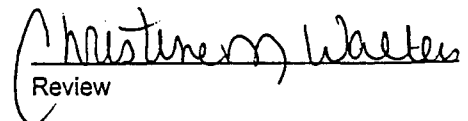
Cations 4.10 meq/L
Anions 4.10 meq/L

Cation/Anion Difference 0.04%

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: Outfall Area Draw of MW #45.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Giant	Project #:	96012-028
Sample ID:	010	Date Reported:	08-18-04
Laboratory Number:	30066	Date Sampled:	08-14-04
Chain of Custody:	12756	Date Received:	08-14-04
Sample Matrix:	Water	Date Analyzed:	08-18-04
Preservative:	Cool	Date Digested:	08-17-04
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	0.001	0.001	5.0
Barium	0.016	0.001	100
Cadmium	ND	0.001	1.0
Chromium	ND	0.001	5.0
Lead	ND	0.001	5.0
Mercury	ND	0.001	0.2
Selenium	ND	0.001	1.0
Silver	ND	0.001	5.0

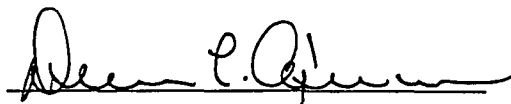
ND - Parameter not detected at the stated detection limit.

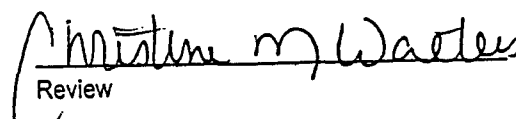
References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.
SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C
section 261.24, August 24, 1998.

Comments: Outfall Area Draw MW #45.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW.

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-19-TPH QA/QC	Date Reported:	08-19-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-19-04
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept Range
Gasoline Range C5 - C10	02-19-04	1.8591E-002	1.8572E-002	0.10%	0 - 15%
Diesel Range C10 - C28	02-19-04	1.5507E-002	1.5476E-002	0.20%	0 - 15%

Blank Conc. (mg/L)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

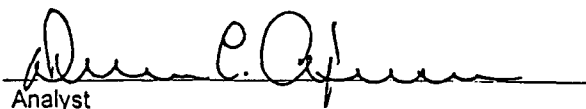
Duplicate Conc. (mg/L)	Sample	Duplicate	% Difference	Accept Range
Gasoline Range C5 - C10	0.3	0.3	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

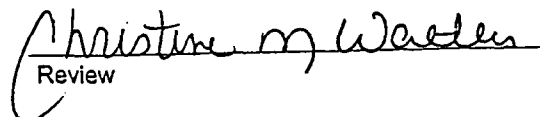
Spike Conc. (mg/L)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
Gasoline Range C5 - C10	0.3	250	250	99.9%	75 - 125%
Diesel Range C10 - C28	ND	250	250	100.0%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	08-19-BTEX QA/QC	Date Reported:	08-19-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-19-04
Condition:	N/A	Analysis:	BTEX-MTBE

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF: Accept. Range 0 - 15%	%Diff.	Blank Conc	Detect Limit
Methyl-t-butly Ether	7.7846E-001	7.7924E-001	0.10%	ND	0.2
Benzene	2.8990E-001	2.9048E-001	0.20%	ND	0.2
Toluene	2.5460E-002	2.5465E-002	0.02%	ND	0.2
Ethylbenzene	3.8451E-002	3.8528E-002	0.20%	ND	0.2
p,m-Xylene	3.2938E-002	3.2995E-002	0.02%	ND	0.2
o-Xylene	3.3333E-002	3.3433E-002	0.30%	ND	0.1

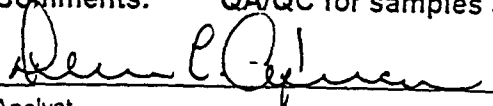
Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit
Methyl-t-butly Ether	ND	ND	0.0%	0 - 30%
Benzene	6.3	6.4	1.6%	0 - 30%
Toluene	85.4	86.8	1.6%	0 - 30%
Ethylbenzene	29.0	28.7	1.0%	0 - 30%
p,m-Xylene	95.8	95.9	0.1%	0 - 30%
o-Xylene	14.9	14.7	1.3%	0 - 30%

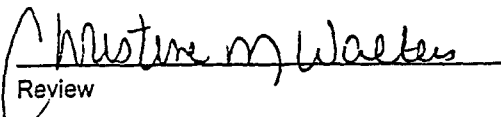
Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Methyl-t-butly Ether	ND	50.0	50.0	100.0%	80 - 120
Benzene	6.3	50.0	56.2	99.8%	39 - 150
Toluene	85.4	50.0	135	99.4%	46 - 148
Ethylbenzene	29.0	50.0	78.9	99.9%	32 - 160
p,m-Xylene	95.8	100	195	99.8%	46 - 148
o-Xylene	14.9	50.0	64.8	99.8%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS Quality Control / Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-18-TM QA/QC	Date Reported:	08-18-04
Laboratory Number:	30065	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	Total RCRA Metals	Date Analyzed:	08-18-04
Condition:	N/A	Date Digested:	08-17-04

Blank & Duplicate Conc. (mg/L)	Instrument Blank (mg/L)	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	0.001	0.001	0.0%	0% - 30%
Barium	ND	ND	0.001	0.027	0.027	0.0%	0% - 30%
Cadmium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Chromium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.001	ND	ND	0.0%	0% - 30%

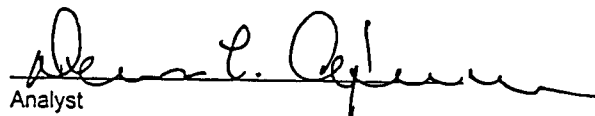
Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.500	0.001	0.500	99.8%	80% - 120%
Barium	0.500	0.027	0.527	100.0%	80% - 120%
Cadmium	0.500	ND	0.500	100.0%	80% - 120%
Chromium	0.500	ND	0.500	100.0%	80% - 120%
Lead	0.500	ND	0.499	99.8%	80% - 120%
Mercury	0.050	ND	0.050	100.0%	80% - 120%
Selenium	0.500	ND	0.499	99.8%	80% - 120%
Silver	0.500	ND	0.500	100.0%	80% - 120%

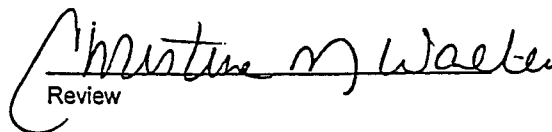
ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.
SW-843, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Comments: QA/QC for samples 30065 - 30067.


Analyst


Review

CHAIN OF CUSTODY RECORD

12756

Pg 1 of 2

Client / Project Name		Project Location		ANALYSIS / PARAMETERS						Remarks		
Givent		outfall area										
Sampler: Morgan K. L. 11:00		Client No. 96012-028										
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	General Chemistry	TPH	DO15	BTEX (MTR)	TOC	WQCC (MTR)	Remarks
001	8-14-04	09:45	30057	Soil	1	X						TOP SOIL
002	11	08:20	30058	Soil	1	X						MIDDLE OF SPILL
003	11	09:45	30059	Soil	1	X						LOWER MIDDLE OF SPILL
004	11	05:50	30060	Soil	1	X						ABOVE SOIL CONTAINMENT
005	11	09:55	30061	Soil	1	X						BELOW SOIL CONTAINMENT
006	11	09:42	30062	Soil	1	X						SOFT MUD #47
067	11	14:40	30063	Soil	1	X						AL. OF MUD #47
068	11	12:50	30064	Soil	1	X						N. OF MUD #45
009	11	11:20	30065	H ₂ O	2	X						DRY MUD #47
010	11	11:40	30066	H ₂ O	2	X						DRY MUD #45
Relinquished by: (Signature) <i>Morgan K. L.</i>		Date	Time	Received by: (Signature) <i>Matthew M. Walter</i>		Date	Time					
Relinquished by: (Signature)		8/14/04	15:30	Received by: (Signature)		8/14/04	15:30					
Relinquished by: (Signature)				Received by: (Signature)								

ENVIROTECH INC.

5796 U.S. Highway 64
 Farmington, New Mexico 87401
 (505) 632-0615

Sample Receipt

Y N N/A

Received Intact

Cool - Ice/Blue Ice

CHAIN OF CUSTODY RECORD

12757

Pg 2 of 2

Client / Project Name Great			Project Location outfall area			ANALYSIS / PARAMETERS											
Sampler: Morgan Kill: 60			Client No. 96012-028									Remarks					
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	ANALYSIS / PARAMETERS					Remarks						
011	8/14/04	10:20	30067	H ₂ O	2	General Chemistry	TOX	8016	8701	8021	2020	5/4/04		VP stream of #11 plot			
Relinquished by: (Signature) <i>Morgan Kill: 60</i>			Date 8/14/04			Time 15:30			Received by: (Signature) <i>Mistina M</i>			Date 8/14/04			Time 15:30		
Relinquished by: (Signature)			Date			Time			Received by: (Signature)			Date			Time		
Relinquished by: (Signature)			Date			Time			Received by: (Signature)			Date			Time		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt

Received Intact	Y	N	N/A
Cool - Ice/Blue Ice			

COVER LETTER

October 05, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: River Downstream

Order No.: 0410010

Dear Cindy Hurtado:

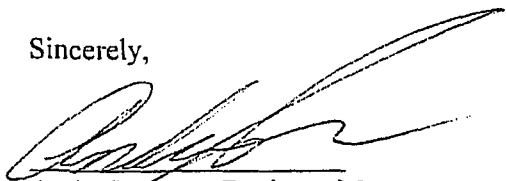
Hall Environmental Analysis Laboratory received 1 sample on 10/1/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 05-Oct-04

CLIENT: San Juan Refining
 Lab Order: 0410010
 Project: River Downstream
 Lab ID: 0410010-01

Client Sample ID: River-Down Stream
 Collection Date: 9/30/2004 9:40:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	10/5/2004 6:01:51 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	10/5/2004 6:01:51 AM
Surr: DNOP	121	58-140		%REC	1	10/5/2004 6:01:51 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/1/2004 3:12:26 PM
Surr: BFB	86.3	74-118		%REC	1	10/1/2004 3:12:26 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	10/1/2004 3:12:26 PM
Benzene	ND	0.50		µg/L	1	10/1/2004 3:12:26 PM
Toluene	ND	0.50		µg/L	1	10/1/2004 3:12:26 PM
Ethylbenzene	ND	0.50		µg/L	1	10/1/2004 3:12:26 PM
Xylenes, Total	ND	0.50		µg/L	1	10/1/2004 3:12:26 PM
Surr: 4-Bromofluorobenzene	93.3	74-118		%REC	1	10/1/2004 3:12:26 PM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 05-Oct-04

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0410010
Project: River Downstream

Sample ID MB-6605 Batch ID: 6605 Test Code: SW8015 Units: mg/L Analysis Date 10/5/2004 4:32:45 AM Prep Date 10/4/2004
Client ID: FID(17A)_2_041004A SeqNo: 310403

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.162	0	1	0	116	58	140	0			

Sample ID Reagent Blank 5m Batch ID: R13318 Test Code: SW8015 Units: mg/L Analysis Date 10/1/2004 8:39:21 AM Prep Date
Client ID: PIDFID_041001A SeqNo: 309516

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	17.31	0	20	0	86.6	74	118	0			

Sample ID Reagent Blank 5m Batch ID: R13318 Test Code: SW8021 Units: µg/L Analysis Date 10/1/2004 8:39:21 AM Prep Date
Client ID: PIDFID_041001A SeqNo: 309515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									

Quantifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Date: 05-Oct-04

QC SUMMARY REPORT
Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0410010
Project: River Downstream

Sample ID LCS-6605 Batch ID: 6605 Test Code: SW8015 Units: mg/L Analysis Date 10/5/2004 5:02:37 AM Prep Date 10/4/2004
Client ID: Run ID: FID(17A)2_041004A SeqNo: 310404

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.55	1	5	0	111	81.2	149	0			

Sample ID LCSD-6605 Batch ID: 6605 Test Code: SW8015 Units: mg/L Analysis Date 10/5/2004 5:32:11 AM Prep Date 10/4/2004
Client ID: Run ID: FID(17A)2_041004A SeqNo: 310405

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.736	1	5	0	115	81.2	149	5.55	3.29	23	

Sample ID GRO std 2.5ug Batch ID: R13318 Test Code: SW8015 Units: mg/L Analysis Date 10/1/2004 9:09:08 AM Prep Date
Client ID: Run ID: PIDFID_041001A SeqNo: 309539

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4924	0.05	0.5	0	98.5	80.3	116	0			

Sample ID GRO std 2.5ug Batch ID: R13318 Test Code: SW8015 Units: mg/L Analysis Date 10/1/2004 3:42:10 PM Prep Date
Client ID: Run ID: PIDFID_041001A SeqNo: 309540

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.05	0.5	0	92.0	80.3	116	0.4924	6.80	8.39	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0410010
Project: River Downstream

Sample ID	BTEX std 100ng	Batch ID: R13318	Test Code: SW8021	Units: µg/L	Analysis Date	10/1/2004 9:38:57 AM	Prep Date					
Client ID:	PIDFID_041001A	Run ID:	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Methyl tert-butyl ether (MTBE)	30.97	2.5	40	0	0	77.4	54.9	142	0			
Benzene	21	0.5	20	0	0	105	81.3	121	0			
Toluene	21	0.5	20	0	0	105	84.9	118	0			
Ethylbenzene	21.34	0.5	20	0	0	107	53.8	149	0			
Xylenes, Total	64.81	0.5	60	0	0	108	83.1	122	0			

Sample ID	BTEX std 100ng	Batch ID: R13318	Test Code: SW8021	Units: µg/L	Analysis Date	10/1/2004 8:39:38 PM	Prep Date					
Client ID:	PIDFID_041001A	Run ID:	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result											
Methyl tert-butyl ether (MTBE)	28.94	2.5	40	0	0	72.3	54.9	142	30.97	6.79	28	
Benzene	19.22	0.5	20	0	0	96.1	81.3	121	21	8.87	27	
Toluene	19.69	0.5	20	0	0	98.5	84.9	118	21	6.41	19	
Ethylbenzene	18.92	0.5	20	0	0	94.6	53.8	149	21.34	12.0	15	
Xylenes, Total	57.34	0.5	60	0	0	95.6	83.1	122	64.81	12.2	13	

Qualifiers: N/D - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

10/1/2004

Work Order Number 0410070

Received by AT

Checklist completed by

Signature: [Handwritten Signature] Date: 10/1/04

Matrix

Carrier name UPS

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- 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
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes No N/A
- Container/Temp Blank temperature? 5° 4° C ± 2 Acceptable
If given sufficient time to cool.

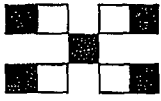
COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Accreditation Applied:
NELAC [] USADE []

CHAIN-OF-CUSTODY RECORD

Client: SAN JUAN Refining
Other: River-Downstream
Project Name:
Project #:
Project Manager:
Sample: Cindy Hurtado
Sample Temperature: 5-9

Table with columns: Date, Time, Matrix, Sample I.D. No., Number, Volume, Preservative (HgCl2, HNO3), HEAL No.
Row 1: 9-30-04, 940A, H2O, River-Down Stream, 4, VOA, X, CH100-1

ANALYSIS REQUEST table with columns: TPH Method 8015B (Gas/Diesel), TPH Method 418.1, EOB (Method 504.1), EDC (Method 8021), B310 (PNA or PAH), RCRA 8 Metals, Anions (F-, Cl-, NO2-, NO3-, PO4-, SO4-), B081 Pesticides / PCB's (B082), B260B (VOA), B270 (Semi-VOA), Air Bubbles or Headspace (Y or N)

Received By: (Signature)
Received By: (Signature)
10/11/04
11a30

Relinquished By: (Signature) Cindy Hurtado
Relinquished By: (Signature)
Time: 1010A
Date: 9-30-04

Remarks: RUSH ASAP

COVER LETTER

September 27, 2004

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: River Sampling Sept 2004

Order No.: 0409062

Dear Cindy Hurtado:

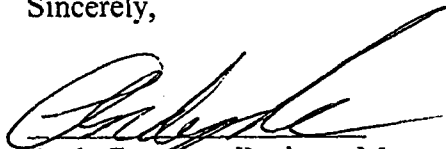
Hall Environmental Analysis Laboratory received 4 samples on 9/8/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager



Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
Project: River Sampling Sept 2004
Lab Order: 0409062

CASE NARRATIVE

Method 8270: Acid surrogates not recoverable due to organic matter in the samples.

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-01

Client Sample ID: River Upstream
 Collection Date: 9/7/2004 10:50:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.20	0.10		mg/L	1	9/8/2004 8:19:27 PM
Chloride	3.8	0.10		mg/L	1	9/8/2004 8:19:27 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	9/8/2004 8:19:27 PM
Bromide	ND	0.10		mg/L	1	9/8/2004 8:19:27 PM
Nitrogen, Nitrate (As N)	0.11	0.10		mg/L	1	9/8/2004 8:19:27 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	9/8/2004 8:19:27 PM
Sulfate	74	0.50		mg/L	1	9/8/2004 8:19:27 PM
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO3)	100	4.0		mg/L CaCO3	2	9/13/2004
Carbonate	ND	4.0		mg/L CaCO3	2	9/13/2004
Bicarbonate	100	4.0		mg/L CaCO3	2	9/13/2004
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/15/2004 1:53:14 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/15/2004 1:53:14 AM
Surr: DNOP	112	58-140		%REC	1	9/15/2004 1:53:14 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/14/2004 1:19:23 PM
Surr: BFB	89.1	74-118		%REC	1	9/14/2004 1:19:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/14/2004 1:19:23 PM
Benzene	ND	0.50		µg/L	1	9/14/2004 1:19:23 PM
Toluene	ND	0.50		µg/L	1	9/14/2004 1:19:23 PM
Ethylbenzene	ND	0.50		µg/L	1	9/14/2004 1:19:23 PM
Xylenes, Total	ND	0.50		µg/L	1	9/14/2004 1:19:23 PM
EPA METHOD 8270D: SEMIVOLATILES						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	9/20/2004
Acenaphthylene	ND	10		µg/L	1	9/20/2004
Aniline	ND	10		µg/L	1	9/20/2004
Anthracene	ND	10		µg/L	1	9/20/2004
Azobenzene	ND	10		µg/L	1	9/20/2004
Benz(a)anthracene	ND	15		µg/L	1	9/20/2004
Benzo(a)pyrene	ND	10		µg/L	1	9/20/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	9/20/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/20/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	9/20/2004
Benzoic acid	ND	50		µg/L	1	9/20/2004
Benzyl alcohol	ND	20		µg/L	1	9/20/2004
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/20/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-01

Client Sample ID: River Upstream
 Collection Date: 9/7/2004 10:50:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	ND	15		µg/L	1	9/20/2004
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	9/20/2004
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	9/20/2004
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/20/2004
Butyl benzyl phthalate	ND	15		µg/L	1	9/20/2004
Carbazole	ND	10		µg/L	1	9/20/2004
4-Chloro-3-methylphenol	ND	20		µg/L	1	9/20/2004
4-Chloroaniline	ND	20		µg/L	1	9/20/2004
2-Chloronaphthalene	ND	10		µg/L	1	9/20/2004
2-Chlorophenol	ND	10		µg/L	1	9/20/2004
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	9/20/2004
Chrysene	ND	15		µg/L	1	9/20/2004
Di-n-butyl phthalate	ND	10		µg/L	1	9/20/2004
Di-n-octyl phthalate	ND	15		µg/L	1	9/20/2004
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/20/2004
Dibenzofuran	ND	10		µg/L	1	9/20/2004
1,2-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
1,3-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
1,4-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
3,3'-Dichlorobenzidine	ND	15		µg/L	1	9/20/2004
Diethyl phthalate	ND	10		µg/L	1	9/20/2004
Dimethyl phthalate	ND	10		µg/L	1	9/20/2004
2,4-Dichlorophenol	ND	10		µg/L	1	9/20/2004
2,4-Dimethylphenol	ND	10		µg/L	1	9/20/2004
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	9/20/2004
2,4-Dinitrophenol	ND	50		µg/L	1	9/20/2004
2,4-Dinitrotoluene	ND	10		µg/L	1	9/20/2004
2,6-Dinitrotoluene	ND	10		µg/L	1	9/20/2004
Fluoranthene	ND	10		µg/L	1	9/20/2004
Fluorene	ND	10		µg/L	1	9/20/2004
Hexachlorobenzene	ND	10		µg/L	1	9/20/2004
Hexachlorobutadiene	ND	10		µg/L	1	9/20/2004
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/20/2004
Hexachloroethane	ND	10		µg/L	1	9/20/2004
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/20/2004
Isophorone	ND	10		µg/L	1	9/20/2004
2-Methylnaphthalene	ND	10		µg/L	1	9/20/2004
2-Methylphenol	ND	15		µg/L	1	9/20/2004
3+4-Methylphenol	ND	10		µg/L	1	9/20/2004
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/20/2004
N-Nitrosodimethylamine	ND	10		µg/L	1	9/20/2004
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/20/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-01

Client Sample ID: River Upstream
 Collection Date: 9/7/2004 10:50:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Naphthalene	ND	10		µg/L	1	9/20/2004
2-Nitroaniline	ND	50		µg/L	1	9/20/2004
3-Nitroaniline	ND	50		µg/L	1	9/20/2004
4-Nitroaniline	ND	20		µg/L	1	9/20/2004
Nitrobenzene	ND	10		µg/L	1	9/20/2004
2-Nitrophenol	ND	15		µg/L	1	9/20/2004
4-Nitrophenol	ND	50		µg/L	1	9/20/2004
Pentachlorophenol	ND	50		µg/L	1	9/20/2004
Phenanthrene	ND	10		µg/L	1	9/20/2004
Phenol	ND	10		µg/L	1	9/20/2004
Pyrene	ND	15		µg/L	1	9/20/2004
Pyridine	ND	30		µg/L	1	9/20/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/20/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/20/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	9/20/2004
Surr: 2,4,6-Tribromophenol	0	16.6-115	S	%REC	1	9/20/2004
Surr: 2-Fluorobiphenyl	55.9	37-95.7		%REC	1	9/20/2004
Surr: 2-Fluorophenol	3.92	9.54-89.8	S	%REC	1	9/20/2004
Surr: 4-Terphenyl-d14	74.7	47.9-115		%REC	1	9/20/2004
Surr: Nitrobenzene-d5	55.7	38-106		%REC	1	9/20/2004
Surr: Phenol-d6	22.7	10.7-63.4		%REC	1	9/20/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
Specific Conductance	310	0.010		µmhos/cm	1	9/10/2004
EPA METHOD 7470: MERCURY						
Mercury	ND	0.00020		mg/L	1	9/14/2004
EPA METHOD 6010C: DISSOLVED METALS						
Arsenic	ND	0.020		mg/L	1	9/15/2004 9:36:29 AM
Barium	0.081	0.0020		mg/L	1	9/15/2004 9:36:29 AM
Cadmium	ND	0.0020		mg/L	1	9/15/2004 9:36:29 AM
Calcium	39	1.0		mg/L	1	9/15/2004 9:36:29 AM
Chromium	ND	0.0060		mg/L	1	9/15/2004 9:36:29 AM
Copper	ND	0.0060		mg/L	1	9/15/2004 9:36:29 AM
Iron	0.031	0.020		mg/L	1	9/15/2004 9:36:29 AM
Lead	ND	0.0050		mg/L	1	9/15/2004 9:36:29 AM
Magnesium	7.5	1.0		mg/L	1	9/15/2004 9:36:29 AM
Manganese	0.0054	0.0020		mg/L	1	9/15/2004 9:36:29 AM
Potassium	2.1	1.0		mg/L	1	9/15/2004 9:36:29 AM
Selenium	ND	0.050		mg/L	1	9/15/2004 9:36:29 AM
Silver	ND	0.0050		mg/L	1	9/15/2004 9:36:29 AM
Sodium	20	1.0		mg/L	1	9/15/2004 9:36:29 AM
Uranium	ND	0.10		mg/L	1	9/15/2004 9:36:29 AM

Analyst: CMC

Analyst: CMC

Analyst: NMO

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-01

Client Sample ID: River Upstream
 Collection Date: 9/7/2004 10:50:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Zinc	0.0057	0.0050		mg/L	1	9/15/2004 9:36:29 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/20/2004 11:05:34 AM
Barium	0.10	0.020		mg/L	1	9/20/2004 11:05:34 AM
Cadmium	ND	0.0020		mg/L	1	9/20/2004 11:05:34 AM
Chromium	ND	0.0060		mg/L	1	9/20/2004 11:05:34 AM
Lead	ND	0.0050		mg/L	1	9/20/2004 11:05:34 AM
Selenium	ND	0.050		mg/L	1	9/20/2004 11:05:34 AM
Silver	ND	0.0050		mg/L	1	9/20/2004 12:47:50 PM
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	220	50		mg/L	1	9/16/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-02

Client Sample ID: River N of MW#45
 Collection Date: 9/7/2004 11:15:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						
						Analyst: MAP
Fluoride	0.22	0.10		mg/L	1	9/8/2004 8:36:17 PM
Chloride	3.7	0.10		mg/L	1	9/8/2004 8:36:17 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	9/8/2004 8:36:17 PM
Bromide	ND	0.10		mg/L	1	9/8/2004 8:36:17 PM
Nitrogen, Nitrate (As N)	0.18	0.10		mg/L	1	9/8/2004 8:36:17 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	9/8/2004 8:36:17 PM
Sulfate	74	0.50		mg/L	1	9/8/2004 8:36:17 PM
EPA METHOD 310.1: ALKALINITY						
						Analyst: CMC
Alkalinity, Total (As CaCO3)	100	4.0		mg/L CaCO3	2	9/13/2004
Carbonate	ND	4.0		mg/L CaCO3	2	9/13/2004
Bicarbonate	100	4.0		mg/L CaCO3	2	9/13/2004
EPA METHOD 8015B: DIESEL RANGE						
						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/15/2004 2:25:53 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/15/2004 2:25:53 AM
Surr: DNOP	108	58-140		%REC	1	9/15/2004 2:25:53 AM
EPA METHOD 8015B: GASOLINE RANGE						
						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/14/2004 1:49:19 PM
Surr: BFB	91.8	74-118		%REC	1	9/14/2004 1:49:19 PM
EPA METHOD 8021B: VOLATILES						
						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/14/2004 1:49:19 PM
Benzene	ND	0.50		µg/L	1	9/14/2004 1:49:19 PM
Toluene	ND	0.50		µg/L	1	9/14/2004 1:49:19 PM
Ethylbenzene	ND	0.50		µg/L	1	9/14/2004 1:49:19 PM
Xylenes, Total	ND	0.50		µg/L	1	9/14/2004 1:49:19 PM
EPA METHOD 8270D: SEMIVOLATILES						
						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	9/20/2004
Acenaphthylene	ND	10		µg/L	1	9/20/2004
Aniline	ND	10		µg/L	1	9/20/2004
Anthracene	ND	10		µg/L	1	9/20/2004
Azobenzene	ND	10		µg/L	1	9/20/2004
Benz(a)anthracene	ND	15		µg/L	1	9/20/2004
Benzo(a)pyrene	ND	10		µg/L	1	9/20/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	9/20/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/20/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	9/20/2004
Benzoic acid	ND	50		µg/L	1	9/20/2004
Benzyl alcohol	ND	20		µg/L	1	9/20/2004
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/20/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-02

Client Sample ID: River N of MW#45
 Collection Date: 9/7/2004 11:15:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	ND	15		µg/L	1	9/20/2004
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	9/20/2004
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	9/20/2004
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/20/2004
Butyl benzyl phthalate	ND	15		µg/L	1	9/20/2004
Carbazole	ND	10		µg/L	1	9/20/2004
4-Chloro-3-methylphenol	ND	20		µg/L	1	9/20/2004
4-Chloroaniline	ND	20		µg/L	1	9/20/2004
2-Chloronaphthalene	ND	10		µg/L	1	9/20/2004
2-Chlorophenol	ND	10		µg/L	1	9/20/2004
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	9/20/2004
Chrysene	ND	15		µg/L	1	9/20/2004
Di-n-butyl phthalate	ND	10		µg/L	1	9/20/2004
Di-n-octyl phthalate	ND	15		µg/L	1	9/20/2004
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/20/2004
Dibenzofuran	ND	10		µg/L	1	9/20/2004
1,2-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
1,3-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
1,4-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
3,3'-Dichlorobenzidine	ND	15		µg/L	1	9/20/2004
Diethyl phthalate	ND	10		µg/L	1	9/20/2004
Dimethyl phthalate	ND	10		µg/L	1	9/20/2004
2,4-Dichlorophenol	ND	10		µg/L	1	9/20/2004
2,4-Dimethylphenol	ND	10		µg/L	1	9/20/2004
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	9/20/2004
2,4-Dinitrophenol	ND	50		µg/L	1	9/20/2004
2,4-Dinitrotoluene	ND	10		µg/L	1	9/20/2004
2,6-Dinitrotoluene	ND	10		µg/L	1	9/20/2004
Fluoranthene	ND	10		µg/L	1	9/20/2004
Fluorene	ND	10		µg/L	1	9/20/2004
Hexachlorobenzene	ND	10		µg/L	1	9/20/2004
Hexachlorobutadiene	ND	10		µg/L	1	9/20/2004
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/20/2004
Hexachloroethane	ND	10		µg/L	1	9/20/2004
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/20/2004
Isophorone	ND	10		µg/L	1	9/20/2004
2-Methylnaphthalene	ND	10		µg/L	1	9/20/2004
2-Methylphenol	ND	15		µg/L	1	9/20/2004
3+4-Methylphenol	ND	10		µg/L	1	9/20/2004
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/20/2004
N-Nitrosodimethylamine	ND	10		µg/L	1	9/20/2004
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/20/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-02

Client Sample ID: River N of MW#45
 Collection Date: 9/7/2004 11:15:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Naphthalene	ND	10		µg/L	1	9/20/2004
2-Nitroaniline	ND	50		µg/L	1	9/20/2004
3-Nitroaniline	ND	50		µg/L	1	9/20/2004
4-Nitroaniline	ND	20		µg/L	1	9/20/2004
Nitrobenzene	ND	10		µg/L	1	9/20/2004
2-Nitrophenol	ND	15		µg/L	1	9/20/2004
4-Nitrophenol	ND	50		µg/L	1	9/20/2004
Pentachlorophenol	ND	50		µg/L	1	9/20/2004
Phenanthrene	ND	10		µg/L	1	9/20/2004
Phenol	ND	10		µg/L	1	9/20/2004
Pyrene	ND	15		µg/L	1	9/20/2004
Pyridine	ND	30		µg/L	1	9/20/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/20/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/20/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	9/20/2004
Surr: 2,4,6-Tribromophenol	0	16.6-115	S	%REC	1	9/20/2004
Surr: 2-Fluorobiphenyl	62.9	37-95.7		%REC	1	9/20/2004
Surr: 2-Fluorophenol	5.23	9.54-89.8	S	%REC	1	9/20/2004
Surr: 4-Terphenyl-d14	74.6	47.9-115		%REC	1	9/20/2004
Surr: Nitrobenzene-d5	61.2	38-106		%REC	1	9/20/2004
Surr: Phenol-d6	28.3	10.7-63.4		%REC	1	9/20/2004
EPA 120.1: SPECIFIC CONDUCTANCE						
Specific Conductance	310	0.010		µmhos/cm	1	9/10/2004
EPA METHOD 7470: MERCURY						
Mercury	ND	0.00020		mg/L	1	9/14/2004
EPA METHOD 6010C: DISSOLVED METALS						
Arsenic	ND	0.020		mg/L	1	9/15/2004 9:39:31 AM
Barium	0.081	0.0020		mg/L	1	9/15/2004 9:39:31 AM
Cadmium	ND	0.0020		mg/L	1	9/15/2004 9:39:31 AM
Calcium	39	1.0		mg/L	1	9/15/2004 9:39:31 AM
Chromium	ND	0.0060		mg/L	1	9/15/2004 9:39:31 AM
Copper	ND	0.0060		mg/L	1	9/15/2004 9:39:31 AM
Iron	0.057	0.020		mg/L	1	9/15/2004 9:39:31 AM
Lead	ND	0.0050		mg/L	1	9/15/2004 9:39:31 AM
Magnesium	7.5	1.0		mg/L	1	9/15/2004 9:39:31 AM
Manganese	0.0052	0.0020		mg/L	1	9/15/2004 9:39:31 AM
Potassium	2.1	1.0		mg/L	1	9/15/2004 9:39:31 AM
Selenium	ND	0.050		mg/L	1	9/15/2004 9:39:31 AM
Silver	ND	0.0050		mg/L	1	9/15/2004 9:39:31 AM
Sodium	21	1.0		mg/L	1	9/15/2004 9:39:31 AM
Uranium	ND	0.10		mg/L	1	9/15/2004 9:39:31 AM

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-02

Client Sample ID: River N of MW#45
 Collection Date: 9/7/2004 11:15:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Zinc	0.023	0.0050		mg/L	1	9/15/2004 9:39:31 AM
EPA 6010C: TOTAL RECOVERABLE METALS						
Arsenic	ND	0.020		mg/L	1	9/20/2004 11:08:26 AM
Barium	0.11	0.020		mg/L	1	9/20/2004 11:08:26 AM
Cadmium	ND	0.0020		mg/L	1	9/20/2004 11:08:26 AM
Chromium	ND	0.0060		mg/L	1	9/20/2004 11:08:26 AM
Lead	ND	0.0050		mg/L	1	9/20/2004 11:08:26 AM
Selenium	ND	0.050		mg/L	1	9/20/2004 11:08:26 AM
Silver	ND	0.0050		mg/L	1	9/20/2004 12:50:05 PM
EPA METHOD 160.1: TDS						
Total Dissolved Solids	220	50		mg/L	1	9/16/2004

Analyst: NMO

Analyst: MAP

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-03

Client Sample ID: River-N of MW#46
 Collection Date: 9/7/2004 11:35:00 AM

Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: MAP
Fluoride	0.19	0.10		mg/L	1	9/8/2004 8:53:06 PM
Chloride	3.7	0.10		mg/L	1	9/8/2004 8:53:06 PM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	9/8/2004 8:53:06 PM
Bromide	ND	0.10		mg/L	1	9/8/2004 8:53:06 PM
Nitrogen, Nitrate (As N)	0.16	0.10		mg/L	1	9/8/2004 8:53:06 PM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	9/8/2004 8:53:06 PM
Sulfate	74	0.50		mg/L	1	9/8/2004 8:53:06 PM
EPA METHOD 310.1: ALKALINITY						Analyst: CMC
Alkalinity, Total (As CaCO3)	100	4.0		mg/L CaCO3	2	9/13/2004
Carbonate	ND	4.0		mg/L CaCO3	2	9/13/2004
Bicarbonate	100	4.0		mg/L CaCO3	2	9/13/2004
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/15/2004 2:58:46 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/15/2004 2:58:46 AM
Surr: DNOP	121	58-140		%REC	1	9/15/2004 2:58:46 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/14/2004 2:19:19 PM
Surr: BFB	87.8	74-118		%REC	1	9/14/2004 2:19:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/14/2004 2:19:19 PM
Benzene	ND	0.50		µg/L	1	9/14/2004 2:19:19 PM
Toluene	ND	0.50		µg/L	1	9/14/2004 2:19:19 PM
Ethylbenzene	ND	0.50		µg/L	1	9/14/2004 2:19:19 PM
Xylenes, Total	ND	0.50		µg/L	1	9/14/2004 2:19:19 PM
EPA METHOD 8270D: SEMIVOLATILES						Analyst: GAB
Acenaphthene	ND	10		µg/L	1	9/20/2004
Acenaphthylene	ND	10		µg/L	1	9/20/2004
Aniline	ND	10		µg/L	1	9/20/2004
Anthracene	ND	10		µg/L	1	9/20/2004
Azobenzene	ND	10		µg/L	1	9/20/2004
Benz(a)anthracene	ND	15		µg/L	1	9/20/2004
Benzo(a)pyrene	ND	10		µg/L	1	9/20/2004
Benzo(b)fluoranthene	ND	10		µg/L	1	9/20/2004
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/20/2004
Benzo(k)fluoranthene	ND	10		µg/L	1	9/20/2004
Benzoic acid	ND	50		µg/L	1	9/20/2004
Benzyl alcohol	ND	20		µg/L	1	9/20/2004
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/20/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-03

Client Sample ID: River-N of MW#46
 Collection Date: 9/7/2004 11:35:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-chloroethyl)ether	ND	15		µg/L	1	9/20/2004
Bis(2-chloroisopropyl)ether	ND	15		µg/L	1	9/20/2004
Bis(2-ethylhexyl)phthalate	ND	15		µg/L	1	9/20/2004
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/20/2004
Butyl benzyl phthalate	ND	15		µg/L	1	9/20/2004
Carbazole	ND	10		µg/L	1	9/20/2004
4-Chloro-3-methylphenol	ND	20		µg/L	1	9/20/2004
4-Chloroaniline	ND	20		µg/L	1	9/20/2004
2-Chloronaphthalene	ND	10		µg/L	1	9/20/2004
2-Chlorophenol	ND	10		µg/L	1	9/20/2004
4-Chlorophenyl phenyl ether	ND	15		µg/L	1	9/20/2004
Chrysene	ND	15		µg/L	1	9/20/2004
Di-n-butyl phthalate	ND	10		µg/L	1	9/20/2004
Di-n-octyl phthalate	ND	15		µg/L	1	9/20/2004
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/20/2004
Dibenzofuran	ND	10		µg/L	1	9/20/2004
1,2-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
1,3-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
1,4-Dichlorobenzene	ND	10		µg/L	1	9/20/2004
3,3'-Dichlorobenzidine	ND	15		µg/L	1	9/20/2004
Diethyl phthalate	ND	10		µg/L	1	9/20/2004
Dimethyl phthalate	ND	10		µg/L	1	9/20/2004
2,4-Dichlorophenol	ND	10		µg/L	1	9/20/2004
2,4-Dimethylphenol	ND	10		µg/L	1	9/20/2004
4,6-Dinitro-2-methylphenol	ND	50		µg/L	1	9/20/2004
2,4-Dinitrophenol	ND	50		µg/L	1	9/20/2004
2,4-Dinitrotoluene	ND	10		µg/L	1	9/20/2004
2,6-Dinitrotoluene	ND	10		µg/L	1	9/20/2004
Fluoranthene	ND	10		µg/L	1	9/20/2004
Fluorene	ND	10		µg/L	1	9/20/2004
Hexachlorobenzene	ND	10		µg/L	1	9/20/2004
Hexachlorobutadiene	ND	10		µg/L	1	9/20/2004
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/20/2004
Hexachloroethane	ND	10		µg/L	1	9/20/2004
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/20/2004
Isophorone	ND	10		µg/L	1	9/20/2004
2-Methylnaphthalene	ND	10		µg/L	1	9/20/2004
2-Methylphenol	ND	15		µg/L	1	9/20/2004
3+4-Methylphenol	ND	10		µg/L	1	9/20/2004
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/20/2004
N-Nitrosodimethylamine	ND	10		µg/L	1	9/20/2004
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/20/2004

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range
 * - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-03

Client Sample ID: River-N of MW#46
 Collection Date: 9/7/2004 11:35:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Naphthalene	ND	10		µg/L	1	9/20/2004
2-Nitroaniline	ND	50		µg/L	1	9/20/2004
3-Nitroaniline	ND	50		µg/L	1	9/20/2004
4-Nitroaniline	ND	20		µg/L	1	9/20/2004
Nitrobenzene	ND	10		µg/L	1	9/20/2004
2-Nitrophenol	ND	15		µg/L	1	9/20/2004
4-Nitrophenol	ND	50		µg/L	1	9/20/2004
Pentachlorophenol	ND	50		µg/L	1	9/20/2004
Phenanthrene	ND	10		µg/L	1	9/20/2004
Phenol	ND	10		µg/L	1	9/20/2004
Pyrene	ND	15		µg/L	1	9/20/2004
Pyridine	ND	30		µg/L	1	9/20/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/20/2004
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/20/2004
2,4,6-Trichlorophenol	ND	15		µg/L	1	9/20/2004
Surr: 2,4,6-Tribromophenol	0	16.6-115	S	%REC	1	9/20/2004
Surr: 2-Fluorobiphenyl	76.0	37-95.7		%REC	1	9/20/2004
Surr: 2-Fluorophenol	2.19	9.54-89.8	S	%REC	1	9/20/2004
Surr: 4-Terphenyl-d14	86.0	47.9-115		%REC	1	9/20/2004
Surr: Nitrobenzene-d5	70.1	38-106		%REC	1	9/20/2004
Surr: Phenol-d6	21.1	10.7-63.4		%REC	1	9/20/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: CMC
Specific Conductance	310	0.010		µmhos/cm	1	9/10/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	ND	0.00020		mg/L	1	9/14/2004
EPA METHOD 6010C: DISSOLVED METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/15/2004 9:42:25 AM
Barium	0.082	0.0020		mg/L	1	9/15/2004 9:42:25 AM
Cadmium	ND	0.0020		mg/L	1	9/15/2004 9:42:25 AM
Calcium	39	1.0		mg/L	1	9/15/2004 9:42:25 AM
Chromium	ND	0.0060		mg/L	1	9/15/2004 9:42:25 AM
Copper	ND	0.0060		mg/L	1	9/15/2004 9:42:25 AM
Iron	0.036	0.020		mg/L	1	9/15/2004 9:42:25 AM
Lead	ND	0.0050		mg/L	1	9/15/2004 9:42:25 AM
Magnesium	7.5	1.0		mg/L	1	9/15/2004 9:42:25 AM
Manganese	0.0040	0.0020		mg/L	1	9/15/2004 9:42:25 AM
Potassium	2.1	1.0		mg/L	1	9/15/2004 9:42:25 AM
Selenium	ND	0.050		mg/L	1	9/15/2004 9:42:25 AM
Silver	ND	0.0050		mg/L	1	9/15/2004 9:42:25 AM
Sodium	21	1.0		mg/L	1	9/15/2004 9:42:25 AM
Uranium	ND	0.10		mg/L	1	9/15/2004 9:42:25 AM

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank E - Value above quantitation range

* - Value exceeds Maximum Contaminant Level

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Lab Order: 0409062
 Project: River Sampling Sept 2004
 Lab ID: 0409062-03

Client Sample ID: River-N of MW#46
 Collection Date: 9/7/2004 11:35:00 AM
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Zinc	0.023	0.0050		mg/L	1	9/15/2004 9:42:25 AM
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	9/20/2004 11:11:17 AM
Barium	0.11	0.020		mg/L	1	9/20/2004 11:11:17 AM
Cadmium	ND	0.0020		mg/L	1	9/20/2004 11:11:17 AM
Chromium	ND	0.0060		mg/L	1	9/20/2004 11:11:17 AM
Lead	ND	0.0050		mg/L	1	9/20/2004 11:11:17 AM
Selenium	ND	0.050		mg/L	1	9/20/2004 11:11:17 AM
Silver	ND	0.0050		mg/L	1	9/20/2004 12:52:21 PM
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	230	50		mg/L	1	9/16/2004

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
Lab Order: 0409062
Project: River Sampling Sept 2004
Lab ID: 0409062-04

Client Sample ID: Trip Blank
Collection Date:

Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/14/2004 2:49:24 PM
Benzene	ND	0.50		µg/L	1	9/14/2004 2:49:24 PM
Toluene	ND	0.50		µg/L	1	9/14/2004 2:49:24 PM
Ethylbenzene	ND	0.50		µg/L	1	9/14/2004 2:49:24 PM
Xylenes, Total	ND	0.50		µg/L	1	9/14/2004 2:49:24 PM

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

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

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining **QC SUMMARY REPORT**
Work Order: 0409062 **Method Blank**
Project: River Sampling Sept 2004

Sample ID	MBLK	Batch ID: R13058	Test Code: E300	Units: mg/L	Analysis Date 9/8/2004 6:22:06 PM	Prep Date					
Client ID:		Run ID: LC_040908A	SeqNo: 303689								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.1									
Chloride	ND	0.1									
Nitrogen, Nitrite (As N)	ND	0.1									
Bromide	ND	0.1									
Nitrogen, Nitrate (As N)	ND	0.1									
Phosphorus, Orthophosphate (As P)	ND	0.5									
Sulfate	ND	0.5									

Sample ID	MB-6468	Batch ID: 6468	Test Code: SW8015	Units: mg/L	Analysis Date 9/15/2004 12:16:19 AM	Prep Date 9/13/2004					
Client ID:		Run ID: FID(17A)_040914A	SeqNo: 305759								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1									
Motor Oil Range Organics (MRO)	ND	5									
Surr: DNOP	1.149	0	1	0	115	58	140	0			

Sample ID	Reagent Blank 5m	Batch ID: R13118	Test Code: SW8015	Units: mg/L	Analysis Date 9/14/2004 8:42:39 AM	Prep Date					
Client ID:		Run ID: PIDFID_040914A	SeqNo: 305309								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.05									
Surr: BFB	16.99	0	20	0	84.9	74	118	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
Work Order: 0409062
Project: River Sampling Sept 2004

Sample ID	Reagent Blank 5m	Batch ID: R13118	Test Code: SW8021	Units: µg/L	Analysis Date 9/14/2004 8:42:39 AM	Prep Date					
Client ID:	Run ID: PIDFID_040914A	SeqNo: 305308									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5									
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Method Blank

CLIENT: San Juan Refining
Work Order: 0409062
Project: River Sampling Sept 2004

Sample ID mb-6470 Batch ID: 6470 Test Code: SW8270A Units: µg/L Analysis Date 9/20/2004 Prep Date 9/13/2004
Client ID: ELMO_040920A Run ID: 307409 SeqNo: 307409

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Aniline	ND	10									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Benzolic acid	ND	50									
Benzyl alcohol	ND	20									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	15									
Bis(2-chloroisopropyl)ether	ND	15									
Bis(2-ethylhexyl)phthalate	ND	15									
4-Bromophenyl phenyl ether	ND	10									
Butyl benzyl phthalate	ND	15									
Carbazole	ND	10									
4-Chloro-3-methylphenol	ND	20									
4-Chloroaniline	ND	20									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
4-Chlorophenyl phenyl ether	ND	15									
Chrysene	ND	15									
Di-n-butyl phthalate	ND	10									
Di-n-octyl phthalate	ND	15									
Dibenz(a,h)anthracene	ND	10									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0409062

Project: River Sampling Sept 2004

Dibenzofuran	ND	10
1,2-Dichlorobenzene	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
3,3'-Dichlorobenzidine	ND	15
Diethyl phthalate	ND	10
Dimethyl phthalate	ND	10
2,4-Dichlorophenol	ND	10
2,4-Dimethylphenol	ND	10
4,6-Dinitro-2-methylphenol	ND	50
2,4-Dinitrophenol	ND	50
2,4-Dinitrotoluene	ND	10
2,6-Dinitrotoluene	ND	10
Fluoranthene	ND	10
Fluorene	ND	10
Hexachlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Isophorone	ND	10
2-Methylnaphthalene	ND	10
2-Methylphenol	ND	15
3+4-Methylphenol	ND	10
N-Nitrosodi-n-propylamine	ND	10
N-Nitrosodimethylamine	ND	10
N-Nitrosodiphenylamine	ND	10
Naphthalene	ND	10
2-Nitroaniline	ND	50
3-Nitroaniline	ND	50
4-Nitroaniline	ND	20
Nitrobenzene	ND	10
2-Nitrophenol	ND	15

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank
 4

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0409062

Project: River Sampling Sept 2004

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Nitrophenol	ND	50									
Pentachlorophenol	ND	50									
Phenanthrene	ND	10									
Phenol	ND	10									
Pyrene	ND	15									
Pyridine	ND	30									
1,2,4-Trichlorobenzene	ND	10									
2,4,5-Trichlorophenol	ND	10									
2,4,6-Trichlorophenol	ND	15									
Surr: 2,4,6-Tribromophenol	77	0	200	0	38.5	16.6	115	0			
Surr: 2-Fluorobiphenyl	46.28	0	100	0	46.3	37	95.7	0			
Surr: 2-Fluorophenol	87.14	0	200	0	43.6	9.54	89.8	0			
Surr: 4-Terphenyl-d14	67.54	0	100	0	67.5	51.2	125	0			
Surr: Nitrobenzene-d5	49.46	0	100	0	49.5	38	106	0			
Surr: Phenol-d6	68.96	0	200	0	34.5	10.7	63.4	0			

Prep Date 9/14/2004

Analysis Date 9/14/2004

Test Code: SW7470 Units: mg/L

Run ID: MI-LA254_040914A

SeqNo: 305227

Batch ID: 6477

Sample ID MB-6477

Client ID:

Analyte

Mercury

0.00008115 0.0002

B - Analyte detected in the associated Method Blank
5

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining
 Work Order: 0409062
 Project: River Sampling Sept 2004

Sample ID MB Batch ID: R13125 Test Code: SW6010A Units: mg/L Analysis Date 9/15/2004 9:03:00 AM Prep Date
 Client ID: ICP_040915A Run ID: 305865 SeqNo:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.002									
Cadmium	ND	0.002									
Calcium	ND	1									
Chromium	ND	0.006									
Copper	ND	0.006									
Iron	0.005769	0.02									J
Lead	ND	0.005									
Magnesium	ND	1									
Manganese	ND	0.002									
Potassium	ND	1									
Selenium	ND	0.05									
Silver	ND	0.005									
Sodium	0.03782	1									J
Uranium	ND	0.1									
Zinc	ND	0.005									

Sample ID MB-6492 Batch ID: 6492 Test Code: SW6010A Units: mg/L Analysis Date 9/17/2004 2:52:50 PM Prep Date 9/16/2004
 Client ID: ICP_040917A Run ID: 306647 SeqNo:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	0.001101	0.002									J
Chromium	ND	0.006									
Lead	0.003158	0.005									J
Selenium	ND	0.05									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Method Blank

CLIENT: San Juan Refining

Work Order: 0409062

Project: River Sampling Sept 2004

Sample ID	MB-6492	Batch ID:	6492	Test Code:	SW6010A	Units:	mg/L	Analysis Date	9/20/2004 11:27:57 AM	Prep Date	9/16/2004
Client ID:		Run ID:	ICP_040920A	SeqNo:	306678						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02									
Barium	ND	0.02									
Cadmium	ND	0.002									
Chromium	ND	0.006									
Lead	ND	0.005									
Selenium	ND	0.05									

Sample ID	MB-6492	Batch ID:	6492	Test Code:	SW6010A	Units:	mg/L	Analysis Date	9/20/2004 12:31:59 PM	Prep Date	9/16/2004
Client ID:		Run ID:	ICP_040920A	SeqNo:	306682						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	ND	0.005									

Sample ID	MB-6492	Batch ID:	6492	Test Code:	SW6010A	Units:	mg/L	Analysis Date	9/20/2004 8:05:04 AM	Prep Date	9/16/2004
Client ID:		Run ID:	ICP_040920E	SeqNo:	307231						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	ND	0.005									

Sample ID	MB-6480	Batch ID:	6480	Test Code:	E160.1	Units:	mg/L	Analysis Date	9/16/2004	Prep Date	9/14/2004
Client ID:		Run ID:	WC_040916A	SeqNo:	305825						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining
 Work Order: 0409062
 Project: River Sampling Sept 2004

QC SUMMARY REPORT
 Sample Duplicate

Sample ID	0409062-01C DUP	Batch ID:	R13081	Test Code:	E120.1	Units:	µmhos/cm	Analysis Date	9/10/2004	Prep Date	
Client ID:	River Upstream	Run ID:	WC_040910E					SeqNo:	304192		
Analyte		Result	306	PQL	0.01	SPK value	0	%REC	0	LowLimit	0
Specific Conductance				SPK Ref Val	0			HighLimit	0	RPD Ref Val	310
								%RPD	1.30	RPDLimit	20

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

QC SUMMARY REPORT

Sample Matrix Spike

CLIENT: San Juan Refining
 Work Order: 0409062
 Project: River Sampling Sept 2004

Sample ID	0409062-01a ms	Batch ID: R13118	Test Code: SW8015	Units: mg/L	Analysis Date	9/15/2004 12:16:35 AM	Prep Date				
Client ID:	River Upstream	Run ID:	PIDFID_040914A	SeqNo:	305326						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4962	0.05	0.5	0	99.2	80.3	116	0			
Surr: BFB	24.28	0	25	0	97.1	74	118	0			

Sample ID	0409062-01a msd	Batch ID: R13118	Test Code: SW8015	Units: mg/L	Analysis Date	9/15/2004 12:46:14 AM	Prep Date				
Client ID:	River Upstream	Run ID:	PIDFID_040914A	SeqNo:	305327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.4794	0.05	0.5	0	95.9	80.3	116	0.4962	3.44	8.39	
Surr: BFB	24.84	0	25	0	99.4	74	118	24.28	2.31	0	

Sample ID	0409062-01a ms	Batch ID: R13118	Test Code: SW8021	Units: µg/L	Analysis Date	9/15/2004 1:15:57 AM	Prep Date				
Client ID:	River Upstream	Run ID:	PIDFID_040914A	SeqNo:	305319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	35.33	2.5	40	0	88.3	65	132	0			
Benzene	20.85	0.5	20	0	104	77	122	0			
Toluene	20.39	0.5	20	0	102	81	115	0			
Ethylbenzene	19.69	0.5	20	0	98.5	84	117	0			
Xylenes, Total	59.65	0.5	60	0	99.4	84	116	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Sample Matrix Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0409062
Project: River Sampling Sept 2004

Sample ID	0409062-01a msd	Batch ID	R13118	Test Code	SW8021	Units	µg/L	Analysis Date	9/15/2004 1:45:42 AM	Prep Date	
Client ID	River Upstream	Run ID	PIDFID_040914A	SeqNo	305320						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	34.01	2.5	40	0	85.0	65	132	35.33	3.80	28	
Benzene	20.1	0.5	20	0	100	77	122	20.85	3.66	27	
Toluene	19.34	0.5	20	0	96.7	81	115	20.39	5.26	19	
Ethylbenzene	19.1	0.5	20	0	95.5	84	117	19.69	3.06	10	
Xylenes, Total	57.67	0.5	60	0	96.1	84	116	59.65	3.38	13	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 27-Sep-04

CLIENT: San Juan Refining

Work Order: 0409062

Project: River Sampling Sept 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID	LCS	Batch ID: R13058	Test Code: E300	Units: mg/L	Analysis Date 9/8/2004 6:38:49 PM	Prep Date					
Client ID:		Run ID: LC_040908A	SeqNo: 303690								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.4818	0.1	0.5	0	96.4	90	110	0			
Chloride	4.833	0.1	5	0	96.7	90	110	0			
Nitrogen, Nitrite (As N)	0.9588	0.1	1	0	95.9	90	110	0			
Bromide	2.531	0.1	2.5	0	101	90	110	0			
Nitrogen, Nitrate (As N)	2.507	0.1	2.5	0	100	90	110	0			
Phosphorus, Orthophosphate (As P)	5.121	0.5	5	0	102	90	110	0			
Sulfate	10.23	0.5	10	0	102	90	110	0			

Sample ID	LCS	Batch ID: 6468	Test Code: SW8015	Units: mg/L	Analysis Date 9/15/2004 12:48:57 AM	Prep Date 9/13/2004					
Client ID:		Run ID: FID(17A)_040914A	SeqNo: 305760								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.541	1	5	0	90.8	81.2	149	0			

Sample ID	LCS	Batch ID: 6468	Test Code: SW8015	Units: mg/L	Analysis Date 9/16/2004 4:45:14 PM	Prep Date 9/13/2004					
Client ID:		Run ID: FID(17A)_040914A	SeqNo: 305989								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.212	1	5	0	104	81.2	149	4.541	13.8	23	

Sample ID	GRO std 2.5ug	Batch ID: R13118	Test Code: SW8015	Units: mg/L	Analysis Date 9/14/2004 7:19:00 PM	Prep Date					
Client ID:		Run ID: PIDFID_040914A	SeqNo: 305349								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.5098	0.05	0.5	0	102	80.3	116	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT

Laboratory Control Spike - generic

CLIENT: San Juan Refining
 Work Order: 0409062
 Project: River Sampling Sept 2004

Sample ID BTEX std 100ng Batch ID: R13118 Test Code: SW8021 Units: µg/L Analysis Date 9/14/2004 7:48:46 PM Prep Date

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	37	2.5	40	0	92.5	54.9	142	0			
Benzene	20.94	0.5	20	0	105	81.3	121	0			
Toluene	20.16	0.5	20	0	101	84.9	118	0			
Ethylbenzene	20.23	0.5	20	0	101	53.8	149	0			
Xylenes, Total	55.93	0.5	60	0	93.2	83.1	122	0			

Sample ID Ics-6470 Batch ID: 6470 Test Code: SW8270A Units: µg/L Analysis Date 9/20/2004 Prep Date 9/13/2004

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	52.68	10	100	0	52.7	44.6	87.9	0			
4-Chloro-3-methylphenol	97.22	20	200	0	48.6	46	92.2	0			
2-Chlorophenol	112.1	10	200	0	56.1	46.3	91.1	0			
1,4-Dichlorobenzene	45.84	10	100	0	45.8	37.8	91.3	0			
2,4-Dinitrotoluene	58.9	10	100	0	58.9	53.2	94.9	0			
N-Nitrosodi-n-propylamine	50.78	10	100	0	50.8	46.2	82.6	0			
4-Nitrophenol	52.42	50	200	0	26.2	3.95	65.2	0			
Pentachlorophenol	89.64	50	200	0	44.8	21.6	105	0			
Phenol	68.14	10	200	0	34.1	26.3	53.8	0			
Pyrene	63.4	15	100	0	63.4	53.8	94.5	0			
1,2,4-Trichlorobenzene	42.9	10	100	0	42.9	37.1	90.7	0			

Sample ID LCS-6477 Batch ID: 6477 Test Code: SW7470 Units: mg/L Analysis Date 9/14/2004 Prep Date 9/14/2004

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.005065	0.0002	0.005	0.00008115	99.7	75.2	134	0			

Client ID: ELMO_040920A SeqNo: 307410
 Client ID: MI-LA254_040914A SeqNo: 305228

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
 Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0409062
 Project: River Sampling Sept 2004

Sample ID	LCSD-6477	Batch ID:	6477	Test Code:	SW7470	Units:	mg/L	Analysis Date	9/14/2004	Prep Date	9/14/2004		
Client ID:		Run ID:	MI-LA254_040914A	SeqNo:	305245								
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury		0.005324		0.0002	0.005	0.00008115	105	75.2	134	0.005065	5.00	0	

Sample ID	LCS	Batch ID:	R13125	Test Code:	SW6010A	Units:	mg/L	Analysis Date	9/15/2004 8:53:37 AM	Prep Date			
Client ID:		Run ID:	ICP_040915A	SeqNo:	305443								
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic		0.4828		0.02	0.5	0	96.6	80	120	0			
Barium		0.46		0.002	0.5	0	92.0	80	120	0			
Cadmium		0.4677		0.002	0.5	0	93.5	80	120	0			
Calcium		49.83		1	50.5	0	98.7	80	120	0			
Chromium		0.4666		0.006	0.5	0	93.3	80	120	0			
Copper		0.4514		0.006	0.5	0	90.3	80	120	0			
Iron		0.536		0.02	0.5	0.005769	106	80	120	0			
Lead		0.4658		0.005	0.5	0	93.2	80	120	0			
Magnesium		50.81		1	50.5	0	101	80	120	0			
Manganese		0.485		0.002	0.5	0	97.0	80	120	0			
Potassium		51.14		1	55	0	93.0	80	120	0			
Selenium		0.4649		0.05	0.5	0	93.0	80	120	0			
Silver		0.5026		0.005	0.5	0	101	80	120	0			
Sodium		47.79		1	50.5	0.03782	94.6	80	120	0			S
Uranium		ND		0.1	5	0	0	80	120	0			
Zinc		0.4678		0.005	0.5	0	93.6	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0409062
 Project: River Sampling Sept 2004

Sample ID	LCSD	Batch ID: R13125	Test Code: SW6010A	Units: mg/L	Analysis Date 9/15/2004 8:56:51 AM	Prep Date					
Client ID:		Run ID: ICP_040915A	SeqNo: 305444								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4992	0.02	0.5	0	99.8	80	120	0.4828	3.34	20	
Barium	0.4615	0.002	0.5	0	92.3	80	120	0.46	0.329	20	
Cadmium	0.4695	0.002	0.5	0	93.9	80	120	0.4677	0.388	20	
Calcium	49.99	1	50.5	0	99.0	80	120	49.83	0.312	20	
Chromium	0.469	0.006	0.5	0	93.8	80	120	0.4666	0.507	20	
Copper	0.4538	0.006	0.5	0	90.8	80	120	0.4514	0.533	20	
Iron	0.5351	0.02	0.5	0.005769	106	80	120	0.536	0.169	20	
Lead	0.4655	0.005	0.5	0	93.1	80	120	0.4658	0.0725	20	
Magnesium	50.88	1	50.5	0	101	80	120	50.81	0.135	20	
Manganese	0.4868	0.002	0.5	0	97.4	80	120	0.485	0.389	20	
Potassium	51.28	1	55	0	93.2	80	120	51.14	0.275	20	
Selenium	0.468	0.05	0.5	0	93.6	80	120	0.4649	0.672	20	
Silver	0.4294	0.005	0.5	0	85.9	80	120	0.5026	15.7	20	
Sodium	47.86	1	50.5	0.03782	94.7	80	120	47.79	0.136	20	
Uranium	ND	0.1	5	0	0	80	120	0	0	20	S
Zinc	0.4708	0.005	0.5	0	94.2	80	120	0.4678	0.631	20	

Sample ID	LCS U	Batch ID: R13125	Test Code: SW6010A	Units: mg/L	Analysis Date 9/15/2004 11:21:31 AM	Prep Date					
Client ID:		Run ID: ICP_040915A	SeqNo: 305866								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	4.831	0.1	5	0	96.6	80	120	0			

Sample ID	LCSD U	Batch ID: R13125	Test Code: SW6010A	Units: mg/L	Analysis Date 9/15/2004 11:24:27 AM	Prep Date					
Client ID:		Run ID: ICP_040915A	SeqNo: 305867								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	4.867	0.1	5	0	97.3	80	120	4.831	0.745	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Laboratory Control Spike - generic

CLIENT: San Juan Refining
Work Order: 0409062
Project: River Sampling Sept 2004

Sample ID	LCS-6492	Batch ID: 6492	Test Code: SW6010A	Units: mg/L	Analysis Date	9/17/2004 2:55:08 PM	Prep Date	9/16/2004			
Client ID:		Run ID:	ICP_040917A		SeqNo:	306648					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5026	0.02	0.5	0	101	80	120	0			
Barium	0.4711	0.02	0.5	0	94.2	80	120	0			
Cadmium	0.4858	0.002	0.5	0.001101	96.9	80	120	0			
Chromium	0.4789	0.006	0.5	0	95.8	80	120	0			
Lead	0.4833	0.005	0.5	0.003158	96.0	80	120	0			
Selenium	0.4785	0.05	0.5	0	95.7	80	120	0			

Sample ID	LCSD-6492	Batch ID: 6492	Test Code: SW6010A	Units: mg/L	Analysis Date	9/17/2004 2:57:19 PM	Prep Date	9/16/2004			
Client ID:		Run ID:	ICP_040917A		SeqNo:	306649					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4921	0.02	0.5	0	98.4	80	120	0.5026	2.13	20	
Barium	0.4702	0.02	0.5	0	94.0	80	120	0.4711	0.206	20	
Cadmium	0.4836	0.002	0.5	0.001101	96.5	80	120	0.4858	0.465	20	
Chromium	0.4754	0.006	0.5	0	95.1	80	120	0.4789	0.732	20	
Lead	0.4817	0.005	0.5	0.003158	95.7	80	120	0.4833	0.323	20	
Selenium	0.4981	0.05	0.5	0	99.6	80	120	0.4785	4.01	20	

Sample ID	LCS-6492	Batch ID: 6492	Test Code: SW6010A	Units: mg/L	Analysis Date	9/20/2004 10:46:14 AM	Prep Date	9/16/2004			
Client ID:		Run ID:	ICP_040920A		SeqNo:	306667					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5658	0.02	0.5	0	113	80	120	0			
Barium	0.5299	0.02	0.5	0	106	80	120	0			
Cadmium	0.5455	0.002	0.5	0	109	80	120	0			
Chromium	0.533	0.006	0.5	0	107	80	120	0			
Lead	0.5396	0.005	0.5	0	108	80	120	0			
Selenium	0.5398	0.05	0.5	0	108	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
Work Order: 0409062
Project: River Sampling Sept 2004

Sample ID	LCSD-6492	Batch ID: 6492	Test Code: SW6010A	Units: mg/L	Analysis Date 9/20/2004 10:49:14 AM	Prep Date 9/16/2004					
Client ID:		Run ID: ICP_040920A	SeqNo: 306668								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.568	0.02	0.5	0	114	80	120	0.5658	0.394	20	
Barium	0.5279	0.02	0.5	0	106	80	120	0.5299	0.391	20	
Cadmium	0.5408	0.002	0.5	0	108	80	120	0.5455	0.862	20	
Chromium	0.5294	0.006	0.5	0	106	80	120	0.533	0.673	20	
Lead	0.5329	0.005	0.5	0	107	80	120	0.5396	1.26	20	
Selenium	0.5307	0.05	0.5	0	106	80	120	0.5398	1.69	20	

Sample ID	LCS-6492	Batch ID: 6492	Test Code: SW6010A	Units: mg/L	Analysis Date 9/20/2004 12:34:15 PM	Prep Date 9/16/2004					
Client ID:		Run ID: ICP_040920A	SeqNo: 306683								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	0.5907	0.005	0.5	0	118	80	120	0			

Sample ID	LCSD-6492	Batch ID: 6492	Test Code: SW6010A	Units: mg/L	Analysis Date 9/20/2004 12:36:33 PM	Prep Date 9/16/2004					
Client ID:		Run ID: ICP_040920A	SeqNo: 306684								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	0.5705	0.005	0.5	0	114	80	120	0.5907	3.48	20	

Sample ID	LCS-6492	Batch ID: 6492	Test Code: SW6010A	Units: mg/L	Analysis Date 9/20/2004 8:07:23 AM	Prep Date 9/16/2004					
Client ID:		Run ID: ICP_040920E	SeqNo: 307232								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	0.498	0.005	0.5	0	99.6	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

CLIENT: San Juan Refining
 Work Order: 0409062
 Project: River Sampling Sept 2004

Sample ID: LCSD-6492 Batch ID: 6492 Test Code: SW6010A Units: mg/L Analysis Date: 9/20/2004 8:09:28 AM Prep Date: 9/16/2004
 Client ID: Run ID: ICP_040920E SeqNo: 307233

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	0.4988	0.005	0.5	0	99.4	80	120	0.498	0.251	20	

Sample ID: LCS-6480 Batch ID: 6480 Test Code: E160.1 Units: mg/L Analysis Date: 9/16/2004 Prep Date: 9/14/2004
 Client ID: Run ID: WC_040916A SeqNo: 305826

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	991	50	1000	0	99.1	80	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR

Date and Time Received:

9/8/2004

Work Order Number 0409062

Received by AT

Checklist completed by

[Handwritten Signature]

9/13/04

Signature

Date

Matrix

Carrier name UPS

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- 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
- Water - VOA vials have zero headspace? Yes No VOA vials submitted Yes No
- Water - pH acceptable upon receipt? Yes No N/A

Container/Temp Blank temperature?

1°

4° C ± 2 Acceptable

If given sufficient time to cool.

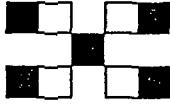
COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkins NE, Suite D
 Albuquerque, New Mexico 87109
 Tel. 505.345.3975 Fax 505.345.4107
 www.hallenvironmental.com

CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refrains
 Project Name: River Sampling - September 2004

Address: #50 CR 4990
Bloomfield, NM 87413

Project #: _____
 Project Manager: _____

Sampler: Cindy Hurtado
 Sample Temperature: _____

Phone #: 505-632-4161

Fax #: 505-632-3911

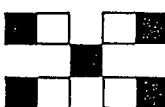
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
2-04	1050A	H ₂ O	River Upstream	2-VOA	X		040602-1
				2-VOA	X		
				1-500ml		X	
				1-125ml		X	
				1-125ml			H2SO4
				1-liter			Amber
				1-liter			

Date: 07-04 Time: 2:30pm Relinquished By: (Signature) Cindy Hurtado
 Date: _____ Time: _____ Relinquished By: (Signature) _____
 Received By: (Signature) Charm B24 9/8/04
 Received By: (Signature) _____

ANALYSIS REQUEST

BTEX + MTBE + TMS (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	PCRA 8 Metals Total	Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	WACC - Dissolved Metals	NO ₃ Backup	Gen Chem Analyticals	Air Bubbles or Headspace (Y or N)
X		X					X					X	X		

Remarks:



CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refining
 Address: #50 Rd 4990
Bloomfield, NM 87413
 Phone #: 505-632-4161
 Fax #: 505-632-3911

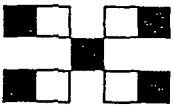
Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
07-04	115A	H ₂ O	River. Nat Mon # 2-VOA	2-VOA	X		04101602-2
				2-VOA	X		
				1-500ml	X		
				1-125ml	X		
				1-125ml			11/24
				1-liter			Amber
				1-liter			

Date: 04 Time: 230pm
 Relinquished By: (Signature) Cindy Hurtado
 Relinquished By: (Signature) _____
 Received By: (Signature) _____
 Received By: (Signature) _____

ANALYSIS REQUEST

Analysis	Requested
BTEX + MTBE + TPH (Gasoline Only)	X
BTEX + MTBE + TPH (8021)	X
TPH Method 8015B (Gas/Diesel)	X
TPH (Method 418.1)	
EDB (Method 504.1)	
EDC (Method 8021)	
8310 (PNA or PAH)	
RCRA 8 Metals Total	X
Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)	
8081 Pesticides / PCB's (8082)	
8260B (VOA)	
8270 (Semi-VOA)	
WQC-Dissolved Metals	X
NO ₃ Back up	X
Gen Chem Anions/Cations	X
Air Bubbles or Headspace (Y or N)	

Remarks:



HALL ENVIRONMENTAL ANALYSIS LABORATORY
 4901 Hawkins NE, Suite D
 Albuquerque, New Mexico 87109
 Tel. 505.345.3975 Fax 505.345.4107
 www.hallenvironmental.com

ANALYSIS REQUEST

BTEX + MTBE + TPH (Gasoline Only)	
BTEX + MTBE + TPH (Gas/Diesel)	X
TPH (Method 418.1)	
EDB (Method 504.1)	
EDC (Method 8021)	
8310 (PNA or PAH)	
RCRA 8 Metals Total	X
Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)	
8081 Pesticides / PCB's (8082)	
8260B (VOA)	
8270 (Semi-VOA)	
WACC-Dissolved Metals	X
NO ₃ Backup	X
Gas Chrom Analysis/Calibration	X
Air Bubbles or Headspace (Y or N)	

Accreditation Applied: NELAC USACE

Other: _____

Project Name: River Sampling - September 2004

Project #: _____

Project Manager: _____

Sampler: Cindy Hurtado

Sample Temperature: 70

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl ₂	HNO ₃	
7-04	1135A	H ₂ O	River - N of MW #4/6	2-VOA	X		0108002-3
				2-VOA	X		
				7-500 ml	X		
				1-125ml	X		
				1-125ml	H ₂ SO ₄		
				1-liter			
				1-liter	Ambic		
							-4

Relinquished By: (Signature) _____
 Relinquished By: (Signature) _____

Received By: (Signature) _____
 Received By: (Signature) _____

CHAIN-OF-CUSTODY RECORD

Client: SAN Juan Refining

Address: #50 CR 4990
Blomfield, NM 87413

Phone #: 505-632-4161

Fax #: 505-632-3911

Date: _____ Time: _____

Date: 7-04 2300 Time: _____

Relinquished By: (Signature) Cindy Hurtado

Relinquished By: (Signature) _____

Received By: (Signature) [Signature] 9/8/04

Received By: (Signature) _____

Remarks: